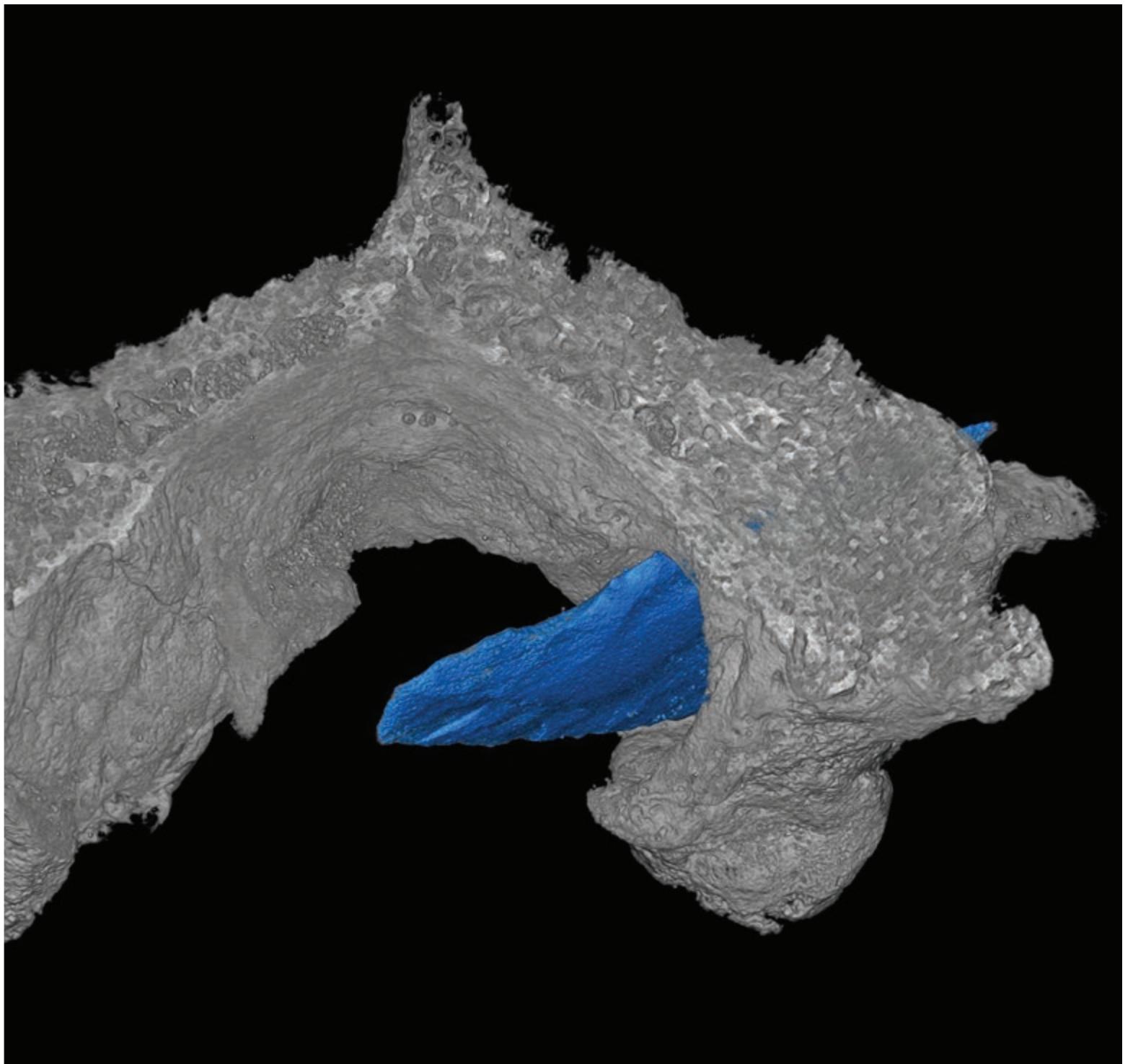


ANCIENT ARROWHEAD

A micro-CT scan displays an arrowhead piercing a vertebra of a man who lived in Siberia 8,000 years ago. In this month's *On Campus News*, we profile U of S archaeology and anthropology professor Angela Lieveise's research findings.

SEE PAGE 5.



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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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U of S working to reduce workplace injuries

ZAHEED BARDAI

With fewer instances of workplace injuries, the University of Saskatchewan's commitment to workplace safety is being realized.

"We had set a goal of 25 per cent for a reduction in workplace injury incidents and we're on track to meeting this goal," said Rob Kliewer, manager of Safety Resources at the U of S.

Maintaining a healthy work and learning environment is a key principle of the university's values, including occupational health and safety and the reduction of workplace illness and injuries. Kliewer said that workplace injuries are often predictable, preventable and costly.

"First, there's a human cost: pain, recovery, added stress on ourselves, our families and colleagues. And second, there's a financial burden to the university: time away from work, damaged property, and fines and fees."

In June of this year, the university amassed a \$117,000 surcharge from the Worker's Compensation Board (WCB) for its number of occu-



Safety Resources manager Rob Kliewer is leading the effort to reduce workplace injuries across campus.

ZAHEED BARDAI

pational injury claims. By reducing the number of workplace injuries, the university can work to eliminate this surcharge.

"We do not want our people to stop reporting workplace injuries, but we want them have greater awareness for workplace hazards and to be safer when doing their work," said Kliewer.

The university is full of high-hazard activities in classrooms, labs, offices, workshops and facilities. Fortunately, Kliewer's plan for establishing a culture of safety and reducing workplace injuries is well underway. Between January and June of 2017, there were 60 reportable WCB incidents, compared to 77 in the same period of 2016. He

attributes this to good teamwork and promoting a vision of safer work areas for the university community.

There are 22 local safety committees in colleges and units, reporting to a single Occupational Health Committee (OHC). The OHC co-ordinates local site visits and inspection audits more frequently than in the past, ensuring that facilities are compliant with discipline-specific regulations. Safety Resources also provides more safety training courses for which faculty and staff can register through its website.

A new initiative, the Contractor Safety Program, is for external contractors who do construction work on campus. They are also required to follow the university's workplace safety protocols.

Kliewer is pleased with the progress the U of S has made in promoting a culture of workplace safety, but recognizes that there is more work to be done.

SEE UNIVERSITY, PAGE 15



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:

FOR MORE
UP-TO-THE-MINUTE
NEWS, VISIT:

news.usask.ca
 @usask

U of S partners in academic hub

The U of S has become a founding partner of a new national academic newswire, *The Conversation Canada*, which provides independent, high-quality journalism. The non-profit organization provides a distribution hub for academic articles, written by researchers and edited by journalists, available to be published for free. Seventeen universities have teamed up with *The Canadian Press*, the founding media partner.

Positive pharmacy accreditation news

The College of Pharmacy and Nutrition at the U of S has received good news from The Canadian Council for Accreditation of Pharmacy Programs (CCAPP). The college's Bachelor of Science in Pharmacy program was awarded accreditation for a four-year term effective 2017-2021, while the Doctor of Pharmacy program received provisional accreditation through to December 31, 2021.

President joins prestigious board

A long-time champion of the arts, U of S President Peter Stoicheff has been appointed to the board of directors of the prestigious Confederation Centre of the Arts. Based in P.E.I., where the 1864 Charlottetown Conference discussions set the table for the creation of Canada, the centre is one of the country's cultural hubs, celebrating the best in visual and performing arts across the nation.

