Returning to IP3
Eight priorities refocus on the integrated plan

Almost six months after the TransformUS program prioritization process was laid to rest and a new set of priorities established, the interim provost and vice-president academic is encouraged by the effort being brought to bear on significant projects for the U of S.

Ernie Barber said the eight priorities outlined last September in fact refocus the institution on the objectives of its third integrated plan (IP3), Promise and Potential.

“This set of initiatives needs to be understood within the framework of what we wanted to do in Promise and Potential. They’re all in the plan in various ways,” he said, adding a period of leadership transition like the University of Saskatchewan is in at the upper echelons of the organization “is not usually the time to strike off on a new strategic direction.”

Emie Barber, interim provost and vice-president academic.

Since the priorities were announced, a person has been appointed to lead each and Barber is seeing members of the campus community “putting our individual and collective energy into projects with university-wide importance. Our guidance is still IP3. We’re demonstrating we can focus and we are modelling distributed leadership, and I’m very pleased with that.”

Barber pointed out while he is not in charge of the individual projects, “I still have an eye on them all because I need to make sure the leaders and teams get what they need to accomplish the initiatives.”

He went on to highlight the progress made in each of the eight priority areas.

**PRIORITY 1: Accelerate the delivery on the commitment to Aboriginal achievement**

This priority, lead by Heather Magotiaux, vice-president of advancement and community engagement, “is in some ways too big to call a single initiative.” Work is focused on building a representative workforce and a proposal is being made for additional investment in Human Resources and the office of the vice-provost for faculty relations to assist units with activities like developing representative candidate pools, he said. There will also be a pilot project designed to help colleges identify and hire Aboriginal scholars.

We also need to make a decision about Indigenous Voices,” an initiative designed to build awareness and understanding of Indigenous ways of knowing. Funding for the program from the Provost’s Committee on Integrated Planning ends this year, he said. Barber is also looking at the Indian Teacher Education Program (ITEP), describing its funding as vulnerable. “My role is to make sure this program does not disappear because of changes to external funding.”

**PRIORITY 2: Continue the restructuring of the College of Medicine**

Dr. Preston Smith, dean of medicine, is leading the continuing efforts to address a number of issues within the college. Barber said one of the

See Individual, Page 2
most challenging issues centres around attaining clinical research and clinical teaching faculty members.

PRIORITY 3: Deliver on the promise of inter-professional health education and interdisciplinary health research

The interim provost said additional investments would be made in the Council of Health Science Deans to create positions dedicated to developing programming. This priority is being led by Karen Chad, vice-president of research.

PRIORITY 4: Advance the reorganization and strengthening of graduate studies and support for graduate students

“This is devilishly difficult because this university favours an operational structure that is uniquely linked to one academic unit,” commented Barber. Two of three units in Media Access and Production (eMAP) have been repositioned in Information and Communication Technology, there has been progress on moving non-credit programming from the Centre for Continuing and Distance Education (CCDE) into colleges, and the University Learning Centre will be transferred to the library, a change that Barber said will be seamless for users.

PRIORITY 5: Continue the capital project for the transformation of the library collections, facilities, capital and services

“This is an effort to make sure that Barber said will be seamless for users. Library Dean Vicki Williamson is leading the initiative.

PRIORITY 6: Complete the reorganization and revitalization of centrally organized teaching and learning activities and functions

“PRIORITY 7: Focus on the creation of inter-disciplinary and cross-college academic programming

“This is devilishly difficult because this university favours academic programming that is uniquely linked to one academic unit,” commented Barber. But there were examples of cross-college programs identified in the program prioritization process and Toddi Steelman, priority leader and executive director of the School of Environment and Sustainabilty, is working with deans to expand the offerings in environmental studies. The goal, Barber said, “is creating opportunities for better outcomes for students with the same resources . . . (but) we need to walk before we run.”

PRIORITY 8: Align administrative services culture to support and facilitate the academic mission

Initially, this realignment was expected to take place in pieces but Barber said it has become apparent it needs to happen across all services and across the campus. Greg Fowler, vice-president of finance and resources, is working with a consultant to assess how services are delivered and develop a new model. Barber added the goal “is to make sure that our central administrative services are college facing” with a how-can-we-help attitude.

