



arch

THE UNIVERSITY OF CALGARY INSIDE AND OUT ISSUE NO. 1

Doctoral student and
CBC Canada Reads winner
Joshua Whitehead sees
Indigenous mental health
through a new lens.

OUTLIERS AHEAD

Along with courageous
and creative researchers,
innovators and educators,
Joshua is at the vanguard
of redefining the future —
with room for radical hope.



Welcome

A publication for and about University of Calgary alumni, faculty, students, supporters and curious readers at large, *Arch* reflects and amplifies the innovation, creativity and relevance of our researchers, big thinkers and storytellers. Enjoy our first biannual print issue (and its accompanying playlist; scan the QR code above) and read us online at arch-magazine.ucalgary.ca.

Photo: Jason Stang

positively, disruptively yours

Everyone featured in this inaugural issue of *Arch* magazine tackles life with a brand of fearless optimism, goodwill and expertise that defines a particular place and time. We're a young university in a city of change, during a very tough year that has called for solutions to problems both old and new.

Designed for and about curious UCalgary alumni, supporters, faculty, staff, students and engaged people at large, *Arch* is an opportunity to capture and share the character and impact of our remarkable people and their work, which is transforming everything from mental and physical health to food security and commercialization.

Joshua Whitehead, for instance, uses words to break down barriers for alienated youth. Dr. Peter Facchini toils over molecular compounds derived from illicit, or previously illicit drugs, with an eye to innovating health care treatments that put our institution on par with universities such as Johns Hopkins. Dr. Temple Grandin, the scientist who famously revolutionized the North American cattle industry, routinely partners with our vet-med school to advance cutting-edge animal welfare research.

This first issue of *Arch* also explores how researchers are opening doors with art therapy to improve men's mental health. We dig deep into how and why our med school is teaching young doctors to help us both live *and* die, and discover how our faculty, students and community are working to make food healthier, safer and more accessible. We've also asked our university family such pressing questions as: "Is it okay to be funny when nothing else is?" and "Is a PhD in comic books a thing?" (yes, and yes).

The world is lucky to have these outlying, passionate minds to bring light to dark places, and find lasting solutions to persistent global problems. And UCalgary is fortunate to be part of a community devoted to empowering and supporting such minds through its unwavering interest, involvement and philanthropic commitment to excellence.

The world is lucky to have these outlying, passionate minds to bring light to dark places.

I'm so proud to kick off this first issue with a column from academic-activist Dr. Malinda Smith (see next page), our new Vice-Provost of Equity, Diversity and Inclusion. She's leading the charge to snuff out systemic racism on campus and in our community.

My hope is that *Arch* (available online, and twice a year in print) will enlighten, entertain and otherwise positively disrupt any previously scheduled programming.

Thanks for reading — and for inspiring us to keep raising the bar.



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Thought and
opinion from the
UCalgary family

Forward



It's important to tell stories — different kinds of stories — about Alberta, and about Calgary. Stories shape our understanding in indelible ways. As the novelist Chimamanda Ngozi Adichie writes, "Stories have been used to dispossess and to malign, but stories can also be used to empower and to humanize. Stories can break the dignity of a people, but stories can also repair that broken dignity."

The stories I tell are often about hidden figures and narratives, those often written out of history, and school and university curricula. I sometimes wonder how differently we might think about Alberta if we knew the contributions of these figures engaging across Indigenous territories.

When it comes to advancing equity, diversity and inclusion (EDI), people have grown too comfortable with a check box of activities as indicators of commitment and change. I'm interested in something deeper — in systemic and cultural change. How we get there, I have learned, is shaped by the stories we tell about why and how EDI matters to questions of justice, to excellence in a university, and to social inclusion in the city and beyond. EDI must be rooted in a deeper commitment to our shared humanity, and a desire to ensure human flourishing.

Many people know the name of American Rosa Parks, but fewer know of Nova Scotian Viola Desmond, who is now on the Canadian ten-dollar bill. Even less known are Alberta Black civil rights leaders like Charles Daniels and Lulu Anderson, who resisted segregated movie theatres in 1914 and 1922, respectively. We are the province where Violet King, the first Black woman lawyer in Canada, emerged. Jews, Muslims, and Sikhs have lived in Alberta for over a century. The first Muslim mayor in North America was elected in Calgary.

This is a province where people have always struggled for a more just and inclusive society and university. Yet, this is often not the story that is told about Calgary, or Alberta.

What stories do we tell ourselves about who is able to excel, who we will support in flourishing? We need to craft alternative imaginaries to the ones that have failed us to-date. As the great poet Ben Okri cautioned, "Beware of the stories you read or tell; subtly, at night, beneath the waters of consciousness, they are altering your world."

I draw on storytelling both to imagine and to craft equitable pathways to ensure that the opportunities to flourish are created for this and the next generation.

I hope the stories on these pages inspire you, and I look forward to hearing yours as we take a new path together.

Dr. Malinda Smith, PhD

Vice Provost of Equity, Diversity and Inclusion
University of Calgary

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The iconic **arch** spanning the south campus entrance once served as the Rainbow Bridge over Crowchild Trail. Built in 1966, it was designed by UCalgary engineering students and has become a symbol of connection, diversity, support and collaboration.

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“These are spaces ripe with knowledge for approaching mental health and queerness from an Indigenous perspective.”



Nobody talks about Dover like Joshua Whitehead talks about Dover.

The southeast Calgary neighbourhood, bounded to the south by Peigan Trail and overshadowed by Forest Lawn to the north, flies low on Calgary's real-estate radar. Seen through the lens of one of Canada's most inventive young artists, however, Dover is a heartland of stunning river views, bucolic swimming holes and unconventional vibes that both inspire and ground his work.

Indeed, Whitehead, who is poised to complete a doctorate in English from the University of Calgary this summer, has a gift for seeing and articulating beauty and meaning in unexpected places. A two-spirit, Oji-Cree/ nehiyaw member of Peguis First Nation in Manitoba, he

poetry collection, *full-metal indigiqueer* (Talonbooks, 2017), was a finalist at the Indigenous Voices Awards.

Now, a version of the dissertation behind his PhD in Indigenous literatures and cultures is poised to grace literary festivals and nightstands everywhere. In addition to a book deal with Penguin Random House for two novels, Whitehead signed with Knopf Canada for a creative work of non-fiction excerpted from his academic topic and titled *Making Love with the Land*. As Whitehead describes it, the book will be a reflection on his personal experiences with the land in Manitoba and Alberta, “as spaces ripe with knowledge for approaching mental health and queerness from an Indigenous perspective.”

If Whitehead doesn't wake every day feeling like “one to watch,” he's not unaware that his life is observed from afar by legions of young people, in particular

Indigenous young people, for whom he thinks of himself as “a gate-opener.”

Whitehead believes “things are shifting in queerness overall in Western society, and also normalizing within Indigenous cultures.” Via his storytelling and uninhibited social media

One to Watch

is the author of the novel, *Jonny Appleseed* (Arsenal Pulp Press, 2018), which was longlisted for the Scotiabank Giller Prize and recently won CBC's 2021 Canada

Reads. The book's lovable protagonist, Jonny, is an Indigenous sex worker who is as unforgettable as the rez he leaves behind. “It's... home because the bannock is still browning in the oven and your kokum is still making tea and eating Arrowroot biscuits,” writes Whitehead. “It's home because it has to be — routine satiates these pangs.”

At 32, Whitehead, who is as unassuming as he is original, has racked up more accolades than successful writers twice his age: in addition to the above, he won the Governor General's History Award for the Indigenous Arts and Stories Challenge in 2016 and, in 2018, his debut

presence, he imagines “holding hands with everyone as we move forward.”

In the long term, Whitehead hopes to find an academic post teaching creative writing and Indigenous literature. Meanwhile, he'll keep writing and “enriching two-spirit stories over my lifetime.”

Wherever he lands, he vows to keep returning to the places he loves in the Blackfoot territory: Áísínai'pi (Writing-on-Stone), Head-Smashed-In Buffalo Jump — and the Dover hills. •

by Jacquie Moore, BA'97

Joshua photos by: Tim Nguyen

SILVER LININGS

It's been a tough year to cultivate feelings of accomplishment, not to mention find fun — but, as these resilient students, faculty and alumni prove, the pandemic has also inspired a world of joyful detours

1 “Ice skating is a new hobby I picked up in my spare time and I absolutely love it! I think the best way to regain motivation during a time like COVID is to continually work on yourself through challenging new skills.”

—**Aiza Asif**, BComm'21, Business Information Technology Management, Haskayne School of Business. Aiza was part of a team that won the 2020 RBC Fast Pitch Competition for its World Blood Investigator mobile point-of-care testing device

2 “Personally, I'm proud of the puppy — Benjamin — my husband and I got this year because he's brought us closer as a family. Professionally, I'm proud to have worked through adverse and challenging times in the ICU throughout COVID, and to have built resilience.”

—**Mia Torres**, BSc'12, BN'15, staff registered nurse on the intensive care unit at the Peter Lougheed Centre

3 “This year, I've spent a lot of time learning about investing in the stock market — so much so that I was asked to be a team lead for a non-profit startup called The Debtless Students that teaches students about financial literacy.”

—**Michael Kohlman**, first-year student and 2020 Schulich Leader in the Schulich School of Engineering

4 “To celebrate Wordfest's 25th anniversary online during the pandemic, we created a series called the Daisy Chain: 25 of Canada's best fiction writers, linked together by mutual love and admiration, and watched by thousands across Canada.

More than half of the writers were BIPOC [black, Indigenous, people of colour]. All the writers were generous. Every member of the audience felt so much less alone.”

—**Shelley Youngblut**, BA'85, CEO and Creative Ringleader, Wordfest

5 “I'm thrilled to have been appointed to the Order of Canada this year — it's incredible and awesome because Indigenous women are usually the last people to be recognized. I'm still levitating to be recognized.”

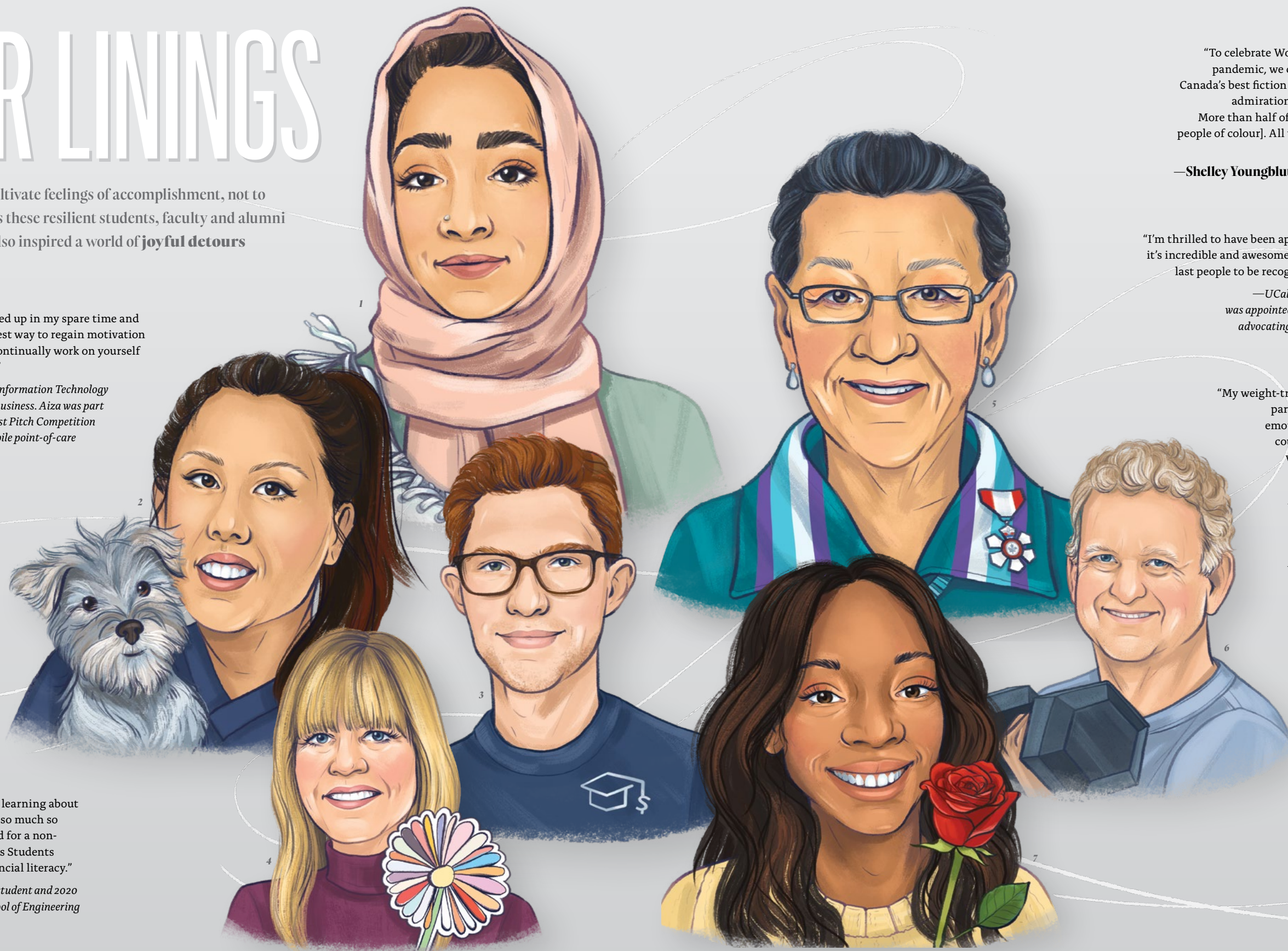
—**UCalgary Cree Elder-in-Residence Doreen Spence** was appointed an Officer of the Order of Canada for her efforts advocating for peace and Indigenous Peoples' human rights

6 “My weight-training hobby has long played an important part in strengthening my physical, mental and emotional health. I'd always been a gym rat, so I could never imagine having the motivation to work out at home. I've managed to assemble a home gym over the past few years, and it has really saved my (turkey) bacon during the pandemic. It's made managing stress in these uncertain times a whole lot easier.”

