alumni UBC Trek

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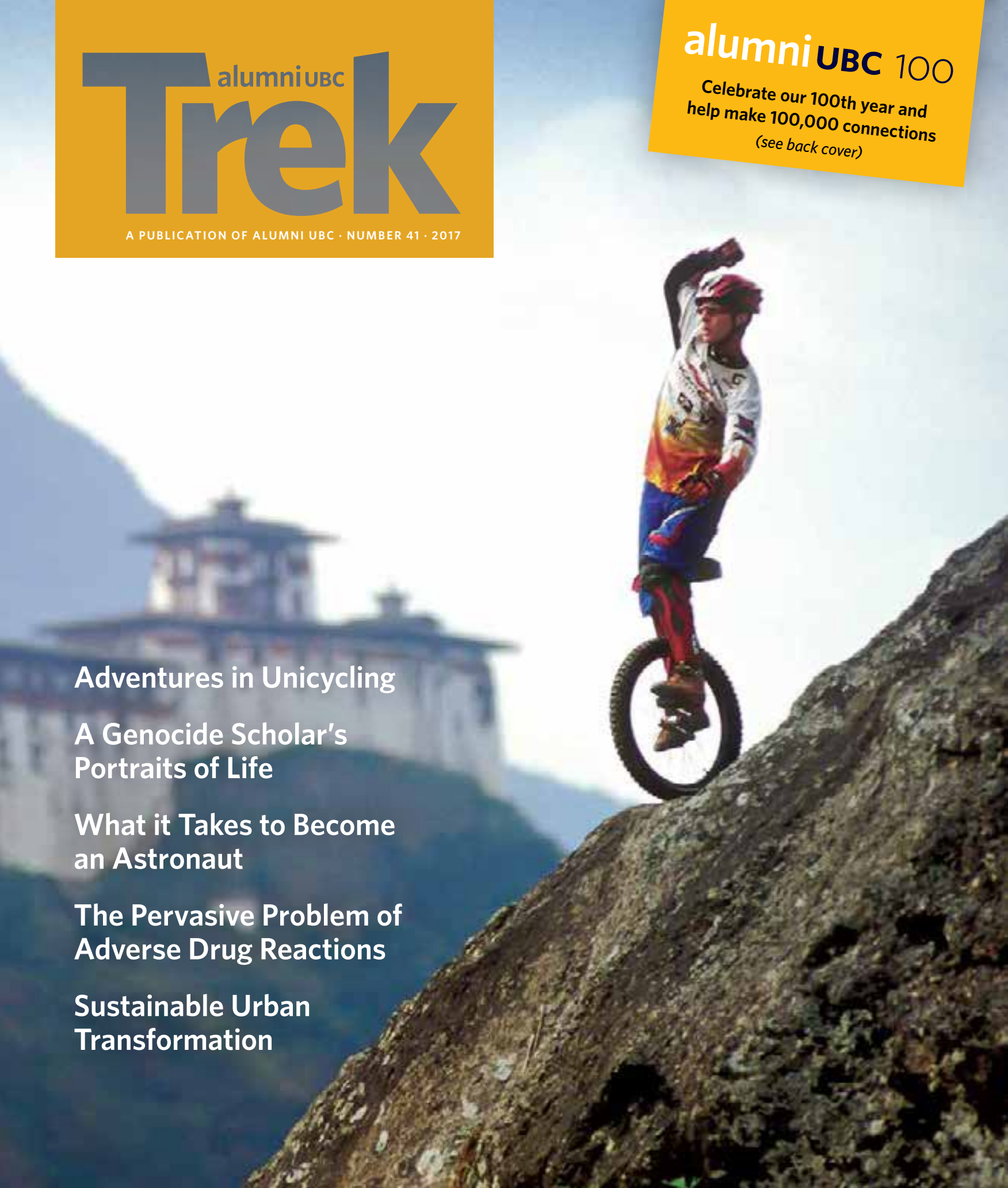
alumni UBC 100

Celebrate our 100th year and help make 100,000 connections

(see back cover)



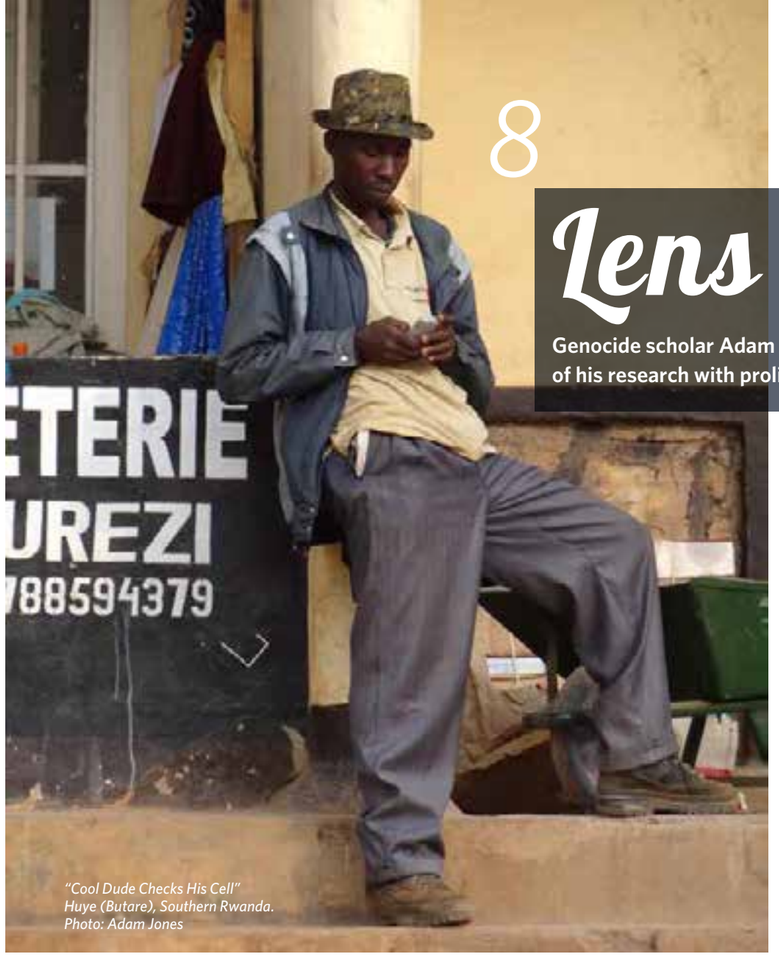
Adventures in Unicycling

A Genocide Scholar's Portraits of Life

What it Takes to Become an Astronaut

The Pervasive Problem of Adverse Drug Reactions

Sustainable Urban Transformation



"Cool Dude Checks His Cell"
Huye (Butare), Southern Rwanda.
Photo: Adam Jones

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Genocide scholar Adam Jones balances the serious nature of his research with prolific travel and photography.

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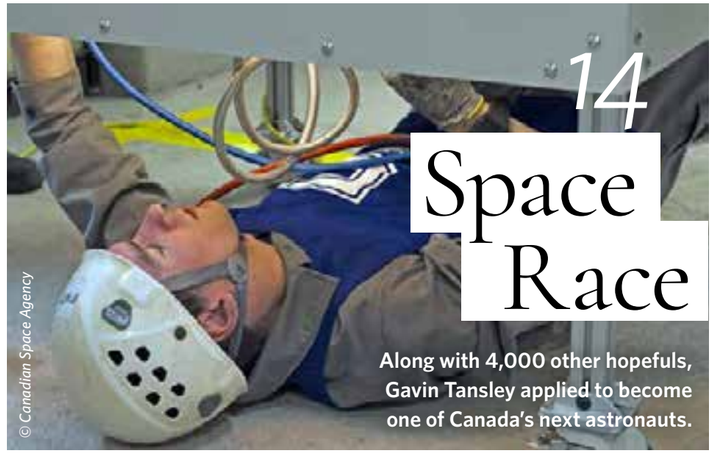

© Canadian Space Agency

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Along with 4,000 other hopefuls, Gavin Tansley applied to become one of Canada's next astronauts.

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Louise Schwarz started her recycling business back in the 1980s, when blue boxes were still a rarity and landfills festered unchecked.

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What do geoscience and unicycling have in common? More than you'd think, according to Kris Holm.

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Amani Saini is on a mission to prevent one of Canada's leading causes of death.

alumni UBC 100: We are One

Be part of the celebration and help make 100,000 connections with UBC and your fellow alumni. Flip this magazine around and open the back cover to find out more.

COVER IMAGE:
UBC alumni tend to be multi-talented, and **Kris Holm** – a professional geoscientist who also happens to be an accomplished unicycle athlete and entrepreneur – is no exception. It's an understatement to say he likes off-road riding; here he is balancing in front of Trongsa Dzong, a fortress in Bhutan (Photo: Sean F. White). Read his story on page 18.

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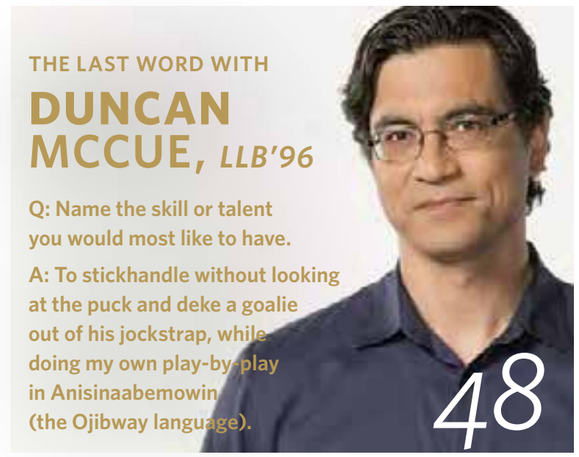
SMALL CITY, BIG IDEAS

How UBC is modelling sustainable urban transformation



THE LAST WORD WITH

DUNCAN MCCUE, *LLB'96*

Q: Name the skill or talent you would most like to have.

A: To stickhandle without looking at the puck and deke a goalie out of his jockstrap, while doing my own play-by-play in Anisinaabemowin (the Ojibway language).

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HAPPY BIRTHDAY *TO YOU*

Have you ever noticed how UBC grads seem to be everywhere? From the Prime Minister, to my federal MP, to my dentist, to the volunteer treasurer on my strata board, to the colleague who's sitting next to me as I'm writing this – there's just no getting away from them. And (with the exception of said colleague's offensive Christmas sweater collection, which gets aired from November) that's a good thing, because where would we be without such well-educated health professionals, lawmakers, volunteers, and colleagues (obsessed with Christmas or otherwise)? Admittedly, there's a high concentration of UBC alumni living here in the Vancouver area, but they can also be found across Canada and in about 140 other countries.

Among them are Nobel laureates, prime ministers, Olympic medallists, authors, actors, and entrepreneurs. But beyond the better-known names, there are countless UBC grads you've probably never heard of who are quietly making their mark on the world. The small but diverse selection of alumni profiles we share in this issue demonstrates the impressive breadth of experience and accomplishment to be found among the membership of *alumni UBC*.

In fact, if there were an official theme for this issue, it would be "multi-talented." You can read about a violin-playing, unicyling geoscientist (that's not to say he does everything at the same time – he's multi-talented, not reckless); a genocide scholar with a passion for photography; and a surgeon who aspires to be an astronaut one day. If he makes it, he'll be following in the footsteps of Bjarni Tryggvason, *BSc'72*, who was the sixth Canadian – and first UBC alumnus – in space (not counting Roberta Bondar, the second Canadian in space, who was awarded an honorary degree by UBC last year). It's enough to make an editor feel like an under-achiever.

Although we can't all be Nobel laureates, prime ministers, prime athletes, billionaire inventors, or astronauts – we can all vote with a conscience, reduce our individual footprint on the planet, and do our bit to help propel great human achievement (like the teachers, the parents, the benefactors of research, the coaches and the advocates who are typically behind the great achievements so often associated with just one name).

Much good can come from many small actions driven by common intent. Maybe that's what was on the minds of the small group of far-sighted grads who, on May 4, 1917, held a meeting and established *alumni UBC*. There were fewer than 100 active members on the rolls, back then. Today there are more than 325,000 UBC alumni living around the globe, and that's a force to be reckoned with.

So happy birthday, and May the 4th be with you... I mean, *Tuum est.*

Vanessa Clarke
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TAKE NOTE

GOOD BACTERIA CLEANS WATER

A UBC-developed system that uses bacteria to turn non-potable water into drinking water is undergoing testing prior to being installed in remote communities in Canada and beyond where clean drinking water is hard to come by.

"Access to clean drinking water is a constant challenge for millions of people around the world," says project lead Pierre Bérubé, a UBC civil engineering professor. "Our goal is to provide a model for low-cost, effective water treatment for communities, and to help locals help themselves as they build, operate and even expand their water treatment plants."

The system consists of tanks of fibre membranes that catch and hold contaminants – dirt, organic particles, bacteria and viruses – while letting water filter through. A community of beneficial bacteria, or biofilm, functions as the second line of defence, working in concert to break down pollutants.

"Membrane treatment can remove over 99.99 per cent of contaminants, making it ideal for making drinking water," says Bérubé, who developed the system with support from the federally funded Canada-India research organization IC-IMPACTS.

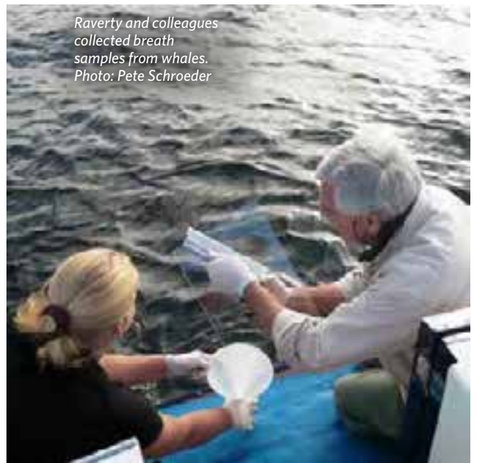
Membrane water treatment is not new, but Bérubé says the modifications developed by his team produce an even more effective solution. "Our system is the first to use gravity to scour and remove captured contaminants, which otherwise accumulate and clog the membrane. It's low-maintenance and as efficient as conventional approaches that need chemicals and complex mechanical systems to keep the membranes clean," he says. "The biofilm also helps by essentially eating away at the captured contaminants. You just open and close a few valves every 24 hours in order to 'lift' the water and let gravity and biology do their thing. This means significant savings in time and money over the lifetime of the system."

BAD BACTERIA THREATENS WHALES

Droplets and exhaled breath caught from the blowholes of killer whales along the Pacific coast are providing scientists with insights into whale health and revealing bacteria and fungi that may be a threat to the mammals.

"We wanted to find out what sort of bacteria and fungi are present in healthy whales and the potential pathogens they are being exposed to in their environment," said Stephen Raverty, the lead author on the study and an adjunct professor at UBC's Institute for the Oceans and Fisheries. "In some circumstances, these pathogenic microbes could pose a threat to the animals and contribute to clinical disease."

A group of fish-eating killer whales, known as southern resident killer whales, are an endangered species that live in the Pacific Ocean off the coast of California and north to the Salish Sea off the western coast of British Columbia. Over the course of one decade in the 1990s, their numbers dropped from about 108 animals to about 70. Some of the threats to whales include changes to their habitat, such as increased shipping traffic, noise, contaminants, and less prey. But these factors alone do not explain why the whale population hasn't recovered.



Raverty and colleagues collected breath samples from whales. Photo: Pete Schroeder

This latest effort gives scientists a look at the microbiome of the large mammals. The findings can be used as a baseline to compare how the health of whales change over time, especially when there is evidence of disease.

Raverty and his colleagues found bacteria and fungi in the whales that cause disease in humans and land-based animals, including salmonella, Staphylococcus aureus and fungi such as Penicillium, and Phoma, among others. These results were compared to the microbial pathogens that Raverty and his colleagues are finding in whale autopsies, also known as necropsies, of stranded killer whales in the region.

"We're not sure if these microbes naturally occur in the marine environment or if they may be terrestrially sourced," said Raverty. "These animals are long ranging and as they migrate along the coast, they are exposed to agricultural run-off and urban discharge, which may introduce a variety of microbes into the water."

Researchers also found evidence of antibiotic resistance in some of the bacteria, possibly related to human activities in coastal regions and in the marine habitat.

"Assessing whether animals are healthy or sick is virtually impossible to do for live animals as big as whales," said Andrew Trites, director of the Marine Mammal Research Unit at UBC, who was not involved in the study. "Raverty and his colleagues found a way to assess health by collecting microbiota and pathogens when the whales exhaled between dives. It is an ingenious way to give whales a checkup."

A PROMISING TREATMENT FOR BLADDER CANCER

A drug created from a malaria protein stopped tumour growth of chemotherapy-resistant bladder cancer, offering hope for cancer patients not responding to standard treatments.

"This is the first study where we put the concept of using malaria proteins for cancer therapy into a direct clinical context," said Mads Daugaard, assistant professor of urologic science and a senior research scientist at the Vancouver Prostate Centre and the Vancouver Coastal Health Research Institute. "There is a massive clinical need to find new treatments for bladder cancer and we saw an opportunity to target this disease with our new malaria drug."

The study advances previous research that showed that a protein from the malaria parasite, called VAR2CSA, could target a wide range of cancer tumours.

In the new research, highly aggressive bladder cancer tumours that were completely resistant to chemotherapy were implanted in the bladder of mice. The researchers then tested whether the malaria protein could deliver drugs directly to tumours.

They found that the tumours responded dramatically to the malaria drug combo.

Eighty per cent of the treated animals were alive after 70 days, whereas all the other animals, in three different control groups, succumbed to bladder cancer.

Bladder cancer is the fifth most common cancer and the most expensive cancer to manage on a per patient basis. Currently, there is only one line of chemotherapy used for invasive bladder cancer, and there have been few advances towards finding new treatments in the past 20 years.

"Chemotherapy is the mainstay of treatment, and only a minority of patients respond to the second treatment option, immunotherapy," said Daugaard. "We're very excited by these results because it shows that we are on our way to developing a completely new treatment option for lethal bladder cancer."

In previous studies, Daugaard and his colleague Ali Salanti (University of Copenhagen) established that the VAR2CSA protein could be used to deliver cancer drugs directly to tumours, because it binds to a sugar molecule that is found only in cancer tumours and the placenta of pregnant animals.

These latest findings demonstrate that the same sugar is expressed in bladder cancer and is especially abundant in tumours that progress after being treated with the standard chemotherapy drug cisplatin.

The researchers' next steps are to design a process that could see the VAR2CSA drug combination manufactured on a larger scale to begin clinical trials. This is being led by Daugaard and Salanti through their startup company VAR2 Pharmaceuticals.

HOW BIRTHPLACE AND EDUCATION INFLUENCE MARRIAGE CHOICES IN CHINA

Many people choose their spouse based on shared values and interests. But in China, another important, relatively unknown factor plays a role: *hukou*, and it may be contributing to growing socioeconomic disparity in the country's largest city, according to a UBC study.

Hukou is a household registration system in China that limits access to social benefits largely based on the birthplace of the holder. The UBC-led sociology study examined the effect of hukou and education on heterosexual marriage patterns in China's largest city, Shanghai. Residents with Shanghai hukou, for example, have better access to jobs, schools, housing and other opportunities in that city compared to migrants, who are effectively treated as second-class citizens. For migrants, obtaining Shanghai hukou is challenging and rarely successful. The researchers found that, in Shanghai, local hukou shapes individual marital choices and is considered a valuable attribute in the marriage market.

"When we think about marriage, we often think about love and romance," said Yue Qian, assistant professor of sociology and the study's lead author. "But in reality, marriage choices are usually filtered by other factors. In this study, we found that hukou has a significant effect."