After recapping the priority-area efforts, Barber added he senses that “most people are like me—they’re proud of this university and that pride is like the pride you have in a child. You want to protect them from harm but you also want them to get better.”

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Ernie Barber

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Individual, collective effort on projects

From Page 1

For graduate students of graduate studies and support organization and strengthening year, we will have signalled to “Before the end of the academic is being led by Karen Chad, acting dean of the college, will also be releasing a report identifying priority areas for financial support for students. Barber added the recent drive to unionize grad students is a call for the university to pay closer attention to them as employees.

PRIORITY 5: Continue the capital project for the transformation of the library collections, facilities, capital and services

This project is decades old, he said and was originally focused on the Murray Library and Murray Building only. That has changed to include the entire library system and Barber said the project’s capital steering committee has resumed meetings. Library Dean Vicki Williamson is leading the initiative.

PRIORITY 6: Complete the reorganization and revitalization of centrally organized teaching and learning activities and functions

Patt McDougall, vice-provost teaching and learning, is managing the reorganization, said Barber. Two of three units in Media Access and Production (eMAP) have been repositioned in Information and Communication Technology, there has been progress on moving non-credit programming from the Centre for Continuing and Distance Education (CCDE) into colleges, and the University Learning Centre will be transferred to the library, a change that Barber said will be seamless for users.

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Ernie Barber
Sylvia McAdam Saysewahum is a passionate woman. She is passionate about the land but does not describe herself as an environmental activist. She is passionate about correcting the wrongs of the past that have disadvantaged Canada’s Indigenous people but she never calls herself an activist. Most of all though, she is passionate about education, and life-long learner is a description that fits her to a tee.

Saysewahum, special projects coordinator, Gwenna Moss Centre for Teaching Excellence, has spent her life educating herself and others, and for more than a year, has focused those efforts at the U of S through the Indigenous Voices initiative.

Indigenous Voices was created three years ago, said, “with a hope and a dream to provide opportunities to faculty and staff to learn about Indigenous ways of knowing. For example, our history is not written in any European textbook, our history is written out on the land and when you destroy the land, you destroy Indigenous history”.

Education is key, said Saysewahum, who will soon shed McAdam in favour of her family’s traditional surname (Her great grandfather went into a residential school with her family, and wrote a book for the Saskatchewan Indian Cultural Centre entitled Cultural Teachings: First Nations Protocols and Methodologies. How did she do it? “I didn’t sleep.” She graduated 2009.

Law continues to be an abiding interest for Saysewahum, whose second book—Nationshood Interrupted: Revalitating Nihiyaw Legal Systems—will be released by Purich Publishing March 5. In it, Saysewahum takes the unique opportunity to share Nihiyaw laws.

The book, she said, “is the first time that elders have given permission for our laws to be written down. I think it’s also a part of my people’s laws that if you have knowledge to share you must share it. It’s an obligation and a responsibility.”

When asked whom she believes should read the book, her reply was “absolutely everyone and I hope for other Indigenous nations that this (book) will create a template to revitalize their laws. This knowledge is diminishing and I’m not going to live forever and neither are my parents. This knowledge is inherent knowledge; it’s not hidden and it shouldn’t be hidden. It belongs to the public.”

Past events prevented knowledge of Indigenous laws being shared nation to nation, she said, “and this is, I hope, a process of correcting that. It’s a healing, nurturing, loving, respectful, peaceful process. It’s always been there; I’ve just translated it into English.”

Saysewahum said she is pleased with the progress made through the Indigenous Voices initiative “but there’s always more that can be done. The can always do better but 500 years of colonization is not going to change in three years.”

In addition to creating opportunities to broaden understanding of Indigenous ways of knowing, institutions like the U of S need to be more vocal on many issues, she continued, in particular the doctrine of discovery, the claiming of exclusive rights to lands by colonial powers.

“When we think about decolonizing, when you explore that term, it means, in its international understanding, to give back the land, to give back the resources to Indigenous people. I think we all need to think about that and question why the court system today still applies the doctrine of discovery. That’s not legal basis for it in international discourse.”

She applauded a recent paper by Ken Coats, Canada Research Chair in Regional Innovation at the U of S, that encouraged provinces to share revenue from natural resources with Aboriginal people. That’s a huge step and we need more of that.