—**Dr. Greg Tweedie**, PhD, associate professor, Werklund School of Education, winner of the 2020 UCalgary Teaching Award in the Teaching in Online Environments category

7 “Over this year, I've really worked on becoming more patient and more able to stay calm amidst all the busyness in my life — I take more breaks, including weekly Zoom chats with friends to watch *The Bachelor* and laugh and talk about it together.”

—**Whitney Ereyi-Osas**, BHSc'20, first-year medical student at the Cumming School of Medicine, president of the Black Medical Student Association, and vice-president of EDI (Equity, Inclusion and Diversity) for the Canadian Medical Association



Spirit of the Law

At the age of 96,
Agnes Cooke —
farm girl, former
nurse and enthusiastic
philanthropist —
aims to be the change
she wants to see

Where did you spend your childhood?

I grew up on a farm near Elfros, Saskatchewan. Back then it was thriving, but it's a bit of a ghost town now (2016 population 90). We grew mixed grain and had lots of animals, horses and cows, pigs, and sheep. My brother's family still farms the land.

How would you describe yourself?

Lucky. I am very lucky. I had fantastic parents. They were both loving, hard-working, progressive Icelanders. I guess I'd also say I'm kind — or, I mean, I think I *want* to be kind. Sometimes, that's not easy. But mostly it is. I like to do what feels right to feel good about me.



What pulled you away from your rural roots?

My parents were very interested in education. My mom was a teacher and my dad had good success as a farmer, and they wanted their kids to be educated. I went to the University of Saskatchewan for what we used to call “household science” (nutrition and food science) but it wasn't for me. I switched to nursing and loved it. Student life was strict: curfews and 12-hour days, not much freedom — the year before I went, students weren't even allowed to have a radio. We all bonded so strongly and we still have reunions. From there I moved to Port Alberni, and then worked at the Edmonton University Hospital.

You've lived in Calgary for nearly 70 years; what brought you here?

My husband, Donald, was a geologist, so Calgary was the place. We lived along the Elbow River and raised our three children here.

It's a challenging time living in a seniors' care centre during COVID. What brings you joy?

It's been hard. At least I can see my daughter now and go for walks. There's not a lot else to do, but something that makes me happy is helping young people. When Donald died in 2003, I started a foundation and started making donations to create bursaries and scholarships. It's addictive! I created scholarships in the University of Calgary's nursing program, and other causes, too. I've met some wonderful people that way and it's been rewarding meeting and hearing from the students. That's really heartwarming. It's just really, really special.

This year, you created a scholarship (the Agnes Stephanson Cooke Law Bursary) for Black law students — a departure from the nursing-related gifts you've gravitated toward. Why this, why now?

I know that I'm fortunate, and I'm able to give where people might need help. And the more I learn about what's going on in the world, the more I want to help. There are too many sad, awful stories about how the law and society treat Black people unfairly, and I started to understand that if change is going to happen, we need more Black lawyers. One thing I could do was to create a scholarship for students who need help to get through law school with success. I'm so happy if I can make any difference. —JM •

Editor's note: We're sad to note that Agnes passed away just prior to publication. We are fortunate to have known Agnes, and are forever inspired by her generous spirit.



In 1954, **Violet King Henry** became the first Black person to be admitted to the Alberta Bar. Between 2016 and 2020, only eight per cent of federal judicial appointments were visible minorities; three per cent self-identified as Indigenous. This lags behind Canada's combined visible minority and Indigenous population of 27.2 per cent (2016 Census).

**“People told me it
wasn't a good idea
for a girl to be a
lawyer, particularly
a coloured girl —
so I went ahead.”**

—Violet King Henry

Photo: “Violet King, lawyer, Calgary, Alberta”, June 1954, [NA-5600-7760a] by Jack De Lorme. Courtesy of Glenbow Archives, Archives and Special Collections, University of Calgary. Modifications to this image include cropping.

fresh thinking

Something Blue

by Harry Vandervlist,
professor emeritus

A UCalgary startup has found a way to create a tantalizing colour not found in nature, naturally

It's been more than eight years since comedian George Carlin left this planet and, of all the vintage comedy routines YouTube provides, his are still among the best. But events are catching up with some of those old classics. Case in point: an exciting discovery by UCalgary researchers addresses Carlin's complaint that, "I can't find blue food!" Not only do we now have all kinds of blue food but, thanks to a UCalgary-rooted clean-tech company, we can make it while pulling CO₂ from the air.

For those who haven't checked into Carlin's backlist lately, it was on the very first episode of *Saturday Night Live* in 1975 that he complained:

"I can't find the flavour of blue! I mean, green is lime; yellow is lemon; orange is orange; red is cherry; what's blue? There's no blue!... Where is the blue food? We want the blue food! Probably bestows immortality! They're keeping it from us!"

A few decades later, here we are enjoying blue Popsicles, savouring blue frosting and fueling ourselves with blue sports drinks. Soothing and eye-catching, blue also looks really good on Instagram. (It's fun to ponder what Carlin would have had to say about Instagram.)

Indeed, demand is high — as in US\$120 million per year — for blue food pigment, or phycocyanin as the stuff extracted from spirulina, a blue-green algae or cyanobacteria, is called. That extraction calls for an energy-inefficient process — or it did, until UCalgary's Synergia Biotech came along.

Synergia Biotech consists of a half-dozen UCalgary professors and research associates from the faculties of science and engineering including Dr. Angela Kouris, PhD (CEO); Dr. Agasteswar Vadlamani, PhD (CTO); Dr. Christine Sharp, PhD'14, and Dr. Marc Strous, PhD (directors); and business partners and collaborators from the community.

The company didn't start out in 2013 looking for a way to make a better blue; rather, the team was hunting for ways to capture carbon and produce bioenergy using algae. In 2017, Vadlamani noticed that, "Hey, we're also able to produce phycocyanin." He knew blue was big business, so the group nimbly "shifted focus, incorporated a company, entered [UCalgary's] Creative Destruction Lab Rockies accelerator program and concentrated completely on commercialization."

The Synergia process relies not on spirulina, but on different natural populations of cyanobacteria originally found in specific British Columbia lakes. The team developed a way to cultivate this renewable resource using a process that draws CO₂ from the air. The researchers prize this carbon-capture aspect,

From the first blue glass in ancient Egypt and the ground lapis lazuli in Vermeer's paintings, to trade wars fought over indigo in the 1500s, fortunes have been built on blue.

says Kouris, because, "for us, the big drive is to replace a technology that can otherwise be a big emitter of CO₂ — which all of the other processes are — and offer a better solution which actually removes CO₂ while still producing something industry needs."

Once they've cultivated the crucial microbes, Synergia extracts the precious phycocyanin using its signature bioprocess and, *voilà*, blue food. And not only blue — this primary colour allows the creation of many other shades, as well.

The question remains whether this naturally extracted phycocyanin really does bestow immortality, as Carlin pretended to suspect. Not quite, though phycocyanin's health benefits include antioxidant, anti-inflammatory and immune-boosting qualities. Immortality aside, a lucrative made-in-Canada, carbon-negative process that replaces a carbon-emitting one is already great news. At this moment, the company has patents pending and is negotiating with a few "major colour multinationals" including a food processing company. Synergia has run pilot projects to test the

production process and aims to have a Canadian manufacturing facility in place by the end of 2021. Once that happens, it will be time to start looking for food labels proclaiming their "natural blue" and, perhaps, trumpeting the carbon-negative pathway to the blue Popsicle or cupcake you clutch in your hand.

From the first blue glass in ancient Egypt and the ground *lapis lazuli* in Vermeer's paintings, to trade wars fought over indigo in the 1500s, fortunes have been built on blue. Thanks to Synergia's fruitful collaboration between engineers and microbiologists, this UCalgary startup now brings us to a new moment in the colour's long cultural history — and marks the first time it's played a role in mitigating our very own 21st-century climate challenges. •

Advancements in the
field of psychedelic
medicine have put
magic mushrooms
at the leading edge
of a renaissance that
could transform
health care

Making Magic

by **Marcello Di Cintio**,
BA'97, BSc'97



Psychedelics have the potential to revolutionize mental health-care treatment, and a new startup called MagicMed is striving to find therapy that allows patients to ‘skip the trip’

Doctor Peter Facchini, PhD, got serious about science when he was 16 and bored of the experiments in his *Sears Wish Book* chemistry set. Instead, he started to conduct “more dramatic” experiments out of his mother’s high school chemistry textbook which was published in the 1950s when, he says, “safety and liability weren’t priorities in youth activities.”

In Grade 11, Facchini’s science teacher assigned him a project to test the effect of electricity on plants. The teacher considered Facchini’s experimental setup too dangerous for the regular lab and locked his equipment in a prep room. Facchini needed to ask for a key every time he wanted to check on his experiment. This wouldn’t do. “I decided it was acceptable to ‘borrow’ equipment for my chemistry experiments at home,” Facchini says. He converted the kitchen in the basement of his family’s Toronto home into a chemistry lab. “I was able to pull off some interesting results.” (Even more interesting results came six years later, when Facchini was working on his post-doc and his mother called him in a panic. The hinges on the basement kitchen cupboard had completely rusted out and the doors had fallen off. She wanted to know what he’d left in the cupboard. “It was probably sulphuric acid,” Facchini told her.)

After high school, Facchini earned a Bachelor of Science in botany from the University of Toronto and then started postgraduate studies. Two months after he started his master’s degree, Facchini’s supervising professor resigned after the university discovered he’d never completed his doctorate. “It just so happened the initials for his first and second name were DR,” Facchini says. “Someone started calling him ‘doctor’ and he just went with it.” With his supervisor axed, Facchini continued with his collaborator. “This guy happened to be working on medicinal plants,” Facchini says.

Facchini defended his PhD in 1991 before starting a postdoctoral fellowship at the Université de Montréal where he was involved in a project to reduce the

glucosinolate content of canola to make the seeds tastier for picky pigs and cows. The idea was to insert a gene into the canola that would halt the production of glucosinolate in the seed. Facchini asked his supervisor if he could clone the gene from opium poppies — the enzyme catalyzes the first step in the pathway from poppy to morphine. His supervisor slouched back in his reclining office chair, sighed, then sprang forward and opened the side drawer of his desk. “I just happen to have a jar of opium poppy seeds,” he said.

In 1995, Facchini accepted a position at the University of Calgary, where he has been conducting research in opiates, cannabis and psychedelics ever since. Facchini reigns as Alberta’s only researcher with a licence to grow opium poppies and has tended to a garden of poppies in the basement of UCalgary’s Science A building for 25 years. Elsewhere in Science A, Facchini maintains a greenhouse devoted to his cannabis plants and peyote cactus — the source of the psychedelic mescaline. He doesn’t grow “magic” psilocybin mushrooms, but this is only because he doesn’t need to. Facchini developed a way to synthesize doseable amounts of psilocybin, as well as other psychedelic compounds, in the cells of ordinary baker’s yeast and bacteria. “Why bother with the mushroom?” he says.