The researchers used data from a 2013 population survey in Shanghai that asked respondents who were born in the 1980s about their own and their spouses' hukou and education when they first got married. The sample included 1,247 couples. In cases of hukou intermarriage – where one spouse has Shanghai hukou and the other is a migrant – couples were more likely to involve a Shanghai husband and a migrant wife (14 per cent) than a Shanghai wife and a migrant husband (six per cent), the researchers found.

Education also proved to be an important factor in marital decisions, with the probability of a migrant marrying a spouse with Shanghai hukou increasing with the migrant's education level. "It's a bit of a tradeoff," said Qian. "If someone with Shanghai hukou marries a migrant, then their migrant spouse needs to at least have the same or a higher education level. Otherwise, it seems they have nothing to gain economically from marriage."

The findings are important because they reveal how China's hukou system is widening resource inequality between migrants and locals and between the educated and less educated, said Qian. This is especially true in Shanghai where nearly half of the population is made up of migrants.

Qian is now studying Asian immigrants to the US. Since hukou is similar to citizenship status, she is interested in seeing if similar marriage patterns emerge. The Shanghai study was co-authored by Brown University sociology professor Zhenchao Qian.

SMOKY WITH A HINT OF SKUNK

UBC scientists have scanned the genome of cannabis plants to find the genes responsible for giving various strains their lemony, skunky or earthy flavours, an important step for the budding legal cannabis industry.

"The goal is to develop well-defined and highly-reproducible cannabis varieties. This is similar to the wine industry, which depends on defined varieties such as chardonnay or merlot for high value products," said Jörg Bohlmann, a professor in the Michael Smith Laboratories and Faculty of Forestry at UBC. "Our genomics work can inform breeders of commercial varieties, and which genes to pay attention to for specific flavour qualities."

Q&A

COULD BRAIN PATTERNS BE USED TO COMMUNICATE PATIENT WISHES IN CASES OF SEVERE BRAIN INJURY?

By Heather Amos

A growing field of research is examining the brain patterns produced by people with severe brain injuries who can no longer communicate and appear to be in a vegetative state. Some have argued that one day we may be able to unlock a code from these patterns and communicate with these patients.

Two UBC neuroethicists are studying what this might mean for Canada and other countries that have recently introduced legislation for physician-assisted death. In a *JAMA Neurology* article published this March, **Judy Illes** and **Emanuel Cabral** examine the ethics around end-of-life decision-making for patients with these injuries.

Are there any examples in Canada or in other countries where patients with severe brain injuries who were unable to communicate have been able to access physician-assisted death?

EC: So far in Canada, there are no known cases of patients with brain trauma who have tried to access physician-assisted death. In the United States and the Netherlands, there have been cases where patients with brain trauma have been asked whether they wanted to prolong their life. In all of these cases, the patients suffered from a specific form of brain trauma called locked-in syndrome. Essentially, these people maintain a good awareness and understanding of their surroundings, but are unable to verbally communicate because they are practically paralyzed within their own bodies. In most cases, patients manage to communicate through eye-blinking or restricted body movements, and sometimes using an alphabet board.

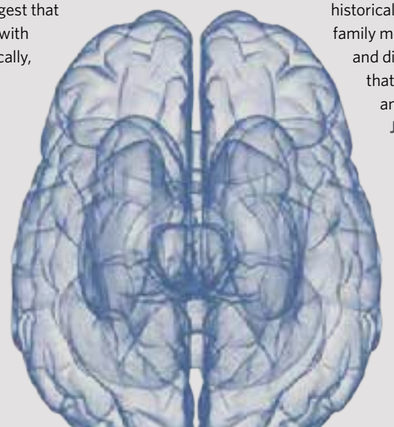
In one such case, physicians in the United States were able to assess one man's memory and thinking by communicating through small head movements. They also allowed him to make decisions on receiving life-prolonging treatments using this method. In another case in the Netherlands, another man with locked-in syndrome used blinking to communicate that he wanted physician-assisted death. After several weeks of consulting with the patient, other physicians and the family, the patient was administered life-ending drugs.

JI: These patients have used indirect "codes" to express their end-of-life preferences. Some people might logically suggest that we can use brain imaging as the "code" to communicate with people in minimally conscious states and that, hypothetically, this could open legal avenues for these patients to request physician-assisted death. Our paper anticipates this question and addresses the issues around it.

How likely is it that we will be communicating with patients about end-of-life decisions by analyzing their brain patterns?

JI: The public is already asking. We need both to anticipate such questions and be prepared to be responsive to them as a professional community.

EC: The idea seems far-fetched. However, studies have shown that it might be possible to use brain imaging to communicate with patients in minimally conscious states. As it stands, this communication channel is still quite weak, but, as research continues, it has led to questions about whether this type of communication might be applied to end-of-life care.



Under Canadian law, verbal communication is not a requirement for physician-assisted death. However, if the person has difficulty communicating, everything must be done to provide a reliable way through which the person can understand the information that is provided to them and communicate their decision. Currently, no such system exists to do so with patients in minimally conscious states.

What are your concerns about using this form of communication?

EC: People with severe brain trauma make up a highly vulnerable and historically neglected population whose health is placed in the hands of family members or health professionals. If we consider feminist ethics and disability ethics, they both emphasize that we have to be certain that the person fully understands the information given to them and their expressed wishes are clear.

JI: There is a huge leap, however, between communicating directly with someone, communicating through a tool like a spelling board, and using statistical interpretation of brain signals as a sign of preference or desire. We would need to be absolutely certain that the answers interpreted through brain imaging are what patients intended to express, and that their answers reflect reproducible, intact decision-making abilities. Researchers are still working out how to interpret the different signals that injured brains produce.

Q & A

HOW TO FIGHT FAKE NEWS

By Corey Allen

The proliferation of fake news is transforming the way people, including children, perceive what's happening in the world around them. **Ron Darvin**, a lecturer and researcher in the faculty of education, studies digital literacy skills of students in kindergarten through Grade 12. In this Q&A, he discusses the trend of fake news, how to fight it, and what parents can do to make sure their children can tell the difference.

What is fake news?

Fake news has become a catch-all term for everything from hoaxes to conspiracy theories to "alternative facts." To combat fake news, we have to distinguish it from satire or news that people just don't want to hear. Fake news is fabricated, deceptive or distorted information meant to mislead the public. Motivations for fake news can be political or to promote self-interests, while others do it to get their five minutes of fame. For some, fake news is a business. Digital ads generate profits, and websites with sensational fake news are paid for every click that they get.

What are some ways people can combat fake news?

While this feature hasn't made its way to Canada yet, Facebook has started rolling out a third-party fact-checking tool in the US and Germany that will label fake news shared on the network as "disputed." Google Chrome extensions include something called a "BS Detector," which displays a red warning when you're about to share something from a questionable source. Fact-checking sites like Snopes and Politifact can also be valuable resources. A site called Hoax Slayer combats email scams and debunks hoaxes that have gone viral.

Apart from using these tools, users should also know how to examine online texts more closely. This would include understanding the political leanings of certain news sites, analyzing domain names or URLs to make sure they are legitimate, or recognizing poor web design. Consuming news effectively requires the audience to be vigilant about what they are reading, listening or watching, and figuring out who created this content and for what purpose.

How can parents teach their kids about fake news?

Kids have two worlds: offline and online. More than parents just asking their child: "How was school today?" they should also ask them what they've read online, on Facebook, or seen on Snapchat that day. Parents can role model digital literacy skills to their children and provide them with the right tools to verify what's online. They have to surround them with legitimate news sources and help them learn how to distinguish fact from opinion at a young age.

How is this era of post-truth affecting kids today?

Fake news has consequences and important implications for whom we elect, the laws we pass, and the kinds of choices we make in our lives. Without the right critical tools, our kids can become not only victims of fake news, but also promoters of it, by indiscriminately sharing things online.

In a culture of clickbait, emotions rather than facts can shape public opinion. It becomes easier for us to rely on what feels right, rather than to figure out what is right. The irony of social media is that while it's supposed to open doors to the rest of the world, it can actually usher us into filter bubbles where we hear what we want to hear. Facebook profits when we keep clicking, liking and sharing stuff online, so their algorithms make sure that what pops up on our newsfeed will make us comfortable enough to keep coming back. This bubble and what we fill it with naturally shapes the way our kids will think about the world.

The research is part of an ongoing collaboration between Bohlmann, graduate student Judith Booth, and Jonathan Page, an adjunct professor in the botany department who founded the cannabis testing and biotechnology company Anandia Labs.

They found about 30 terpene synthase genes that contribute to diverse flavours in cannabis. This number is comparable to similar genes that play a role in grapevine flavour for the wine industry. The genes the researchers discovered play a role in producing natural products like limonene, myrcene, and pinene in the cannabis plants. These fragrant molecules are generally known in the industry as terpenes.

"The limonene compound produces a lemon-like flavor, and myrcene produces the dank, earthy flavour characteristic of purple kush," says Booth.

They also found a gene that produces the signature terpene of cannabis, beta-caryophyllene, which interacts with cannabinoid receptors in human cells along with other active ingredients in cannabis.

Bohlmann says the economic potential of a regulated cannabis industry is huge, but a current challenge is that growers are working with a crop that is not well standardized and highly variable for its key natural product profiles.

"There is a need for high-quality and consistent products made from well-defined varieties." he said.

The researchers say it will also be important to examine to what extent terpene compounds might interact with the cannabinoid compounds such as tetrahydrocannabinol (THC) that confer the medicinal properties of cannabis.

LAZYBONES

Inactive teens have weaker bones than those who are physically active, according to a new study.

Researchers at UBC and the Centre for Hip Health and Mobility at the Vancouver Coastal Health Research Institute measured the physical activity and bone strength of 309 teenagers over a specific four-year period that is crucial for lifelong, healthy skeletal development.

"We found that teens who are less active had weaker bones, and bone strength is critical for preventing fractures," said Leigh Gabel, lead author and PhD candidate in orthopedics at UBC.

Gabel and her co-investigators used high resolution 3D X-ray images to compare differences between youth who met the daily recommendation of 60 minutes of moderate-to-vigorous physical activity per day and those who got less than 30 minutes a day.

The four-year window – between the ages of 10 to 14 for girls and 12 to 16 for boys – is a vital time when as much as 36 per cent of the human skeleton is formed and bone is particularly responsive to physical activity.

"Kids who are sitting around are not loading their bones in ways that promote bone strength," said Gabel, which is why weight-bearing activities such as running and jumping and sports like soccer, ultimate Frisbee and basketball are important.

Bone strength is a combination of bone size, density and microarchitecture. While boys had larger and stronger bones throughout the study, both boys and girls responded in the same way to physical activity.

"We need school- and community-based approaches that make it easier for children and families to be more active," said co-author Heather McKay, a professor in orthopedics and family practice at UBC and the Centre for Hip Health and Mobility.

The good news is that activity does not have to be structured or organized to be effective: short bursts such as dancing at home, playing tag at the park, chasing your dog or hopping and skipping count, too.

"The bottom line is that children and youth need to step away from their screens and move to build the foundation for lifelong bone health," said McKay.

COWS AND CURFEWS

Dairy cows housed indoors want to break curfew and roam free, suggests new UBC research.

The study measured how much work dairy cows will do to access pasture, by pushing on a weighted gate. It found the cows worked hard, especially at night. As a comparison, the researchers also measured how much weight the cows would push to access their regular feed when kept indoors, and discovered that the cows worked just as hard to go outside as they did to access fresh feed when they were hungry.

Dan Weary and Marina von Keyserlingk. Photo: courtesy LFS Learning Centre

"Our findings show cows are highly motivated to be outside," said Marina von Keyserlingk, the study's lead author and an animal welfare professor in UBC's faculty of land and food systems.

von Keyserlingk said many dairy cows in Canada, the US and other parts of the world are housed exclusively indoors. This may meet the cow's basic needs for food, water, hygiene and shelter, but does not allow the cow to engage in natural behaviours.

"Improving the cow's quality of life is obviously important for the animal, but it's also important for the people involved, including the farmers that care for them and the consumers who buy dairy products," said co-author and UBC animal welfare professor Dan Weary.

The researchers said their findings support previous studies that found public opinion of a good life for cattle involves access to outdoor grazing. T

Lens on Life

Genocide scholar **Adam Jones,** *BA,88, PhD'99*, balances the serious nature of his research with prolific travel, and photography that captures the human dignity present in everyday life.

BY CHRIS CANNON
PHOTOS BY ADAM JONES

Adam Jones
Photo: Albert Law

Adam Jones plans his work in five-year cycles, re-evaluating his strategy as he goes. Like most polymaths, he enjoys warming multiple projects on the back burner while he's still cooking up the main course. A self-described "happy globetrotter," Jones has visited 103 countries so far, capturing thousands of local faces in his photography, while still finding time to write about music, media, politics, and of course, travel. "I am never as happy as when I have a bag slung over my shoulder," he says, "and I'm leaving some shoe rubber somewhere on the other side of the world."

His speech patterns reflect this *joie de vivre*; the words tumble out of his mouth in a waterfall of questions and answers, and he seems entirely capable of carrying on a dialogue with himself. Like his photography, his conversation style is upbeat, celebratory, and life-affirming. It would be easy to believe he doesn't have a serious bone in his body – not something you'd expect from one of the most prolific genocide scholars in the world.

A professor of political science at the UBC Okanagan campus since 2007, Jones teaches courses on African politics, human rights, mass media, gender and international relations, politics in film, and crimes against humanity. His photography and academic pursuits scan like two sides of the same coin, recording small moments of human dignity on film while studying its assault in the largest of contexts.

"I think that [photography] is very much connected with my interest in human rights," he says. "I find people fascinating. I find diverse societies fascinating; I'd like to see their livelihoods and interests protected rather than destroyed. It's a kind of safety valve on both an intellectual and emotional level."

Born in Singapore to British parents, Jones followed his father's postings with the Royal Air Force before his family eventually settled in Vernon, BC, where he first took up photography for a photo-essay assignment in a junior-high journalism course. "I still remember the photo shoot I did – the collection was called The Dark Side of Vernon," he laughs. "It was like piled-up broken bottles in alleyways, stuff that was challenging the image of Vernon as a sedate and pleasant place."

Jones caught the travel bug early, continuing his education in Victoria, Shanghai and Singapore before settling at UBC for an undergraduate degree in history and international relations in 1986. After a stint at McGill for his master's degree, he revisited UBC to complete his PhD in political science, studying political transitions and gender and ethnic conflict.

His interest in genocide came into focus in 1999, when a racial clash in Kosovo led to the deaths of thousands and displacement of millions, followed months later by 1400 civilian deaths in East Timor as the nation sought its independence from Indonesia.

Jones watched the Kosovo conflict unfold on television from Barcelona, where he was taking a break after completing his dissertation. But he couldn't ignore the headlines, noticing in particular the selective targeting of unarmed adult men – a phenomenon that feminist Mary Anne Warren had recently termed "gendercide." The targeted killing of innocents according to gender, gendercide would become one of Jones' many academic specialties as his career slowly took shape.

Despite its relative infancy as a scholarly topic, the act of genocide goes back to the earliest literature: Thucydides wrote about the Siege of Melos in 416, where the men were exterminated and the women and children sold into slavery; Homer recorded Agamemnon's call for the annihilation of the Trojans "down to the babies in their mothers' wombs"; and, of course, genocidal themes run throughout nearly all of the major religious works that have come down through the ages.

Although genocide is usually recognizable by the sheer numbers of victims, it is different than mass murder in kind rather than in scale. The targeted extermination of a population based on something that unites them – ethnicity, nationality, religious beliefs – genocide literally means "killing a race." The term was coined near the end of WWII to describe the atrocities committed by Nazis against certain European groups, deeds that had been described to that point as "mass killings" or "crimes against humanity." The first hint that the wanton extermination of an entire race was an especially evil act may have come in a 1941 radio broadcast by Winston Churchill, describing Hitler's march across the blood-soaked Russian plains:

"As his armies advance, whole districts are being exterminated. Literally scores of thousands of executions in cold blood are being perpetrated by the German police troops upon the Russian patriots who defend their native soil. Since the Mongol invasions of Europe in the sixteenth century, there has never been methodical, merciless butchery on such a scale... We are in the presence of a crime without a name."

The unthinkable act was finally termed in the 1943 book Axis Rule in Occupied Europe by Raphael Lemkin, a Polish Jew who barely escaped to Sweden ahead of Hitler's forces. Lemkin, who would lose 49 relatives to Hitler's camps, campaigned tirelessly for genocide to be recognized as a particularly horrendous crime. In 1951, his efforts paid off with General Assembly Resolution 260, a United Nations convention that established genocide in legal terms, seeking to prevent its occurrence and hold accountable its perpetrators.

"But you didn't really get the birth of any kind of notable academic exploration until the 1980s," says Jones. "The exception of course is the Holocaust, and that was already being studied as the Holocaust rather than in a comparative genocide context. It was really the 1915 Armenian genocide that became the second case added, and then we got the genocides in former Yugoslavia and then 1994 in Rwanda. And that, I think, really catalyzed the field."

With the recent advent of the 24-hour news cycle, the Rwanda genocide – in which 70 per cent of the ethnic Tutsi population was wiped out in 100 days by the Hutu majority – caught the attention of the West with a brutal detail to which most viewers were unaccustomed. The massacre of 800,000 unarmed civilians, many killed with machetes, brought the concept of genocide to the living room, and soon after to the classroom.

But it wasn't just watching history unfold, it was also a re-examination of history long considered settled. Just two years earlier was the Columbus quincentenary – the 500th anniversary of his 1492 arrival in the Americas. "Connected with that event was a small but really significant flood of very potent writings about genocides of indigenous peoples," Jones points out.

The first hint that the wanton extermination of an entire race was an especially evil act may have come in a 1941 radio broadcast by Winston Churchill, describing Hitler's march across the blood-soaked Russian plains

"Woman with Flowers on Street" Zadar, Croatia.

"I think genocide studies was one of the first fields to systematically explore that as targeted, systematic violence, to resuscitate a lot of cases that had fallen out of the historical records."

The growth of this area of study coincided with the growth of Jones' career, and he became a leading scholar in the field, writing or editing more than a dozen books on genocide and gendercide. After five years teaching at CIDE in Mexico City and a graduate fellowship at Yale, Jones returned to UBC and joined the Political Science department at the Okanagan campus.

Just as the rise of his academic field matched the timing of his career, the growth of technology transformed his photography. The rapid ascent of the digital camera and the explosion of the internet as a system of distribution empowered Jones to share small glimpses of human dignity even as he studied its extinction.

"I took photographs here and there the way the casual traveller does, really until the early 2000s," he recalls. "But once it became basically free, I found that incredibly liberating in the same way I found the internet liberating for my scholarship: the ability to get my work out there and distributed. I don't think there's a whole lot of motivational connection, but the two forms of productivity have definitely interwoven over the last couple of decades."

Jones' professional-quality camerawork and his penchant for generosity have bolstered his profile over the past decade. He shares his photos through a Creative Commons license, so they can be freely used by thousands of individuals and institutions, including many in the scholarly community. His Flickr profile contains more than 18,000 images from 61 countries, and has upwards of eight million views.

His pictures have also found a home in his classroom, where he keeps his global photo archive open in a browser window so he can illustrate points during lessons, connecting the students directly to the communities they are studying. "I find that a really nice pedagogical strategy," he says, "because we're in an ever more visual age, and a professor using power-point slides with reams of text on them is one thing, but having a sequence of vivid images to convey, and ones that you're intimately familiar with the circumstances of – it's really a huge boost on the teaching front."

And yet his photos aren't what one might expect in a class studying crimes against humanity. Despite select images of memorials, mass graves, and unimaginable human grief, most of his subjects are presented outside the context of war, going about their daily business of work and play – a reminder that we are not born into conflict, but all have an intrinsic majesty regardless of our home and station.

Jones tries to capture his subjects before they spot him so they don't stiffen up or become self-conscious. If a subject sees the photographer, he says, "you lose all of that ease and naturalness in the posture. And so much of the inherent dignity of human beings, even at the very bottom-most rungs of society, is in that ordinary composure of face and presentation of form."