Former Huskies lead Team Canada

The Canadian Olympic men's hockey team will be led by two U of S alumni at the 2018 Winter Games in Pyeongchang, South Korea. Former Huskies hockey player Willie Desjardins will be the head coach of Team Canada and former Huskies coach Dave King will join Desjardins behind the bench as an assistant. Both have extensive coaching careers, including serving as NHL head coaches.

CORRECTION: In July's OCN, David Parkinson was misidentified in the photograph that accompanied the story on summer students from Mexico.



Campus will be buzzing again in September when 21,000 students begin the fall semester.

 SUBMITTED

New support systems await influx of fall students

 HENRYTYE GLAZEBROOK

It's hard for many to get excited about summer slowly waning into fall, but for Patti McDougall that change is something to get excited about.

To McDougall, the sun's earlier creep toward dusk, trees starting to lose their leaves and the cooler shift in the wind all add up to one welcome prospect: back to school.

"At the start of the fall term I am revitalized by the return of our continuing students and the influx of new students," said McDougall, the vice-provost teaching and learning at the University of Saskatchewan. "As thousands of students return to the university, it feels like a life force of energy directing our focus. I look forward to that positive energy and the enthusiasm about what the coming year will hold."

Fall is a fascinating time on any campus, and the U of S is no exception. With more than 21,000 new and returning students soon to flood into classrooms, the university is taking care to establish a series of support systems to ensure their transition back into academics is

smooth, educational and fun.

"Over three thousand of these students are new first-year students in our direct-entry colleges," McDougall said. "What's particularly exciting is that our student numbers are up almost a thousand students as compared to this same time last year."

For three days in August, leading up to the residence move-in, the International Student and Study Abroad Centre's (ISSAC) student staff and volunteers will set up at the Diefenbaker International Airport, personally greeting new international students until the last flight arrives each night.

Returning for its second year, the annual Aboriginal Student Weekend Welcome will take place Aug. 11-12. An estimated 60 students and guardians are currently registered for the program, which provides an opportunity to get familiar with campus, meet fellow students and staff and learn more about what U of S has to offer.

Health and wellness initiatives will also feature some changes, with

Student Affairs and Outreach being established as a new entity responsible for mental health intake and outreach, early alerts and crisis response.

The new unit will work alongside the Student Wellness Centre, as part of an integrated Student Affairs and Services team, and will introduce a new centralized health intake and shared-care model, as well as new support options such as individualized care planning and mental health support groups.

Orientation week will also include a series of other activities, including smart start academic orientation, an environmental programs open house and more.

But for McDougall, what's most important is that students dive into the new academic year with vigour.

"My challenge to new students is to take part in orientation activities and attend the campus expo to find out more about services and clubs," she said. "Find something you're passionate about and get involved." ■

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Appointments solidify senior leadership

The University of Saskatchewan has bolstered its senior administration team with a trio of appointments over the past few weeks.

The U of S has announced the recruitment of executive directors in the School of Public Health (SPH) and the School of Environment and Sustainability (SENS), as well as a new dean in the College of Nursing, as the university continues to enhance its leadership contingent.

Irena Creed (SENS)

Creed has been named executive director of SENS for a five-year term, effective Sept. 1.

Creed currently is a biology professor who holds cross appointments in the departments of geology and earth sciences and who served as a Canada Research Chair in Watershed Sciences for the past 10 years at Western University in London, Ont. She has researched

environmental issues across Africa, Asia, Europe and North America, including studying the future of the Laurentian Great Lakes and the Saskatchewan River Basin, which has previously brought her to the U of S.

A former acting director of Western University's Centre for Environment and Sustainability, Creed is anxious to begin her new role with SENS.

"The University of Saskatchewan is a remarkable place, where strong support by senior administration for its signature areas in food, water and energy and Indigenous communities, combined with a collegial and collaborative environment, creates remarkable opportunities for interdisciplinary research and teaching," said Creed, who was a guest speaker in the Global Institute for Water Security's Distinguished Lecture Series in 2013 at the U of S.

Creed earned a Bachelor of Science Honours in zoology, a Master of Science in botany and environmental sciences, and a PhD in geography at the University of Toronto, followed by post-doctoral work at the University of Alberta.

Creed takes over from Toddi Steelman, who completed a five-year term as executive director this year.

Steven Jones (SPH)

Jones has been appointed executive director of the SPH for a five-year term, effective Sept. 1.

Jones previously served as an adjunct assistant professor of immunology at the University of Manitoba, and is currently chief executive officer of Cognoveritas Consulting Inc., and a senior advisor to McKinsey and Company global management consulting firm. He has extensive international experience in places as diverse as Sierra Leone and Saudi Arabia to China and the United Kingdom, as well as a decade working for Health Canada and the Public Health Agency of Canada.

"I am thrilled to be joining the



Creed



Jones



Tzeng

Jones earned a Bachelor of Science Honours in cell biology and microbiology and a PhD in immunology and microbiology at the University of Plymouth, U.K. Jones served as acting director of bioterrorism and public health emergency response for the Public Health Agency of Canada, working with the RCMP and the Canadian Forces to manage biological security operations for the Vancouver Olympic Games and the G8 and G20 summits in Vancouver.

Jones takes over from Dr. George Mutwiri, who had served as interim executive director since July 2015.

Huey-Ming Tzeng (Nursing)

Tzeng, who is currently dean of the Whitson-Hester School of Nursing at Tennessee Technological University, will begin her five-year term as dean on September 15.

"This is an exciting opportunity, and I am honored and humbled to join the U of S College of Nursing," said Tzeng, who earned a Bachelor of Science in nursing from National Yang-Ming Medical in Taiwan and a Master of Science in nursing and PhD from the University of Michigan. "The college has proud, longstanding history and tradition, and I look forward to working with our outstanding faculty, staff, students, and alumni, as well as our talented colleagues across the campus and in the communities we serve, to continue building our college into a model to which others aspire."

Tzeng was associate dean of student affairs and program compliance at the Washington State University's College of Nursing before heading to Tennessee. Tzeng was selected for the Fellowship in the American Academy of Nursing and inducted into the American Academy of Nursing.

Tzeng takes over from Beth Horsburgh, who has been serving as interim dean since March 2016. ■



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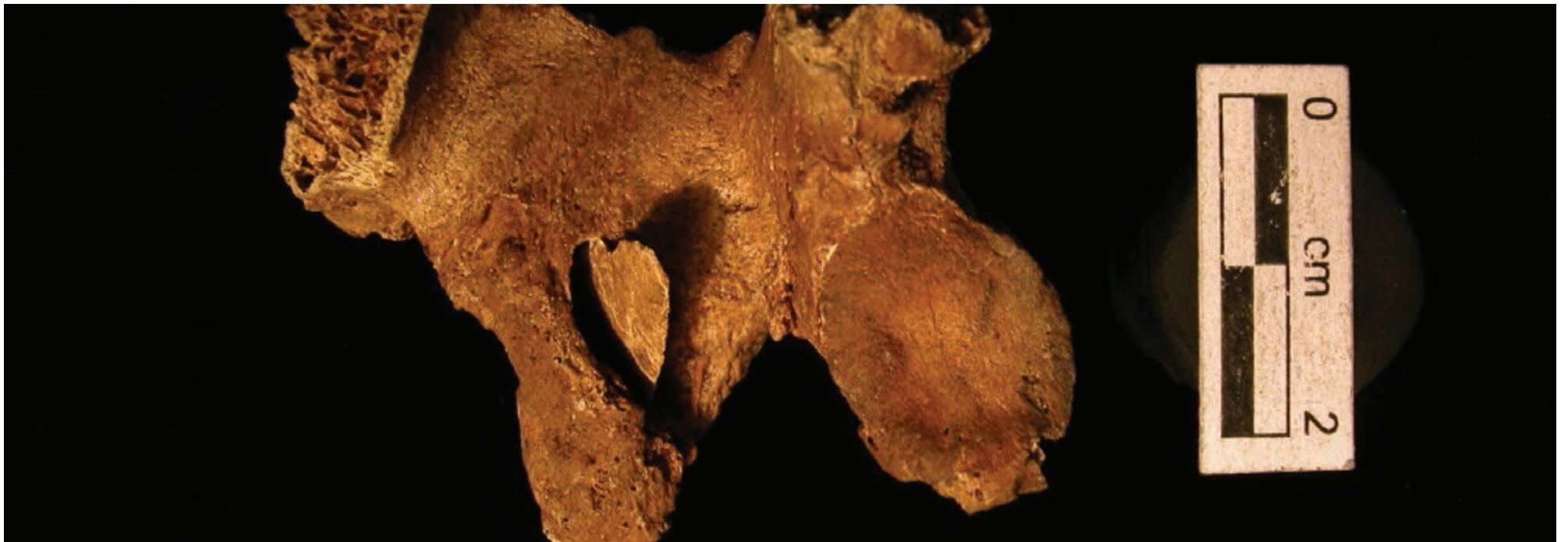
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A high-resolution photograph shows an arrowhead piercing a vertebra of 25-to-35-year-old man, a member of an Early Neolithic hunter-gatherer community, who lived 8,000 years ago.