Facchini co-founded Epimeron Inc., a private biotechnology firm, out of his UCalgary lab in March 2014. For the first five years, Epimeron focused on producing opiate molecules in yeast rather than from poppies, just as he’s doing with psilocybin. In the spring of 2019, Epimeron merged with another Calgary biotech firm to form Willow Biosciences Inc. Under Facchini’s direction as chief scientific officer, Willow used the same yeast process to biosynthesize cannabinoids, including cannabigerol, considered “the mother of all cannabinoids” for its ability to naturally evolve into compounds like THC and CBD.

In April 2020, in the middle of the pandemic lockdown, Willow decided to reduce its Calgary-based headcount, and Facchini and his team suddenly found themselves contemplating their futures.

Psychedelic research boasts a long history on the Canadian prairies. Indeed, it was a Saskatchewan-based psychiatrist named Dr. Humphry Osmond who first coined the term “psychedelic” in 1953 in a poem he wrote for his friend, author Aldous Huxley (best known for his science-fiction novel, *Brave New World*), after guiding him through a mescaline trip:

*To fathom Hell or go angelic
Just take a pinch of PSYCHEDELIC*

Two years earlier, Osmond had accepted a research position with his fellow psychiatrist and biochemist, Dr. Abram Hoffer, at the overcrowded Saskatchewan Mental Hospital in Weyburn, one of the largest asylums in North America. Hoffer secured grant funding from Premier Tommy Douglas’ government to examine the effectiveness of LSD and mescaline as drugs for treating schizophrenia and alcoholism.

Business Insider magazine ranked MagicMed the fifth highest money-raising psychedelic startup in the world.

Work by Hoffer, Osmond and colleagues in labs worldwide led to a revolution in brain science and psychiatry that lasted through the 1960s — but the party ended once the parties started. The drugs inevitably drifted out of the labs and into the counter-culture, and recreational use of psychedelics overshadowed their

research potential. As the drugs became associated with anti-establishment movements — especially among anti-Vietnam War activists in the U.S. — governments began to regard psychedelics as more menace than medicine. The UN Convention on Psychotropic Substances banned psychedelics globally in 1971, and medical research effectively ceased for more than 30 years.

Psychedelic science was resurrected in 2006 when researchers at Johns Hopkins University School of Medicine showed a single high dose of psilocybin had long-lasting positive effects on a patient’s mood and sense of well-being. The study sparked an ongoing renaissance of psychedelic research, especially in the last decade.

By the end of January 2021, the U.S. National Library of Medicine’s ClinicalTrials.gov website showed 59 psilocybin drug trials had been registered worldwide. These studies pit psilocybin against a wide range of conditions including depression, anorexia nervosa, cluster and migraine headaches, PTSD, alcoholism, and disorders linked to cocaine and opioid use. If the outcomes of such tests prove positive, psilocybin could soon emerge as a licensed medication for multiple forms of mental illness.

Perhaps it was no surprise, then, that Facchini and his locked-down colleagues didn’t stay unemployed for long. “I sat in my backyard, drank a lot of beer, thought about psychedelics, had a lot of Zoom calls, and said, ‘To hell with it, let’s start another company!’” Facchini says. “Opportunity knocked.”

A Toronto-based investment banker familiar with Facchini’s work wanted to launch a new biotech firm focusing on psychedelics. The investor had confidence in the team’s broad experience, Facchini says, “not just in the science with the things we’d done before, but also in our business savvy.” What had started out as a thought experiment by Facchini and his crew at the beginning of April 2020 was incorporated as MagicMed Industries by the end of May and had secured \$30 million in commitments from investors by the end of the year. In February 2021, *Business Insider* magazine ranked MagicMed the fifth highest money-raising psychedelic startup in the world.

Facchini confesses to not understanding the psychology of venture capitalists. “I became a scientist to avoid dealing with lawyers and businesspeople,” he says. Still, he wonders if the pandemic-stalled economy inspired investors. “Investors need an active economy; they need

money to be moving to do what they do. And so, they were looking for these opportunities.” Especially, as it turns out, in the medical psychedelic space. Investors are pouring hundreds of millions of dollars into the sector. “We’re capitalizing on it,” Facchini says. “We have business savvy, but it’s also a pretty easy sell. And we’re one of the few companies that actually has hardcore science behind it.”

Facchini says MagicMed’s approach of responding to market demand differs from the usual academic model “which is, ‘If you build it, they will come.’ They usually don’t.

“There are still people who feel academia should be this pure, ivory-tower endeavour. If you are trying to make money from your research, then it’s dirty.”

But, in order for universities to remain relevant to the world off-campus, they have to emerge as economic engines. Facchini says he believes the kind of market-focused research MagicMed engages in could drive the post-pandemic recovery in Alberta — especially in the wake of a collapsing energy industry. The province may turn to academia to create new jobs in new sectors. “The university is saying we should lead,” Facchini says. “You have to start by being supportive of the trailblazers.”



UCalgary’s new Parker Psychedelic Research Chair, established earlier this year by alumnus Jim Parker (BA ’90), demonstrates the university’s commitment to innovation in the psychedelic field. The Chair will launch a psychedelic research program within the Mathison Centre for Mental Health Research & Education at the Hotchkiss Brain Institute (HBI) to consider initiatives targeted toward improving mental health. Under this program, UCalgary could emerge as world a leader in psychedelic research.

That said, market enthusiasm for psychedelics will eventually abate; investors showed similar excitement for cannabinoids only a few years ago, but then the bubble burst. “Cannabinoids are mostly yesterday’s news,” Facchini says.

The “mushroom boom” won’t last forever, either, and many of the new psychedelic startups won’t be around in a few years. “I have no delusions about what to expect,” Facchini says. MagicMed needs to raise as much capital as quickly as possible and position itself in terms of partnerships and acquisitions. “You want to be one of the survivors as opposed to some of these companies that aren’t going to be here a year from now.”

trippy roots

The earth abounds with chemical compounds intended to deter herbivores, protect against pathogens and other clever tricks of nature — for humans, however, such psychoactive plants can have mind-altering effects

Mushaboom

What makes a **mushroom** magic? Psilocybin is a psychedelic compound occurring naturally in more than 200 species of fungi. In humans, psilocybin has hallucinogenic effects similar to LSD and mescaline including a sense of euphoria, changes in perception and a distorted sense of time (think *Alice in Wonderland*).

Wile E. Peyote

Used for thousands of years by Indigenous tribes for healing and religious purposes, **peyote** is a small cactus that grows in the American southwest, Mexico and Peru. Effects of its hallucinogenic substance, mescaline, include a loss of ability to think rationally and a feeling that time is passing more slowly than it is.

Cogito, Ergot Sum

Not the sexiest of backstories, **ergot** is a parasitic fungus that grows on rye. Discovered by Swiss chemist Albert Hoffman in the 1940s, ergot contains a compound from which lysergic acid diethylamide (a.k.a. LSD) can be derived. “Bicycle Day” (April 19) marks Hoffman’s legendarily trippy bike ride home after trying the drug for the first time.

Mornin’, Glory

The common name for more than 1,000 species of flowering plants, **morning glory** seeds contain ergoline alkaloids that can produce a similar effect to LSD when taken in large doses. Their use dates back to ancient Aztec and Mayan tribes whose high priests would consume the seeds to trigger vision quests.

Potent Brew

A brew made from various ingredients including caapi vine, which grows in the Amazon region, **ayahuasca** has long been used by traditional healers in several South American countries, and it plays an important role in some religious ceremonies. According to current research, its psychedelic properties may protect brain cells and stimulate neural cell growth.

Big Chew

A perennial rainforest shrub growing in Central Africa, **iboga**’s roots and bark contain a psychoactive alkaloid that induces a profound psychedelic trance state when consumed in large doses. Its taste has been described as “like sawdust laced with battery acid.”

Salvation

A member of the mint family, **salvia** is a psychedelic herb whose leaves contain opioid-like compounds. It’s fast-acting and, anecdotally, when chewed, smoked or imbibed in tea, can produce a particularly unpleasant experience. —JM



Illustrations: Mathieu Potvin

In the meantime, important science needs to be done. Researchers remain uncertain how psilocybin and other psychedelics function. A U.K.-based scientist has been using MRI scans to observe what parts of the brain light up with psilocybin and determine the mechanism of action. Evidence suggests that psilocybin and other “classic” psychedelics like LSD and mescaline bind to particular serotonin receptors. The drugs likely disrupt brain circuits and systems that encode rumination — the sort of repetitive thoughts and behaviours that characterize a range of mental illness, from depression and addiction to anorexia.

Facchini and his team at MagicMed are working at developing derivatives of psilocybin to create what he calls a “psy-brary” of novel molecules that can be patented and tested for their clinical effectiveness.

HBI director Dr. David Park, PhD, is keen for members of the institute to work with MagicMed and the psilocybin derivatives they eventually isolate. “We can act as matchmakers to see what researchers within HBI would be interested in some of the novel compounds generated by MagicMed,” Park says.

The Mathison Centre, HBI’s mental-health research arm, can facilitate both animal studies as well as clinical trials important to understand how psilocybin and/or its derivatives may affect mental health.

HBI is excited about collaborating with a startup as local as MagicMed — whose labs are literally up the street — and

the psychedelics’ potential as a treatment for a variety of mental-health conditions. But, despite the anecdotal evidence supporting the effectiveness of whole-plant psychedelics, their long history as recreational drugs, and the enthusiasm for MagicMed’s novel compounds, Park cautions against moving too quickly. “You can’t shortcut science,” he says.



If Facchini, Park and their scientist collaborators

occupy one end of the medical psychedelic chain, palliative-care physician Dr. Lyle Galloway, MD, a clinical lecturer in the Department of Oncology, stands at the other. Galloway first encountered psychedelic mushrooms when he was in his early 20s, while travelling abroad. “It was a profound experience,” Galloway says. “I had a big-dose experience right off the bat that gave me a considerable amount of respect for what these medicines can do.” Galloway bought some books on how to cultivate mushrooms and ordered himself some mail-order spores. “I got reasonably good at growing psilocybin mushrooms,” Galloway says. “And then I got married and had kids and then life went on.”

After decades of dormancy, psychedelic mushrooms have bloomed in Galloway’s professional life over the past few years. Research started to emerge suggesting psilocybin can have a role in alleviating what palliative-care physicians refer to as “existential distress” — one of the most difficult forms of suffering to treat. “Supportive counselling helps to some extent, but talk therapy only goes so far,” Galloway says. Two simultaneous studies published in 2016 from New York University and Johns Hopkins showed patients with end-of-life depression and anxiety responded dramatically and rapidly to a single treatment with psilocybin.

The studies hardly surprised the many therapists who’ve long been working outside the law with psilocybin and other psychedelics.



Dr. Peter Facchini says that, because psychedelics were banned for so long, “we have a lot of catching up to do.”

Photos: Jason Stang

“There is a wealth of experience out there with underground therapists who’ve been working for years — decades, in some cases — with these medicines,” Galloway says. “That’s not really acknowledged.”

Galloway, though, sought more official training. In 2019, he enrolled in the year-long Psychedelic-Assisted Therapies and Research certificate program offered by the California Institute of Integral Studies. The program’s faculty included scientists who performed much of the original research on therapeutic psychedelics in the 1960s and 1970s.

Galloway, a clinician-scientist who is currently collecting data to inform future practice and research, has had a number of patients ask him about possible use of psilocybin in their own cases, often having heard about it in the news or through support groups. Galloway makes sure these patients understand that the science of medical psychedelics is relatively new, and that while he believes the treatment is safe for most patients, careful screening is necessary and there may be side effects the medical community doesn’t yet know about. If patients are interested in pursuing this option, Galloway will discuss the evolving process by which they can apply

for an exemption, and ensure they are connected with appropriate medical and psychotherapeutic supports to proceed safely.

Once granted an exemption, the patient must seek out his or her own supply of psilocybin mushrooms. Unlike cannabis products that can now be legally purchased in specialty shops in nearly every neighbourhood, psychedelics remain illegal. Still, patients have little trouble sourcing them. Even those with no street contacts or any experience with recreational psychedelics easily manage to score mail-order ‘shrooms online. “I have patients in their 60s who went online and, without substantial Internet knowledge, ended up with therapeutic quantities of mushrooms in their mailbox,” Galloway says.