“When I do presentations, I talk about treaty, about the erasure of Indigenous knowledge, the resources that are being extracted in violation of treaties and Indigenous sovereignty, and what the treaties promised in terms of land. That’s what I talk about in the book and that’s exactly what Indigenous Voices is about.”
The possibility of long-term water shortages was an issue Saman Razavi always considered of great concern while growing up in Tehran. “Iran, and the Middle East in general, is a water-scarce region. Water is very important, arguably as important as oil.”

When he moved to Canada to pursue his PhD in hydrology at the University of Waterloo, Razavi found himself living in a country perceived as having an abundance of water, but where that may not always be the case. “Eventually Canada may even face (water scarcity),” Razavi said. “I’ve seen how people are vulnerable to water, and how people can fight over water. This is what drives my research and career.”

Razavi is the latest researcher drawn to the U of S by the Global Institute for Water Security and its “ambitious and world-class research program.” He joined the School of Environment and Sustainability as assistant professor in watershed modelling in November, following a postdoctoral fellowship with the College of Engineering.

“My current research has two parts—how source water is generated and how we forecast, and the second component involves how we control and allocate water,” he said. “Basically: what water are we going to get, and how are we going to use it?”

In his master’s studies at the Amirkabir University of Technology in Tehran, Razavi focused on the hydrological side. “My current research has two parts—how source water is generated and how we forecast, and the second component involves how we control and allocate water,” he said. “Basically: what water are we going to get, and how are we going to use it?”

In his master’s studies at the Amirkabir University of Technology in Tehran, Razavi focused mainly on the water management or second half of the question. In his PhD, he focused on the hydrological side. This gives him, he explained, a unique perspective in the water resources academic community. He has worked with both the hydrologists and the water resource managers and can understand where both groups are coming from and what their needs are.

“In traditional hydrological modelling, you’re mainly dealing with nature and what their needs are. In his master’s studies at the Amirkabir University of Technology in Tehran, Razavi focused mainly on the water management or second half of the question. In his PhD, he focused on the hydrological side. This gives him, he explained, a unique perspective in the water resources academic community. He has worked with both the hydrologists and the water resource managers and can understand where both groups are coming from and what their needs are.

“Interaction between hydrological modelling, you’re mainly dealing with nature and physics. But when it comes to water management you’re mainly dealing with people, making it incredibly challenging.”

But with that challenge comes opportunity: “I can develop a new avenue for research into global understanding of water problems and their solutions.”

NEW TO US highlights the work of new faculty members at the University of Saskatchewan. If you are new to campus, or know someone who is, please email on@usask.ca
Cute little penguins in the Antarctic face ugly big problems. Penguin populations in the region have been in decline for some time, but there has never been a clear reason, said Bill Patterson, geology professor and director of the Saskatchewan Isotope Laboratory.

In search for answers, Patterson boarded the ship National Geographic Explorer and headed to the South Pole to examine the nesting sites of three brush-tailed penguins—Adélie, Chinstrap and Gentoo. What he discovered were significant population declines in two species and slight growth in the third over the past 100 years.

“We examined (isotope values of) eggshells and bits of prey items from guano around rookeries and there were no substantial changes for 44,000 years,” said Patterson. “It was a boring data set. So then we examined samples from 2003, and it was completely different. Isotopic changes coincided with population drops.”

The change, Patterson continued, is linked to diet, specifically the consumption of krill, a crustacean closely related to shrimp. Krill populations have changed drastically over the past 250 years for many reasons, including changes in whaling and sealing, fisheries and climate change.

“When krill populations went up due to whaling and sealing—removing those krill feeders—penguins switched to eating krill,” Patterson said, adding that krill were abundant and slow, meaning penguins could feed more quickly and be in less danger from predators like leopard seals and killer whales. “Penguins are very aware that their lives are in danger every one penguin resurfaces or not. If it comes up, they all jump in.”

So penguins got hooked on krill because of availability, but then krill populations started to decline. “Whaling began in the 1760s and krill populations grew but when when sealing and sealing stopped, those populations recovered substantially.”

As whale and seal populations bounced back, krill populations went into decline, a situation that was even more pronounced because fisheries began catching 150,000 to 200,000 tons of krill per year for food, feed and oil.