SUBMITTED

Ancient spinal injury: A story of survival

CHRIS PUTNAM

It was a single fragment of bone, but to Angela Lieveise, it told an 8,000-year-old tale of violence and compassion.

In the latest issue of the *International Journal of Osteoarchaeology*, Lieveise and her co-authors reported a pre-modern medical miracle: the first recorded archaeological case of an individual surviving a penetrating spinal injury.

“This injury would be pretty much a death sentence if it happened today and you couldn’t get to a hospital,” said Lieveise, a faculty member and head of the Department of Archaeology and Anthropology in the College of Arts and Science. “So if we go back in time 8,000 years, which is when this individual lived, it’s nothing short of remarkable that he didn’t die immediately.”

During a recent trip to Russia, Lieveise encountered a piece of a vertebra from the lower back of a 25-to-35-year-old man, a member of an Early Neolithic hunter-gatherer community in what is now Siberia. Along with the rest of the man’s incomplete remains, it had

been excavated years earlier from an ancient cemetery by one of Lieveise’s collaborators from Irkutsk State University in Russia.

Embedded deep within the vertebra was a stone arrowhead. The man, it seemed, had been shot in the back while fleeing an assailant.

Similar injuries have been documented in the past by archaeologists, but incredibly, the bone in this case had almost entirely healed around the projectile. Lieveise, who specializes in human remains, recognized the significance immediately: this individual must have survived for months after his catastrophic injury.

The bone was shipped to the University of Saskatchewan, where Lieveise brought it to David Cooper, Canada Research Chair in Synchrotron Bone Imaging and a faculty member in the College of Medicine’s Department of Anatomy and Cell Biology. Cooper performed micro-computed tomography (micro-CT) imaging on the fragment.

“With the micro-CT we were



Angela Lieveise recently made an important discovery in Siberia.

SUBMITTED

able to look deeply into the bone and see how it had healed and remodeled around the projectile point,” said Lieveise.

They concluded that the owner of the vertebra had survived for a year or even longer after his injury.

The healing process would not have been easy. Damage to this part of the spinal cord would not have paralyzed the victim, but he must have suffered persistent pain,

weakness and infection. He would also have required extensive care, both immediate and long-term, noted Lieveise.

“That’s really interesting, too,” Lieveise said. “It shows remarkable evidence of compassion by his community members to keep him alive and fed and to get him to safety after the injury.”

That compassion extended beyond his death. When the man

eventually died—whether from complications from his injury or from an unrelated cause is impossible to say—he was buried no differently than the other members of his community. He was placed on his back, his head facing west, and richly surrounded with tools and ornaments.

“It shows that he was not given any particularly different status because of his injury,” Lieveise said. “He was buried for who he had been his whole life and not for the possibly disabled person he may have been in that last year.”

The archaeologist believes it is a case that challenges the simplistic views some of us have about pre-modern people.

“I think it tells you that people were valued even in the distant past for lots of things, not just their physical prowess, or their reproductive ability or whatever you might think,” said Lieveise. “It’s quite a lot more nuanced than that.” ■

Chris Putnam is a communications officer in the College of Arts and Science.

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The newly rebranded Shop usask store is located at the Preston Crossing open air shopping centre.

 LESLEY PORTER

New Shop usask store set for grand opening event

 LESLEY PORTER

If you've checked out the new retail tenants at Preston Crossing, you've likely seen some familiar signage and logos.

Shop usask, an off-campus rendition of the university's bookstore, opened its doors on July 7. Located just north of campus at Preston Avenue and Attridge Drive, the new location replaces the Huskie Store in Centre Mall.

"We had never had a permanent location for our off-campus store," said Garry Drake, manager of retail services. "After being placed in every mall at one time or another, we wanted our own store to have a place to call home."

Shop usask offers a variety of U of S-branded clothing, giftware, accessories and Huskie Athletics swag, with more merchandise on

the horizon.

"We are continuously expanding our offerings and looking into a lot of new products," said Drake, adding that the hot ticket items so far have been kids clothing and collegiate lounge wear.

Selection aside, the location is also proving to be a draw.

SEE PRESTON, PAGE 15



Giesy goes global in search of answers

HENRYTYE GLAZEBROOK

People often ask John Giesy why he spends so much time working in Hong Kong, China, considering he's a Canada Research Chair in Environmental Toxicology. His answer is always simple.

"I can affect our environment more by the work I do in China than here," said Giesy, who holds multiple professorships in China and was the second Canadian ever to be awarded the Einstein Professor of the Chinese Academy of Science.