"It has me always visually prowling around," he continues, "being more observant in my wanderings outside the country than I would otherwise be because I'm always looking for input and stimuli that could make an interesting photo. It keeps me more attuned to what's going on, more invested in it."

The rapid ascent of the digital camera and the explosion of the internet as a system of distribution empowered Jones to share small glimpses of human dignity even as he studied its extinction.

A number of his photos appear in his most recent book, the 900-page tome *Genocide: A Comprehensive Introduction*, which Jones considers his magnum opus. The text is the third edition of a graduate instruction book he originally wrote in 2006, and probably his last major work on the subject. "I'm not sure how much more I have to say about genocide as a big-picture topic," he says. "I've been writing about it for about 25 years now. I'm very happy with the work that I've done, and I know I've got more work to do on it, but I'm not particularly wedded to the subject for the remainder of my career."

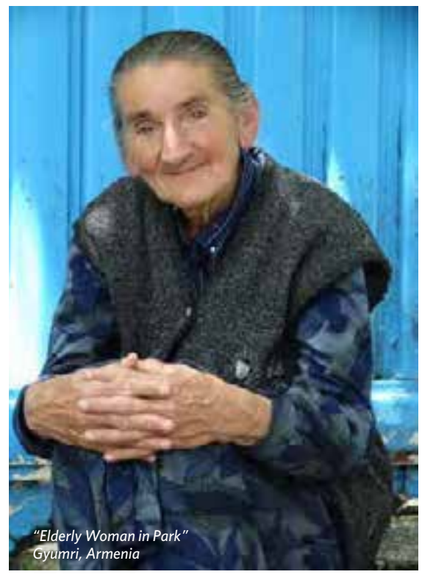
Undoubtedly this search for new directions is partly due to his inclination for eclectic experiences. "Sometimes I think there are topics that choose me more than I choose them," he chuckles. "I just get picked up by them and whirled around for a few days or a few years. I'm not sure how much choice I have in the matter sometimes."

But there is also the recognition that the field of genocide studies has suffered some recent setbacks. Since publishing the second edition of his book in 2010, he's noticed a disturbing rise in xenophobia and nationalism in countries that had seemed to be on an upward trajectory of progressive

"Ricksha Driver and Vehicle" Old City, Dhaka, Bangladesh

"Kids Outside Freedom Saloon" Rubona, Near Rubavu (Gisenyi), Rwanda

"Woman in Rain-Streaked Bus Window" Odessa, Ukraine



"Elderly Woman in Park" Gyumri, Armenia

"Young Woman outside Bet Gebriel-Rafael Rock-Hewn Church" Southeastern Cluster, Lalibela, Ethiopia

"Young Man at Fabric Stall" Old City, Dhaka, Bangladesh

cosmopolitanism. "Broadly speaking, the legal remedies and legal institutions that were being put in place to handle genocide and crimes against humanity were effective and popular," he says. "I thought that there was increasing consciousness on the part of leaders and the masses."

But recent political developments around the globe – the rise of religious jingoism in Southeast Asia, the endless civil war in Syria, the broken state in Libya, synagogue and mosque desecrations in the shadow of America's new white nationalism – have dotted the international landscape with a fresh roster of truly terrifying political figures.

"Today the international environment seems rather different and chillier," he laments. "You've got a lot more talk about putting up walls and keeping people out. I see disturbing evidence of things that I really cherished moving forward now being rolled back. Even at the level of nuclear annihilation it's a scary time, and I thought we put that one at least on the high shelf for a while."

Whatever effect the new political climate has on his academic work, nothing will keep Jones from travelling. This summer he is returning to the road for a voyage through the deep south of the United States, followed by trips to Qatar, Thailand, Bangladesh, Singapore, Malaysia, Australia, Finland, Estonia, Poland, Slovakia, Ukraine, and Moldova. His four-month expedition will be "sort of a combination of an intellectual survey, a travel account, and a photo essay," he muses. "Maybe something else that I'm still playing with." T

Explore all of Adam Jones' travel photography at ***flickr.com/photos/adam_jones***

The story behind the pictures: *For an online slideshow of images selected and captioned by Jones, please visit the online magazine:* **trekmagazine.alumni.ubc.ca**

"Young Girls Strike a Pose" Busua, Ghana

NASA astronaut Stephen Robinson is held aloft by Canadarm2. (Credit: NASA)

Space Race

Along with 4,000 other hopefuls, **Gavin Tansley**, *MD'12*, applied to be one of Canada's next two astronauts.

BY CHRIS PETTY, *MFA'86*

When Gavin Tansley was in grade 12, a perceptive counsellor set him up with an unusual job in the school's work placement program. The program, which was designed to give non-academic high school seniors a taste of the various trades available at post-secondary schools around the province, was not intended for high achievers like Tansley. But the counsellor saw the budding scientist in him and massaged the rules a bit to set up a placement with UBC researcher Dr. Cheryl Wellington (professor of pathology and laboratory medicine in the Djavad Mowafaghian Centre for Brain Health), who gave him a research project all his own.

"I got to look at cholesterol transport," he says, "and how it might influence the formation of the protein plaque responsible for Alzheimer's disease. It was an amazing opportunity for me, and I even got my first author publication and was a co-author on a couple of others."

The experience, he says, convinced him that his career should always be focused on creating new knowledge. "I wasn't particularly brilliant," he claims, "but I was really excited by that experience." It also made him a lifelong fan of UBC. "Having faculty like Dr. Wellington, willing to take a risk on a curious high school student and offer that kind of opportunity is what makes UBC special." It also convinced him to apply to UBC when he graduated from high school.

He started a bachelor's degree in cell biology and genetics, then transferred to medicine after his third year – a dream he'd had since childhood. During his MD training he spent time in BC's north working in remote areas, and discovered his research passion. The challenges of delivering medicine in centres far away from cities – what he calls austere, remote environments – excited him because of the opportunities for research but also because his work could cause positive change.

"It's much different providing medical services in places where they don't have the kind of resources we have in urban centres," he says. "You have to learn to be adaptable and inventive. My current work as a surgeon in trauma care links to that because emergency medicine sometimes requires creative solutions to immediate problems. You use the resources at hand."

The trick, he says, is to balance his passion for research and discovering new knowledge with his love for the practice of medicine. "I will always do both."

Currently, Tansley is working as a trauma surgeon in Halifax, doing his residency through Dalhousie. His career path is fairly clear: research into the area of medicine in austere environments and perhaps even a period of time with Médecins sans Frontiéres.

Unless, of course, he becomes Canada's next astronaut.

His love of research and medicine notwithstanding, Tansley's real siren call has always been the stars. "I've wanted to be an astronaut since I was a little kid," he says. "All through school I'd seek out books and magazines about space and astronauts." But he kept his interest under wraps in high school and after. "I didn't want to be that kid in school or that adult working a normal job who was still talking about being an astronaut," he laughs.

He thought of applying when the Canadian Space Agency (CSA) put out a call for Canada's next astronaut in 2009, but he didn't have the required professional experience – or his MD. He was sure he'd missed his chance, as the call for applications is a rare occurrence. But when the CSA put out another call in June 2016, he knew his moment had come. Almost 4,000 Canadians applied for the spot and, to his great joy, he was one of 72 selected to enter the first round of testing.

The selection process is a complex one. Candidates must undergo many series of tests to determine physical endurance, emotional stability and intellectual ability. Though CSA prefers candidates to not discuss the nature of these tests, Tansley did allow that they were difficult and draining. But did he feel he performed well?

"Meeting the other candidates is a great way to be humbled," he says. "You don't leave one of these testing events feeling good about yourself. You're being compared to the top tier. It's an amazing group of people. They could pick one of the names out of a hat and get a spectacular astronaut."

In spite of Tansley's self-doubts, he recently survived the agency's latest winnowing exercise to become one of the remaining 32 candidates. A decision of the final choice will be made this summer.

His medical background, he feels, has little to do with his success so far. "That's not why I was selected," he says. "It's less about my particular skill set and more about the level of training I've received. My research training gives me a very methodical approach to problems. And, being a trauma surgeon by definition means I have to assess life-threatening situations on the spot and come up with solutions quickly. I think that's why they value that training."

If he is chosen to be Canada's next astronaut, he won't necessarily be doing medical research. His primary job will be as an operator. Scientists on the ground will have experiments they want to conduct on the space station, and the astronauts become a set of skilled hands that can conduct those experiments appropriately and

NUMBERS ON THE FINAL 72 ASTRONAUT CANDIDATES

DEGREES BY FIELD OF STUDY

ENGINEERING
79

MEDICAL/HEALTH
38

PHYSICAL SCIENCES
35

BIOLOGICAL & BIOMEDICAL SCIENCES
23

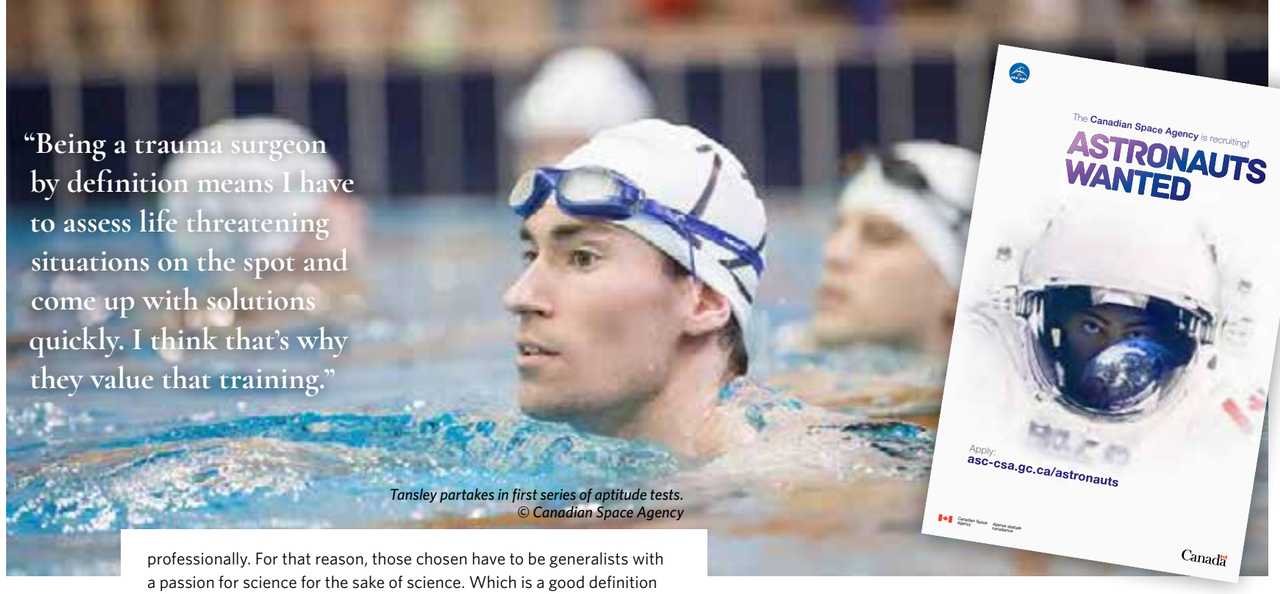
OTHER
21

AERONAUTICS & AEROSPACE
14

TOTAL NUMBER OF UNIVERSITY DEGREES HELD BY THE CANDIDATES
210

32% 68%

TOTAL NUMBER OF CANDIDATES
72



Tansley partakes in first series of aptitude tests.
© Canadian Space Agency

professionally. For that reason, those chosen have to be generalists with a passion for science for the sake of science. Which is a good definition of Gavin Tansley.

In spite of the more sober requirements of the job of astronaut, a brief perusal of the candidates’ resumes would seem to indicate that they, as individuals, are big risk takers. Rock climbers, sky divers, mountaineers, and crazies who go scuba diving in shark infested waters. Tansley himself is a dedicated rock climber and mountaineer. But he suggests that “risk” isn’t a motivating factor.

“I’m not a risk-taker,” he says. “I don’t think risk takers make it very far in those kinds of activities. If you’re a rock climber and a risk taker, you’re probably going to get hurt. I see myself as a risk avoider with a huge passion for adventure. Adventure takes you to these places and requires certain skills, but you’ve got to have a methodical, very calculated approach. You have to have the experience to do something safely. People who aspire to be an astronaut have that desire for exploration and adventure in common. It’s not about risk; it’s about adventure. And, at the same time, you’re working at the very top of human endeavour. That’s really attractive to a lot of people, me included, so we assume the risk.”

But becoming an astronaut means he will have to give up being a surgeon. He will have to move to Houston, Texas, and begin years of specialty training. He’s in his early 30s now, and, typically, astronauts retire in their mid 50s. After 20 years, he’ll be hopelessly behind as a medical practitioner. Is he sure the sacrifice is worth it?

Tansley partakes in first series of aptitude tests.
© Canadian Space Agency

Tansley partakes in second series of aptitude tests.
© Canadian Space Agency

“I’ve wanted to be a physician all my life,” says Tansley. “All my training, all my focus has been on that goal. I wouldn’t give it up for anything, except for the chance to be an astronaut. I’d do it in a heartbeat.”

Gavin Tansley lives with his wife in Halifax, Nova Scotia.

Update

Shortly before going to press, we learned that Gavin Tansley was unfortunately not one of the 17 candidates to move on to the final selection stages. “Although it is not happy news to hear, I look back on the experience so fondly that I’m having a hard time feeling disappointed,” he says. “I met truly incredible people and experienced things I would not have had the chance to experience otherwise. I will now press on through my surgical training and continue doing the things I love doing. I can only hope that one day there will be another call and at that point I’ll be a better candidate.” We’ll be rooting for him when he tries again.

*UBC alumnus **Bjarni Tryggvason**, BASc’72, was selected to be one of Canada’s first six astronauts in 1983. (Credit: NASA)*

Launch of the Space Shuttle Discovery on Mission STS-85 at 10:41 a.m. EDT on August 7, 1997, with Canadian Space Agency astronaut Bjarni Tryggvason aboard. (Credit: NASA)

WHAT ARE THE REQUIREMENTS FOR BECOMING AN ASTRONAUT?

Source: Canadian Space Agency

Who can apply? Persons residing in Canada and Canadian citizens residing abroad can apply. Preference will be given to Canadian citizens.

In which language/s do they need to be proficient? Either French or English. Proficiency in both official languages of Canada is an asset but not a requirement. However, Canadian Space Agency astronauts are based at NASA in Houston, Texas, where the working language is English. Moreover, the two official languages aboard the International Space Station are English and Russian.

Which university degree do they need? Candidates must have a bachelor’s degree from a recognized university in engineering or science (eg: physics, chemistry, biology, geology, mathematics, computer science) or a doctorate in medicine or dentistry.

How many years of professional experience should they have? Candidates must have at least three years of relevant professional experience OR be licenced to practise medicine in Canada. A master’s degree is equivalent to one year of professional experience, and a doctorate is equivalent to three years of professional experience.

Which qualities and skills are required? Motivation, resourcefulness and teamwork are all important qualities required to be part of the CSA’s astronaut corps. Judgment, integrity, reasoning, public speaking and the ability to synthesize and communicate using plain language are also necessary.

Is there a required height? The Soyuz capsule used to go to the International Space Station is limited in size. To be safe inside the capsule, the astronaut must measure between 149.5 cm and 190.5 cm (4’9” and 6’2.5”). This might change in the future.

Is there a required weight? Again, the Soyuz capsule used to go to the International Space Station is limited in size, so the astronaut must weigh between 50 kg and 95 kg (110 lb. and 209 lb.) to be safe inside the capsule. This might change in the future.

What about visual acuity? To be considered, applicants must meet very stringent medical requirements and be in excellent health. Applicants must score 20/20 (6/6) or better in each eye, with or without correction. Applicants who have undergone refractive laser surgery (PRK or LASIK) are eligible, but the Canadian Space Agency does not recommend that applicants undergo refractive laser surgery for the sole purpose of applying for employment as an astronaut.

Is there an age requirement? There is no official age requirement. The applicants chosen in 2009 by the Canadian Space Agency were 33 and 39 years old when they were selected. The applicants chosen by NASA in 2013 were between ages 26 and 46.

How many astronauts will be selected during the Canadian Space Agency’s 2016–2017 recruitment campaign? Two individuals will be selected as new members of the Canadian astronaut corps in the 2016–2017 recruitment campaign. The CSA is recruiting exceptional people with excellent health; a university education in science, engineering or medicine; and extensive knowledge and experience.

Lay of the Land

As a geoscientist, **Kris Holm**, *MSc'02*, makes his living from knowing the land. But he's probably covered more of it as an off-road unicyclist.

BY CHRIS PETTY, *MFA'86*

At four years old, Kris Holm, took up the violin. Over the years he became good at it, and while he trained in the classical mode, he picked up fiddling along the way. Learning the violin, he says, became something of a metaphor for the rest of his life, and his teacher, the late Frona Colquhoun, became his first and most influential mentor.

"Because I was doing it at such a young age," he says, "she taught me that I could learn something that seems impossible at first glance."

At some point, however, he must have decided that the violin wasn't going to pay the rent, so he looked to other activities. One day, shortly before his twelfth birthday, he saw a man in downtown Victoria riding a unicycle, playing a violin. "That's for me," he thought, and asked for one for his birthday. And so it was that one of the world's foremost unicycle athletes was born.

"Unicycling is a rare sport," he says, "because initially it's so difficult to do. Most sports, even the ones that are hard to do well, are easy to do badly. Anyone can get up on a skateboard, for example, and teeter precariously down the street. But even an athletic person can barely go a metre on a unicycle to start, and that stops a lot of people from trying."

Off-road unicycling was a natural for Holm, who was, by the 1980s, a committed rock climber. He started riding trails around western North America, incorporating it into his rock climbing passion. But unicycles have played a very small part in the history of wheeled vehicles, and when he began riding they were novelty items aimed at children, circus clowns and jugglers. As he advanced in the sport, he bought off-the-shelf unicycles and customized them with bigger tires and reinforced frames, but they weren't up to the rigours he put them through. Then, in 1998, he worked with a local machinist to build his own mountain unicycle.

By the mid '90s, mountain biking was becoming a big thing on Vancouver's North Shore and trails were being designed to challenge emerging mountain bike technology. At the same time, advancing video technology made it possible for riders and sponsors to film their escapades cheaply and easily. Holm's new unicycle (and his skill level) proved a great match for the demands of those world-class trails, and in 1998 he earned his first sponsorship from Norco Bicycles. A year later he began selling a small number of his branded cycles (Kris Holm Unicycles) through the online retailer, Unicycle.com. In 2003 he moved production offshore for international distribution.

To promote the sport, he has been featured in more than 50 videos, wrote a book (*The Essential Guide to Mountain and Trials Unicycling*) and founded unicycle trials – riding unicycles on obstacle courses – which has had its own world championship since 2002. He's cycled up mountains in Central America, down a volcano in Bolivia and along the Great Wall of China, as well as up and down North Shore mountains.

Freeriding at Mt. Seymour, BC. Photo: Richard Wheater

As a business model, Kris Holm Unicycles is definitely a 21st century phenomenon. His unicycles are built and distributed around the world from factories in Taiwan. He developed a saddle that provides a comfortable ride over rough terrain, and his units come equipped with a state-of-the-art disc brake. He also produces a line of protective gloves in Pakistan and a line of leg armour in China. All of this is conducted on the internet and without having to leave home except for an annual trip overseas to meet with suppliers. Kris Holm Unicycles are considered one of the top brands in the world. Each year, his company provides a grant to fund the most creative mountain unicycle adventure: The Evolution of Balance Award. As well, he sponsors his own Factory Team in international competitions, and was the first cycling company to join One Percent for the Planet, donating one per cent of his gross revenues to environmental causes.