Not only was there now a shortage of krill for penguins to feed on, but what was left of the krill population was moving south because of climate change. “The warmer temperatures resulted in krill populations moving (to a more suitable climate),” said Patterson.

The penguin diet over the past 100 years to present day is quite different from the krill-only diet during periods of stable populations, Patterson continued. “By examining feathers, nails, guano, stomach contents and eggshells, we know that their diet is now mostly squid, emerald rock cod, silverfish, ice fish and other fish that are farther below the surface.”

All these seemingly unconnected events have resulted in penguins competing for scarce food and adapting to new food sources. “We taught them to eat krill and then took that away.”

This diet change has been problematic for Adélie and Chinstrap penguins that are selective eaters; those populations have decreased between 30 and 50 per cent and 20 and 30 per cent respectively. The story for Gentoo penguins is startlingly different.

“Because Adélie populations are collapsing, Gentoo are expanding into those nesting sites,” he said. “Gentoo are like teenagers and will eat anything compared to Adélie and Chinstraps which are very selective eaters.”

Unfortunately, this is not the end of the story, said Patterson, especially when looking at projected temperature increases. “There are lots of important animals in this ecosystem and we don’t know how further climate change will influence the ecosystem. It’s changing faster now than it has over the past 30 million years.”

Nominate a colleague for the President’s Service Award

SELECTION CRITERIA

The President’s Service Award is designed to recognize exceptional contributions by a non-academic staff member who is currently working at the University of Saskatchewan. Employees must be a current employee as of April 30 of the year nomination is considered. Criteria for selection of the individual include evidence of the following:

- enhancement of the work environment by providing extraordinary service to the university community;
- inspiration, support and respect of the endeavors of others; and
- distinction achieved through dedication and commitment.

Nomination forms are available from the President’s Office or may be downloaded from the website. For further information, call 306-966-6613.

NOMINATIONS

All members of the University of Saskatchewan community are invited to nominate an employee for the President’s Service Award. Each nomination must include:

1. a completed nomination form;
2. a one-page overview/executive summary by the nominator;
3. specific examples of how the nominee meets the criteria of this award; and
4. exactly three signed letters of support. These letters may be:
   - from internal supporters, for example, students, co-workers, supervisors;
   - from external supporters as they relate to the work of the nominee at the university; or
   - signed by one or more individuals.

The maximum length of the package, including the nomination form, must not exceed 12 pages.
2014 GREENHOUSE GAS INVENTORY

University of Saskatchewan is implementing the climate action plan to meet our GHG reduction targets.

SCOPE 1
Consumed Natural Gas, Agriculture, and Fuel

SCOPE 2
Consumed Electricity

SCOPE 3
Business Travel & Waste

161,250 metric tonnes 2014 greenhouse gas emissions (C02 equivalent)

LUNCH
This female Merlin was spotted near the Education Building Feb. 12 enjoying the spoils of her morning hunt. Known in Medieval times as lady hawks, Merlins are small fierce falcons that use surprise attacks to bring down other birds. A couple of pairs are known to nest close to campus and live largely on a diet of pigeon but sightings with close are rare.

McKercher Lecture Series at the College of Law

GUEST SPEAKER
ROD WOOD
ESTEY CHAIR IN BUSINESS LAW, U OF S

Estey Lecture in Business Law: Commercial Law at the Crossroads

MONDAY, MARCH 2, 2015
12pm (noon)
RM 150, MLT LECTURE THEATRE
15 Campus Drive
College of Law, University of Saskatchewan

GUEST SPEAKER
ALEX NEVE
SECRETARY GENERAL OF AMNESTY INTERNATIONAL CANADA

Confronting a Human Rights Scourge: Canada and the Global Struggle against Torture

TUESDAY, MARCH 10, 2015
1:15 pm
RM 150, MLT LECTURE THEATRE
15 Campus Drive
College of Law, University of Saskatchewan

Lecture Series at the College of Law

sustainability.usask.ca

See Climate Action Plan at:
usask.ca/climateaction
The University of Saskatchewan has always played host to bright minds—some of them are just younger than others.