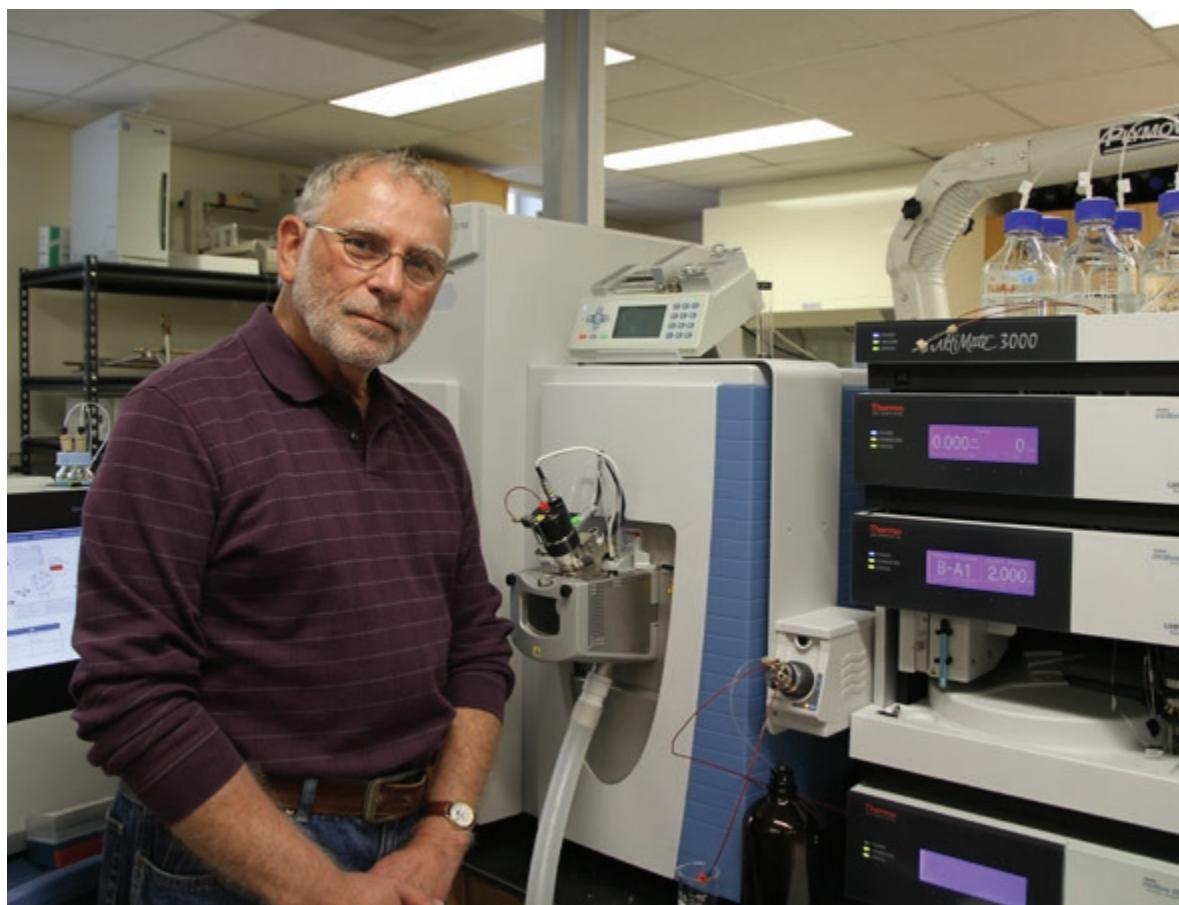
"What happens in China goes around and comes around. What they release in China ends up in polar bears in our Canadian Arctic, and our Northern people get exposed through their diet to these things even though they're getting no economic benefit from the manufacture or use of them."

Giesy is a man of many accomplishments. He has dual citizenship and high level security clearances with both Canada and the United States, where his expertise has been sought on everything from the public safety of chemicals to the 2010 Deepwater Horizon oil spill in the Gulf of Mexico.

In the 1970s he worked in Vietnam to better understand the use of Agent Orange, which contains a highly toxic component known as dioxin, helping to broker negotiations between the Asia-Pacific nation and the United States.

His list of accredited citations sprawls vastly, as high as 55,000, making him one of the foremost experts in the combined fields of environment and environmental toxicology.

He's also a professor in the



John Giesy is a leading eco-toxicologist and Canada Research Chair in Environmental Toxicology.

HENRYTYE GLAZEBROOK

Department of Veterinary Biomedical Sciences and Toxicology Centre at the University of Saskatchewan, where he does research and instructs students.

It's that last area where Giesy thinks his main duty lies, not just to U of S students but to fellow researchers, politicians and the everyday citizens of Canada.

"We're in the education business," he said. "There are a lot of great scientists, but what makes the difference, I think, between just being a scientist and being what I inspire to be as a Canada Research Chair, is being able to translate into social welfare, being able to explain it to the public, to have it have impli-

“ I can't save the world one person at a time, but if I work with a third of the world's population living in China I can have a big impact.

John Giesy

cations. It's all about education.”

Giesy works in mass spectrometry, a very technical sounding term regarding chemical analysis that he likes to explain as “socially relevant research.” Some of his projects are thought up by himself and his colleagues while others are brought to him by governmental leaders, but all involve exploring the near-unnoticeable pieces that make up our world.

The key, he said, is identi-

fying what may or may not be harmful to humans and helping others use that information to manage the risk in their lives.

He cited the common potato as

an example of understanding risk. These everyday root vegetables are technically in the deadly nightshade family due to the natural toxins they contain, developed to deter insects from feasting on them, and yet remain a staple of meals across the globe.

“The bottom line is there are risks to everything you do,” Giesy said. “Talking to me is technically a risk—the office could be hit by lightning—but it's a relatively small

risk, based on our experience. My job is to put those risks in perspective for you. We don't want you so afraid of everything that you can't live your life.”

Today Giesy is working in the Athabasca and South Saskatchewan River Basin, where he wants to educate communities about the safety of the food located right in their backyard to help curb rising issues of obesity and diabetes due to poor nutrition.

The concern of the local populace is that oil sand developments and pesticide use have made fish and produce in the area unfit for consumption. The reality, said Giesy, is that much of what's available is harmless.

“You have a risk of contaminants on the berries, but it's pretty minor,” he said. “But the risk of not eating them, because of the loss of antioxidants and vitamin C, B, D, is huge. And that translates directly to what we see in the health of the population—obesity, diabetes, heart disease, the list just goes on and on and on. It's not so much what they did eat, but what they didn't eat.”

This experience falls closer to home than, say, his time in China, but the hope in any case is that he can change hearts and minds. For Giesy, it's all about the long term, the big picture—how is today's work going to reverberate and help make lasting, positive change?

“When I go to China, I teach short courses working with students and post-docs, but mostly with the professors to educate them in the newest technologies so they can apply it in their own research,” he said. “The idea is to multiply these things. It's like throwing a pebble in a pond; it touches many shores.

“I can't save the world one person at a time, but if I work with a third of the world's population living in China I can have a big impact.” ■

Paris Climate Accord trumps U.S. withdrawal

 HENRYTYE GLAZEBROOK

On June 1, President Donald Trump announced plans to pull the United States out of the Paris Climate Accord, a decision that critics have said could lead to harsh consequences for communities relying on a federal move toward climate change mitigation.

But if you ask Philip Loring, an associate professor with the University of Saskatchewan School of Environment and Sustainability (SENS), some of those consequences have already come to pass.

Loring does much of his work with local communities in Alaska, where he's witnessed firsthand the effects of climate change—everything from water treatment centres overwhelmed by silt from melting permafrost to coastal populations pulling up stakes and moving inland to keep from washing away with rising tides.

"You go to communities where permafrost is thawing out from under the water treatment facility and you see a crack in the floor from one side of the building to another," Loring said.

"The ground is changing, and what was once permafrost is not anymore. That can happen underneath water and wastewater mains that are above ground in a lot of these communities, and the pipes sink."

Built within the framework of the United Nations and signed by 194 of its 196 members, the Paris Climate Accord is a globe-spanning agreement aimed at holding the worldwide increase in temperature at two degrees celsius by tackling issues of climate change and green-



Philip Loring researches climate change effects in Alaska.  HENRYTYE GLAZEBROOK

“ There are communities in coastal Alaska that are just not going to be livable because of erosion and there are lots of communities in coastal Alaska that are going to see dramatic changes.

Phillip Loring

house gas emissions.

The accord, which is also designed to ease adaptation to changing climates and alleviate financial issues created therein, is both wholly voluntary and structured so as to create more substantial goals for more developed regions such as Canada, the United States and the United Kingdom.

Despite involvement being left up to each country's own discretion, researchers like Loring are already concerned with how movement away from the Paris Climate Accord could affect issues of federal funding for institutions like the U.S. Environmental Protection Agency (EPA), which issues grants to areas

already facing direct consequences of climate change.

"There are communities in coastal Alaska that are just not going to be livable because of erosion and there are lots of communities in coastal Alaska that are going to see dramatic changes, whether they like it or not, because of that warming," he said.