Galloway then encourages his patients to bring their newly acquired mushrooms into the office for a formal, supervised therapy session. However, psychedelic-inspired healing does not rely on the presence of a therapist. “Essentially, the real healing comes from the patient — it comes from inside,” Galloway says. “However, a trained therapist can function as a guide for the experience. Someone familiar with the territory [who] can help make sense of what happens.”

Unlike drugs that serve to blunt consciousness, psychedelics can bust down all the doors. “These medicines need to be approached with a certain amount of respect, or even reverence,” Galloway says. Trips are rarely pleasure cruises to a patient’s happy place. “A psychedelic experience can be extremely scattered and extremely scary,” Galloway says. While patients can enjoy some fun and levity during their psychedelic session, the experience is often agonizing. Long-buried grief and unprocessed guilt can erupt unexpectedly.



Psychedelic-derived medicines aim to transform the prevalence of mental health challenges including addiction, PTSD, depression and substance misuse disorders.

One of Galloway’s palliative colleagues observed one patient endure such agony during her psilocybin treatment that the therapists who witnessed the experience also suffered distress. “They even arranged a debriefing for all the staff on the unit,” Galloway says. “Sometimes it goes this way.” The patient, though, woke the next day needing half of the pain medication and none of the sedatives she’d been using before the session. After meeting the therapist for one post-psychedelic “integration work” appointment, the patient “went on with her life,” Galloway says. “She was able to address her end-of-life issues in a straightforward way that she never was able to before.”

Despite such anecdotal successes and hours-long therapist-led sessions, Facchini questions their practicality. “Imagine if every time you needed to take an antibiotic, you had to sit for four hours in the doctor’s office,” he says.

“You need medicines that are going to be prescribable.” This is what MagicMed aims to produce in its labs. Clinical trials will eventually show whether or not the psilocybin derivatives MagicMed isolates can still function as effective medicine — if they bind to the appropriate receptors, say — without inducing psychedelic effects. In other words, will his novel compounds allow a patient to reach their therapeutic destination without taking the trip?

Galloway, while admiring Facchini’s lab work, suspects the trip is necessary. “Most people in my field are not that excited about the discussion of receptors,” Galloway says. Questions about biochemical pathways, dosing and other such factors appear less important in psychedelic-based therapy than what Galloway calls the mystical experience. “What seems to be linked to a positive outcome is having a transcendent sort of experience,” he says. “There is something about the experience of leaving your ordinary consciousness for a period of time, then returning, that taps into a profound healing potential.” He says the psychedelic trip grants patients suffering from end-of-life distress a “50,000-foot view” on their “small self.” From that height, they can tap into something larger, whatever that might be.

Mystical, though, doesn’t mean religious. A psilocybin trip is not necessarily a commute with God. Avowed atheists benefit from these therapies without emerging as believers at the other side. Still, the experience does touch patients at the spiritual dimension of their existence in the same way meditation, chanting and devotional dance has for the followers of traditional faiths. All these experiences can help someone access elevated states of consciousness, Galloway says. “But the ability to go so far away from your ordinary state of consciousness and return within a number of hours is unique to psychedelics.”

The idea that Facchini’s molecules might allow patients to bypass these sessions fascinates Galloway: “Would it be possible to develop a molecule that rewires patterns in the brain and allows insight? One that drops you back into your life without any therapy involved? Maybe. I don’t know.” Clinical testing of Facchini’s novel compounds may eventually answer these questions.

In the meantime, Galloway and his colleagues in the field weigh the actual therapy component heavily. “We look at the psychedelic as the catalyst for the therapy,” Galloway says. An introspective patient who is a disciplined meditator, say, might be able to make

some progress with psilocybin on a solo trip. “But there’s something about having an objective third party in the room who gives a good perspective and can guide things in a helpful direction.”

The emergence of psychedelic medicine may do more than treat existential distress in patients; it might cure a sense of disillusionment among the palliative-care professionals themselves. Galloway figures half of the palliative-care physicians he knows have grown cynical about the work. “You can say we’re treating depression and anxiety, and we do that, or at least pretend to do that, with existing medications and therapies,” Galloway says. “But we were worried that we weren’t doing much good.” Galloway had grown so disheartened with the work, he contemplated quitting psychiatry altogether. “Then [psychedelic medicine] came along and revolutionized things. The reason why I got into psychiatry was because I wanted to help people in the way I am seeing this help people.”

As psychedelic medicine inches gradually into the mainstream, Galloway hopes his fellow practitioners talk openly about their own experiences with psilocybin. “A year ago, I wouldn’t have admitted I was good at growing mushrooms when I was in my 20s,” Galloway says. “Now, I am more comfortable. The fact is that these medicines have been used by responsible people in the real world for decades, if not millennia, and are not causing damage all over the place.” He says he believes more open conversation about use of these medicines by both patients and therapists will be beneficial.

In addition to assisting patients access therapeutic psychedelics, the non-profit coalition TheraPsil has been working on obtaining psilocybin exemptions for their physicians and therapists. Health Canada granted at least 19 such exemptions for health-care professionals in December 2020, and more are forthcoming. “I hope this becomes the norm in order to qualify to be a psychedelic therapist,” Galloway says. “I don’t believe you can do a good job without having some personal experience.”



For his part, Facchini cares little about the approval of mainstream science. He’s built a career out of researching compounds many consider illicit. “I’ve never been concerned about what someone else is going to think,” Facchini says. Tut-tutting conservative academics who would shy away from such research baffles him. “The whole idea of tenure

is you’re supposed to be able to push the boundaries, as long as you’re not breaking the law or harassing anybody,” Facchini says. “You should be taking risks, and those risks are what pay off.”

Many of Facchini’s medical psychedelic colleagues were first drawn to the field by their own experimentation. “I’ve heard from others in the sector say, ‘I went somewhere in South America and did ayahuasca and it changed my life,’” Facchini says.

Trips are rarely pleasure cruises to a patient’s happy place.

This is the sort of origin story many people expect Facchini to tell. Facchini, though, resembles the 16-year-old kid in his kitchen chem lab more than a retired drug-tourist in a lab coat. He is no more fervent about psychedelics than he is about morphine or E. coli. “I am not passionate about psychedelics — I am passionate about the science,” he admits. “I’m passionate about how the applications of the science can impact people in a positive way.

“I want to be Elon Musk and make rockets that actually take off and land. I want to make these things work.” •

THE ART OF BOXING

It seems fair to say that men haven't typically been encouraged to discuss the contents of their hearts — a new research project aims to change that with an eye to improving mental health *by Don McSwiney, BA'87*

We have a lot of boxes in our society. There are the kind we can see and, for instance, check off on a form or fill with our most precious belongings. It's the boxes we *can't* see, however, that often hold the power to define and restrict our potential.

When it comes to societal notions about what it means to be a "real" man, such boxes can be not only limiting but downright damaging — to the individual compelled toward such a stereotypical image of himself, as well as to those around him.

A new community-led research project from the Faculty of Social Work titled ManBox is exploring our ideas of masculinity by creating actual boxes and asking men to paint and illustrate them to represent the faces they show the world — and, perhaps, who they are inside.



Ricky Kawa taps into his creativity to showcase the awareness and resilience he's cultivated through this unique research project.

Photos: Roth & Ramberg

“It’s a heavy box,” says assistant professor and research lead Dr. Liza Lorenzetti, MSW’06, PhD’17. “I think the boxes represent the weight men feel to perform as *men* in society.”

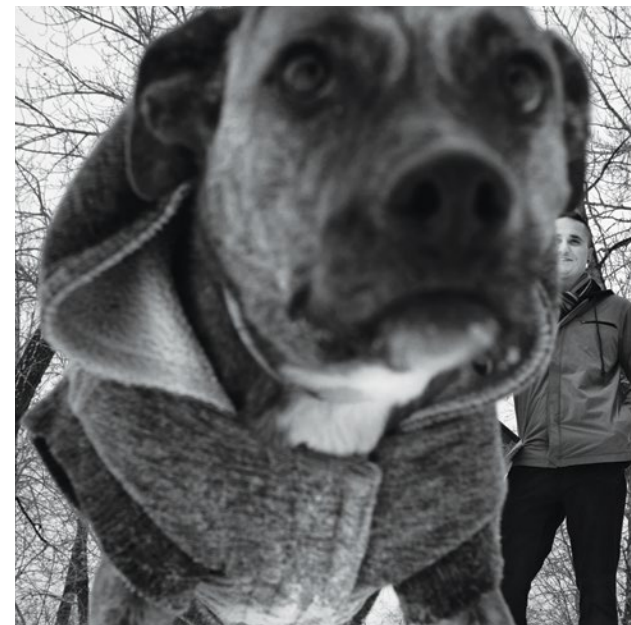
For social work alumnus Will Tabak, BSW’19, it’s the walls of the box that hold the most significance. “For me, the box represents the unhealthy way that we socialize men and male children,” says Tabak, who works with the Alberta Men’s Network and is co-ordinating the partnership project in the community. “The way we teach them to believe that you can only show the world certain parts of yourself so that people will trust you and see you as a protector — basically, the generalized stereotypes that men tend to live with in society.”

When Tabak created his own box earlier this year, he described the process as transformational. He says he initially tried to rigidly control the process, which in some ways reflected his approach to life and even to his work leading the ManBox project. Tabak’s box helped him realize this and, ultimately, to let go. “I found myself trying to be very open to whatever feeling came into my head and my heart,” he says. “That was what I tried to express at the end of the journey of my project.”

Tabak is hoping to share the therapeutic boxes with men in lower-income or other marginalized communities who don’t typically have access to artistic materials, or who aren’t often asked to take part in reflective, artistic, research-based exercises like this one. He also hopes to provide the experience to men who are reintegrating into society from the justice system. “We think it might help some of these men get back on their feet,” Tabak says.

Like the artists behind them, each ManBox is multifaceted. On the one hand, they’re a tool for social change — a challenge to harmful societal ideas about masculinity. Research shows these stereotypes fuel societal issues like domestic violence, increased substance abuse and higher suicide rates among men. On the other hand, they’re also a tool for reflection built on a theoretical framework of transformational learning.

“The group’s collective project design really resonated with my experience over 25 years of practice in domestic-violence intervention,” says Lorenzetti. “We need to invest — up-front — in well-being, and in healthy relationships and self-care.” People can change, she says, “but they need to engage in personal transformation to do that and — on the ground, in the community — that’s where the change is going to happen.” »



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Working on this box has shown me that I’m a pretty black-and-white person — I see a dichotomy in myself of duty and strength versus emotionality and sensitivity. The night sky represents wonder and ambition; the ocean is spirit and peace; the mountains and valleys are strength and power; the river a symbol of the journey. This project has shown me so much of who I am and allowed me to trust the expression of what I see in my mind’s eye.

Will Tabak
BSW’19, registered social worker and project co-ordinator of the ManBox Art Project

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Generations of men have been told it's a weakness to show vulnerability — that creates a toxic environment. Opening up to my partner and my family, specifically the females in my family, gave me a better perspective on who I am and how I affect the people around me. I've felt isolated through COVID, not interacting with my friends in the usual way. Reaching out to friends to say, 'I'm struggling, wanna go for a dog walk?' That's been empowering.

Ricky Kawa
Co-founder of Sprout Society
vegan-meal prep company



Building the boxes for this project was meaningful to me because I want to help make art more accessible and approachable for people. At some point in our lives — maybe especially for men — we're taught to stop being creative and just have fun with art. I wanted to help celebrate and create opportunity for that.

Nicole Chalifour
BSW '19, social worker and artist who designed
and built the boxes for this community art project





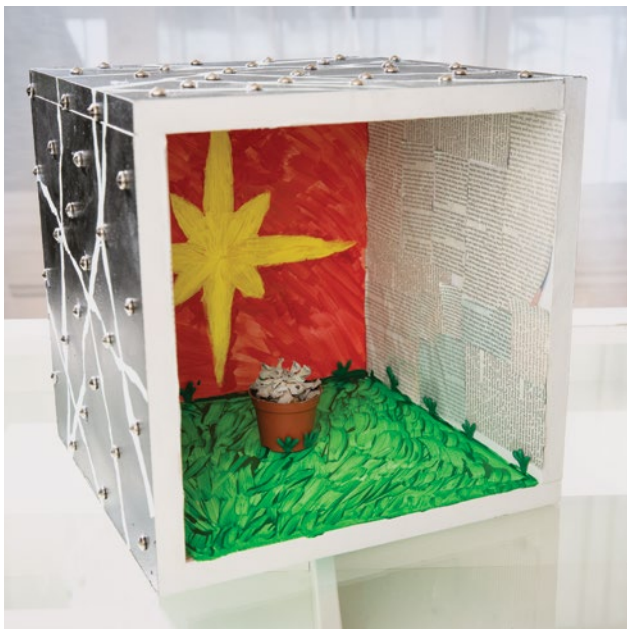
I grew up angry and aggressive. I think back to my romantic relationships and where things went wrong. Through therapy and a peer group, I've realized how my unpierceable exterior has caused me a lot of distress. Working on this box has deepened my reflection on my struggle with expressing emotions: the metal-studded exterior is prickly and hard to touch and, inside, I layered it with text to show my inner complexities. On the back is a rising sun, to symbolize the dawn of a new day.