Still, Holm considers his unicycle business and the sport itself to be his hobby. His intentional career, as he calls it, is in geoscience. He leads the geohazards group at BGC Engineering, which provides risk assessments of development and major industry projects for public and private clients. Holm and his colleagues assess debris potential in steep creeks that may flood; analyse slopes in danger of slumping; and investigate any other geological structure that may be subject to natural disruption. The team works with the Municipality of North Vancouver to assess potential damages from landslides and floods, stemming from the 30-plus steep streams that careen through residential areas, and helps them determine strategies to reduce any impact. They also work in Canmore to help devise ways to prevent the kind of damage that occurred during the devastating 2013 Alberta floods. Holm has also worked in various South American countries and in northern BC to assess risks in mining and forestry sites.

Kris Holm designed his own mountain unicycle. Photo: Sean F. White

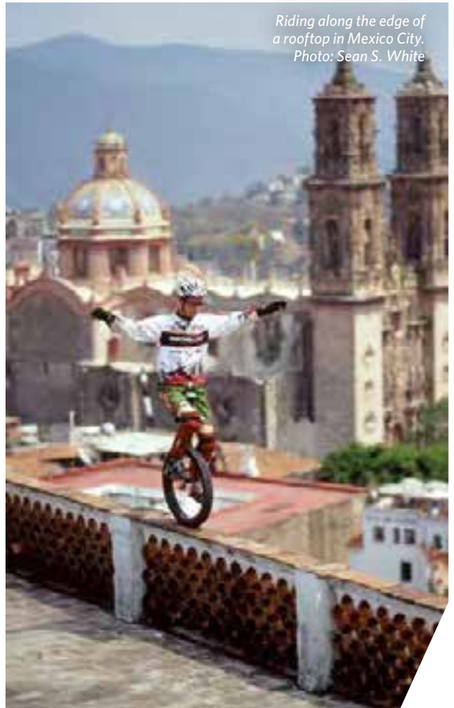
"You learn to recreate geological history in this job," he says, "to understand the forces that shaped a site over the past 10,000 years or more. You pose questions that have a direct bearing on people, where they're living, what risks they face, and how safe they can be. It has a real impact on a community."

Holm sees many parallels in his work as a geoscientist, as a unicylist and an entrepreneur. He's been able to conflate his experiences and learning in seemingly disparate endeavours into a unified whole. For one thing, few people understand what he does as a professional geoscientist, hardly anyone else does it, and communicating the complexities of the activity is challenging. The same can be said about unicycling.

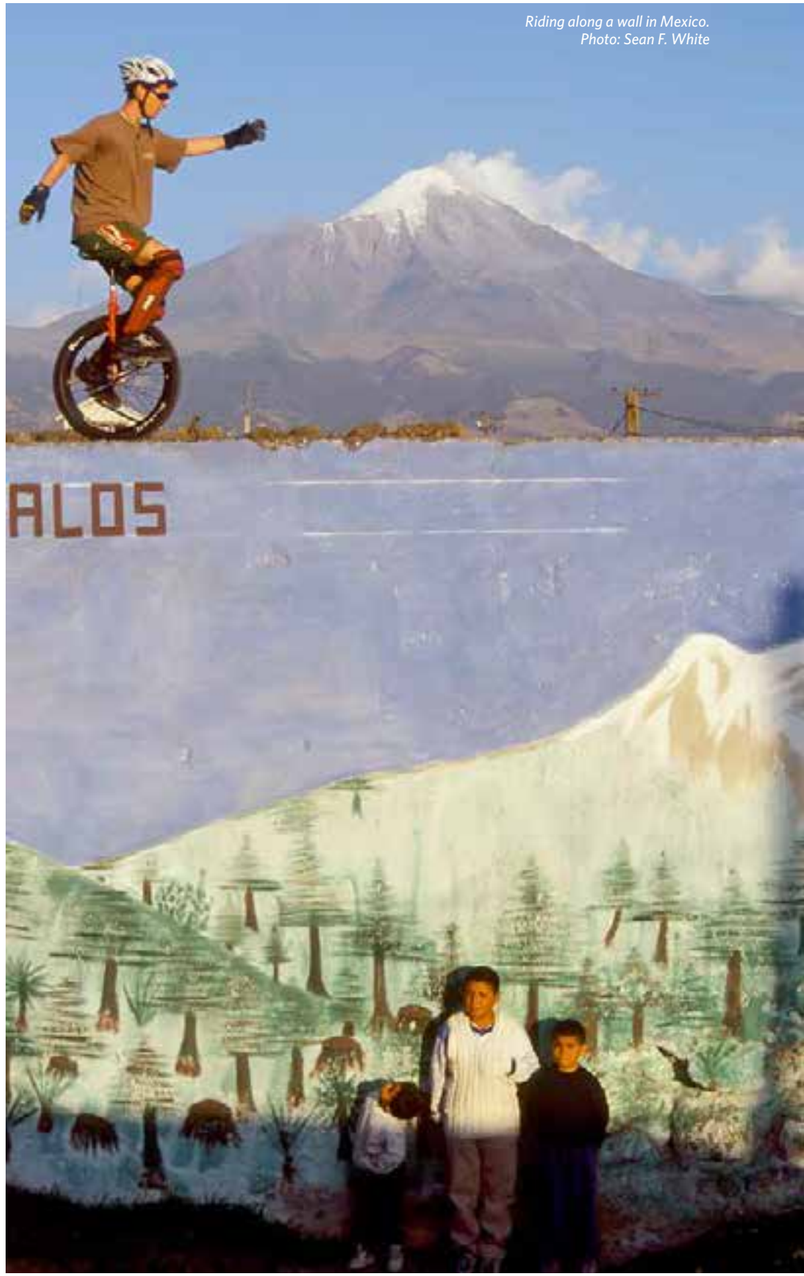
"Risk is about management," he says, "whether it's in unicycling or professional work. It's about focus, about engaging utterly in what you're doing."

Holm the geoscientist conducting terrain and geohazards fieldwork in a remote area of northwest British Columbia. Photo: Matthias Jakob

Assessing terrain and geohazards at 4,500m in the Chilean Andes. Photo: Matthias Jakob



Riding along the edge of a rooftop in Mexico City. Photo: Sean S. White



Riding along a wall in Mexico. Photo: Sean F. White

"There's also a collective aspect to both types of work," he says. "Even though there's only one name on the brand, it can't succeed without good social media managers, product builders and assemblers, distributors and retailers in different countries. Everything works better when everyone is inspired by a common interest. And that's the same when I'm managing a geoscience project."

But there's another struggle, one that's common to scientists and to elite athletes. "As a scientist, you have a passion for your discipline," he says. "You're good at it and you love it. Then, at some point you get a job and realize that you have to generate money, especially when you work as a consultant in a company. You're balancing two extremes: the pursuit of excellence for its own sake, and the need to achieve good profits in business.

"It's even more difficult as an athlete, especially in an independent sport like mountaineering or unicycling. Some people scorn you if you get sponsors because it seems that you're selling out, you're not pure. Suddenly I was on TV every two weeks. How do I stay true to the original reasons I ride? But I couldn't do it at a world level without sponsorship support. What I learned in professional riding I'm able to translate into my professional consulting life: doing something you love just for the joy of it, but also doing it in such a way that you can make a difference and make money."

Another parallel is the risk factor. By definition, investigating the potential of a damaging slope failure or rampaging creek and effectively communicating that to the client is fraught with professional peril. Similarly, racing down a mountain bike trail at breakneck speed (or cruising along the brow of the Chief near Squamish) is a heart-pounding, injury-inviting enterprise.

"Risk is about management," he says, "whether it's in unicycling or professional work. It's about focus, about engaging utterly in what you're doing. Anyway," he adds with a laugh, "I'm able to focus better when I'm a little scared."

Perhaps that's why he didn't pursue a career as a professional violinist. Not scary enough.

Kris Holm lives with his wife and two children at Wesbrook Village, UBC. Visit his website at ***www.krisholm.com****.*

Holm and his dog Loki can often be spotted on campus. Photo: Paul Joseph

Unicycles have played a very small part in the history of wheeled vehicles, and when he began riding they were novelty items aimed at children, circus clowns and jugglers.

Sorting It Out

Back when festering landfills were out of sight and out of mind for most people, **Louise Schwarz**, *BA'83*, decided to start tackling one source of the problem head-on.

BY ROSEMARY ANDERSON, *BA'74*

Photos by Martin Dee

It was late summer in 1988. Back then, sustainability was a little-used word in the *Canadian Oxford*, blue boxes were a rare sight, and the toxic soups dished up by landfills had gained little of the notoriety they deserve. Like most of the people she knew, Louise Schwarz, *BA'83*, hadn't given a second thought to what becomes of the trash we throw away.

But on that September day, she was visiting her friend JoJo in Seattle, who was "a greenie" and ahead of the curve. JoJo pointed out a green bin she'd placed outside her apartment. "I've got all the people in the building doing recycling," she remarked, "so we're not just throwing it all away."

> To begin with, it was just Schwarz alone, picking up paper trash in her Chevy Chevette

Schwarz, who had just returned to Vancouver after several years teaching ESL in Europe, was not attuned to environmental issues. Although she had started noticing some things – the way people still smoked in hospitals in Italy, for example, and how crowded some cities were becoming – not once had she ever considered the life cycle of garbage.

But when JoJo spoke that day about the concept of recycling, a realization hit Schwarz "like a ton of lead bricks": when we throw garbage "away" it is out of sight and out of mind, but all we are really doing is shifting its location. Once garbage, always garbage. And what starts out as a seemingly manageable pit of refuse gets added to and added to, until it becomes a mountain of toxic metals and stinking, germ-infested rot – quite possibly near someone else's home – filling up space and sucking clean air from people and animals and plants. The more she thought about it, the more her head reeled.

Over the next few months, Schwarz couldn't shake the nagging conviction that she had to take on this garbage monster. "I cannot be a person who stands on the sidelines and says, 'Oooh, it's a big mess, and I can't do anything to change anything'," she says.

At the time, one of her brothers was running a courier business. When she observed the "sheer volume of envelopes" going into his garbage, she knew this was something she could tackle: she could recycle office paper. She sent out a letter to commercial enterprises, offering to collect their paper trash for the bargain basement price of a few dollars a load, "depending on frequency." She picked her fee out of thin air, she laughingly admits, but she knew of no other service like it on which to base her numbers. The letter itself was simple and direct. The welfare of the environment "is the most pressing issue we face today," it said, and it went on to extol recycling as "a necessary alternative to the ever-growing problem of our waste."

The phone started ringing, and Schwarz's little non-profit social enterprise was born. She called it Recycling Alternative. To begin with, it was just Schwarz alone, picking up paper trash in her Chevy Chevette hatchback, but the venture soon graduated to needing a van, and Schwarz was joined by her business partner, Robert Weatherbe.

The company switched into full gear as a for-profit business in 1998. Today, they boast a fleet of 20 vehicles, fueled – whenever possible – with recycled biodiesel, and they service a wide variety of commercial clients, from offices to shopping malls, restaurants, large apartment buildings, and even YVR.

In addition to paper, they sort, bale, and deliver soft plastics and cardboard for recycling; they collect e-waste, batteries, lights, and Styrofoam, and disseminate these to the appropriate processing specialists; they shred highly sensitive documents for business and residential clients; and, every day, they collect, aggregate, and deliver tons of food waste for composting.

Always concerned about the impact of their fleet's carbon footprint, Weatherbe designed a special vehicle they fondly call the "Zero Waste" truck. It has an engine smaller than usual for a vehicle its size and bears three distinct waste compartments. One Zero Waste truck can do the complete rounds of a pickup route and return to the depot having collected three totally separate recycling streams in a single pass.

In another novel move, they've been running experiments on a revolutionary food composter. You can feed this composter 10 totes of mouldy, disgusting, messy food waste and, in 24 hours, you'll have an output of zero food waste and two totes of earth that smells like chicory coffee, is dry, has no pathogens, and isn't infested with fruit flies, rats, or anything else. Scientists from UBC's Faculty of Land and Food Systems are working with Recycling Alternative to test the material's growing yield (see "Miracle Microbe" on the next page).

For a high-volume enterprise such as a convention center or an airport facility, having one of these composting systems on site means they can scale down from their daily (and often twice-daily) organics pickups to just one collection per week. Not only would this help them slash their waste-disposal costs, but the reduced frequency of pickup would mean a lot less CO_2 is being emitted by garbage trucks. Another advantage is no longer having to contend with smelly garbage awaiting pickup and tempting rats, mice, and other vermin to the feast.

Near one end of the facility, Weatherbe has a whole row of these composters and is conducting further experiments to see how they handle plastics. Nobody wants plastics in their compost and, in any case, current binning protocols require that the entire bin has to go to a landfill if plastics such as sandwich wrappers or sushi trays happen to get dumped in along with the banana peels and other food waste, "so we wanted to test what happens if we threw in packaged food – hummus… a tray of sushi," says Schwarz. "What we've discovered is the heat in this machine helps break open and coagulate the plastic. The microbes go in and start

Louise Schwarz founded Recycling Alternative in the 1980s.

Recycling Alternative shares space with its Green Hub neighbour, United We Can.

eating the food, and then it's so much easier to sift out." They run the mix through a tumbler to catch the macro-plastics, then centrifuge what's left to separate out the micro-plastics. "Bear in mind, this is experimental," Schwarz cautions, "but the goal is a nutrient-rich compost tea." The UBC scientists are keen to test this end product as well, when it is ready.

The company's focus has always been recycling, Schwarz says, but what sets them apart is their innovative approach to waste reduction, and their integrative approach to helping clients improve their own recycling infrastructure. For example, they help educate clients so they can choose more environmentally-friendly product lines, meaning less of their waste must go to a landfill. And long before the City of Vancouver banned the dumping of organics in regular garbage, Recycling Alternative was heavily invested in exploring new ways to effectively reduce clients' organic waste.

Recycling Alternative is, at heart, a community-building enterprise, and it enjoys sharing space, as well as values such as inclusive employment, with its Green Hub neighbour, United We Can.

On the depot floor there's a constant ebb and flow of workers. Members of the binner community stream in with shopping carts overladen with refundable bottles and cans, and leave with empty carts and the day's earnings in their pockets. A fair portion of the mountains of pop cans and beer and wine bottles they bring in would have ended up in landfill if the binners hadn't retrieved them. The binners belong here. They are an integral part of this co-location business community, initially envisaged by Schwarz and Weatherbe and proposed to the City many years ago. Recycling Alternative and United We Can each has their own separate lease agreement with the City for their respective portion of the 30,000 square-foot depot, but there is a notable absence of walls and a striking warmth of spirit.

Crossing the warehouse floor, Schwarz and the binners greet each other by name. Schwarz is in her element. "When I integrate, it does something to me. It changes who I am," she says. "And I want my staff to be a part of this. It opens up their world and their heart, too, to integrate, and to understand that we are all one. Integration is so important. We're just all the same, all the same."

MIRACLE MICROBE

In conjunction with scientists in UBC's Faculty of Land and Food Science, Recycling Alternative is experimenting with a revolutionary composting system that harnesses the energy and digestive ability of a microbe harvested from hydrothermal deep-sea vents off the coast of Japan. One of the most dramatic attributes of this microbial system is its ability to decompose waste extremely fast.

If, on a Sunday morning, you were to feed the contents of 10 large green bins into one of these microbial composting systems, by Monday you would have zero food waste remaining. Instead, you would have about two totes-worth of pasteurized material that looks a lot like everyday garden soil and smells exactly like fresh chicory coffee. That's an 80 per cent reduction in volume alone, achieved overnight, plus the remaining product is clean. Any human pathogens that were growing the night before, on what was then rotting meat and bones and other stench-ridden food waste, will have been destroyed, and all traces of pest infestation will be gone.

Not surprisingly, the earthy substance these composters produce so rapidly from organic waste is more microbially active than the substance typically generated over the long haul in backyard composting bins. One potential issue with high microbial activity is that active microbes may hog the available nitrogen for their own metabolism, leaving too little for the plants.

But graduate student Zineb Bazza at UBC's Center for Sustainable Food Systems, working under the supervision of assistant professor Sean Smukler, has been testing this product for its value as a soil amendment – which is a way of getting things such as nutrients back into the soil – and so far Bazza has found that its microbial activity does not seem to negatively impact plant performance.

UBC Instructor Dr. Will Valley has had the opportunity to field-test this material in his personal farming business, and his anecdotal observations coincide with Bazza and Smukler's findings. If you're working with established plants, such as perennials, "you can use it right away in the soil as an amendment," he says, "and you can add it as mulch and it'll bring nutrients back into the soil." He believes the material holds promise, as well, for use in ecosystem restoration. When a road is being built, for example, the material could be used to re-establish banks at the edges of the road. "So it's beyond just agriculture."

Smukler feels the same way. "There are a lot of exciting opportunities for using this material. We just need to know a bit more about it."

Amani Saini
Photo: Paul Joseph

Bitter Pill

Amani Saini, *BA'09*, wants to establish routine genetic tests in Canada to combat one of the country's leading, but little recognized, causes of death. And for her, it's personal.

BY ALIA DHARSSI, *BA(HONS)'09*

It happened in the fall of 2010, when students at UBC were writing their midterms. Amani Saini's younger sister, a 19-year-old studying anthropology, called her family's home in Abbotsford and asked her parents to come and pick her up. She wasn't feeling well. Saini knew her sister wouldn't miss exams unless she had been stricken with something particularly nasty, but she could not have anticipated the rapid and severe worsening of symptoms a short time later that would lead to a surreal and terrifying vigil at Vancouver General Hospital's ICU, praying for her little sister's life.

Saini's sister was suffering from toxic epidermal necrolysis. It caused her eyes to burn, her body to blister, and her skin to peel off. A doctor told the family to prepare for a funeral, says Saini, still shaken by the memory.

Almost as shocking as the symptoms and dire diagnosis was the cause: an adverse drug reaction to the ibuprofen in a common over-the-counter medication she had taken to treat an ordinary cold.

Miraculously, after three weeks in hospital, Saini's sister survived, although her quality of life would not be the same. Saini, too, was profoundly affected. How could a non-prescription cold medication lead to a life-and-death struggle? The doctors told her they didn't know how it might have been avoided, says Saini, who couldn't let the issue go. Now she is on a mission to prevent adverse drug reactions (ADRs) like the one that nearly killed her sister.

ADRs, which occur when patients experience a harmful and unintended reaction to a normal dosage of a drug, kill 10,000 to 22,000 Canadians each year. It's a number that would place them anywhere between the third and fifth leading cause of death in Canada, if they were recorded in the Canadian Vital Statistics Death Database. But too often, experts say, it's the result of an ADR, such as toxic epidermal necrolysis (TEN), that is recorded as the cause of death, rather than the ADR itself.

But now, dramatic drops in the cost of genetic testing, along with research focused on pinpointing ADRs influenced by an individual's genetic makeup, stand to change that unsettling statistic. Saini is working closely with researchers at UBC and plans to play a central role by building an organization to advocate for policies to prevent ADRs and help those who fall victim to them.

"There are so many reasons why people die – drunk driving, dangerous driving, suicide, Alzheimer's, cancers, lung disease – and if you look at these causes, they all have an [associated] organization that's advocating for [their prevention]," she says. "It just surprised me that, when my sister got sick, there wasn't really any resource that we could go to."

Saini, an arts grad who had shied away from science for years, began reading up on ADRs and possible treatments. She was spurred by anger about the decreased quality of life experienced by her sister, who took a semester off from UBC after most of her tear ducts were destroyed by TEN and still suffers from chronic dry eye. She must spend half an hour each morning caring for her eyes, limit her time in front of computer screens, and use pricey eye drops every day.

Her story is not unusual. Hundreds of thousands of Canadians experience ADRs each year. The majority survive, but many suffer lasting damage to their bodies. No one knows how big the problem is. Healthcare providers can report ADRs to a national database, but experts say it's currently drastically underused. For example, only four per cent of TEN cases are reported there, according to a 2004 study from the University of Toronto. New legislation enacted in 2014 – *Protecting Canadians from Unsafe Drugs Act* (Vanessa's Law) – requires mandatory ADR reporting by healthcare institutions, but this will not be enforced until supporting regulations are published.