"The EPA grants help rural communities adapt to climate change, so pulling those is where you're going to see the change in administration at the federal level impact what people are doing on the local level to deal with climate change. They're very cash-strapped already, they rely heavily on these



Greg Poelzer says renewable energy has become cost-effective.  SUBMITTED

“ We have crossed the tipping point on the economic viability of wind and solar, and hydro is very cost effective long term—notwithstanding the very significant upfront capital costs for hydro.

Greg Poelzer

small federal grants that may not continue.”

Despite sharing concerns over federal funding both to communities and to researchers, fellow SENS professor Greg Poelzer emphasized that the most important decisions concerning investments in renewables are already moving forward at the state level—even in many “red” states which voted heavily in favour of Trump's policy agenda.

"Texas has the largest wind farms outside of California," he said. "Most energy in South Dakota comes from renewable sources. Alaska has the largest penetration of renewable energy in off-grid communities of any jurisdiction in

the world.”

The result, Poelzer continued, is a world already moving toward a future of renewable energy—both through state action and privatized companies chasing market trends—regardless of whether or not federal policy follows suit.

"We have crossed the tipping point on the economic viability of wind and solar, and hydro is very cost effective long term—notwithstanding the very significant upfront capital costs for hydro," Poelzer said.

"The price and abundance of shale gas was the death knell for coal as a future source of energy production." ■

Thirst for solutions

Global Water Futures tackles new research projects

CHRIS MORIN

Some of Canada's most serious water-related challenges, including floods and climate change, have prompted a number of new national projects led by University of Saskatchewan researchers.

We are in an era of profound change when it comes to water management, and unless these issues are addressed immediately, experts say things are only going to get worse.

That's where the Global Water Futures program, led by Howard Wheater, U of S Canada Excellence Research Chair in Water Security and director of the Global Institute for Water Security, comes in.

"The hydrology of Canada is bound with our cold, which is comprised of ice, snow and frozen soils. And that hydrology is seeing drastic changes," said Wheater. "One sign of this change is the Rocky Mountain glaciers are rapidly declining and will be mostly gone by end of century.

"In addition to the permafrost thaw changing the landscapes in the north—which is impacting industrial development and community access—Canada is facing significant financial losses from related issues such as floods and droughts."

That's why the U of S-led Global



GLOBAL WATER FUTURES
SOLUTIONS TO WATER THREATS
IN AN ERA OF GLOBAL CHANGE

Water Futures (GWF) program is currently funding 11 initial research projects across Canada totaling nearly \$16.2 million over the next three years to tackle some of Canada's most pressing water-re-

“Water is fundamental to the quality of life and drinking water is at the most basic issues of health for everyone. These are big societal challenges we face, and we need to address them as soon as possible.”

Howard Wheater

lated challenges.

This latest announcement in June follows last year's initial funding of \$77.8 million for the GWF project—the largest universi-

ty-led water research program ever funded worldwide and the most sizeable award ever granted to the U of S.

While the results of the program, including four of the initial projects led by members at the U of S, are yet to come, Wheater is already anticipating a number of developments that will address these water management issues.

"We are developing a number of tools that will help improve flood forecasting and predict algal blooms," said Wheater. "We are also working on a new app that is geared towards users reporting extreme events with more efficiency."

With 106 researchers from 15 Canadian universities involved in the 11 projects, Wheater stressed that the water management issues happening close to home ultimately extend far beyond our own campus borders.

"The world is looking to us with considerable interest to help solve these issues," he said. "Water is fundamental to the quality of life and drinking water is at the most basic issues of health for everyone."

"These are big societal challenges we face, and we need to address them as soon as possible." ■

For more information, please visit: globalwaterfutures.ca



Howard Wheater is director of Global Institute for Water Security.  DAVID STOBBE

U of S, NASA team up on global water survey

 HENRYTYE GLAZEBROOK

Pardon the pun, but Canada is practically overflowing with freshwater.

And, believe it or not, that abundance causes problems for water researchers.

“Canada is blessed with more freshwater than anywhere else in the world, but there’s no way you can put sensors in to monitor everything,” said Al Pietroniro, executive director of National Hydrological Services, an adjunct professor with the University of Saskatchewan and member of the Centre for Hydrology. “It’s too big.”

It’s this exact issue that SWOT (Surface Water and Ocean Topography) is aimed at solving. The term refers to a satellite scheduled to launch in 2021 by the National Aeronautics and Space Agency (NASA). SWOT will be capable of measuring surface elevations of any water body large enough for its sensors to collect data on, including the vast majority of Canada’s seemingly infinite northern lakes and rivers.

Water surface elevation is relatively simple information to collect, requiring only limited tools and small teams to venture out to a site and gather measurements. The problem, however, is the time and costs required to make such trips feasible over Canada’s vast



Al Pietroniro is an adjunct professor with the U of S Centre for Hydrology and director of Environment Canada’s National Hydrological Services.

 HENRYTYE GLAZEBROOK

landscape. SWOT, if successful, will blow the doors open on the breadth of available data.

“All of a sudden, data that’s only accessible on a three- or five- or 10-day basis at a few locations is now available immediately and everywhere, and it’s pretty cost effective in that the satellite would already be

up,” Pietroniro said. “That changes, from an operational perspective, what you would actually be looking at. It changes what you’d be offering as a service to Canadians.”

The project entered its first phase of calibration and validation on July 7, which involved a series of sites chosen around the globe

at which partner institutions have set up teams and equipment to collect data that can be measured against numbers taken from flyover airplanes (AirSWOT)—designed to mimic eventual SWOT data sourcing—in order to cross reference accuracy.

“There’s not a lot of data sitting

out there, and so these calibration sites are designed for us to find out what the best way to make sure the satellite is seeing what it’s supposed to see and measuring exactly as it’s supposed to be measuring,” Pietroniro said.

The U of S—one among a list of collaborators which includes NASA and the NASA Above Programme, Canadian Space Agency, Centre national d’études spatiales, NASA’s Jet Propulsion Laboratory, Environment and Climate Change Canada, University of North Carolina, University of California Los Angeles and other researchers—has established data collection sites along the North Saskatchewan River, in Redberry Lake and the St. Denis National Wildlife Area.

Pietroniro, referring to the North Saskatchewan River site as one of the project’s “key global sites,” said the U of S is uniquely positioned to be a leader during the initiative thanks to its robust water research programs, including the Global Institute for Water Security, Global Water Futures and three American Geophysical Union Fellows in Howard Wheeler, Jeff McDonnell and John Pomeroy.

SEE PIETRONIRO, PAGE 15

Profile pictures worth a thousand words

U of S psychology student researches selfie-style photos on dating apps

LESLEY PORTER

For most people, using Tinder at work is a no-no. For Jennifer Sedgewick, a master's student in the Department of Psychology at the U of S, it was a summer research project that yielded some interesting results in how men and women portray themselves on dating sites.

Sedgewick works in Lorin Elias' human neuropsychology lab, which examines how differences between brain hemispheres contribute to lateral biases in perception and attention. She was curious as to how people perceived men and women as attractive on dating apps such as Tinder.

Her research, she explained, is grounded in a psychological theory called conceptual metaphors, which denotes that how people understand metaphors is how they act in real life.

"For example, if you are trying to convey power, you would try to convey yourself to be taller or show other people as subordinate," she said.

Sedgewick found this theme prevalent in how men and women vertically represented themselves in selfie-style photos. She collected her



Master's student Jennifer Sedgewick analyzed more than 900 profile photos for her research.

LESLEY PORTER

data last summer, analyzing over 900 profile photos from the app. After parsing the selfies from the non-selfies, she found some distinct gender differences in the selfie pile.

"Men tended to hold (the phone) from below whereas women were more likely to orient it from above," she said.