Sebastian Benavides
BA'16, BSW'20, child and youth-care counsellor at Hull Services



I think many men fall short in their communication — that hurts them, and it can hurt others. My box symbolizes my sides that people see — a loving father and husband, a musician — and how I feel inside, which is sometimes soft or playful and sometimes foolish or even cracked or breaking down. The cobwebs show how I can feel stuck or confused and can't always reach the heart there in front of me. The plant extends toward the various facets of me and shows how these complexities can co-exist.

Arya Boustani
Media technician, with his daughter Parisa





The Great Divide

Whether or not they choose to be with an individual in their final moments, residents at the Cumming School of Medicine are trained to care for those who have a legal right to end their life. It's a complex and exceptionally personal path for the patient at the heart of such a decision — and a profound experience for the doctor who chooses to be there

by **Christina Frangou**

“Wherever the art of medicine is loved,
there is also a love of humanity.”

—Hippocrates

By the time physicians finish their training, they know death more intimately than most. They see the many ways people die — quietly, violently; young, old; unexpected, long-awaited. They see good deaths and bad deaths, and deaths made better or worse by the actions of other people.

Dr. Roberta Lee, MD’19, a resident in family medicine at the Cumming School of Medicine (CSM), witnessed a patient die after receiving CPR, when every person in the room knew survival was unlikely — but tried just the same. She has watched patients die in pain and unable to breathe, and others die at peace, with their pain at bay and their families at their side. There’s often a pit in her stomach in these moments, she says.

Families ask questions like, “Do you think I should stay?” and, “What if tonight’s her last night?” as their loved one drifts closer to the end of life. Lee struggles to answer. It’s never perfectly predictable; bodies and minds and even families don’t always do what’s expected. Caring

for someone through death is hard, uncomfortable and uncertain work. Even so, Lee wants to be there. “I want to learn and I want to know,” she says.

Since Canada’s first medical education program opened in 1824 at what later became McGill University, medical education has focused on the preservation and extension of life. Over the last 50 years, the philosophy has expanded to include the idea that medicine could also make dying better. In 1975, Canadian surgeon Dr. Balfour Mount coined the term “palliative care” to describe the kind of care that provides someone with relative comfort as they are dying. End-of-life care is now a mandatory part of medical training.

Another big change came to medical education in 2015 when the Supreme Court of Canada voted unanimously to overturn a ban on physician-assisted death. Federal legislation supporting medical aid in dying followed one year later. The court’s decision and subsequent legislation changed doctors’ relationship with dying: they

could now legally assist in a patient’s death. With it, medical schools faced a new challenge: how to teach medical trainees to aid in someone’s death, when many in the house of medicine are uncomfortable with the concept.

Medical Assistance in Dying (MAID) came to Canadian health care through the courts, on behalf of patients who’d lobbied for decades. In the early 1990s, Sue Rodriguez, a woman from Victoria, B.C., who suffered from amyotrophic lateral sclerosis (ALS), submitted a challenge

Svend Robinson. Nationally and internationally, public attitudes about assisted dying shifted slowly over the next two decades and, by 2014, three countries, three American states and the province of Quebec had legalized some form of medical aid in dying. The Canadian Medical Association, after debate, issued a statement that physicians could follow their conscience when deciding whether or not to provide medical aid in dying, if the practice was made legal.

In the summer of 2016, more than a year after the Supreme Court ruled that Canada’s Criminal

Divisions remain among physicians to this day. “At the core of it, there is a difference of opinion about what the definition of medicine is,” says Lee. Some believe MAID violates their concept of medicine; they are opposed on philosophical or religious grounds. Others, while unwilling personally to contribute to a medically assisted death, are not conceptually opposed to MAID as an act of medical care. And then there is another, smaller group of physicians who’ve chosen to become MAID providers or actively participate in some part of the process. They believe that assisting a patient to die, when it is an eligible patient’s wish, fulfils their oath to alleviate suffering.

Dr. Beverly L. Adams, BA’83, MD, senior associate dean of education at CSM, supports physicians’ right to hold their personal views, but points out that those views cannot be imposed on patients. “It’s about the patient and patient autonomy,” she says.

Generations ago in medicine, perhaps a doctor’s opinion might have trumped all others, but no longer, Adams says. Modern medical ethics recognizes the need to put patients’ values at the forefront of decision-making about their medical care.

“A good physician always sees things from a patient’s perspective,” she says. “We shouldn’t be paternalistic and tell them they must suffer.”

Adams supports MAID. She sees it as an act of care — a new variation on the way physicians have long sought to ease intolerable suffering of their patients. When she trained in the 1980s, she remembers coming to the realization that even state-of-the-art treatments can cause anguish and misery. “There is a



Photo: Riley Brandt



Dr. Roberta Lee is a resident in family medicine at the Cumming School of Medicine. She “wants to learn and know” how to be present for people in life, and in death.

to the Supreme Court of Canada, arguing that the section of the Criminal Code prohibiting assisted suicide was constitutionally invalid. Rodriguez wanted the legal right to have a physician help her to end her life at a time of her choosing.

Rodriguez lost her case in September 1993 but, five months later, she had an assisted death anyway, aided by an anonymous doctor in the presence of NDP MP

Code must be amended so doctors could help people to die if they had incurable medical conditions, the federal government passed the MAID Act. It laid out the eligibility criteria for a medically assisted death. MAID became an offering within every province’s health-care system, but doctors and nurse-practitioners, as laid out by the legislation, are not compelled to participate in assisted deaths.

lot of suffering in medicine,” she says. Adams completed a year of internship and then a year of internal medicine training and often looked after patients who were dying. “Physicians have always been concerned about patients’ pain and suffering and would maximize analgesia appropriately, especially near the end of life.”

UCalgary, Adams says patients have a right to a medically assisted death, so medical students must know about it; they must know what MAID is and who is eligible, and the ethical considerations around it such as the need for fair access. “It’s part of the curriculum. We need it to be covered,” she says.

his long-term pediatrician about MAID — would he be eligible? And what, as a physician, might one say?

Once they graduate from medical school, physicians progress to residency, years of hands-on, in-depth training in their area of specialty. It’s here that new doctors get most of their exposure to patients who are considering MAID, particularly physicians training in palliative care, family medicine or internal medicine.

Dr. Lee majored in philosophy as an undergraduate and came to medical school interested in the practical ethics of medicine, including patient autonomy. She felt patients had a right to make decisions about their bodies, even though she was uncertain about how she felt about participating in MAID or witnessing it.

During her residency in family medicine, she worked with a physician who mentioned that she did MAID assessments and procedures. When the physician asked if Lee wanted to be present when a patient received MAID, Lee said yes. She felt she wanted to know what MAID was like first-hand. “If it’s something my patients might want, I should know about it,” she says.

The patient, an elderly man, seemed genuinely happy that Lee was there to learn, Lee recalls. She met him at his home on the day of his planned death. “We walked in and he was joking. He had a friend with him and they were laughing, they were reminiscing,” she says. The man, who had advanced cancer, was at peace with his decision. Lee waited for the pit in the stomach as they went through informed consent and the procedure began, but it never came. “There wasn’t that air of futility that sometimes accompanies a bad death. It felt like he was choosing his path,” she says.

Students who are opposed to MAID don’t have to participate in assisted deaths, but they need to understand that capable patients should be able to make their own decisions about their bodies.

Adams has not been present when someone has died by MAID, not as a provider nor as a witness. A psychiatrist, she cares for patients with mental illness who are not eligible for MAID under the present legislation. Mental illness does not meet the criteria of being clearly associated with a reasonably foreseeable death, despite the fact that many of those afflicted die prematurely. “Severe mental disorders should not be excluded from consideration for MAID — however, I am concerned we have not done enough to provide appropriate access to evidence-based treatment for mental illness,” she says. “I would like to see more investment in these resources and ensure a patient has had appropriate care prior to this consideration.”

As the person responsible for overseeing medical education at

Students who are opposed to MAID don’t have to participate in assisted deaths, but they need to understand that capable patients should be able to make their own decisions about their bodies, Adams says.

“In med school, they teach you, ‘First, do no harm,’ right? Maybe that’s why some people grapple with [MAID],” says Adams. “But we also talk about humanism in medicine.”

In medical school, students learn about MAID through an ethics course that covers the evolving legal status of MAID and resources available for patients and physicians in Alberta. Students talk through a series of scenarios, breaking down the ethical and legal requirements in each case. For instance, a man with incurable cancer, depression and anxiety — would he be eligible for MAID? A 15-year-old boy with an inherited muscular disease who asks

Learners are extraneous to the process of MAID — they don’t have to be there, Lee points out. Their presence depends on the willingness of patients to allow one more witness into the room as they pass from life to death. For patients and families, a person’s death is a momentous event in their histories. It doesn’t need unwilling witnesses, says Lee. That’s why she believes that not all physicians need to see MAID first-hand as a learning experience.

medical practice after she finishes training. If a physician is going to be part of MAID, they need to be prepared and capable emotionally, spiritually and psychologically of providing MAID. “It’s not clear to me that I’m able to do that yet,” she says.

Dr. Adam Neufeld, MD, applied to medicine because he wanted human connection, something deeper than if he’d stayed in research or gone into sales.

He likes the idea of caring for people of all ages, going through the whole spectrum of life experiences — birth, death and all the messy and sweet parts in between. Neufeld, who finished medical school in Saskatchewan before coming to Calgary for residency, has always been supportive of MAID.

“I’m very happy that this exists as an option because I think it gives people dignity, options and choices, which really is giving them autonomy at a stage in their life that can be very scary,” says Neufeld, who also has a master’s degree in neuroscience from Carleton University.

During a rotation on palliative care medicine, Neufeld, a first-year resident in family medicine at CSM, was asked by several patients about MAID. They didn’t always want to be referred for an assessment, but wanted to know about the process — what did he think of it? Were they eligible? How did the process work? Sometimes, patients raised the subject of MAID because they were afraid of what lay ahead for them. Fear is not unusual in palliative care discussions; patients are afraid of “being alone, being in pain, dying and leaving family behind, being afraid for them,” he says.

Neufeld says it’s hard to sit in front of a patient with intractable health

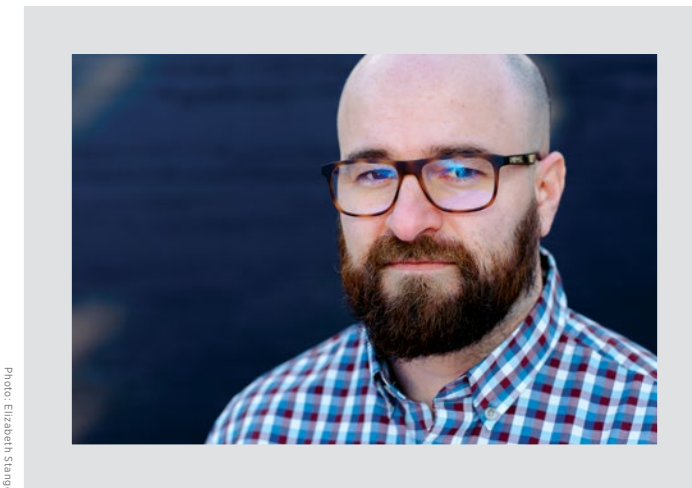


Photo: Elizabeth Strange

From
Dr. Adam Neufeld’s
perspective,
MAID is a rare
chance to be
there with a
patient through
end of life.

“Who are we to say this person should probably qualify and someone else doesn’t?”

Lee calls being at the bedside for an assisted death a privilege, and one that should be reserved for the physicians most interested in providing MAID as part of their medical practice. She compared the experience to that of asking patients whether a medical student can try an IV on them for the first time. “The suffering and the generosity required for [a patient to let a student start an IV for the first time] are different for someone allowing you into their home to witness their last moments,” she says.