> Hundreds of thousands of Canadians experience adverse drug reactions each year. The majority survive, but many suffer lasting damage to their bodies.

In BC alone, hospital emergency departments treat about 210,000 patients for ADRs each year, according to 2011 research from UBC. In 2015, another UBC study found that one in 12 visits made by children to a pediatric hospital in Nova Scotia was related to problems with medications, including ADRs. Such hospital visits, many of which are preventable, come with a significant price tag: ADRs cost the Canadian healthcare system more than $13 billion each year.

Other countries are already taking advantage of new research and cheaper DNA sequencing. In Taiwan, eight per cent of the population carry a gene variant that can trigger TEN when they take certain drugs. Genes that trigger TEN are also common among Southeast Asians and Indians. (Saini's parents migrated to the Lower Mainland from Punjab, a province in Northwest India.) Over the last decade, doctors in Taiwan, Thailand and Singapore have begun routinely testing patients for these gene variants before prescribing specific drugs that are known to cause TEN in those countries.

Their stories fired Saini up. In late 2015, she contacted researchers who studied ADRs in Southeast Asia to find out more. "That's when I realized this is something that can be adopted here," recalls Saini, a politics nerd who has been dedicating her spare time to human rights causes, such as genocide prevention and landmines control, since her teen years.

She soon met researchers in Vancouver who were already building the knowledge needed to prevent ADRs in Canada. They were based in the same place where her sister's brush with TEN began – at UBC. In fact, medical professionals, geneticists and policymakers in BC have the potential to take a leadership role when it comes to preventing ADRs, according to Neil Shear, a Toronto dermatologist who was the founding chair of the federal government's Canadian Adverse Drug Reaction Advisory Committee.

More than a decade ago, scientists and doctors affiliated with UBC, including Bruce Carleton, Michael Hayden, and UBC geneticist Colin Ross, *BSc'93*, spearheaded the Canadian Pharmacogenomics Network for Drug Safety (CPNDS), a group of clinicians and researchers across Canada that aims to reduce serious ADRs in children. The network has made significant headway, identifying cancer drugs that can cause deafness and heart problems among children with specific gene variants. They also discovered that codeine, a common painkiller, can be life-threatening for breastfed babies if their mothers metabolize it too quickly.

ADRs are "a bigger problem than most people realize," says Ross, who has focused his career on using genomics to improve the safety and efficacy of drugs. He developed the first gene therapy to receive regulatory approval in the Western world during his postdoctoral fellowship at UBC.

Over the years, the network has gathered DNA samples from more than 40,000 patients. They include those who haven't, as well as those who have, had ADRs involving specific drugs. Most studies require anywhere between 50 and 1,000 willing patients. Volume and in-depth clinical data are key. Researchers run tests on their DNA samples to identify genetic factors that might be linked to particular ADRs. Typically, they try to replicate the results with a second, and sometimes a third, cohort of patients before following up with validation studies using cultured cells or animal models, explains Ross.

To date, genetic tests in Canada have largely been applied to personalize cancer and HIV therapies. Pharmacist and UBC researcher Mark Kunzli, *BSc Pharm'07, MBA'11*, would like to see the use of genomics expanded to more common drugs. He speaks passionately about the role of community pharmacists.

Working closely with Ronald Reid, a UBC pharmaceutical sciences professor, and others at UBC, Kunzli tested a model for how pharmacists could use information from genetic tests to help with medical prescriptions in more than 30 community pharmacies across BC. One day, the researchers hope, doctors and pharmacists will have a database containing the genetic information of patients they can use to personalize treatment plans and reduce ADRs.

Preventing ADRs on a broad scale is a complex challenge, in part because they are so varied. Even though, as Kunzli points out, "there are certain situations where we know with almost absolute certainty that if you have a certain gene variant and you take a certain medication at any dose, you will have an ADR," (which is the case with Asians who have specific gene variants that trigger TEN), generally speaking, ADRs are caused by any number of drugs and influenced by many factors, including age, genetics, and how someone's kidney and liver function. They can also range in severity – from an itchy nose to death.

Pharmacists are already trained to adjust drugs based on a variety of factors, ranging from what people eat to how their livers and kidneys function, says Kunzli. “Now we’re just trying to adjust drugs and drug prescribing based on gene function.”

Martin Dawes, head of UBC’s Department of Family Practice, is working on a practical tool to guide pharmacists and physicians through the process. He helps run a personalized medicine company partly owned by UBC called GenXys, which runs pharmacogenetic tests on DNA samples of customers and supplies software that helps patients and physicians make sense of the results.

“The real future is where you’ve got it on your smartphone,” said Dawes, envisaging the day when our genetic information is loaded into an app that helps us make decisions about over-the-counter medication.

But, even as the future holds many possibilities, available technology and research have yet to be translated into public policy. “We’ve been talking about it since 2003 – how [the Human Genome Project] is going to change everything. But it hasn’t,” says Kunzli. “Why hasn’t it? Because we haven’t been able to get the policy to support it.”

This is what Saini brings to the table. She holds a master’s degree in public administration from Dalhousie University and has worked on health policy for two provincial governments. Last year, she wrote a policy proposal that called on provinces to test Canadians for gene variants that could trigger ADRs, either when they are born or when they are prescribed a new drug. In addition to saving lives, Saini argues that genetic tests to prevent ADRs would save the healthcare system billions of dollars and ease the rush in emergency rooms. In November 2016, the Canadian Science Policy Centre recognized her idea with the Science Policy Award of Excellence in the youth category, which recognizes “innovative and compelling evidence-based policy that will make a difference to Canadians” by those under 35.

Last year, Saini was recognized by the Canadian Science Policy Centre

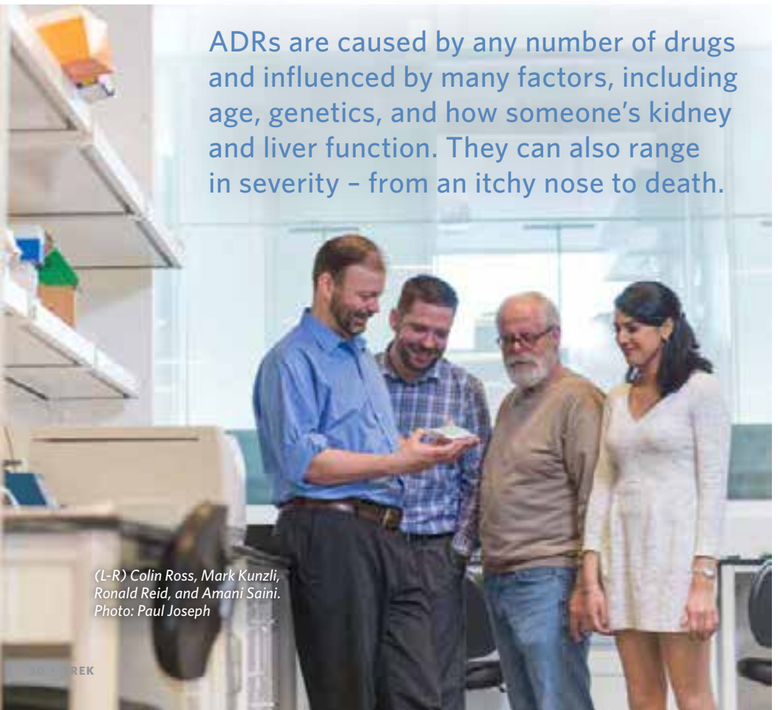

Amani Saini met with researchers from UBC’s Faculty of Pharmaceutical Sciences Photo: Paul Joseph

Now, with advice and support from Dawes, Kunzli, Reid and Ross, Saini is establishing a non-profit organization dedicated to preventing ADRs. In addition to advocating for targeted genetic testing, Saini plans to push for electronic health records to give healthcare providers clear information on a patient’s allergies and gene variants, and support a mandatory national system for gathering data on ADRs.

“If the evidence isn’t there, you can’t really act upon it,” she explains. Even everyday interactions with her sister – like a recent Friday night when she couldn’t sleep over at Saini’s because she’d left her eye drops at home – are a constant reminder of just how important this evidence can be.

“I’m happy my sister recovered,” says Saini. “I feel really blessed that she did, because other people’s family members don’t. But it also does make me very upset to know it is something that is preventable.” T

ADRs are caused by any number of drugs and influenced by many factors, including age, genetics, and how someone’s kidney and liver function. They can also range in severity – from an itchy nose to death.


(L-R) Colin Ross, Mark Kunzli, Ronald Reid, and Amani Saini. Photo: Paul Joseph

PREZ LIFE

Highlights from the busy schedule of UBC president Santa J. Ono.
Follow him on Facebook, Instagram, YouTube and Twitter **@UBCprez**

Met with **Rumana Monzur**, MA'13, who was attacked and blinded by her husband in Bangladesh in 2011 while she was a graduate student at UBC. Today she advocates for women's rights and serves on UBC's Presidential Working Committee on Disability Culture, Art and Equity.

Gave a guest lecture at UBC Okanagan (BIOL 312).

Announced a new research chair to improve cancer outcomes and wellness among First Nations and Indigenous peoples. (Pictured with **Joe Gallagher**, chief executive officer of the FNHA.)

Shared some campus spirit at Storm the Wall.

Encountered an interesting T-shirt design by UBC student **Sean Collie**. (Ono is the former president of the University of Cincinnati, where students made a bobblehead in his likeness.)

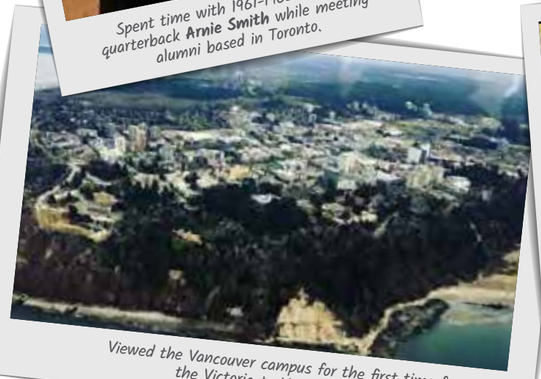
Celebrated the gift of a Tom Lee piano for the Robert H. Lee Alumni Centre (the pianist is **Terence Dawson**, MMus'83, DMA'91, chair of the UBC School of Music's Keyboard Division).

Visited students partaking in a two-day hackathon to analyze educational data, and judged the final competition.

Attended the raising of Reconciliation Pole, outside Forestry on Main Mall. Carved by **James Hart**, the 55-ft pole tells the story of the time before, during, and after the Indian residential school system.

Hosted international students with wife **Wendy Yip** (left) at the president's residence, Norman MacKenzie House.

Spent time with 1961-1962 T-Birds quarterback **Arnie Smith** while meeting alumni based in Toronto.



Viewed the Vancouver campus for the first time from the Victoria-to-Vancouver Helijet.

Led a discussion at the BC Tech Summit in March. President Ono is proud to serve as BC's chief innovation advisor.

Spoke with **The Hon. Navdeep Singh Bains**, minister of Innovation, Science and Economic Development.

@UBCprez

Visit **trekmagazine.alumni.ubc.ca** to hear a message for UBC alumni from Professor Ono.

CLASS ACTS

What have you been up to lately? Share your latest adventures, unique stories, milestones, and journeys with fellow alumni in Class Acts. Don't be shy. You're a member of *alumni UBC* – you've got bragging rights. Have photographic evidence? Email high resolution scans (preferably 300 dpi) to **trek.magazine@ubc.ca**. Submissions should not exceed 200 words.

COLD PLACES

Having spent a considerable amount of her life exploring the mountains as a cyclist, skier, runner, and mountaineer, **Joanna Young**, *BSc'08, BA'08*, is no stranger to cold places. Her love of nature led her north, where she is currently a PhD candidate at the University of Alaska Fairbanks, studying the effects of climate change on the loss of glacial mass. She is also program lead for a unique mountaineering and science education program for young women called Girls on Ice Alaska.

Her most recent adventure, however, took her to one of the coldest places on Earth: Antarctica. She was there as part of the inaugural edition of Homeward Bound, an ambitious 10-year initiative that hopes to provide training for 1,000 female science leaders with the goal of increasing the number of women in positions that can influence policy change for a more sustainable future. In its first year, 76 scientists from around the world spent almost three weeks travelling the rugged Antarctic coastline, discussing climate change and making frequent stops to explore the continent's natural features and animal inhabitants.

"Antarctica strikes me as one of the last really wild and remote places," Young says, "but even if not visibly so, it's still being impacted by humans. Being [there] opened my eyes to the truly global scale of the negative impacts of human-induced climate change, despite how distant and uncharted the continent may seem."

While confronting the reality of a changing world was difficult, Young feels that her experience on the expedition was a positive one. "I learned that in challenging times, there is enormous value in maintaining relentless optimism. I stepped off the ship with a better sense of my own personal motivators, and an ability to assess whether the projects I take on truly align with those." True to Homeward Bound's mandate, the program also made a significant impact on Young's approach to leadership: "In my future work, I will be more intentional about bolstering, valuing, and listening to fellow colleagues, knowing that these behaviours are what contribute to a productive team who is invested what they do."

Young's trip was funded by the Alaska Climate Science Center and the University of Alaska Fairbanks Resilience and Adaptation Program.

A GIFT FROM THE PAST

Years ago, UBC's class of 1932 established an endowment meant to be used towards the development of UBC Library's collections. At the time, they likely envisioned that the funds would go towards new books or a rare acquisition. It is improbable they could have imagined the kinds of collections their endowment is funding today, or its tremendous benefit for students – at UBC and beyond.

The endowment will fund the library's annual contribution to Knowledge Unlatched, an initiative that brings together libraries from all over the world via a crowdfunding platform to support Open Access scholarly ebooks in the humanities and social sciences. Since its inception in 2013, the Knowledge Unlatched initiative has "unlatched" 449 ebooks, making them available to readers worldwide.

"We were looking for a way to continue our support of Knowledge Unlatched this year, and the class of 1932 has come through for us," says Ellen George, Humanities & Social Sciences librarian at UBC and Knowledge Unlatched Title Selection Committee member. "It's wonderful that these UBC alumni, who could never have imagined ebooks or open access, are helping to fund this initiative."

CAFFEINE FIX

Can you convince a population of tea connoisseurs to fall in love with coffee? It's no easy feat, but that's exactly what **Matt Chitharanjan**, *MA'08*, is trying to do. Despite being the seventh-largest coffee producer in the world, Chitharanjan says, India exports the vast majority of its crops, and a widespread coffee culture has yet to take root nationwide.

Chitharanjan and his wife Namrata Asthana hope to change this with *Blue Tokai Coffee*, their new chain of roasteries-cum-cafés that sources its beans exclusively from local farms. A long-time coffee lover, Chitharanjan was disappointed by the dearth of options for a good cup of brew after his 2012 move from Chennai to Delhi. While some major international chains have made inroads to the Indian market, the most he could find was instant coffee grounds and stale, expensive imported beans. Moreover, he realized that there were no retailers showcasing the high-quality, single estate Arabica beans grown in the country's southern coffee belt.

Seeing an opportunity, the couple used their savings and support from friends and family to purchase a roaster and began making contacts with farmers to find the best that they had to offer. *Blue Tokai* launched in 2013 as an e-commerce operation, and the response far exceeded expectations. Not only did individuals take an interest – both within India and abroad – but wholesalers began picking up their coffee to serve in restaurants and other commercial operations. Somewhat unexpectedly, Chitharanjan has also become something of a coffee educator, teaching customers used to instant coffee about the many ways in which it can be brewed and offering a selection of presses, grinders, and drip-pots for sale.

Blue Tokai has been so successful that, in 2015, they opened their first café in Delhi, and have since opened two more cafes in Delhi and a second roastery café in Bombay. Last November, Chitharanjan gave a presentation about his coffee venture to a group of UBC grads who were exploring India through the *alumni UBC* Travel Program.

Find out more information at www.bluetokaicoffee.com.

1940s

After retiring in 1991 from her position as Chief of Conservation Services for the Royal British Columbia Museum in Victoria, **Mary-Lou Florian**, *BA'48*, has devoted her time to research and writing – publishing several books related to the conservation of museum objects. Keen to make her research more widely available, Florian approached UBC Library to make her new book available through its Open Collections. The book – *Comparative Anatomy of Branches, Roots and Wood of Some North American Dicotyledonous and Coniferous Trees and Woody Shrubs Used in Ethnographic Artifacts: Identification and Conservation Concerns* – is a comparative anatomy of tissues that were used historically in making ethnographic and archaeological artifacts. Florian hopes it will be useful as a lab manual for teaching and reference for research, not only for ethnographic reasons, but also for many aspects of plant anatomy and identification and forestry.

1950s

Thanks to some great tennis in 2016, **George Morfitt**, *BCom'58*, has attained the #1 ranking in the Men's 80+ Singles category in Canada. Now retired from squash and racquetball, Morfitt once held the #1 rankings in both these sports as well. He is a former president of Tennis BC, Squash BC and Squash Canada, and a former chair of the Canadian Sport Centre Pacific. • **Norman A. Gillies**, *BA'58, BSW'61*, founded the Center for Counter-Conditioning Therapy (*c-ctherapy.org*). It offers an approach to mental health based on a clinical discipline Gillies calls Clinical Ethnology.

1960s

Edelgard Mahant (née Petzelt), *BA'62*, was not prepared to retire when she reached the age of 65 in 2006. She loved her job as a professor at York University so much that she found another one like it, in Botswana. There she became a part of local life – not a visitor, but a professor who, like the locals, travelled on the mini-buses and shopped in the supermarkets. After returning to Canada in 2012, she wrote a book about her life in Botswana: *Grandma's Gone to Africa. One Woman's Journey to Botswana the Good.* (Toronto: EP2M Enterprises, 2016). It is her first non-academic book; she hopes that readers will find it enjoyable, amusing and perhaps even informative. ▪ **Richard Garner**, *BSc'63, (MD'67, Johns Hopkins)*, continues to practice orthopaedic surgery in Anchorage, Alaska, with a tentative retirement date of April 2018. ▪ **Rick Atkinson**, *BCom'64*, published his second book on retirement planning in the summer of 2016. *Strategies for Retiring Right!* is designed to help readers build a personal retirement plan to enhance life after work. Rick's first book, *Don't Just Retire – Live It, Love It!* (2009) became a bestseller. He is founder of RA Retirement Advisors (Toronto), helping boomers successfully transition into retirement. For information, visit www.whencaniretire.info. ▪ **Fred Affleck**, *BA(Hons)'66*, is celebrating 45 years in Australia with his wife Margaret, a retired teacher, musician, and artist. They moved there after three years in Ottawa – Affleck having received his PhD in history at the University of London – and lived in Perth, Adelaide, and Sydney. Affleck worked in government, as a management consultant, as a senior executive in two national railway companies and as a professor at Curtin University and The University of Western Australia, researching transportation and urban/regional planning. In semi-retirement, he served as a member of Australia's National Transport Commission and as chair or deputy chair in Crown corporations, including Western Australia's Fremantle Port Authority. Affleck was recently appointed an Officer in the Order of Australia for his long career of service to the transportation industry and the arts. Since retiring, he has been volunteering as reforming president of Arts Margaret River in southwest Australia's top wine and beach resort town. ▪ **Pierre Josseron**, *BA'66*, says he transferred from the University of Lausanne (Switzerland) to UBC in order to broaden his horizons. It worked. After two years teaching in Burundi, he began his career as a delegate of the International Committee of the Red Cross. This work – which has concerned the protection of civilian populations, refugees, and prisoners of war – has taken him to the Israel-occupied territories of Gaza and the West Bank; Nicaragua just after the Sandinista Revolution; East Timor under Indonesian occupation; Iran just after the Khomeini Revolution; Argentina, Chile and Uruguay under their former military regimes; Peru in the context of the Sendero Luminoso guerilla warfare; Geneva during the Argentina/UK conflict over the South Atlantic islands, when he was in charge of the Red Cross Task Force; Indonesia; Australia/Pacific, where he lectured law students on International Humanitarian Law and was involved in protection activities following the coup d'état in Fiji; Thailand, for the protection of Cambodian refugees escaping the Khmer Rouge; Armenia, in the context of war with Azerbaijan; Uzbekistan and former Soviet Central Asia, following the breakup of the Soviet Union; and Syria. He is spending his retirement in both Switzerland (his homeland) and Portugal (for the ocean and the horizon).