For men, not only does holding the phone from below give the

impression of being bigger, but it also pronounces features associated with masculinity, like a bigger jawline and smaller eyes. Women, on the other hand, tended to orient their selfies from above, which makes them appear smaller and manipulates other features associated with femininity, such as bigger eyes.

This pattern is consistent with what the litera-

ture would suggest is attractive for men versus women, she explained, as well as with other dating sites where men tend to over-report their height and women under-report their weight.

Additionally, selfies accounted for 90 per cent

of women's profile photos—versus 54 per cent of men's photos—which would suggest that women are taking and sharing more selfies than men.

"If (men are) taking less selfies, maybe they're relying on other photos," said Sedgewick, noting that the men in her study were more likely to use group photos in their Tinder profile. "Or even if they did take selfies, they might not want to send out that image that they are the type that takes selfies."

The research paper was published in a recent selfie edition of the journal *Frontiers in Psychology*, and has since been disseminated and shared widely on news sites around the world.

Sedgewick's interest in this type of social psychology research piqued while completing her undergraduate degree, when she took classes from Elias—now her graduate supervisor—on laterality and how that translates to real life behaviour. Her master's thesis examines the directional bias in lateral kissing behaviours.

"It's hard to not be interested in things you do every day, especially with behaviours like kissing or even when viewing works of art," she said. "You don't always think about things like that." ■





University of Saskatchewan professor Greg Marion, head of the Department of Music, with some of the treasured items in the prestigious Kaplan instrument collection.

HENRYTYE GLAZEBROOK

Kaplan Chair to enhance music department

HENRYTYE GLAZEBROOK

With more than 30 years on campus before he retired in 1991, plus a continued presence as an emeritus professor thereafter, it's impossible to measure the remarkable effect someone like David Kaplan has had on the University of Saskatchewan.

But, with the combined efforts of administration, faculty and two generous donors, it is possible to honour his legacy.

"David Kaplan was a very, very special person to this department," said Greg Marion, head of the U of S Department of Music. "He was also very special to the community of Saskatoon, to the province of Saskatchewan and beyond."

Xiaoping (Bob) Xu and Ling Chen, two former graduate students who worked closely with Kaplan during their time at the U of S, had

already contributed \$1-million to the music department to establish a series of ongoing scholarships in honour of their former instructor.

After Kaplan's death in 2015, the duo donated an additional \$2-million—the largest single alumni contribution in the history of the College of Arts and Science—to create the Kaplan Chair in Music, a new position at the U of S that will add another high-profile expert to the faculty and greater capacity to the department.

"I believe that the Department of Music is going to become a destination of choice, much more than it already is, in large part because of (Xu and Chen's) generosity," Marion said.

The goal of the Kaplan Chair in Music is to fill a gap in the depart-

ment that has existed longer than Marion's own tenure. Despite a wide selection of sessional lecturers providing tremendous instruction on string instruments and beyond, the department does not have a dedicated faculty member who specializes in research, scholarly and artistic work in the area.

"We have a very strong performance tradition in this department, but what we do lack currently is the strength of a tenured faculty member who is a string performer," Marion said. "We have piano, we have trumpet, we have voice, we have saxophone, but this is going to take us into a whole new area."

Filling the position will invigorate not just the music department by bringing in students who might otherwise seek string training

elsewhere, but will also help the city by funnelling talent to the Saskatoon Symphony Orchestra. Marion said the person selected for the role will most likely have a focus on either violin or cello, and will enter a tenure-track position as either an associate or assistant professor.

Marion said that the Kaplan Chair in Music will be expected to possess a high level of renown as a string instrumentalist, and will perform both nationally and internationally to promote the university and create opportunities for students.

"It's going to be a catalyst that will draw attention to the things that we already do very well and will help us build toward greater opportunities," he said. "Not only will the person we hire showcase their own talent, but they will also provide

opportunities, perhaps even taking students abroad to perform. The benefits of this position are going to extend in concentric circles."

Marion is also hopeful that the Kaplan Chair will take a key role in shining a wider spotlight on the U of S Amati Collection, a quartet of string instruments with a rich musical history dating back generations and widely considered a crown jewel for the university, by attracting celebrated musicians to perform on or study them.

"It's going to put these precious, irreplaceable instruments from the 1600s on broader display," he said.

The gift from Xu and Chen will fund the Kaplan Chair in Music for 10 years, after which the College of Arts and Science has committed to take over moving forward. ■

Reducing Mozambique maternal mortality rates

 SARATH PEIRIS

University of Saskatchewan researchers will be working with partners on the front lines in Mozambique's health sector on a comprehensive five-year project to reduce the African country's maternal mortality rate that is 70 times higher than Canada's.

The \$16.6-million research and training project, funded by Global Affairs Canada, aims to improve health services for women, tackle gender barriers that prevent them from accessing effective care, train more than 1,000 health professionals, and invest in medical facilities and equipment.

"This major investment by the Canadian government recognizes the University of Saskatchewan's two decades of success in Mozambique," said U of S epidemiologist Nazeem Muhajarine, principal investigator, and director of the Saskatchewan Population Health and Evaluation Research Unit.

"We hope to build on this success and leverage the relationships that we have nurtured, in this new project. We are adopting a community-based, family-supportive and women-enabling approach to reduce deaths during childbirth and improve infant health outcomes."

Muhajarine and project director Denise Kouri lead a team that includes university researchers and community development leaders from Saskatoon.

About 25 U of S undergraduates and graduate students—in medicine, nursing, nutrition and physiotherapy—will participate in the project, working on-site with Mozambican staff or helping with evaluations and research.

"This transformative initiative addresses a great tragedy and demonstrates our university's ongoing commitment to global citizenship and international community service," said U of S Vice-President Research Karen Chad. "This



Gender specialist Jessie Forsyth (left) helps lead a women's group discussion in Mozambique.

 SUBMITTED

community-engaged project will also provide an extremely valuable international learning experience for our students."

The project builds on the university's 20-year partnership with Mozambique in Inhambane province on the southern coast, and aims to improve conditions under which women give birth in 20 targeted rural communities in five health districts.

"The key to this project is that it considers community and family factors in women's lives, as well as medical factors," said Kouri.

The strategy involves empowering women by providing them financing to establish small-scale economic projects, such as grinding flour and raising chickens, giving them more influence in family decisions.



Project director Denise Kouri (left) and principal investigator Nazeem Muhajarine lead the five-year research endeavour.

 SUBMITTED

District hospitals will receive three new ambulances, with 20 off-road vehicles retrofitted as community mini-ambulances. As well, five small maternal clinics will be built in rural areas, with another five refurbished. Ten new "waiting houses" will enable women nearing their due date to be re-located close to a hospital.

Close to a dozen staff members and five community workers in rural areas will be hired to educate people about gender equity and women's sexual and reproductive rights. The plan calls for training more than 1,000 new health care workers—about half of them maternal and child health nurses, along with preventive medicine technicians and nutritionists — and providing practitioners with improved technical skills to better respond to women's needs.

A key aspect of Muhajarine's research is a study of near-fatalities related to complications involving pregnancy and childbirth. The study will help researchers understand the capacity and functioning of the medical and social systems associated with maternal care, and develop measures to reduce maternal deaths.

Muhajarine will travel to Mozambique two or three times a year, while Kouri will be there for several months a year, and gender specialist Jessie Forsyth will be in Inhambane for about eight months.

Meanwhile, U of S pediatrics specialist Mahli Brindamour, who was involved with projects there in 2010, will return next year to provide continuing professional education to front-line hospital staff, while Dr. Eddie Rook of the College of Medicine will host workshops in community health clinics.