Lee hasn’t decided if she will participate in MAID as part of her

issues who wants MAID but cannot legally access assistance in dying because they're ineligible. "In [that] position, we feel a little helpless," he explains. "Who are we to say this person should probably qualify and someone else doesn't?" He applauds the ongoing re-evaluation by the federal government of how MAID is working in Canada, taking into account perspectives of ethicists, experts, patients and physicians. "These are challenging decisions to make, and not overnight decisions."

Neufeld has been present as patients died by MAID. Their deaths are unlike many other deaths in medicine; patients often express a sense of relief, he says. "I think it gives them a sense of closure or peace, that they can sort of be the

master of their own ship."

From his perspective, MAID is a rare chance to be there with a patient through the end of life. With other patients, he'd said goodbye at the end of a day and gone home to think about their case overnight, dreaming up something they could talk about the next day or add to the care plan. But, in the morning, the patient's name was no longer on his list of patients because they'd died overnight. "It's a bit of an adjustment every time that happens," Neufeld says. Otherwise, he feels the experience of being someone's doctor as they seek out an assisted death is the same as caring for any patient going through a challenging time. A physician's role is to get to know who a person is, what their fears and

values are, and to provide the kind of care that is as close to what they want as possible, he explains. "Whether that's MAID or [not] doesn't change anything for me," he says.

Dr. Lauren Bilinsky, MD, a fourth-year CSM resident in family medicine and public health, came to medicine after majoring in chemistry and Canadian studies as an undergrad. For her, the humanities had revealed experiences of Indigenous peoples, immigrants and refugees to Canada. "And, through all these discussions, equity became very, very important to me," she says.

As a physician, she wants to address inequities, including in end-of-life care. Across Canada, care for the dying is a patchwork of unevenly distributed services that are not always accessible when patients need it, particularly for people who live in rural areas, or are less advantaged socially or economically," Bilinsky says.

Rural areas are less likely to have the same access to palliative

care services like hospices, and people who have severe illness or nearing the end of their life may not comfortably travel long distances for care. In fact, relatively few Canadians receive formal palliative care outside hospitals: in Ontario and Alberta, fewer than one in six people who died in 2016-2017 received publicly funded palliative home care, according to a 2018 Canadian Institute for Health Information report.

Scotia doing her undergrad degree, watching over her phone.

She was in her second last year of medical school when MAID was legalized. She says she wants to help patients achieve their end-of-life goals, whatever those may be. Everybody sees dying differently and people should have an opportunity to make choices as they see fit, Bilinsky says. "Each person, each patient, each

"Then, at all three, after a couple of minutes of crying and deep breaths, all three families started telling stories about all the wonderful times," Bilinsky says. "There's a moment to reflect on the sadness of the situation, but also the blessings of being able to be there for each other and honour somebody's wish for their end of life."

Public health work has dominated Bilinsky's waking hours throughout the pandemic, and she expects to work mostly in that area when she completes her training. But end-of-life care, perhaps including MAID, will hopefully be a part of whatever she does, she says.

In March 2021, after a year of bitter debate, the federal government passed Bill C-7. The law opens the door for more Canadians to access MAID, including those whose deaths are not "reasonably foreseeable." For patients in this new tract, they must have a serious and incurable "disease, illness or disability," be in an advanced state of decline and be suffering intolerably. They're required to go through a minimum 90-day period between their first assessment for MAID and the day of the procedure.

The bill also gives the federal government two years to come up with guidelines that would allow people to seek MAID on the basis of a mental disorder.

How changes will play out in hospital rooms, hospices and patient homes is unclear. But they will not affect how students and residents are trained to help patients who seek MAID, says Adams.

"The principles are still the same," she says. "You're paying attention to a patient's pain and suffering." •



Photo: Riley Brandt

Dr. Lauren Bilinsky is a CSM resident in family medicine and public health; she strives to address unevenly distributed health-care services, including end-of-life care.

"MAID and palliative care are so important and are not equitably accessible across the country for many reasons," Bilinsky says. "Sometimes there isn't somebody available or trained, specifically for our rural, remote or northern populations. But I think we also really need to dig into some other conversations about equity."

Diversity, inclusivity and racism all need to be explored as possible barriers to end of life care, she says.

In her own family, Bilinsky has seen how good end-of-life care makes a difference to patients and their families; her grandfather died in hospice with his daughter at his side and Bilinsky, who was in Nova

provider is going to have a different idea of what constitutes quality versus quantity of life."


Bilinsky welcomes the ongoing and tricky discussions over MAID. "I like that there are debates and continued conversations about MAID. These are very important ethical discussions," she says.

To date, Bilinsky has witnessed three deaths by MAID. Each followed a similar pattern. The medical team waited for the person to say they were ready. Then the team went through the consent again before injecting the different drugs. Family and friends held their breath as their loved one's breath slowed. When they stopped breathing, their loved ones inhaled.

"Each person, each patient, each provider is going to have a different idea of what constitutes quality versus quantity of life."



Illustrations: Valéry Goulet



All you can't eat

Photo: Isiah & Taylor Photography

Certainly, there's more than enough food in the world to feed us all — but ensuring nobody goes hungry takes strategic vision, compassion and an appetite to upend the status quo

Hunger. It's a sensation all living beings know — the feeling of discomfort or weakness brought on by a lack of food, quickly followed by a compelling desire to eat. For most of us, this unnerving sensation is readily sated with a meal at home or on-the-go. Yet the problem of hunger is a growing one right here in Canada and has far-reaching effects, from impacting physical and mental health and relationships, to hurting the ability to find and keep a job.

While there is certainly more than enough food produced to feed the global population, more than 690 million people go hungry every day — and that number is on the rise. By the year 2030, it's estimated that the number of people affected by hunger will surpass 840 million, more than 10 per cent of the world's population.

In recent years, this urgent global issue has been described as "food insecurity." This is defined as inadequate or insecure access to food, mostly due to financial constraints. While the term may have a more technical ring to it than "hunger," its devastating effects are just as real. In 2017-18, according to Statistics Canada, one in eight Canadian households, or about 4.4 million people, were food-insecure, and one in 16 Canadian children suffer from food insecurity, which can be anything from the fear of running out of food to going days without eating.

Most people who suffer from food insecurity are in the workforce, but low wages and job-precariousness mean that even those able to work often don't bring in enough income to avoid its effects. According to a report from the non-profit Community Food Centres Canada (CFCC), during the COVID-19 pandemic the number of Canadians experiencing food insecurity has increased by a staggering 39 per cent, disproportionately impacting Black, Indigenous and northern communities. Along with low wages and employment insecurity, low social assistance rates, systemic racism and the high cost of food in Canada's north are among the reasons cited.

The eradication of food insecurity, however, is being tackled on a wide variety of fronts, with the understanding that it requires the co-operation and integration of policy actions across social, health, economic and agricultural domains, as well as all three levels of government.

With food supply chains temporarily impacted during the pandemic and predictions of more pandemics to come, there is also an increasingly urgent need to re-evaluate where and how we get our food — and how sustainable these practices will be in the coming decades.

In recent years, UCalgary has played a leading role in promoting healthy living and safe food for Canadians, with projects undertaken by academics, employees and alumni that address food insecurity in innovative ways. Initiatives like UCalgary's Simon Farm Project also address the issue with sustainability at its core, ensuring that ecological balance and the avoidance of depleting natural resources are also incorporated into the aims to alleviate food insecurity for all.

UCalgary researchers, alumni and staff are working to address the urgent need to fight food insecurity in our communities, whether for urban and rural families or for residents of remote northern communities. While these passionate individuals and groups address the issue in unique ways, they share a common belief: that hunger has no place in a healthy and caring society. »

by Valerie Fortney, BA'86

The Calgary Community Fridge



Photo: James Hill

Community fridge organizers, from left: Sasha Lavoie, Jennifer Jetté, Megan Kirk, Alice Lam.

the “community fridge,” part of a growing North America-wide movement to ensure easier access to healthy food for all.

The fridges are appearing on well-travelled streets, often tucked in between a local pharmacy or coffee shop and other businesses. They are stocked and replenished, often every day, with healthy, fresh, donated food for the taking — no questions asked.

Lavoie says she and a small group of like-minded friends saw an opportunity to do something concrete in their own city in a time of extreme deprivation for many due to the global pandemic. “Community involvement and lowering barriers to accessing aid resonate so much for me,” she says. The project appealed to her as — in the words

of fellow organizers — a “mutual-aid project,” wherein individuals take charge of caring for one another through a redistribution of wealth and resources.

The Calgary Community Fridge, located outdoors at 908 Centre St. N. and protected from the elements in an open shed, is accessible 24/7 and stocked by local restaurants, grocers, businesses and residents; it is regularly cleaned and restocked by a small team of volunteers.

Lavoie, a native Calgarian, says her experiences volunteering with agencies such as Distress Centre Calgary opened her eyes to the close connection between mental health issues and food insecurity. “Seeing the end of a food hamper or even accessing one is a real stressor,” she says. “In an ideal world, we wouldn’t need community fridges — this is just one more way to help our neighbours.”

It’s the centrepiece of any home, the big appliance teenagers run to at the end of the school day, the destination for grumbling tummies and creative cooks. For far too many, though, the family fridge brings more anxiety than relief, its bare shelves a stark reminder of the tangible impact of living with food insecurity.

So, when photographs of brightly painted fridges started popping up on Sasha Lavoie’s Instagram feed earlier this year, it got her thinking about how this symbol of plenty — and, far too often, privilege — is far from universal.

“It really struck a chord with me,” says Lavoie, BA’12, communications co-ordinator for UCalgary’s Campus Mental Health Strategy and current undergraduate student in the Department of Psychology. “They were vibrant fridges, their opened doors showing fresh, colourful vegetables and fruits.” These weren’t just garden-variety Instagram posts of a ubiquitous household appliance, though; what Lavoie had discovered was

Arctic Institute of North America University of Calgary

It’s a place of breathtaking beauty, where giant glaciers are surrounded by majestic mountains and ancient icefields. The starkness of the landscape is matched only by its extreme seasons: eternal sunshine in the summer; weeks of darkness and temperatures plunging to -40°C in winter.

The often unforgiving land and climate of the Kluane region of Canada’s Yukon territory also presents some big challenges for those who call it home. A short growing season, combined with a variety of social, economic and political forces, have led to the Yukon having some of the highest rates of food insecurity in the country.

A new initiative, launched by UCalgary’s Arctic Institute of North America, is intended to play a role in addressing this inequity. Researchers at the Kluane Lake Research Station (KLRS), located 220 kilometres northwest of Whitehorse, recently began planting their first crops combining two technologies — a hydroponic system called Cropbox from the United States, along with clean, solar-powered energy courtesy of Yukon-based Solvest Inc. and Cold Acre Food Systems Inc.

“Our goal is to essentially demonstrate these units can operate 12 months of the year,” says Dr. Henry Penn, PhD,

of the hydroponic system, a 40-foot shipping container that is the equivalent of a traditional growing acre. Penn, a post-doctoral researcher with the Institute, says that for people living in the region, access to fresh produce often requires a several-hour drive to Whitehorse, where grocery store prices for such essentials as apples and potatoes can be two to three times higher than in southern centres like Calgary.

The project’s birth was the result of a conversation Penn had with Solvest and Cold Acre about using solar technology to power the research station, which, for more than a half-century, has been conducting research in a wide variety of disciplines, from glaciology and botany to zoology and anthropology. Solvest was also looking to try hydroponic growing, which has seen success in such centres as Whitehorse. The sustainability component — so far, the diesel fuel usage at the research station has been reduced by 80 per cent — was vital to its success.

Penn, whose team has been working with the region’s First Nations communities since the project’s inception, admits it “isn’t a silver bullet,” but it does have the potential to help address food insecurity in the Yukon.

“We’re not proposing these systems as a replacement for traditional growing, but it could help us understand better where hydroponic systems, indoor growing, could fit in as part of a broader food security system solution,” he says.



Photos: Ryan Campbell Photography

Left: Installation of the Cropbox at the Kluane Lake Research Station. Below: Growing trays inside the Cropbox; each square space is a place for a crop.



FreshRoutes & LeftOvers Foundation



Photo: Riley Brandt

Lourdes Juan brings affordable, culturally appropriate shopping to the doorsteps of newcomers, seniors in affordable housing, students and people on Indigenous reserves with few nearby grocery-store options.

and serve those in the community experiencing food insecurity. Since 2012, her LeftOvers Foundation has been redistributing unused food to underserved populations, to the tune of about 10,000 lbs of food per week in Calgary, Edmonton and Winnipeg, collectively.