1970s

Ron Newman, *BSc(Geophysics)'70*, has been elected vice president of the Canadian Society of Exploration Geophysicists for 2017. ▪ **Lyall D. Knott**, *QC, BCom'71, LLB'72, (MLaws, University of London)*, has been elected to the Board of Directors of The Urology Foundation. The Urology Foundation supervises a fund which is dedicated to research, education and development of new technology in the field of urology. ▪ **Aileen Stalker**, *BSc'77, MA'92*, has published a new book, *Snowshoe Trails in Southwestern British Columbia* with Rocky Mountain Books. ▪ Stikeman Elliott lawyers **Ross MacDonald**, *LLB'92*, and **Noordin Nanji**, *BSc'79, (LLB'82, York U.)*, were recently appointed Queen's Counsel in recognition of their contributions to the profession. They were among 40 selected from 179 nominations. MacDonald was one of six lawyers who opened the Vancouver office of Stikeman Elliott, a commercial real estate practice, in 1988. Nanji is a corporate lawyer and chairs the Vancouver General Hospital and UBC Hospital Foundation.

1980s

Anna Krause, *BEd'84*, edited *Wetion* and *The Pilot and the Parrot*, e-book musicals written and produced by James Allan Krause, PhD, her husband, whom she met at UBC in 1979. A third e-book musical, *The Gardens of Venus*, is expected in 2020. All three unique works include original compositions, and 10-scene standalone plays built into the larger productions. They are available through Booktrack.com. The Krauses live happily in Courtenay on Vancouver Island. ▪ **Sandra Yuen MacKay**, *BA'89*, an artist and the author of *My Schizophrenic Life: The Road to Recovery from Mental Illness*, received the 2012 Courage to Come Back award, was chosen for the 2012 Faces of Mental Illness campaign, and received the Queen's Diamond Jubilee Medal for being a spokesperson on mental health issues. Recently, Yuen MacKay published her first novel *Chop Shtick*, an engaging satirical story about artists, mental illness, triumph, loss, life and relationships, told with humour through the eyes of a Chinese schizophrenic female artist. Since 2013, she has been a director for the Coast Foundation Society Board that governs Coast Mental Health and continues to build awareness and support those with mental illness. ▪ Last year, the Royal Life Saving Society celebrated its 125th anniversary, and **Nicole Liddell**, *BA'89, MA'93*, who is a past president of Lifesaving Society Canada's BC & Yukon branch, was one of 125 members to receive a commemorative certificate of merit for their voluntary contributions to the work of the RLSS, particularly in the fields of sport, youth and drowning prevention. Liddell has been involved for 25 years, including as an examiner, event contributor, committee member and branch board member. Recently, she has been involved on the Sponsorship Committee for Lifesaving Society Canada's hosting of the 2017 World Conference on Drowning Prevention in Vancouver this October. Liddell and the other honourees also received an invitation to a reception at Buckingham palace from the patron of the Royal Life Saving Society, Queen Elizabeth, and its Commonwealth president Prince Michael of Kent. Also in attendance were the Duke of Edinburgh, Princess Michael of Kent, and the Duke and Duchess of Gloucester.

1990s

Ambrose Mong, *MA'93*, has written *Guns and Gospel: Imperialism and Evangelism in China*. It is an exploration of the history of Christian missionary work in China and its often ambiguous and uneasy relationship with European imperialism. ▪ In November 1916, after 46 years of teaching music theory, **Keiko Parker**, *MA'93*, received the inaugural Teacher of Distinction Award from the Royal Conservatory of Toronto at a ceremony held at the Chan Centre on UBC's Vancouver campus. She has two concert pianist sons, **Jon Kimura Parker** *(UBC Music, 1977-79)* and **Jamie Parker**, *BMus'85*, who both studied at Juilliard. Jamie is pianist in the Juno-winning Gryphon Trio. Keiko's daughter, **Elizabeth Anne Fumiko Parker**, *BMus'92*, also studied at UBC. In 1993, Keiko received her master's in English, after studying on a part-time basis. She spends her retirement years translating Jane Austen's novels into Japanese. Her translations of *Emma* and *Persuasion* have already been published in Tokyo and *Mansfield Park* is due out this year. ▪ **Stevie Jay**, *BA'98*, plays the lead role in *Blood Empires*, released last December. He also plays the role of Detective Joseph in 2017's *You Don't Know Dick*.

2000s

Phil Chow holds a 2002 Certificate in Internet Publishing from UBC Continuing Education. He recently started a digital consulting agency, noticedwebsites.com, which allows him to work anywhere in the world with Wi-Fi connectivity. Now based in Vancouver, he hopes to become a digital nomad, working and travelling for up to a year. ▪ Vancouver-based MIZA Architects, founded in 2015 by **David Zeibin**, *MArch'08*, and **Mike Wartman**, *MArch'08*, was recently honoured with two top awards in the 2016 City of Edmonton Infill Design Competition. The company was Best in Class for the Single Detached home category, and Best Overall in the entire competition. MIZA's team also included intern **Warren Scheske** *(BA'09, MArch'14)*. Infill development usually earmarks undeveloped urban land for construction projects and is a contentious topic in Edmonton. The Infill Design Competition showcased design innovation and redirected the conversation toward beneficial infill development. MIZA's entry, titled SlimCity, describes a 17-foot wide "skinny" house designed with environmental features, long-term flexibility for a variety of users, and the capacity to quadruple the number of people living on the site.

2010s

Two-time Journey Prize nominee **Lori McNulty**, *MFA'12*, has published her debut short story collection, *Life on Mars*, drawing positive reviews from authors including Zsuzi Gartner and Alexander MacLeod. McNulty has been a finalist for the CBC Short Story Prize, the CBC Creative Nonfiction Prize, and the Edna Staebler Personal Essay Contest. ▪ **William Tham**, *BSc'16*, has join the editorial board of the *Ricepaper*, a pioneering Asian-Canadian literary magazine. His first novel, *Kings of Petaling Street*, was published by Fixi London and draws from the stories that he heard growing up in Kuala Lumpur, Malaysia. He has been keeping busy with various positions in diverse fields, including education, quality assurance, and data analysis.

UBC'S **SUSTAINABILITY** MILESTONES

1990 SIGNS GLOBAL TAILLOIRES DECLARATION

1996 FACULTY MEMBER DR. WILLIAM REES AND GRADUATE STUDENT MATHIS WACKERNAGEL ORIGINATE THE AWARD-WINNING ECOLOGICAL FOOTPRINT CONCEPT

1997 BECOMES FIRST CANADIAN UNIVERSITY TO ADOPT A SUSTAINABLE DEVELOPMENT POLICY

2007 MEETS KYOTO PROTOCOL GHG REDUCTION TARGETS FOR ACADEMIC BUILDINGS 5 YEARS EARLY

BECOMES FIRST CANADIAN UNIVERSITY TO OPEN A CAMPUS SUSTAINABILITY OFFICE

INTEGRATES SUSTAINABILITY AS A CORE PILLAR IN HIGHEST LEVEL STRATEGIC PLAN

2009 DEVELOPS A SUSTAINAB ILITY ACADEMIC STRATEGY

2010 SETS BOLD TARGETS TO REDUCE GHG EMISSIONS AS PART OF CLIMATE ACTION PLAN

INITIATES 5-YEAR BUILDING TUNE-UP PROGRAM, WHICH WILL REDUCE GHG EMISSIONS BY 10%

BECOMES FIRST CANADIAN UNIVERSITY TO EARN STARS GOLD RATING FROM THE ASSOCIATION FOR THE ADVANCEMENT OF SUSTAINABILITY IN HIGHER EDUCATION

VANCOUVER CAMPUS DESIGNATED CANADA'S FIRST FAIR TRADE CAMPUS BY FAIRTRADE CANADA

2013 RELEASES A FIRST-OF-ITS-KIND 20 YEAR REGENERATIVE SUSTAINABILITY STRATEGY

CENTRE FOR INTERACTIVE RESEARCH ON SUSTAINABILITY ACHIEVES FIRST LEED PLATINUM FOR UBC (SEE PAGE 41)

2016 NAMED ONE OF CANADA'S GREENEST EMPLOYERS FOR SIXTH CONSECUTIVE YEAR

33%
REDUCTION IN ABSOLUTE GHG EMISSIONS SINCE 2007 (UBC OKANAGAN: 34% REDUCTION IN GHG EMISSIONS PER STUDENT SINCE 2007)

59%
REDUCTION IN WATER USE PER STUDENT SINCE 2000 (UBC OKANAGAN: 19% REDUCTION IN WATER USE PER STUDENT SINCE 2007)

647
SUSTAINABILITY RELATED COURSES (2016)

38
GREEN BUILDINGS

57
SUSTAINABILITY RELATED ACADEMIC PROGRAMS (2016)

423
FACULTY ENGAGED IN SUSTAINABILITY RESEARCH (2016)

James Tansey
Photo by Martin Dee

SMALL CITY, **BIG IDEAS**

How UBC is modelling sustainable urban transformation

Sustainability is a core value for UBC – an aspiration grounded in the fact that its campuses are the size of small cities and represent a microcosm of the challenges facing cities around the world. The university's commitment to research and innovation in the field of sustainability will support the emergence of the next generation of technologies, financial vehicles and policies that will ensure the future of our global cities is a positive one.

Dr. James Tansey is executive director of the UBC Sustainability Initiative and the Sauder Centre for Social Innovation and Impact Investing. Here he discusses what UBC – one of the most sustainable campuses in the world – is doing to be a model for sustainable urban transformation.

Q: Sustainability – how would you define it?
I would define sustainability in terms of our capacity as a species to innovate in response to the unintended consequences of social change and economic development. Since the beginning of the industrial revolution, sustainability has been about the challenge of improving human well-being through economic growth while also operating within the boundaries of natural systems. There has always been a tension here, and that also translates into debates about the social impacts of economic growth, issues related to equity, and the right to basic human security. To me, sustainability is really about the need to innovate and I am always optimistic that we can solve the problems we've created.

Q: You often reference the idea of future cities. What do you envision for the cities of the future and why focus on cities?
The city has provided the nexus for almost all the major innovations that have emerged in the last two centuries, and by 2050 some 70 per cent of the world's population will reside in urban centres. While cities offer opportunities to increase the efficiency of resource use, they also create huge demands on energy, water and food systems.

In terms of energy, for example, cities account for approximately 67 per cent of the total global energy use. Today, low natural gas prices still make it tougher for alternative energy sources to compete, but the cost of solar will continue to decline. In the cities of the future, advances such as glass that can harness the sun's power – so skyscrapers could be covered in windows that double as solar panels – have the potential to propel widespread use of solar energy.

Ultimately, we need to develop sustainable, intelligent, innovative and equitable cities that embrace innovation. I believe Vancouver is a globally leading example.

Q: What are some of the key challenges to overcome in terms of urban sustainability and how can universities play a role in overcoming them?
The core challenge is how we integrate built form with transportation, energy and resource systems in a way that contributes positively to our quality of life. UBC is a living laboratory for the kinds of urban systems we need to create in order to deliver on these goals.

Given its size and population, the Vancouver campus already functions like a city. Many of our projects already have a direct application to urban sustainability: we've built high-performance buildings, including the world's tallest contemporary wood building; delivered award-winning public realm projects; adopted electric vehicle fleets; supported smart energy grid research; and incorporated a renewable energy system, the Bioenergy Research and Demonstration Facility, as part of our campus energy sources.

By providing a microcosm of the challenges faced by cities, we can support an innovation agenda that will shape the cities of the future. Over the course of our recent evolution, as we solve one set of challenges, new ones emerge. So our capacity to innovate is not just an economic imperative, it's essential for us to thrive as a species.

We also have a responsibility to ensure our students leave as responsible global citizens. To ensure their success, we provide on and off-campus opportunities for students to develop applied skills and make a positive impact in the community.

> **WE'VE REDUCED OUR GREENHOUSE GAS EMISSIONS 33 PER CENT RELATIVE TO 2007 LEVELS – AND THAT'S AS OUR STUDENT POPULATION INCREASED BY 20 PER CENT AND OUR CAMPUS FOOTPRINT BY 16 PER CENT OVER THE SAME PERIOD.**

Q: The university committed itself to a policy of sustainability in 1997. Looking back, what are you particularly proud of in terms of UBC's efforts?
Looking back, our overall efforts are indeed remarkable.

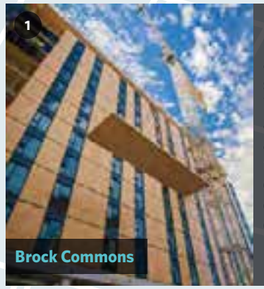
UBC now offers more than 50 sustainability-related academic programs and more than 600 sustainability-oriented courses, and hosts more than 400 faculty working on sustainability-related research. Students can also participate in initiatives such as the Sustainability Scholars Program – which provides them with applied experiences and helps advance the sustainability goals of our partners, including the City of Vancouver and Metro Vancouver – or the SEEDS Sustainability Program, which teams them with faculty and staff to tackle operational sustainability challenges amounting to more than a hundred projects each year.

Operationally, we've had many firsts for Canada. In 1997, we were the first campus to develop a sustainable development policy, and the following year were the first to open a sustainability office and publish a campus-wide sustainability strategy. We've reduced our greenhouse gas emissions 33 per cent relative to 2007 levels – and that's as our student population increased by 20 per cent and our campus footprint by 16 per cent over the same period.

These climate action achievements were made possible through our renewable energy Bioenergy Research and Demonstration Facility, the replacement of the Vancouver campus' aging steam heating infrastructure with a more efficient hot water heating system, the opening of the new Campus Energy Centre, and continued focus on green buildings and engagement and behaviour-change programs. Now we are moving toward the 2020 emissions reduction target of 67 per cent, and beyond to reach the 2050 target of zero emissions.

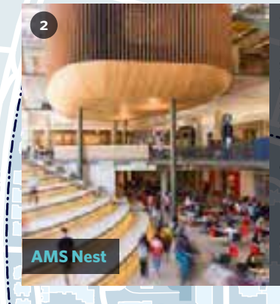
What makes me proudest, however, is the passion and enthusiasm of our students, who continue to explore and innovate. Just recently, a PhD student (now an alumnus) developed an innovative way to use the university's existing Wi-Fi network to determine the number of building occupants and adjust ventilation accordingly – saving energy without sacrificing air quality. His patent-pending innovation is the basis of a start-up called Sensible Building Science and is being installed at campuses across BC. As far as we know, it's the first of its kind in North America. And I expect we'll see more examples like this in the future.

SUSTAINABILITY HIGHLIGHTS ON THE VANCOUVER CAMPUS



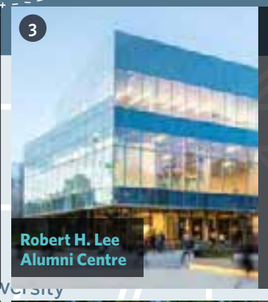
1 Brock Commons

Brock Commons reflects UBC's leadership in sustainable construction and its commitment to providing students with more on-campus housing. The structure was built using recent advances in engineered timber products and building techniques, demonstrating that wood is a viable sustainable option for high-rise applications, while creating unique research and learning opportunities on campus.



2 AMS Nest

The AMS Nest is UBC's new student union building. Opened in 2015, the goal is *LEED Platinum Certification. Sustainability highlights include solar-powered heating and cooling systems, in-vessel composting facilities, stormwater management, and a roof-top garden and a child-care facility. The Nest also incorporates more than 100 Social, Environmental, and Economic Studies (SEEDS) student-led sustainability projects.



3 Robert H. Lee Alumni Centre

More than 80 per cent of the wood used in the centre's construction came from sustainably managed forests, almost 15 per cent of other materials were from recycled sources, and more than 75 per cent of construction waste was diverted from landfills. Water-efficiency measures save 164,000 litres per year, and elements such as sensor-controlled lighting and heat-recovery ventilators are designed to reduce energy consumption. All this helped to earn the building *LEED Gold certification last year.

4 Chemistry Centre

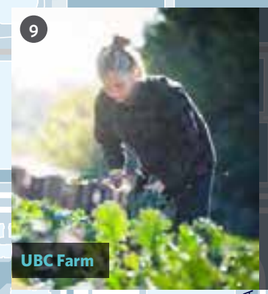
This renovated heritage building now features state-of-the-art labs and lecture theatres, plus high-efficiency lighting and a heat-recovery system that reduce energy use by 21 per cent annually compared with a standard building. It is an outcome of the UBC Renew program, which minimizes the financial and environmental impacts of demolition and new construction. The program has kept 313 tonnes of waste from landfill and saved five million litres of water.

5 C.K. Choi Building

UBC's first green building was the C.K. Choi Building, which set benchmarks worldwide when it opened in 1996. Nearly half of all building materials came from former buildings and streets, including red bricks from demolished buildings and wood beams from UBC's old Armoury. Waterless toilets save 1,000 to 1,500 gallons of water per day and collected rainwater is used for irrigation.

6 Centre for Interactive Research on Sustainability (CIRS)

UBC's first LEED Platinum certified building, CIRS models regenerative design as it relates to environmental and human well-being. The building features wood sourced from forests affected by pine beetles and includes a seasonally responsive living wall, solar panels, radiant panel heat ventilation, a green roof and a wastewater treatment lab. CIRS is UBC's hub for sustainability and well-being and home to researchers, students and operational units.



9 UBC Farm

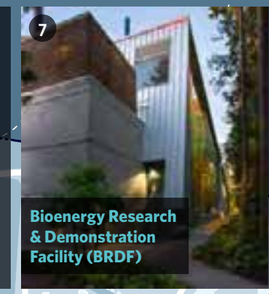
The Centre for Sustainable Food Systems (CSFS), located at the UBC Farm, is a unique research centre that aims to understand and fundamentally transform local and global food systems towards a more food-secure future. It integrates interdisciplinary academic, community, and production programs to explore and exemplify healthy and sustainable food systems.

10 Academic District Energy System (ADES)

Begun in 2011, this five-year $88 million conversion project replaced UBC's aging steam infrastructure with a more efficient hot-water system comprising more than 11 km of underground piping. It was one of the largest projects of its kind in North America, and an integral component of UBC's Climate Action Plan. The primary energy source for this new system is the Campus Energy Centre (#10 on map), a state-of-the-art hot water boiler facility capable of meeting all of UBC's heating requirements. The new system has reduced thermal energy use by 24 per cent, cut GHG emissions by more than 22 per cent, and saved $5.5 million annually in operational and energy costs. The ADES also offers opportunities for researchers, students, staff and industry partners to collaborate in exploring and developing green technologies in areas such as geothermal energy, biomass gasification, ocean thermal energy, solar energy and waste-heat recovery.

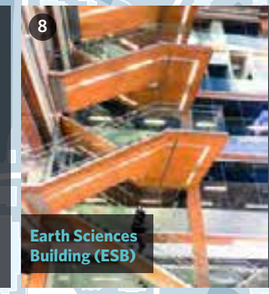
Electric Vehicle Charging Stations

As part of UBC's goal to reduce greenhouse gas emissions to zero, 18 electric vehicle charging stations were installed in 2013 to encourage the community to go electric. UBC is the second largest commuter destination in Metro Vancouver. The stations can also be used as a platform for innovation. For example, exploring how electric cars might be used as emergency generators in case of a natural disaster.