Brindamour has seen language communication issues involving hospital staff and patients, while a strongly hierarchical hospital system intimidates patients, who often aren't treated well. While these are barriers to reducing maternal mortality rates, Brindamour considers the challenge well worth the effort.

"This project is what global health should be all about." ■

Sarath Peiris is a communications contributor to the U of S Research Profile and Impact unit.

Cyclotron helps reduce wait times for patients

HENRYTYE GLAZEBROOK

A year ago, Royal University Hospital (RUH) patients scheduled for medical scans to detect cancer cells sometimes waited as long as seven weeks.

Today, with radioisotopes being produced locally at the Saskatchewan Centre for Cyclotron Sciences at the U of S since June of last year, wait times on average have been reduced to as little as one week. Saskatchewan Premier Brad Wall made the announcement during a visit to the facility on July 10.

For some, that reduction in wait time can remove an unbearable stress from their shoulders much earlier than would otherwise be possible. For others, it can mean a welcome boost in a dire fight for survival.

“The sooner you can find out about cancer the better you can treat it and the better chance you have to save the patient’s life,” said Ghislain Boudreault, facility manager for the Saskatchewan Centre for Cyclotron Sciences. “That’s what makes the whole thing relevant. Cancer is always a matter of time. If you detect it too late, the patient will die. But if you can detect it very, very early, now you have a more hopeful chance to save the patient’s life.”

The Saskatchewan Centre for



Ghislain Boudreault is the facility manager for the Saskatchewan Centre for Cyclotron Services.

HENRYTYE GLAZEBROOK

Cyclotron Sciences, operated by the Sylvia Fedoruk Canadian Centre for Nuclear Innovation, has been the primary producer of radiopharmaceuticals to RUH since June of last year, drastically reducing the distance between use and production compared to their previous

out-of-province supplier of radioisotopes. Given the shelf life of radiopharmaceuticals, said Boudreault, that difference can be critical.

“Radiopharmaceuticals are radioactive compounds, so they decay over time,” he said. “You cannot produce them, store them

and then use them in two weeks. If you need it today, you’re producing it today, because by the end of the day there’s nothing left.”

The radiopharmaceuticals make very early cancer detection possible due to its chemical buildup, the sugary foundation of which is drawn

in by the high metabolic rate of cancer cells. The process creates a bright spot of radiation on reconstructed images as the radioactive sugar compound taken up by the tumor cells, which can easily be seen on medical scans.

“It’s all about metabolism,” Boudreault said, adding that the technique can be similarly used—albeit with different radiopharmaceuticals—to study brain activity and diseases such as Alzheimer’s and Parkinson’s. “You don’t need to wait until the tumour is big to detect it. As soon as it starts growing and the metabolism has changed, you can detect it.”

Boudreault is happy the facility has been able to help bring wait times down for patients. He is also proud of their other accomplishments, including passing inspections, obtaining licensing, marketing, and recently bringing on Calgary Foothills Medical Centre as another client for back-up supply of radiopharmaceuticals.

“It is an excellent sign that we are doing really, really well,” he said. “We have a great team and a great facility, and we can get the best out of it. I can tell all the researchers and fundraisers are confident that we can do more.” ■



COMING EVENTS

COURSES / WORKSHOPS

Language Classes

For information, or to register, visit learn-languages.usask.ca or call 306-966-4355.

- One-week Intensive French Immersion
- Aug. 14–18; 8:30 am–5 pm (one-hour lunch break). All levels offered (beginner to advanced). This week-long program consists of 40 hours of learning. Highlights of the program include: themes, vocabulary and grammar taught with the communicative method. Language lab exercises and group projects and

excursions. Guided conversations, discussions and debates. Friday’s final luncheon will be provided.

- Four-day Intensive Cree Immersion
- Aug. 14–18; 10 am–3 pm (one-hour lunch break). This program offers 16 hours of learning over four days. Highlights of the week include: instruction using the communicative method, experienced teachers, group projects, guided conversations and discussions, and socio-cultural activities. Learn nēhiyawēwin (Cree language) through a practical approach. The lessons inspired by Dr. Stephen Greymorning will provide you with the skills and appreciation to speak and understand the nēhiyawēwin language

through total immersion techniques. This beginner Cree language course will enhance your professional and personal relationships. It is an ideal course for those who have little or no Cree language skills. Must be 18 years old. The textbook is included.

Training sessions for new online conferencing tool

The Information and Communications Technology (ICT) division is offering training sessions for academic instructors on the new Cisco WebEx system, which is replacing BlackBoard Collaborate in August. The new system, which was tested in a pilot project during the past academic term, will be used to broadcast lectures, to host meetings, and for one-on-one video and audio conversations. ICT is offering in-person and virtual training sessions for instructors throughout the summer. To register for a WebEx session, visit training.usask.ca or contact the ICT Service Desk at servicedesk@usask.ca or call 306-966-2222.

usask.ca or contact the ICT Service Desk at servicedesk@usask.ca or call 306-966-2222.

MISCELLANY

Gallery Tours

Daily until Aug. 31, Diefenbaker Canada Centre. Join one of our docents for an immersive historical experience of two new exhibits. Through hands-on learning and additional narratives and storytelling, visitors will have the opportunity for a more critical and personal interaction with the history of Canada and the Great War. Free tours run every day, at any time, subject to docent availability. For more information, visit usask.ca/diefenbaker.

General History Campus Tour

Each Tuesday and Sunday until Aug. 30, 1–2:30 pm, Diefenbaker Canada Centre. Your docent will highlight the university’s

history, important achievements, and unique architecture. These free tours are excellent for families and individuals of any age, as well as newcomers. It will provide many unique and interesting facts about one of Saskatchewan’s oldest and most important institutions. The tours are also a great way to get students interested in and familiar with the university. For more information, visit usask.ca/diefenbaker.

Sunday Mass at STM Chapel

Each Sunday until Oct. 22, 11 am–noon, join the campus ministry team for the celebration of the Eucharist. Come worship God in a welcoming environment with people from the campus community. For information, visit stmcollege.ca.

**Next OCN: Friday, Sept. 8
Deadline: Monday, Aug. 28**



Preston Crossing perfect location for new usask outlet

FROM PAGE 6

“The location at Preston offers the perfect balance of being close to campus while being more convenient for the public or someone not yet familiar with the layout of campus,” Drake said.

The store is part of a larger rebrand by Consumer Services to co-ordinate all the campus retail

outlets, Drake explained. This includes the campus computer store in lower Place Riel, main bookstore in Marquis Hall, and outlets in arts (formerly the Tuck Shop), agriculture (formerly the North 40) and health sciences. By having all of these outlets under the Shop usask banner, Drake also hopes to engage with customers and encourage them

to support their university.

“The re-brand is a natural step to ensure everyone knows all the locations—both off and on campus—are university-operated,” he said. “Our goal is to ensure every customer to know that when they shop at any of our locations, they are supporting the university and its students.”

The grand opening is Aug. 24. ■

Pietroniro excited about SWOT project applications

FROM PAGE 10

“The U of S has peaked at this point with John and Howard and Jeff as examples, and there’s a lot more people with the Toxicology Centre and SENS (the School of Environment and Sustainability), to name a few,” he said. “They’re not only probably the most influential water resources group in Canada, they’re globally probably the most influential as well.”

The SWOT project is still in early stages, but already Pietroniro is excited about the potential applications on everything from ephemeral prairie sloughs to permafrost level calculations and water balance calculations once all the kinks are worked out and it launches in earnest.