Working with her regular partners, restaurants, bakeries and other food suppliers at the start of the pandemic last March, she and her team were able to quickly redistribute 27,000 lbs of food when those businesses were caught off guard and shut temporarily.

Juan's newest project, Fresh Routes, uses a refurbished Calgary Transit bus that houses a mobile grocery store filled with fresh produce and other healthy food items, at prices between 25 and 40 per cent lower than those of regular grocers. "We saw that the LeftOvers model helped to bring food to agencies serving vulnerable Calgarians, but we also wanted to bring food directly to households," she says of Fresh Routes, which also operates in Edmonton. The bus, along with several trucks, have removable carts that can be placed outside and will move into high gear this spring as the weather gets warmer and COVID-19 restrictions potentially ease.

Juan, who in 2020 was seen by the Al Jazeera TV network's 40 million viewers in a feature on pandemic heroes, has high praise for organizations like the Calgary Food Bank. She sees her programs as another part of the "web" of services that reach out to those in need. Promoting sustainability — redistributing unused food rather than sending it to the landfill — and helping to stretch monthly grocery budgets make for a rewarding life, says Juan.

"It's about bringing food dignity to people, offering them healthy food and doing it creatively," she says. "I'm an eternal optimist, but I know it can be done." •

The year 2020 is one Lourdes Juan, BGS'05, MEdes'10, will never forget. "I got married, got pregnant and now I'm Enzo's mom!" she says with a hearty laugh. "Some pretty wonderful things happened."

Of course, planning a wedding during a global pandemic — her guest list of more than 300 was whittled down to just immediate family — looked a lot different than it would have in normal times. Juan, though, found ways to pivot not only in her personal life, but also in her life's work. It's a vocation that feeds her soul and, in turn, feeds some of Calgary's most vulnerable communities.

For nearly a decade now, Juan, who received her master's degree in environmental design at UCalgary, has been finding innovative ways to both combat food waste

Simon Farm Project

Over the past two decades, Dr. Tatenda Mambo's educational pursuits have taken him from his home country of Zimbabwe to California and Ohio, before finally landing in Canada in 2009 to begin his PhD at UCalgary.

"I have no problem going to unfamiliar places," says Mambo, PhD'16, of his peripatetic lifestyle. "I've always been good with people, so making new connections hasn't been hard." Still, toiling on a farm south of Calgary wasn't where Mambo imagined his journeys would eventually lead him. "Being a farmer definitely wasn't in the plan," he says with a chuckle, noting that his childhood dream was to play professional basketball. "But I found I like getting my hands dirty."

As co-manager of the 21-acre Simon Farm Project, Mambo, a post-doctoral scholar in UCalgary's Sustainability Studies Program, oversees an enterprise that provides engagement and experiential learning opportunities in regenerative agriculture.

Along with getting his hands dirty, Mambo found he also liked — in fact, loved — the idea of applying his academic knowledge to producing food sustainably.

"What we want to focus on is *nutritious* food," he says. "The key is to improve the soil at the same time we are harvesting crops from them." The current practices of conventional agriculture rely on synthetic forms of nutrients to provide plant nutrition, such as chemical fertilizers and pesticides — practices that have been blamed for greenhouse gas emissions, soil degradation and water pollution. Regenerative agriculture, on the other hand, sees the integration of various forms of production, with those activities — which include biodiversity, nutrient cycling and environmental stewardship — functioning as part of a holistic ecological system.

Some of the many benefits of regenerative agriculture include reversing climate change by rebuilding soil-organic matter, which, in turn, will help to keep healthy the billions of acres of farm- and pasture land that feed the world today.

"We clearly can produce enough food to feed the world," says Mambo, whose co-manager at the farm is Dr. Craig Gerlach, PhD, a professor in UCalgary's School

of Architecture, Planning and Landscape and the academic lead for its Sustainability Studies program. "But conventional methods, coupled with our current food system, have particular sustainability concerns with regard to the environmental and wider social impacts due to pollution, loss of ecosystem services, obesity and nutrient deficiencies, food waste, and loss of genetic diversity."

The Simon Farm Project, a five-year partnership with the land's owner, John Simon, and UCalgary's Sustainable Energy Development (SEDEV) program, has grown a wide variety of vegetables, along with hops for Alberta breweries — a testament to its overseers' commitment to biodiversity and growing with the intent to regenerate, rather than degrade, the soil.

"This can be an illustration of how we can shift agricultural practices in our region," says Mambo, who is more than happy with his unexpected turn as a farmer. "We want to open people's minds to better ways of doing things." •



Photo: Riley Brandt

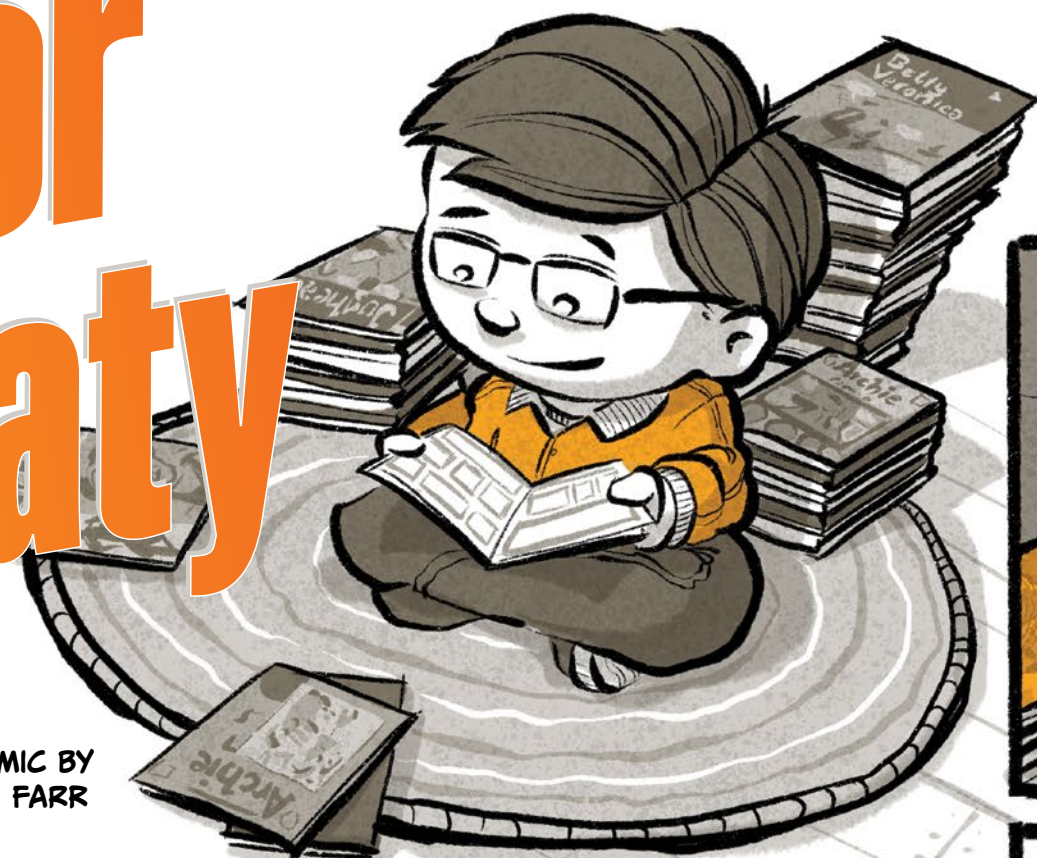
Tatenda Mambo strives for solutions that will have a profound, positive impact on food security challenges while recycling nutrients to model sustainability.

THE ORIGIN OF

Professor Bart Beaty

COMIC BOOK SCHOLAR

A COMIC BY
RICH FARR



It's a rare and enviable career that's built on a childhood obsession — race-car driver, ballet dancer, astronaut. No matter how into *Spider-Man* they are, however, it's unlikely to occur to most kids that an acceptable adult life could be spent immersed in comic books. Dr. Bart Beaty, PhD — a professor in the Department of English and author of several books about art, history and the significance of comics — is proof that what intrigues us as children can be not only an acceptable but an important lens through which to learn, teach, research and otherwise shape and meaningfully engage with the world.

A globally respected expert in his field, Beaty's love of first, *Archie* (the focus of his recent scholarly study, *Twelve Cent Archie*), then *Spider-Man*, *Wolverine*, *Maus* and dozens of European titles, started when he was eight with nothing to do but dig into a neighbour's box of comic books. His trajectory from there has led him through adventure and

academia and put more than one of his undergraduate courses on the list of classes that fill up faster than Jughead can eat a dozen burgers.

Beaty was both fascinated and dismayed by the impact of COVID-19 on the comic-book industry — a quaint world in which, until the spring of 2020, fans (despite various digital offerings) still gathered in retail shops every Wednesday all over North America to grab and gab about the newest releases on New Comic Book Day. The fracture took place after shops closed and Diamond Distributors — who have had a monopoly on distributing DC, Marvel and other publishers for nearly 40 years — completely shut down, putting the industry on hold for weeks. When the machine started up again, things were — for better or for worse — different.

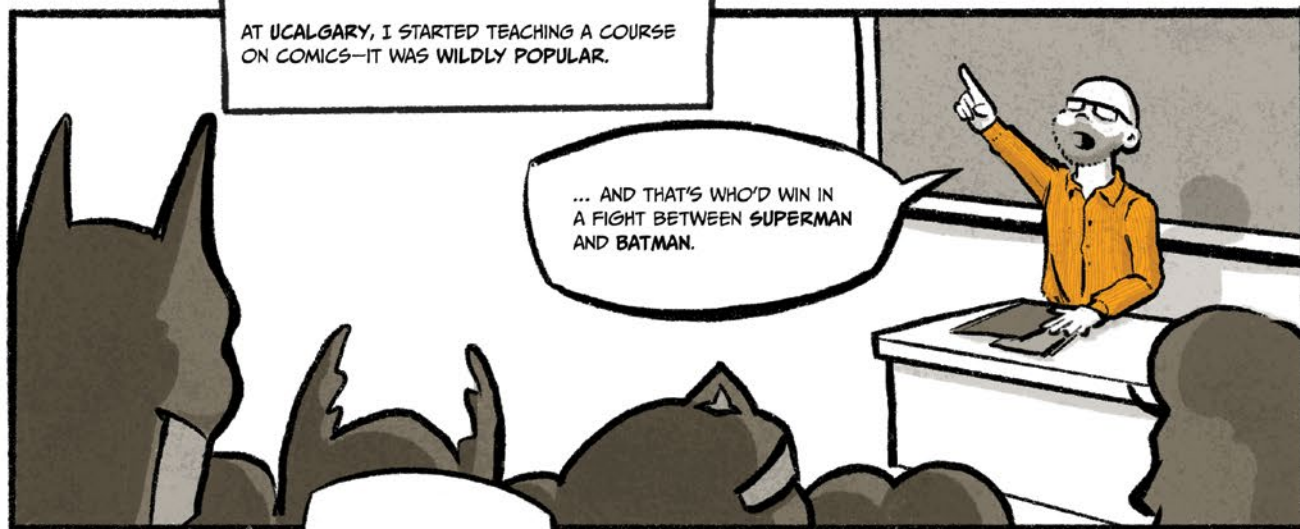
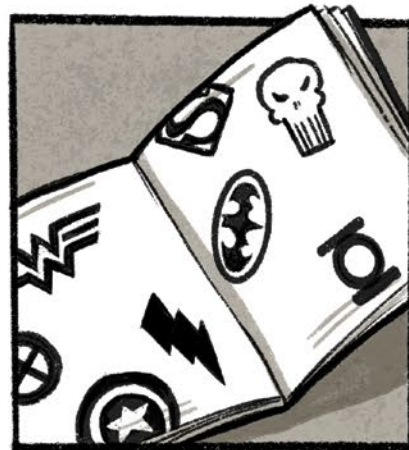
It's a tenuous time and, certainly, Beaty isn't alone in wondering with hope, curiosity and perhaps a touch of nostalgia: what's next? — JM »







AFTER MY DISSERTATION, I GOT A GRANT AND SPENT THREE SUMMERS ON A COMIC BOOK TOUR OF EUROPE.



DC CUT A DECADES-LONG CONTRACT WITH THEIR DISTRIBUTOR AND STARTED THEIR OWN COMIC BOOK DAY ...