7 Bioenergy Research & Demonstration Facility (BRDF)

Using renewable fuels, BRDF produces steam, electricity, and hot water for use in campus buildings. It was the first project of this scale in North America capable of generating both clean heat and power using biomass – a plant-based, carbon-neutral alternative to fossil fuels. Research aimed at reducing GHG emissions and fossil fuel consumption is also conducted on site. The BRDF has already reduced campus emissions by 14 per cent.



8 Earth Sciences Building (ESB)

ESB features the largest application of cross laminated timber (CLT) in North America, using over 1,300 tons of BC-sourced and engineered CLT. Each ton of dry wood products sequesters sufficient carbon to keep between 1.8 and 2.0 tons of CO_2 from being formed. ESB also features a high-efficiency envelope, a timber cantilevered staircase, high-performance window glazing, thermal energy exchange and a stormwater management system.

*LEED stands for Leadership in Energy and Environmental Design, and is a rating system that encourages sustainable construction. Buildings can be rated Certified, Silver, Gold or Platinum, and points are awarded based on their performance in the following categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environment, innovation and design process, and regional priority.

n =

71

Number of active members on the rolls at the second meeting of the executives of the recently formed UBC Alumni Association in 1917.

"If you really want to treat substance use as a public health issue, then it's really important to base your policy on evidence. Otherwise, if you continue to base your policy on ideology, it's not going to solve the problem."

*UBC alumna **Kanna Hayashi**, PhD'13, who in March was named first holder of the St. Paul's Hospital Chair in Substance Use Research. (Roundhouse Radio)*

"Moved by Miss Peck and Mr. Wright that an Alumni Association be formed. Carried."

The 14-word minute from a meeting on May 4, 1917, that established alumni UBC.

325K+

Number of UBC alumni today.

"The team concocted a whimsical and tasteful installation entitled Macro Maki in which festival attendees can don pillow-sized sushi costumes and shoot selfies on a stage that's designed like a massive wooden sushi tray or engage in other various shenanigans, outlandish waggery, and other nonsensical skimdimmery for no apparent reason."

The Georgia Straight's ***Craig Takeuchi**, BA'96, MA'02, reports on the winning entry for an interaction-based structure for the 2017 Powell Street Festival, concocted by UBC Architecture master's candidates.*

"My hope for the pole is that it moves people to learn more about the history of residential schools and to understand their responsibility to reconciliation. The schools were terrible places. Working on the pole has been difficult but I have loved it too. We need to pay attention to the past and work together on a brighter future."

***James Hart** on the 55-foot Reconciliation Pole he carved, which tells the story of the time before, during, and after the Indian residential school system. The pole was raised on the Vancouver campus on April 1. (UBC News)*

In 1929 alumni UBC's *first branch was established in Toronto, with 40 members. Today there are close to **8,000** UBC alumni living in Toronto.*

40

3,348

*Number of alumni who volunteered at UBC over the 2016-17 year, **1,289** of them as mentors.*

65,222

*Number of alumni who engaged with UBC over the 2016-17 year, **15,851** of them for the first time.*

"... any full-time alumni director should be full of enthusiasm and optimism; persistence and patience; tolerance and understanding; dedication and faith; great stamina and a strong sense of humour; loyalty and humility.... You surely must be a little crazy to go into this demanding type of work!"

***Frank J. E. Turner**, BCom'39, was* alumni UBC's *first full-time employee. Hired in 1945, he worked out of room 201 in Brock Hall. The quote is from an article he wrote in the 1966 50th anniversary issue of the* UBC Alumni Chronicle, *a predecessor of this magazine.*

QUOTE UNQUOTE

IN MEMORIAM

Jimmy Campbell, *BSc'42*, and Lorraine Campbell (née Thompson), *BSc'42, MSc'44*

The Faculty of Land and Food Systems focuses on the connections between agriculture and communities. Nowhere was this more apparent than in the lives of its graduates Jimmy and Lorraine Campbell. The Campbells graduated from the Faculty of Agriculture and farmed on Saturna Island for approximately 70 years prior to their recent deaths on November 29, 2015, (Jimmy) and February 16, 2016 (Lorraine). Jimmy's agriculture career began with an undergraduate project to grow flax for fish net production, which he carried out on the farm of Lorraine's father. Lorraine was one of few women undergraduates in the faculty, and even fewer women master's students at the time she completed her MSc in plant nutrition and raspberry production. While Jimmy's flax project failed, it initiated a lifelong devotion to agriculture and to Saturna Island, where they moved after Jimmy left the Canadian Navy following WWII. Here they raised cattle, chickens, lots of vegetables, and lambs, including those for the annual July 1st Saturna Island Lamb Barbeque that attracts more than 1,000 people annually. Over the years the Campbells hosted visiting students from UBC and around the world, and provided opportunities for them to learn about sustainable agriculture, rural communities and the marine environment. Jimmy and Lorraine were community leaders in the southern Gulf Islands. In 1993 Lorraine received a Canadian 125th Anniversary medal in recognition of her many volunteer activities, including 19 years on the board of the Lady Minto Gulf Islands Hospital and 13 years as a school trustee. Jimmy also served 12 years on the Gulf Island School Board, 10 years on the Capital Regional District Board (as chair for seven) and two years on the Islands Trust. The Campbells had four children, Jimmy (deceased), Tommy, Nan and Jacques (Jacqui). The Campbell farm continues as an important aspect of the Saturna Island community.

Lucy Berton Woodward, *BA'43*

Artist, writer, lively personality, dedicated gardener, handywoman, unparalleled baker of raspberry pie, loving mom and grandmother, Lucy died on December 9, 2015. She was born in Dawson City, where she and her brother Pierre had an idyllic childhood playing amid the ruins of the Gold Rush and drifting down the Yukon River in their parents' little boat. Lucy wrote two children's adventure books set in the Yukon, *Johnny in the Klondike* (1964), co-authored with her mother, Laura Beatrice Berton, and *Kidnapped in the Yukon* (1968). The Depression led the family to Victoria and then to Vancouver, where Lucy wrote for *The Ubyssey* while attending UBC. After stints at the *Vancouver News-Herald*, a dress designer's studio, the Weather Office, the UBC President's Office and an advertising agency, she met Geoffrey Woodward through the Players' Club Alumni of UBC theatre group. They married in 1950. As she started a family – son Berton and daughter Paisley – Lucy continued to write. She also did publicity for arts organizations and, from 1968-70, wrote the *Vancouver Sun's* "Here and There" social column. She was a loving mother, a skilled seamstress and someone able to fix almost anything. She held liberal, secular views and possessed a fierce sense of independence. After Geoff's retirement from BC Hydro, the couple moved to White Rock in 1975. There they enjoyed their magnificent view, often taking in the sunset with drink in hand. They also travelled abroad. After Geoff died in 1998, Lucy continued to garden, paint prolifically, and study her family's genealogy. She was blessed to live in her own home and have clarity of mind almost to the end. She died peacefully, of old age, at Peace Arch Hospice in White Rock, surrounded by loved ones.

Joyce Sihota, *BA'46, BSW'47*

Joyce slipped peacefully out of this life on February 18, 2017, in Nanaimo, BC, surrounded by her loving family. She was born in Peace River, Alberta, on October 16, 1925, and after obtaining both a BA and BSW from UBC, became the director of Camp Alexandra in Crescent Beach. She dedicated her life to supporting her husband and raising her family of seven children in South Surrey. When her husband retired in 1986, the couple moved to Abbotsford to start a blueberry farm, and for several years Joyce chaired the BC Blueberry Council. As a person she always considered others first, and as a mother, grandmother and great-grandmother, she was selflessly devoted to her family. She will be deeply missed. She leaves behind her husband of 68 years, Dedar, children Paul (Kensey), Jan, Kim (Kathryn), Darshan (Shalene), Karen, Don (Denis), Chris (Cal), 15 grandchildren, 10 great-grandchildren, her sister Dorothy, sister-in-law Dial, and many nieces and nephews. In lieu of flowers, the family suggests a memorial donation in Joyce's name be made to the Victoria Epilepsy and Parkinson's Centre (www.vepc.bc.ca).

Gordon Webster, *BSc'49, MSc'51*

Dr. Gordon Webster, *BSc'49, MSc'51*, passed away in November 2016. He taught soil chemistry at the University of Alberta from 1960 to 1987.

Pete Steele, *BSc'50*

Peter was born on January 11, 1926, near Vermillion, AB. Peter served in the RCAF, including a brief stint in England at the end of WWII. He was in England on VE Day and in Vancouver on VJ Day. After graduating from UBC, he went on to earn a master's in agriculture at Washington State College (now Washington State University), eventually moving to Seattle and becoming a US citizen. He worked for 34 years at Carnation Fresh Milk and Ice Cream Company, holding positions such as quality control director and milk plant superintendent. Peter met his sweetheart, Mary Jane Ferguson, at a Skandia folk dance and they married on July 9, 1960. An avid mountain climber with the Washington Alpine Club and Mountaineers, Peter

summited every major peak in Washington and Oregon. After taking the Mountaineer climbing course, Peter and some friends started the Washington Alpine Course, which still exists today. He was a dedicated skier and instructor for years before serving 15 years on the volunteer ski patrol at Ski Acres and achieving National status. At the age of 86, he hosted his extended family at Sun Peaks Resort in BC and skied five days in a row. He thoroughly enjoyed folk, round, and square dancing. He and MJ camped first with a tarp, then a tent, a 19 ft. tent trailer for 17 years, and then a 29 ft. fifth wheel trailer for 23 years. He always had projects in his shop, tinkering with mechanical/electrical inventions. After living a fulfilling life, Peter passed away June 29, 2015, surrounded by his loving family. He is survived by Mary Jane; his sister, Barbara McGillvray; daughters Dana (Michael) Korch and Diane (Dick) Sine; son David (Danielle); and his adoring grandchildren Benjamin, Elena, and Annalise Korch, Tara and Emmett Steele, Kim McKeown, and Michael and Stephen Sine.

Raymond Ernest Counsell, *BSc'53*

Raymond E. Counsell, PhD, passed away peacefully on March 21, 2016, in Bonita Springs, FL, with his wife Liz by his side. Ray was born in Vancouver in 1930. At the age of 10, he was hired as a delivery boy for a local pharmacy. Upon graduation from high school, the minister of his church recommended that he attend university.

Ray enrolled at UBC and, in 1953, received his bachelor's degree in pharmacy, along with the Horner Gold Medal as the top student in his class. He subsequently attended the University of Minnesota in Minneapolis and graduated with his PhD in medicinal chemistry and organic chemistry. In 1957, he married Elizabeth Short and the couple moved to Evanston, IL, where Ray became a senior research chemist at pharmaceutical company G.D. Searle.

In 1963 Ray was recruited to the University of Michigan to establish a new program in radiopharmaceuticals for the diagnosis and treatment of cancer. Over the course of the next 40 years, Professor Counsell was supported by grants from the National Institutes of Health and oversaw the training of many doctoral students and postdoctoral fellows. Moreover, his laboratory gave rise to numerous agents subsequently used for the diagnosis and treatment of cancer. Among his numerous awards, Dr. Counsell received a Fogarty Fellowship, the Doctor Honoris Causa from the University of Ghent, Belgium, and the Alumni Outstanding Achievement Award of the University of Minnesota.

Ray was a wonderful role model, had a great sense of humor, and loved his family dearly. In addition to his wife of 58 years, he is survived by three children: Steve Counsell (Carol), Ron Counsell (Shelly), and Cathy Martin (Mike); six grandchildren and two great-grandchildren; nephew David Counsell (Wendy) and Liz's niece Stephanie Allin (Maurice).

John (Jack) Cooke, *BA'54*

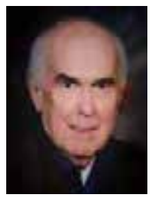
Jack passed away peacefully in his sleep at Vancouver General Hospital at the age of 85 on November 1, 2016. Born in Vernon, BC, Jack was the second of three children born to Edward and Irene Cooke. After being raised in Vernon Jack went on to complete an undergraduate degree in sciences at UBC, an MBA at the University of Western Ontario, and a teaching certificate at UBC. Jack became a teacher and, while teaching in Salmon Arm, he met Brenda, whom he married in 1966. Jack and Brenda moved to Courtenay and then

Victoria. In Victoria, Jack taught for several years at Mount View. He then turned to a career in real estate and then accounting/tax preparation. Jack's two keen hobbies were fishing and farming. He often spoke fondly of fishing with his father in the Okanagan and guiding for several years out of Campbell River. In Victoria, Jack took on a keen interest in fruit and vegetable farming and revitalizing a heritage orchard in Shirley. The family enjoyed many weekends and holidays at the farm and shore excursions. With son John, several visits were made to Brenda's family in the UK and other European destinations. Subsequently, Jack and Brenda travelled further afield along the Pacific Rim. The final exploration – a river cruise from Amsterdam to Budapest – was his final voyage, much enjoyed. Jack leaves with fond memories his wife of over 50 years, Brenda, his son John, daughter-in-law Louise, grandson Daniel and granddaughter Natalie. The family express their deepest gratitude to the medical and health aid staff at Victoria General Hospital, of note the ICU. If desired, donations may be made in his memory to the Heart and Stroke Foundation of Canada. To offer a condolence please visit *www.earthsoption.com*

Alan Clifford Casselman, *BA'56, BSW'65*

1932-2016

Alan Casselman passed peacefully at the age of 84, after a brief battle with dementia. He was a kind man with a laid-back demeanour and a twinkle in his eye. In his day, he enjoyed fishing, travel, his hobby farm and a good coffee. Predeceased by his wife of 47 years, Silvia Casselman, Alan is survived by his sons, Joel and Ian Casselman, daughter-in-law Kim Casselman and granddaughter Ella. In lieu of flowers, a kind donation to the Heart and Stroke Foundation of Canada or the Alzheimer Society of Canada is greatly appreciated.



Bernard Anthony Heskin, *BASc'58, PEng, FEC*

August 20, 1934 – December 17, 2016

With great sadness, we wish to announce the passing of Bernie on December 17 at the age of 82. He was the only child of John (Jack) and Elizabeth (Cissie) Heskin. He will be dearly missed by Marie, *BSN'58*, his wife of 55 years; sons John, *BCom'86* (Ana Maria), Michael, *BCom'87*, David, *BA'91, BEd, MSpED'12* (Karen) and daughter Mary Anne, *BCom'94* (Brad); and his beloved grandchildren Hannah, Matthew and Trevor Pruner.

Born in Vancouver, he grew up in Dunbar and later Selma Park (Sechelt). He was a member of the first graduating class of Elphinstone High School, from where he entered UBC and graduated in 1958 as a Civil Engineer.

His professional career was spent with the federal government, first with the Department of Fisheries. Later he joined the newly formed Department of the Environment, serving for many years as the regional director of EPS for BC & the Yukon. In 2009, he was awarded the designation Fellow of Engineers Canada (FEC) for contributions to his profession.

Neil William Macdonald, *BA'58, MA'60, MPE'91*

The first in his family to go to university, Neil earned three degrees from UBC: a bachelor's and a master's in psychology and another master's in physical education. He also had a master's in journalism ('67) from the University of Oregon and a PhD in mass communications ('66) from the University of

Minnesota. Neil was a Renaissance man. He was invited to a Pittsburgh Pirates training camp only to have his pro baseball dreams cut short by rheumatic fever. He became a sports reporter for *The Province* and the Eugene *Register-Guard*, which were the happiest days of his life. He won a national award for an article in *Old Oregon*, wrote book reviews for the *Vancouver Sun*, and late in life was a sports reporter for *The Northern Light* in Blaine, WA. He became a psychology professor and taught at several universities before teaching for 30 years at Vancouver City College, repeatedly earning the highest possible student reviews. He wrote, produced and hosted a cable television show on psychology that won a Canadian national cable award, published *The League that Lasted*, and wrote a book on Jack the Ripper. He was also a background actor, painter and cartoonist. Although he said he never wanted children, he was a devoted and loving father. He spent thousands of hours coaching his children at sports, always supported them in their dreams, and passed on his love of everything from psychology and astronomy to medicine and movies, animals and sports to art and literature. He is survived by his wife of 55 years, Lea Macdonald, three children and six grandchildren. In lieu of flowers, please donate to any medical research organization.

Denis F. R. Gilson, *MSc'59, PhD'62*

Born in London, UK, on November 18, 1934, Denis died on January 22, 2016. He obtained, in 1957, a BSc from University College, London, and did his MSc and PhD degrees at UBC. He held a post-graduate fellowship at the University of California, Berkeley, from 1962-64. After teaching at UBC he joined the faculty of McGill University in 1965, serving as associate dean of Graduate Studies from 1971-75 and becoming emeritus professor of chemistry. He is survived by his wife, Patricia Goodwin, *BA'57*, sons Michael Goodwin Gilson (Christine Lanthier) and Stephen Thomas Gilson (Karen Laduke), granddaughters Clara Lanthier-Gilson and Kathryn Meagan Gilson, and brothers Ian Trevor, Noel John and their families.

Barbara Howard, *BEd'59*

1921 – 2017

Athlete, educator and community leader, Barbara Howard was the first black female athlete to represent Canada in international competition. In 1948, when most ethnic minorities were barred from teaching, Barbara became the first person of colour to be hired as an educator by the Vancouver School Board, teaching physical education at Lord Strathcona Elementary School.

In 1938, in grade 11, Barbara ran a 100-yard sprint in 11.2 seconds to qualify for the British Empire Games, a time that beat the games' record by a tenth of a second. But despite winning silver and bronze medals in relays at the games, she came sixth in the 100-yard dash. Her next chance would have been the 1940 Summer Olympics in Tokyo, but the Second World War derailed the Olympics for the next decade and ended Barbara's running career.

Barbara earned a Bachelor of Education at UBC in 1959 and started a new path. Barbara taught at Hastings, Henry Hudson, Lord Strathcona and Trafalgar elementary schools in a career spanning more than 40 years. At Trafalgar, Barbara worked with brilliant, but underperforming kids. In a 2010 *Burnaby Now* interview, she recalls being told to do "anything" to keep the children stimulated. She had them plan day-trips, sent them to work with their fathers, and had them film movies. Her strategy seems to have worked; like Dr. Patricia Hoy of the UBC School of Music, many were later successful, earning advanced degrees. "The child," Barbara argued, "is more important than the curriculum."

In 2010, Barbara was recognized by the Vancouver Park Board with a Remarkable Women Award for "her passionate dedication to inspire others to make a positive difference in their community." She was inducted into both the Burnaby Sports Hall of Fame and the BC Sports Hall of Fame, and in 2013, received the Queen Elizabeth II Diamond Jubilee Medal. In 2015, she was welcomed as one of "The Legends" in the Canada Sports Hall of Fame. Barbara Howard passed away on January 26, 2017 at the age of 96.

Pullikattil Chacko Simon, *MSc'60*

March 1, 1913 – March 8, 2017

Pullikattil Chacko Simon was born on a small farm in Kerala, India. After graduating from Madras Veterinary College, he filled many government posts. Later, he moved to Sri Lanka where, as district veterinarian, he established several government veterinary hospitals and contributed greatly to livestock improvement. Because of these contributions, he was awarded special Ceylon Citizenship by the Prime Minister.

In 1957, he emigrated to Canada, where he was recruited by the Canada Department of Agriculture as a meat inspector. After completing a master's degree in microbiology from UBC, he transferred to the Federal Department of Agriculture Animal Pathology Laboratory as a pathologist and research scientist. He published many scientific papers and contributed to a textbook on infectious diseases of animals.

After retiring from Canada Agriculture, he taught a course in animal pathology for the Department of Animal Science at UBC.