The Academic Research/Work Placement Program is an initiative between the Saskatoon Public School Division (SPSD) and several organizations in Saskatoon, including the U of S. A number of colleges participate in the program, which aims to place Grade 12 students in an area they are hoping to pursue after high school. The variety of programs for students to participate in is wide, from health sciences and engineering to law and the social sciences.

Over the course of 10 weeks, students from participating schools come to campus to work alongside faculty, staff and researchers for two hours a day, explained Marlene Flaman Dunn, career education co-ordinator for SPSD.

"In their senior year, we like to get them on campus, in the area of their interest, where they get a chance to talk to people in the field—professors, researchers, grad students, undergrad students—and they get a feel for what may be in store for them," she said.

Many of the students have completed the required senior-level courses well ahead of time and are facing spare periods in their schedule.

"They have room in their timetable and they want to have something that's challenging for them."

More than 200 high achievers have participated in the program since its launch 12 years ago. In addition to getting hands-on experience and a taste of the real world, students earn credit for their grade 12 career and work education class.

One of the most sought-after placements at the U of S, according to Flaman Dunn, is in the Western College of Veterinary Medicine (WCVM), since 2003, 31 students have completed placements in the college.

Cathy Coghlin is a research technician in the Department of Veterinary Biomedical Sciences at WCVM and also co-ordinates the placement program for the college. She strives to give the students a well-rounded experience over their placement period, which can include classroom, lab and clinical work. By doing so, she hopes to expose them to the academic environment awaiting them if they pursue veterinary studies.

"When I was in school, to be a vet was to play with puppies and kittens. I had no clue what was involved in becoming a vet," she said with a laugh. "It's a total immersion for them to understand what's expected of them, and what they are going to have to learn in order to become a DVM (doctor of veterinary medicine)."

The students participate in everything from lectures and assisting with lab set-up, to learning proper animal handling techniques and assisting with clinical procedures, she said. "They're seeing how it all ties in. You see the lightbulbs going off."

And faculty members in the college are keen to mentor and work directly with students in the lab and clinical environments.

"They get to see radiographs being done, they get to see ultrasounds being done," said Coghlin. "If there's an MRI being done that day, they don't necessarily go right in but they can see what MRI scans look like that the vets look at to determine a diagnosis."

The program may also ease the sometimes-rocky transition from high school to university, a struggle for many students, said Flaman Dunn. If they know what is expected of them academically and apply themselves, they are more likely to be successful in their studies, she added.

Students apply to participate directly to the school division. This involves submitting recent transcripts, a questionnaire explaining why they want to take the program and two reference letters from teachers who can vouch for their academic ability as well as their level of maturity.

In the academic placements on campus, students are typically paired with a researcher or graduate student. There is usually a short period of time to allow the students to familiarize themselves with the subject, and once they do they fit in well, said Coghlin. A few have even had their names listed as a researcher in an academic journal article before they are officially a university student.

Hands-on experiences such as these are invaluable, said Flaman Dunn, for both student engagement and career exposure. "It is paramount to expose them to a potential career path. I would much rather see those students engaged in higher areas of learning than taking spares."

Cathy Coghlin co-ordinates the Academic Research/Work Placement Program in the WCVM.
Low-cost fresh produce proving popular on campus

Marg Sheridan

Winter is no excuse to skimp on eating your greens, and thanks to a handful of Health and Science students you do not even have to venture out in the cold to stock-up on some fresh, and inexpensive, fruits and vegetables for the family. “The booth shares up-to-date health information while providing access to low-cost fresh produce for the Health Sciences and RUH communities,” explained Tatiana Rac, one of the food booth founders alongside fellow medical student Erin Bereh and Sarah Finch, a registered dietician and PhD candidate. “It brings us closer towards establishing a culture of health promotion, disease prevention and food security.” Originally the group was hoping to set the booth up in the RUH, but now with the support of FLIP (Fostering Leadership through Innovative Programs) and the Saskatchewan Medical Association, they have decided to use the E-wing Atrium in the Health Sciences Building in the hopes of drawing staff, students and the families of RUH patients alike to the local table. “In that building, we’re supposed to be promoting health, but we have nothing but vending machines and Tim Hortons,” explained Jennifer Peterson, a public health student who is part of the group of College of Medicine students hosting the booth. “People were pleased to see that they could just grab an apple or banana for a snack, and even stuff like spinach that went over really well!” The produce is being purchased at wholesale prices from CHEP Good Food Inc., an organization that is working to help improve access to healthy food in the city, which means that when it is offered at the booth, the prices are lower than the cost of buying fresh fruit elsewhere on campus. The produce available at their first booth in January was limited to apples, bananas, spinach and baby carrots but the response was so enthusiastic that organizers are hoping to have a broader selection at the February booth. “We did a survey of what other produce people would like to see,” Peterson continued. “Lots of answers were oranges, avocados and cucumbers so we’re going to try to bring in more next time.” The fruit was being sold at three pieces for $1, allowing the students and staff to mix and match their own snack. But the biggest surprise, according to Peterson, was the popularity of the spinach, which sold out. “We were surprised it went over so well,” Peterson said with a laugh. “It’s not something someone’s going to take back to their desk to eat, but a lot of people bought it to take home, and we were kind of surprised because we figured it was the grab-and-go stuff that would be most popular.” Moving forward, the group is hoping to increase the engagement of the booths by offering health-specific information as well as a venue for healthy snacking.