“Every reservoir in North America is going to be measurable, all the big ones, and most of the

lakes and rivers,” he said. “How does that change how we deal with water management in this country? That data’s really not always available, so that changes so much in terms of what we’re doing.

“I don’t like using the phrase lightly, but I think it is a paradigm shift. It has the potential to really change how we can manage water in this country.” ■

University committed to *Mission: Zero* partnership with WCB and Ministry of Labour Relations

FROM PAGE 2

“There has been renewed enthusiasm for the university’s commitment to *Mission: Zero*, a partnership between the WCB and the Saskatchewan Ministry of

Labour Relations and Workplace Safety,” said Kliewer.

“We are working towards zero injuries, zero fatalities and zero suffering in university work spaces and we’d like to be at a place where faculty, staff and students see them-

selves as partners in this process.”

As a testament to this commitment, some faculty are incorporating safety programming at the start of their lectures, going over fire evacuation routes, lockdown and emergency response plans.

History in the making

CHRIS MORIN

When Bill Waiser first began his journey collecting the stories of Saskatchewan, he had no idea how far the road would take him.

A graduate of the U of S with a PhD in history, Waiser left his home province for a job in the Yukon. That’s when he got the call from his alma mater, and returned to Saskatchewan as a history professor—a position he said he enjoyed for over 30 years.

After a lifetime of working as a historian, including writing and co-writing over a dozen books and penning a wildly popular column called *History Matters* for the *Saskatoon StarPhoenix*, Waiser was named a Member of the Order of Canada—one of the country’s highest civilian honours. One of 99 individuals inducted during a ceremony on June 30, Waiser joins the nearly 7,000 members who have been named to the Order, which recognizes people in all sectors of Canadian society. It’s an achievement he does not take lightly.

“It was definitely not something that was on my mind when I started teaching at the university,” said Waiser. “Even so, three thousand students later, this induction comes as a pleasant surprise and I’m grateful for the honour.

“I’ve been very fortunate to have this opportunity at the U of S,” he added. “It’s one of the ways I’ve been able to interact with the public on a regular basis on Saskatchewan’s history. People will add to these stories, or even share their own, and it’s been very gratifying.”

In addition to receiving the Order of Canada, Waiser has racked up a number of prestigious accolades.



Waiser

The U of S professor emeritus was named to the Saskatchewan Order of Merit and elected a fellow of the Royal Society of Canada, while his book *Saskatchewan: A New History* (2005) was named one of the best books of the year by *The Globe and Mail*.

Although he has since retired from the U of S, Waiser promises his work is not yet done.

“Our history is not young. It’s thousands of years old. We need that understanding to be better informed citizens,” said Waiser. “Those who had read or participated in it know better. There’s always someone out there with a tough question and I try my hardest to find the answer.”

Waiser is not the only U of S alum joining the Order of Canada. Editorial cartoonist Brian Gable, whose work has appeared in *The New York Times*, *Time Magazine* and numerous other publications, was also inducted this year. After graduating from the U of S in 1971, Gable began his career with *The Sheaf* before going on to work for the *Regina Leader-Post* and *The Globe and Mail*.

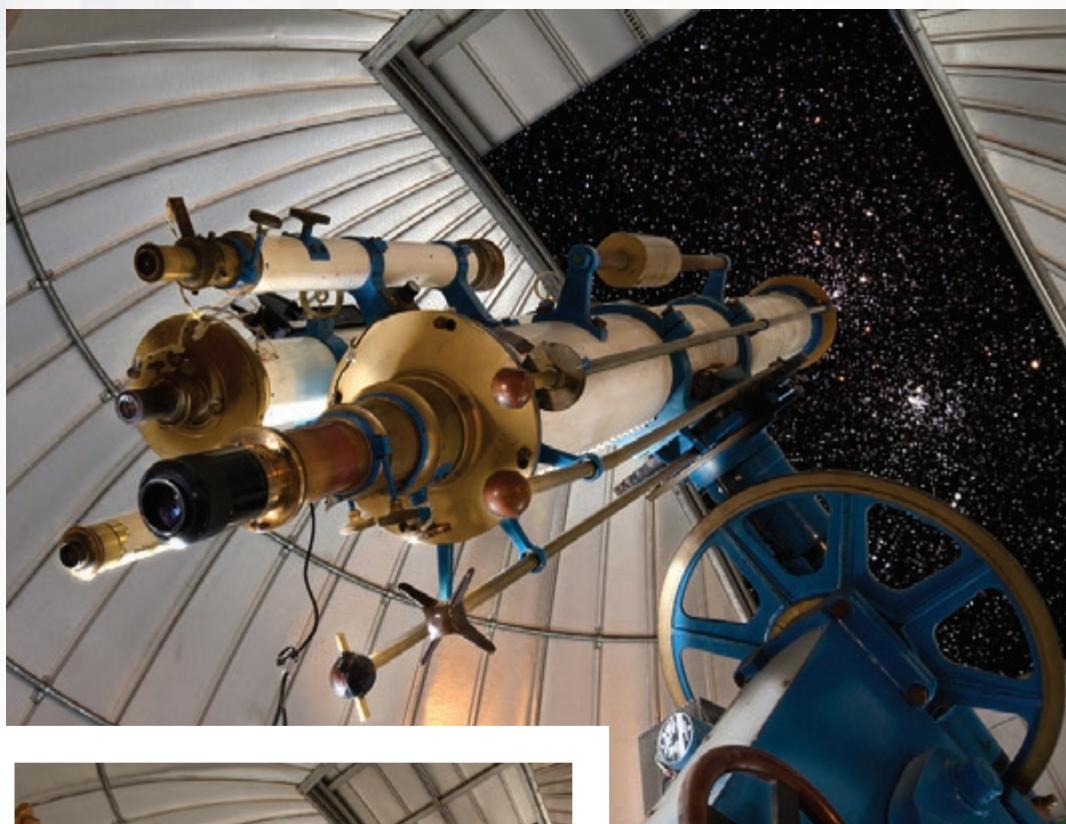
Waiser and Gable received the U of S College of Arts and Science’s Alumni of Influence Award in 2016. ■

workplace safety in your college or unit, contact Safety Resources at 306-966-4675 or email safetyresources@usask.ca. ■

Zaheed Bardai is a communications specialist in Human Resources.



There are fascinating statues, artifacts and fun objects located all over the University of Saskatchewan campus. Get to know them a little better with this year's *On Campus News* back page feature: Interviews with inanimate objects. If you know an inanimate object, tell us about it at news@usask.ca.



Telescope

LOCATION: U OF S OBSERVATORY,
ON WIGGINS AVENUE ACROSS THE STREET
FROM THE HEALTH SCIENCES BUILDING

■ **What are you?**

I'm a three-metre long refracting telescope. I am sometimes referred to as the Duncan telescope.

■ **How old are you?**

I have been on campus since 1928, when the observatory was first built.

■ **What can you see?**

My six-inch diameter lens is capable of seeing as far as a thousand light years away within the Orion constellation. If city light pollution wasn't a factor, I could see some galaxies over two million light years away.

■ **What can we see during the summer months?**

Saturn, in all its ringed glory, is quite visible. The colourful Ring Nebula is another sight to see.

■ **When is the best time to stargaze in Saskatchewan?**

Nothing beats the fall, when nights are long and it's still warm out.

■ **Tell me about a busy time in your life.**

In the fall of 1985, over a thousand people lined up outside to catch a glimpse of Halley's comet. I am also popular during eclipses and the transits of planets, such as Venus and Mercury.

Information and photographs provided by Stan Shadick, Department of Physics and Engineering Physics, College of Arts and Science