He served as treasurer on the board of Unity Church and was one of their most popular speakers. He was co-founder and president of the Hatfield Society, an organization which housed parolees and helped reintegrate them into the community. He founded and funded the Chacko and Lize Simon Trust for Sacred Heart Hospital School of Nursing in Kerala and the Chacko and Lize Simon Scholarship, which has provided nearly 4,000 scholarships to children of the very poor in his native Kerala.

In 1996, the Hatfield Society changed its mandate and established the Hatfield Society Scholarship Fund for students from low-income families in the Greater Vancouver Area. Eighty students have benefited.

In his eighties and nineties, he published 42 magazine articles and two books: *The Missing Piece to Paradise* and *The Philosopher's Notebook*.

In 2012, he was awarded the Queen's Diamond Jubilee Medal for his contributions to society.

Helen Kathleen Gray, *BLSc'62*

August 4, 1920 – June 13, 2016

After a long and full life, Helen Gray (née Rodd) died in her sleep at home as she'd hoped. Helen was dynamic, curious and kind, and fully committed to life and all it offered. A graduate of the University of Toronto and later Tufts University (international law), she chose to marry the love of her life Ian and postpone a career. Once her three boys were in school she went back to school herself, getting a degree in

library science at UBC. She was among the first librarians at SFU and spent 20 happy years there. She and Ian travelled the world, and enjoyed many friends and evenings at the theatre and symphony. She loved learning and reading, and in retirement was an active participant in Elder College. Helen leaves behind her three sons David (Claudia), Cameron (Peg) and Michael (Sue), along with eight grandchildren (Max, Emma, Andrew, Paula, Sara, Lisa, Christina and Leslie) and nine great-grandchildren (Jarod, Jacob, Emma, Jasper, Simon, Isaac, Callum, Emily and Isla). We thank Living Well and their caregivers for their wonderful support. We will miss Helen but will never forget her.

Michael Deland, *BSc'63, MSc'65*
Michael passed away April 22, 2016, in Melbourne. From Vancouver, Michael moved to the University of Connecticut for a PhD in genetics, after which he spent three years at Purdue University in the Department of Neurophysiology. In 1974 the family returned to Melbourne, where he worked in the Genetics Department of Monash University for three years. Teaching was his major interest, so until retirement he taught senior biology at the secondary school level. He is survived by his wife, Lynlee, and their three children.

Sharon Roscoe, *BSc'63*
Sharon Grace Roscoe (née Furnival) passed away on December 9, 2015. Born in Ottawa, the daughter of Dr. George M. Furnival and Marion (née Fraser) Furnival, she graduated with a BSc from UBC, with honours in chemistry and a major in mathematics. She graduated with a PhD in physical chemistry from McGill University. Sharon taught virtually every chemistry course at Acadia University, from biochemistry to theoretical chemistry, rising rapidly to the rank of professor, and was head of the Chemistry Department. She was an adjunct professor in the School of Biomedical Engineering at Dalhousie University and the Department of Chemistry at the University of Guelph. On her retirement, Acadia appointed her emeritus professor. Sharon's research was continuously funded by *The Natural Sciences and Engineering Research Council* of Canada (NSERC) and by contracts with the Dairy Farmers of Canada, the Nova Scotia Health Research Foundation, SOHIO (Standard Oil of Ohio) and BP America. She was a co-chair of the NSERC Biosciences B Strategic Grants Committee and a member of the NSERC Discovery Grants Committee 26. She was a Fellow of the Chemical Institute of Canada and received the Clara Benson Award of the Canadian Society for Chemistry. She served as a member and chair of the executive of the Canadian Section of the Electrochemical Society, receiving its R.C. Jacobsen Award. She served the International Society of Electrochemistry in many roles, including nine years as secretary general, and was appointed an honorary member of the society. Sharon served her community as a figure skating and riding instructor and a Beaver leader. She enjoyed camping, canoeing and skiing with her family and in retirement was an avid golfer. She is survived by her husband of 47 years, John, two sons, James and Thomas, two grandchildren, Coll and Ailsa, a sister, Patricia, and two brothers, William and Bruce. A memorial service was held in the Manning Memorial Chapel, Acadia University.

Governance/Nominating Committee seeks recommendations
The alumni UBC *Governance/Nominating Committee is always seeking recommendations for alumni nominees to serve on the organization's Board of Directors. In particular, the committee seeks candidates who have the skill sets and experience necessary to effectively set strategic direction, develop appropriate policies, and ensure* alumni UBC *has the resources necessary to effectively fulfill its mission and vision. Please send suggestions to* ***Ross Langford*** *– Chair, Governance & Nominating Committee, c/o* ***Sandra Girard****, manager, board relations, 3rd floor – 6163 University Boulevard , Vancouver BC V6T 1Z1 / email:* sandra.girard@ubc.ca *no later than June 20, 2017.*

Brian Van Snellenberg, *BASc'64*
Brian grew up in Vancouver, graduating from Magee High School before enrolling in mechanical engineering at UBC. Following graduation in 1964, he worked for a brief time in England before returning to Alcan in Kitimat, a company where he would work for the next 27 years. In 1967 he moved to attend the University of Western Ontario to get his MBA. He moved several times with Alcan – to Winnipeg, Kingston and Toronto – before moving to Hong Kong in 1986, where he worked in an Alcan joint venture with China for the next two-and-a-half years. Returning to Canada, Brian worked for Alcan for several years in Montreal before taking a job with PowerTech Labs in Vancouver. In 1996 Brian took a job with WorkSafe BC as executive director of Finance, retiring in 2009. During retirement, he and Maria enjoyed travelling in their trailer and Brian continued his interest in photography. Brian passed away October 1, 2016, following a two year battle with lung cancer. He is survived by his wife, three children, their spouses, and six grandchildren.

James Paterson Taylor, *QC, LLB'68*
December 5, 1943 – October 16, 2016
Jim Taylor, loving husband and father, brilliant scholar, distinguished lawyer, and beloved member of the community, passed peacefully on a Sunday afternoon, surrounded by his family. The BC flag at UBC was lowered in his honour. He is survived by his wife, Judy, daughters Jennifer and Carolyn, their husbands, Sidi and Krish, and his grandchildren, Savannah, Quincy, and Sophia.

Jim studied history and law at UBC and returned as a faculty member in 1974. He enjoyed a meteoric career, gaining tenure in only his third year and becoming a full professor two years later. A leading lawyer, Jim co-authored *British Columbia Practice* – a text that was the constant companion of all BC litigators – with now-Chief Justice Beverley McLachlin. He served as the deputy attorney general and deputy minister of justice for the Province of Saskatchewan, as a partner and the head of litigation for national law firm Blake, Cassels & Graydon, and as a co-founding partner of litigation boutique Taylor, Jordan, Chafetz LLP.

Jim was also an extraordinary UBC alumnus, who led friend-raising and fundraising efforts and generously contributed his own time and money to an enormous range of UBC initiatives. His remarkable commitment leaves a lasting legacy, and yet he was a modest man whose often substantial gifts were usually made anonymously, or in honour of others.

Jim helped UBC establish the University Neighbourhoods Association, an innovative model for providing municipal-like services to the burgeoning University Town residential community. As its first chair, Jim worked unflaggingly to establish a strong foundation for a community that now numbers over 11,000, and in many ways was the unofficial "mayor" of University Town. He organized a multicultural program, set up initiatives to welcome and integrate new residents, and even read books to children at the community centre. Jim's kindness and generosity touched the lives of countless people, and he was loved in return. In 2009, UBC dedicated a park to him in the Hawthorn Place neighbourhood.

His achievements were recognized with many other awards and accolades, including his appointment as Queen's Counsel in 1989 and a Diamond Jubilee commemorative medal in 2012. Jim was a larger-than-life figure and set an inspiring example. He is sorely missed by fellow faculty members, former students, colleagues in the legal profession and, most of all, by his family and friends.

Henry Graham Armstrong (Harry), *EdD'72*
Born June 9, 1930, Harry died in White Rock on February 10, 2016. He started his journey to a UBC doctorate degree in 1966 at the age of 36 with his wife, May, and his four children: Garth (deceased 1988); Kevin, *BEd'83*; Kerry, *BPE'82, MALT'05 (Royal Roads)*; and Patrick. He received his first two degrees at the University of Alberta. We were all inspired by his studies (BCom and MEd) and his career as executive director of the BC School Trustees from 1973-1989. Most of all, his partnership in marriage with Mary Telford (May) for over 64 years showed us that love can propel changes in life that go from air raids and surviving a direct hit in Belfast, to a nine-month separation as they immigrated to Canada, and even through an educational journey that changed the lives of educators and children in BC and beyond. Learning in our family continues with his six grandchildren: Jamie Armstrong (BA and MA), Kyle Armstrong (BA), Brennan Hall (BA), Sarah Hall, Maegen Armstrong and Brittany Armstrong (all three girls continuing in post-secondary education). Harry, a great teacher, taught us about faith, hope and love. With the gift of love, even if we are not together physically, we are together, which gives us the hope we need to carry forth not for ourselves alone – to love, to transform ourselves and others.

Francis Edward Schwab, *BSc'74, MSc'79, Phd'86*
Francis passed away at the age of 63 on March 6, 2016, with family at his side, following a long struggle with brain cancer. He was born on November 20, 1952, in Summerland, BC, and graduated from Nechako Valley Secondary in Vanderhoof in 1970. He went on to earn a PhD from UBC in 1986, and was the biology instructor at the Labrador College/College of the North Atlantic in Labrador City, NL, for more than 20 years. While living in Labrador, he published 14 papers on the interactions between local birds, small mammals, and their habitats.

Francis Joseph Furtado, *BA'86, MA'88*
It is with great sadness that we announce the sudden death of Francis Furtado in Ottawa on January 3, 2017. Francis was born on April 2, 1966, in Cardston, Alberta, and grew up in Southern Alberta before making Ottawa his home.

In 1986, Francis obtained a Bachelor of Arts (Honours) in political science and international relations from UBC, where he also completed a master's in 1988.

Following graduation, Francis began his employment in the federal public service, where he held several positions through his career of almost 23 years. Francis' professional life was filled with accolades, including two Deputy Ministers' Commendations and the Exceptional Achievement Award at the Privy Council Office. He was appreciated for his intellectual curiosity, strategic thinking, and fine pen; he was also a kind and supportive mentor.

Francis was happiest when surrounded by friends and family, engaged in thoughtful and spirited political debate. He was open to all views – even if he disagreed – if they were backed by evidence, conviction, and passion. Francis also enjoyed cooking and food. Discussions held over dinner or in the kitchen made fond memories, particularly if his guests managed to make him laugh hard enough to cry!

Francis was an avid reader, loved music and enjoyed most televised sports and, in particular, sports commentary – his favourites being football, tennis, basketball, hockey and Formula 1 motorsport.

Francis is predeceased by his father Menino. He is survived by his mother Amalia; his sister Sarah, brother-in-law Christopher, and niece Naomi; as well as his brother Xavier, and sister-in-law Carrie Lee.

The family is grateful to Benoit Bazinet, Isabelle Gallen and staff at the Beechwood Funeral Home in Ottawa.

THE LAST WORD WITH DUNCAN MCCUE, *LLB'96*

Award-winning journalist Duncan McCue is the host of CBC Radio One's *Cross Country Checkup*. McCue was a reporter for CBC News in Vancouver for over 15 years and taught journalism at the UBC Graduate School of Journalism. During this time, he was recognized by the Canadian Ethnic Media Association with an Innovation Award for developing curriculum on Indigenous issues. Now based in Toronto, his news and current affairs pieces continue to be featured on CBC's flagship news show, *The National*.

McCue's work has garnered several awards from the Radio Television Digital News Association and the Jack Webster Foundation. He was part of a CBC Aboriginal investigation into missing and murdered Indigenous women that won numerous honours, including the Hillman Award for Investigative Journalism. In 2011, he was awarded a Knight Fellowship at Stanford University, where he created an online guide for journalists called Reporting in Indigenous Communities (riic.ca).

McCue is also an author. His book *The Shoe Boy: A Trapline Memoir* recounts a season he spent in a hunting camp with a Cree family in northern Quebec as a teenager. Before becoming a journalist, McCue studied English at the University of King's College, then law at UBC. He was called to the bar in British Columbia in 1998. McCue is Anishinaabe, a member of the Chippewas of Georgina Island First Nation in southern Ontario, and the proud father of two children.

What is your most prized possession?
If the house was burning down, first thing I'd grab are my journals and family photos. Precious connective tissue to my past.

Who was your childhood hero?
Wayne Gretzky. Wept like a baby when he was traded to LA, then I went back to being a Leafs fan.

Describe the place you most like to spend time.
Sitting on the dock of the bay (or lake or river).

What was the last thing you read?
Embers by Richard Wagamese. Sadly, he died not long after I read it. Such a loss.

What or who makes you laugh out loud?
Both my kids tease me irreverently, and make me snort on a regular basis.

What's the most important lesson you ever learned?
"Do unto others..." I'm not Christian, but as far as a succinct principle to guide one's life, that's a pretty sweet lesson.

What's your idea of the perfect day?
The perfect day is when I learn something, when I feel an emotion and when I am alive to the world around me: seeing, smelling, tasting, listening. The BEST day is when I manage to capture that day in written word.

What was your nickname at school?
In elementary, I was cursed with Dunkin Donuts and Duncan Hines (as in cake mix). In high school, Funky Dunky was bandied about but never stuck.

What would be the title of your autobiography?
The Utterly Unverified Shoe Boy Chronicles

If a genie granted you one wish, what would it be?
Global Indigenous self-determination. Make it so.

What item have you owned for the longest time?
My classic English teddy bear. Given to me by my Mom in my first year of life. Still watches over me at night.

What is your latest purchase?
A USB charging cable. I leave so many of those things in hotel rooms...

Whom do you most admire (living or dead) and why?
Malcom X. What a life, what a man. I admire his brains, his fire, his willingness to acknowledge and learn from his mistakes.

What would you like your epitaph to say?
"He helped his community. Oh, and told some pretty good stories."

If you could invent something, what would it be?
A lightsabre. Natch. And I'd like to be able to fix the hyperdrive.

In which era would you most like to have lived, and why?
I'd love to know what it was really like at First Contact in this place known as Turtle Island.

What are you afraid of?
I fear failing. I know I'd be a better person if I could embrace failure – but I'm failing at that.

Name the skill or talent you would most like to have.
To stickhandle without looking at the puck and deke a goalie out of his jockstrap, while doing my own play-by-play in Anisinaabemowin (the Ojibway language).

Which three pieces of music would you take to that desert island?
Collected works of Neil Young, Blue Rodeo and U2.

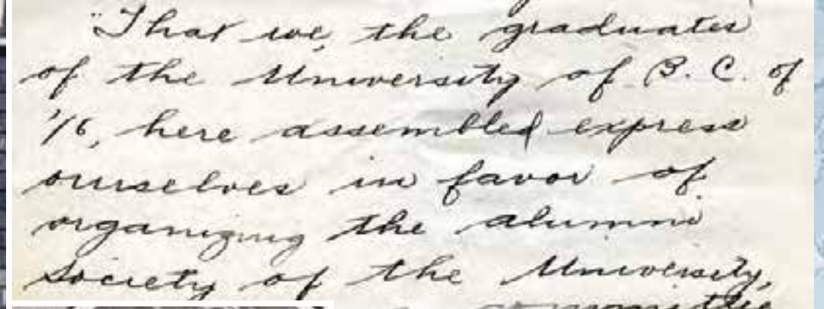
Which famous person (living or dead) do you think (or have you been told) you most resemble?
I've been told Johnny Depp and – whoah – Keanu Reeves.

What is your pet peeve?
I really can't stand paying for campsites. It really bugs me.

What are some of your UBC highlights?
The Aboriginal Moot in law school. Sweatlodges at the UBC First Nations House of Learning. And, when I became an adjunct professor, launching the Reporting in Indigenous Communities course at the Graduate School of Journalism.

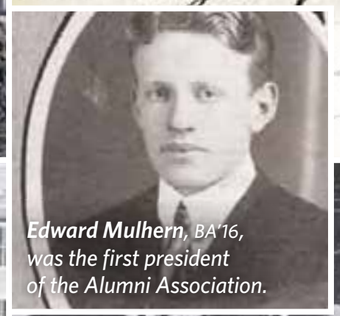

We are One

Jessie Anderson *(centre), BA'16, was the first individual to be granted a UBC degree.*



That we, the graduates
of the University of B. C. of
'16, here assembled expres
ourselves in favor of
organizing the alumni
Society of the University
a committee
pt a
port to
in 1917

Minutes from a 1917 meeting discussing the idea of forming an alumni association.



Edward Mulhern, *BA'16, was the first president of the Alumni Association.*

1920s

1950s

1970s

1980s

2000s

2010s

2010s

2016

Make a Connection and You Could Win!

Share your UBC pride during *alumni UBC 100* and you could win our Travel in Style Sweepstakes.* The more ways you take part, the greater your chances of winning.

Get started by visiting **alumni.ubc.ca/map**. You can use this postcard as a prop when taking photos and making videos to add to the map, or you can simply mail it in.

1

Place yourself on our global alumni map. **Receive one contest entry.**

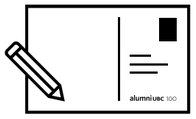
2

Add a memorable UBC moment to your map profile. **Receive three contest entries.**

3

Share your memorable moment in a short video with our built-in recording platform. **Receive three more contest entries.**

4



Unable to add yourself to the map? You can still win! Write a message on the back of the postcard and mail it in. Your card will be displayed in the Robert H. Lee Alumni Centre. **Receive three contest entries.****

* See details at *alumni.ubc.ca/travel-in-style*

** Even if you've added yourself to our global alumni map, you can still mail in your postcard for additional contest entries.

10 Ways to Connect

Join our Global Alumni Map

Our interactive online map lets you find your friends and classmates around the world. Add your profile to it for a chance to win our Travel in Style Sweepstakes. (Turn the page for more details.)

Host or Attend One of Our 100 Dinners

Starting this summer, host or take part in a dinner with your fellow alumni in celebration of 100 years of UBC experiences.

Come to Alumni Day at Homecoming 2017

This September, join in a day of learning, entertainment, and family-friendly fun at UBC's 2017 Homecoming festivities.

Reunite With Old Friends

Catch up with your old classmates and reminisce about your student days. Reunions are a great way to strengthen common bonds and renew friendships.

Learn and Socialize at Our Events

Choose from dozens of events across the globe and online. From networking receptions to panel discussions about the most pressing issues of the day, there's an event for you.

Browse Our Media

alumni UBC produces a wealth of informative and entertaining content. Visit our online media library to explore podcasts, webcasts, blogs, photo albums, and stories from *Trek* magazine.

Take Advantage of Benefits & Services

Your connection to UBC doesn't end with graduation. As an alumnus, you receive lifetime access to exclusive benefits and services. Take advantage of these special offers available just for you.

Visit the UBC Welcome Centre

The Wong-Trainor Welcome Centre in the Robert H. Lee Alumni Centre is the friendly front door for all visitors to UBC's Point Grey campus. Our staff and volunteers will be happy to answer your questions and help you plan your visit.

Volunteer and Donate

Whether you're interested in contributing financially or as a volunteer, there are many ways to give back to your UBC community.

Find us on Social Media

Connect with *alumni UBC* and graduates around the world on social media. We're on Facebook, Twitter, Instagram, and LinkedIn.

We are One

Our Goal: 100,000 Connections

alumni UBC was formed by a small group of UBC's earliest graduates on May 4, 1917. Now we're more than 325,000 strong, spanning more than 140 countries.

Individually impressive and collectively outstanding, UBC alumni are helping to realize the university's aspirations for a better world.

To mark our 100th year, we're building our global community with an ambitious goal: making 100,000 alumni connections by May 2018. Wherever you are in the world, there's a way to take part.

Visit **alumni.ubc.ca** for more information on how to be part of *alumni UBC 100*

alumni UBC 100