Learning about the link between copper and human disease

Michael Robin

The healthy food booth in the E-wing atrium of Health Sciences.

The campus community shall make informed choices to minimize the institution’s ecological footprint associated with energy and water, with a goal of continuous improvement and reduced operating costs.

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The policy sets out to ensure the University operates in a sustainable manner and includes a ‘best practices’ section for identifying individual actions that help you to do your part. More information is available at polcies.usask.ca under the category of health, safety and environment.

The body handles copper, “be it acquisition, distribution or excretion, cause severe, fatal forms of human disease,” Leary said, explaining that there are intricate mechanisms to move copper around the body. “However, we know shockingly little about these mechanisms.” Leary and his team demystified copper somewhat with their discovery that mito-

Biochemist Scot Leary.

University of Saskatchewan researcher Scot Leary has begun to shed light on a little-understood process critical to life—how cells regulate copper. “You have about 30 proteins in the cell that require copper,” said Leary, a biochemist in the College of Medicine, adding that copper dysregulation is at the root of a multitude of illnesses, including Lou Gehrig’s disease and dementia. The body’s cells also use copper to fight off infections.

Changes in the way the body handles copper, “be it acquisition, distribution or excretion, cause severe, fatal forms of human disease,” Leary said, explaining that there are intricate mechanisms to move copper around the body. “However, we know shockingly little about these mechanisms.” Leary and his team demystified copper somewhat with their discovery that mitochondria, the power plants inside all living cells, help to balance
Dementia over distance

Meeting care needs in rural and remote areas

Dementia is devastating to both patients and caregivers, but it is especially so for people living in rural and remote areas, said cognitive neurologist Dr. Andrew Kirk.

“If you live 40 kilometres from the nearest town and you have to go there to get groceries, it can be very difficult not to be able to drive, for example,” he said. “Children of the patient are more likely to live elsewhere, so that can be difficult too. As well, these are often elderly folk, frail people, so it’s hard to travel four hours to Saskatoon for a medical appointment.”

Kirk is part of the Rural Dementia Care team at the College of Medicine. Formed in 2003 and led by rural health delivery specialist Debra Morgan, the team conducts research and shares knowledge around the province aimed at improving diagnosis, treatment and care of both people with dementia and their caregivers.

Morgan explained that rural people identify a whole spectrum of issues around dementia care, such as lack of awareness that prevents people from recognizing symptoms, diagnostic uncertainty among health-care providers, and difficulty accessing post-diagnostic supports and services.

“In rural settings the family physician might be the only health-care provider,” she said. “Perhaps they don’t want to be the one to tell the person they can’t drive, for example, because it could affect their relationship. Patients and families need those relationships with their local health-care providers.”

The Saskatchewan team is one of 20 involving 340 researchers across Canada working on dementia under the Canadian Consortium on Neurodegeneration in Aging (CCNA). The goals are to prevent or delay the onset of dementia and related illnesses, advance treatments, and improve the quality of life of patients and caregivers.

One of the Saskatchewan team’s achievements is the Rural and Remote Memory Clinic on campus, at the Canadian Centre for Health and Safety in Agriculture. For the last 10 years, rural patients have been able to access the specialists they and their families need to get a diagnosis. The one-stop clinic uses tele-health for pre-clinic assessment and follow up to reduce repeated travel over long distances.

“One of the things we have now are rural practitioners referring cases to us they couldn’t diagnose themselves,” Kirk said.

“It’s a perennial problem and it’s not just rural practitioners; it’s hard to diagnose dementia. There are many, many reasons why people believe a specialist should do it.

Dementia is a collective term for diseases that affect the brain, interfering with the ability to think and to hold memories.

While the memory clinic has the expertise to diagnose the toughest cases, Morgan said there are simply not enough resources to serve the entire province. This means developing programs to empower local health-care professionals to recognize and diagnose dementia, and providing tools to set up support programs in rural communities.

“For the more typical, uncomplicated cases of dementia, we want to be able to increase the capacity of rural health-care providers to do more diagnosis and support on their own,” she said.

Kirk and colleague neuro-psychologist Meagan O’Connell hope to develop ways to support family doctors to diagnose and treat patients with more confidence.

“But if you live 40 kilometres in rural Ontario, it can be very difficult not to be able to drive, for example,” she said. “Children of the patient are more likely to live elsewhere, so that can be difficult too. As well, these are often elderly folk, frail people, so it’s hard to travel four hours to Saskatoon for a medical appointment.”
Copper vital from birth to life's end

From Page 8

levels of the essential element to keep the cell healthy.

Specifically, they looked at the gene Scot, and found a novel connection between it and a molecule responsible for importing copper into the cell. When they disrupted the gene in a mouse model, it caused a severe copper deficiency, and cells could not make the proteins they needed to make energy—a lethal condition. Their work is published in the journal Cell Reports.

According to Leary, copper is a Swiss Army knife of elements when it comes to the body’s chemistry, beginning in the womb where it is critical to central nervous system development, to the end of life where its proper function is essential to cognition and retaining memory.

Rare genetic flaws involving copper metabolism cause Menkes disease, whose victims rarely live to see their 10th birthday, and Wilson disease, where an excess of copper can be treated. More common is amyotrophic lateral sclerosis, better known as ALS or Lou Gehrig's disease, caused by dysfunction in an essential copper-related protein. Leary explained copper is also part of the immune system’s arsenal used to attack invading bacteria, viruses or fungi.

"Copper is turning out to be really big at the host-pathogen interface," he said. "Pathogens are more virulent if they’re able to kick copper out that the host throws at them. We don’t really understand the interplay between host and pathogen in this context and how that may be manipulated in our favour."

Leary said there is also a growing body of evidence that dysfunctional copper regulation is involved in some types of dementia in older adults.

"Copper is turning out to be important to brain physiology and there is clear and exciting evidence that late-onset, cognitive disorders with neurodegeneration involve dysregulation of copper homeostasis."
The Oliver letters

E. H. Oliver was an historian, theologian, founder of the Presbyterian Theological College (later St Andrew’s College), leader in the formation of the United Church in 1925 and ultimately, its moderator. And, he delivered the first lecture at the University of Saskatchewan.

For his master’s thesis, Gordon Barnhart, interim U of S president, wrote a biography of Oliver, and during his research, discovered the Oliver papers in the University Library, University Archives and Special Collections, a gold mine of information. In the fall of 1916, as Oliver left for the front in the First World War, he promised his wife Rita that he would write to her every day—and that is what he did. The letters that Rita wrote to Edmund were lost, but she kept all of the letters she received from him.

Oliver served as a chaplain in the army and worked with the soldiers, trying to help them avoid the evils of “demon rum” and the looser moral standards in wartime Europe. Oliver was also influential in establishing the University of Vimy Ridge. This began as a series of reading rooms and included lectures both in England and at the front in France. Oliver and 12 instructors travelled by bicycle to the troops at the front to educate the soldiers. There was an urgency to this effort because, as Oliver noted, “if we don’t hurry, our pupils may get shot or killed before they are educated.”

At the conclusion of the war, Oliver shared with Rita his relief that they had achieved some valiant goals. “The war is over and peace has been won. The world has been made safe for democracy and we’ll all get home to our wives.”

Without these letters in the U of S archives, such glimpses of life during the First World War would not have been possible.