On Being Funny When Nothing Else Is

An award-winning comedian does the math during a global crisis — and it turns out she's more or less essential

by Rebecca Northan, BFA'96

In 1996, when my mother was diagnosed with cancer and given eight weeks to live, our death-related comedic exchanges were not for the faint of heart. I promised that, if she dared to leave me her treasured collection of 1,200 pieces of purple glass, I would most definitely plan a Greek wedding. Mom promised to haunt me.

You may be familiar with the late, great comedian Steve Allen's classic formula: "tragedy plus time equals comedy." My mom taught me that, rather, tragedy divided by comedy equals sanity — an algorithm I believe I may have just invented, but don't quote me on it.

Admittedly naive in the early days of the pandemic last March, I was convinced it would blow over quickly. I made a big fat bet with a director colleague that COVID-19 would be in our rear-view mirror by May — he said it would last at *least* a year. I accused him of being a pessimist; he countered with something about epidemiology and scientists. Likely, I rolled my eyes. (For the record, I worship at the altar of science, but I am plagued with a competitive and contrary nature.) We agreed that the loser would pay for a very expensive dinner. We shook on it.

My good friends almost immediately started doing improv shows online. Improvisers are a particularly resilient and resourceful bunch: the world shut down on a Wednesday; I had friends in Austin, Texas, who did their first Zoom performance that Friday. I tried to participate,

but found the notion too depressing: live performance is all about being in a room together, shoulder to shoulder, so the laughs can travel. We call it a "warm room." Anything online felt cold to me and, afterward, I would find myself feeling lonelier than when I started. I lost 14 months of work in the first two weeks of lockdown. I started meeting the neighbours in the middle of the street, in the middle of the day, no shoes, no socks, cocktails in hand — yes, *cocktails*, plural.

I read the results of a public survey that claimed "performing artist" was the No. 1 most *non-essential* job on the planet, possibly in the universe. In a last-ditch effort at pragmatism, I immediately took an online government survey to find out what other jobs I might be suited for: my top result was "actor," which I still cannot believe is a suggestion on a government survey — it seems irresponsible.

By April 2020, I had stopped folding my laundry. I would get undressed in front of the washing machine, then walk nude to the living room to dress out of the mountain of clean laundry on the couch. I didn't bother to close the drapes (once a performer, always a performer). Every two weeks, I would grocery-shop (not online) in my pyjamas. The neighbour across the street, who had not spoken to us since we moved in three years earlier, started talking our ears off while waiting for her biweekly porch delivery of cotton candy. When not sitting in a chair staring into the middle distance, I cried a lot.

Sitting still is not something I'm good at so, towards the end of May last year, I launched a project called "Sidewalk Scenes," whereby patrons can go online to book a curbside performance of live music, a kid's show or improv comedy. I pulled out my old Doc Martens — the fashionable improviser's footwear of choice in the early '90s — and marvelled that I was making a return to street performing at 48 years old. I found a growing acceptance that my impending sense of doom and periodic hot flashes had more to do with perimenopause than the likelihood that I had developed psychic abilities or contracted COVID.

And I made jokes. All kinds of jokes. Silly jokes. Immature jokes. Inappropriate jokes. Jokes infused with gallows humour and desperation. None bear repeating. Most you had to be there for. Many are utterly unmemorable, save for the resulting shared laughter.

The laughs we find in the middle of a tragedy are the ones we reach for as an act of survival. For the love of all that is sacred, may we find at least a few things to laugh at so we don't completely come apart at the seams. In my view, if we can follow the tenuous thread of a tiny laugh, we can usually manage to hold on to some scrap of sanity. Tragedy divided by comedy ensures we don't sit in it for too long — humour invites us to come up for air.

Enter the "non-essential" performing artist. Our job is to reframe things to provide a bit of distance from which to see ourselves, and you, as utterly human: "*Remember when we all stopped wearing pants?*"

A woman who booked one of my curbside comedy shows sent a note that read: "When we booked you, we thought we were doing *you* a favour, but it turns out you did *us* the favour — laughing with the neighbours from our

respective porches brought us together as a community."

Without a doubt, the best laughs are the ones that unite us in mutuality. We call those "warm laughs," and they travel faster than any other. They make us feel less alone. They don't come from punching down, and they tend to be accompanied by vigorous head nodding and sparks of recognition — "Oh my god, that's *me!*"

Underneath those warm laughs, gleaming at their very centre, is a nugget of truth and vulnerability,

floating on a sigh of, "Aren't we just so...human? Aww. Bless our wee cotton socks — and forgive us."

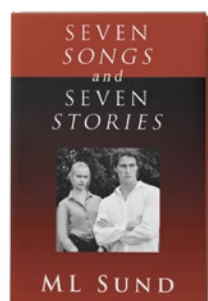
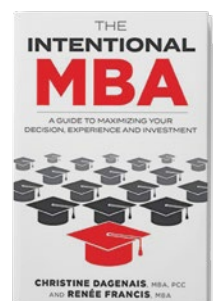
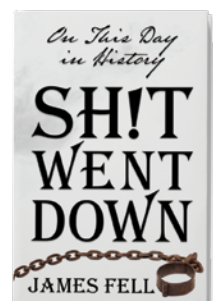
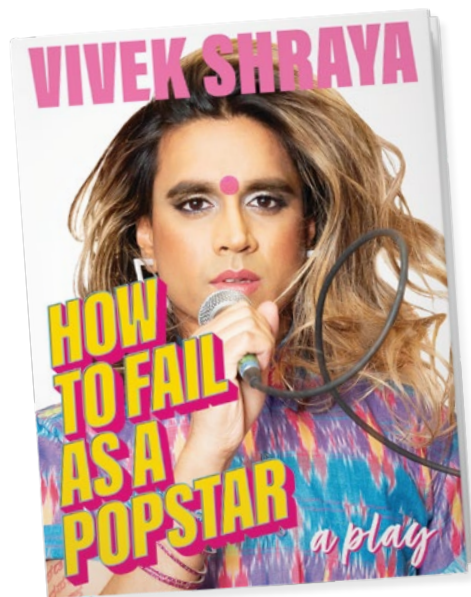
If there is ever a way, in the middle of an ongoing tragedy, that I'm able to offer that kind of a laugh, well, I suppose I am quite happy being non-essential. •



Our job is to reframe things to provide a bit of distance from which to see ourselves, and you, as utterly human: "*Remember when we all stopped wearing pants?*"

Rebecca Northan is a Canadian Comedy Award-winner and an alumna of the Loose Moose Theatre and Second City, and has created several hit shows that have toured across Canada, the U.S. and the U.K. including *Blind Date*, *Undercover* and *Legend Has It*.

Rebecca has also taught at UCalgary, the Canadian Film Centre, the Banff Centre, the Soulpepper Academy and the Stratford Festival Conservatory. This year, she joined the faculty at the National Theatre School of Canada.



Book Shelf

by Hong Truong, BA'13

Compelling recent reads from writerly faculty and grads on everything from how to get a good night's sleep to a history of cyber-intelligence

■ **How to Fail as a Popstar** (Mar 2021)

Vivek Shraya, assistant professor,
Department of English

How to Fail as a Popstar is Shraya's debut theatrical work, a one-person show that chronicles her journey from singing in shopping malls to "not quite" pop music superstardom with beguiling humour and insight. Shraya's book is a raw and humorous reflection on the power of pop culture, dreams, disappointments and self-determination.

■ **On This Day in History**

Sh!t Went Down (Apr 2021)

James Fell, BA'93, MA'96, MBA'99

Fell's writing has evolved from fitness to motivation to social justice. Now, he's writing about history. His latest book will expand your knowledge of world history in the most hilarious and profane way possible.

■ **Behind the Enigma: The Authorised History of GCHQ, Britain's Secret Cyber-Intelligence Agency** (Oct 2020)

Dr. John R. Ferris, PhD, professor,
Department of History

Based on unprecedented access to documents in the U.K.'s Government Communications Headquarters (GCHQ) archive, *Behind the Enigma* is the first book to authoritatively explain the history of one of the world's most potent intelligence agencies, revealing the fascinating truth behind this remarkable and enigmatic organization.

■ **The Intentional MBA: A Guide to Maximizing Your Decision, Experience and Investment**

(Jun 2020) Christine Dagenais, MBA'11,
and Renée Francis, BA'06, MBA'16

After three years of collaboration, the authors never planned to launch their labour of love during a pandemic, but they've soldiered on. Written for MBAs by MBAs, this practical guide will help those considering an MBA, studying in school now or graduated to find information on how to get the most out of the experience.

■ **Seven Songs and Seven Stories**

(Aug 2020) Michael Sundberg, BSc (Eng)'88

While working in Saudi Arabia as an engineer, Sundberg began writing and ultimately turned to this new passion as a full-time pursuit. He was intrigued by the similarities and differences amongst people around the world — their cultures, priorities and histories. This collection of short stories and song lyrics (published under the pseudonym ML Sund) explores temptation, regret and redemption across the American Heartland.

■ **Sleep Good: Get the Sleep You Deserve**

(Nov 2020) Raman Gill, BEdP'13

After two years of sleepless nights, Gill published *Sleep Good* — a handy guide on the essential practices to get a deeper sleep and better understand how sleep works. Learn how to wake up refreshed, handle shut-eye habits and self-reflect to a better sleep.

■ **Others of My Kind: Transatlantic Transgender Histories** (Oct 2020)

Dr. Annette F. Timm, PhD, professor,
Department of History | Co-Authors:

Alex Bakker, Rainer Herrn and Michael Thomas Taylor

Others of My Kind is the story of a transatlantic network of transgender people who, through the exchange of letters and photographs, established a community for themselves and carved out a space in the emerging study of human sexuality.

by the numbers

Facts and figures shaping our world — or piquing our interest >>> by Matt O'Grady

\$1.41 billion

Amount raised by UCalgary's *Energize* campaign — the third-largest successfully completed fundraising campaign in Canadian history

US \$10 billion

Amount raised by crowdfunding site GoFundMe since launching in 2010 (average donation: US \$66)

US \$44.7 million

Largest GoFundMe campaign in history, America's Food Fund, led by Leonardo DiCaprio and Laurene Powell Jobs (widow of Steve)

64,000

Temporary foreign workers (TFWs) who came to work in Canada's agriculture industry in 2019, according to a report from UCalgary's Simpson Centre

52%

Increase in TFWs working in agriculture between 2015 and 2019 in Canada, according to that same study

41.9%

Increase in snack consumption since COVID-19 began, according to research from Arizona State University

3.52 billion

Number of Smarties manufactured at Nestle's Toronto factory each year

318

Number of PhDs and MDs granted between fall 2019 and spring 2020 by UCalgary

35,000

Students at UCalgary in Fall 2020, a record-high enrollment

1,000%

Increase in subscribers to e-learning platform *MasterClass* between 2019 and 2020, according to the company

\$240

Cost of an annual subscription to *MasterClass*

\$172

Cost for a 12-month "sock subscription" from Calgary's Friday Sock Co.

34

Ultramarathons completed by 46-year-old Albertan Laura Townsend, who's committing to finishing 50 by her 50th birthday

1

Rank of UCalgary's Faculty of Kinesiology among sport science schools in North America, according to ShanghaiRanking's Global Ranking of Sport Science Schools

1

Rank of Calgary among Canadian cities with the most sunshine (southern Alberta communities in the Top 10: five)

\$1.3 billion

Cost to insurers of the Calgary hailstorm on June 13, 2020, the costliest hailstorm in Canadian history

\$4 billion

Amount paid out over the past 10 years by insurers for damage caused by Alberta hailstorms, mostly to windows and sunroofs

600

Megawatt hours (MWh) of electricity expected to be generated each year from new solar panels on UCalgary's net-zero MacKimmie Tower

205 million

MWh of electricity being consumed by global data centres in 2018, or 1% of total global electricity use

350 million

Global daily users of Zoom in December 2020, up from 10 million daily users in 2019

974

Attendees for UCalgary's virtual Faculty of Arts convocation in November 2020, addressed by honorary doctorate-recipient Jean Grand-Maitre of Alberta Ballet

100

People employed behind the scenes to produce Alberta Ballet's virtual presentation of *The Nutcracker* last December

100

Dancers and workers at Moscow's Bolshoi Theatre who tested COVID-19 positive shortly after reopening for its 245th season last fall

200

Acrobatic cats who "perform" in the Moscow Cats Theatre, hosted by director/clown/handler Yuri Kuklachev

55

Cats studied by a group of scientists including UCalgary's Dr. Daniel Pang, PhD, in order to "develop and validate the Feline Grimace Scale (FGS) to detect naturally occurring acute pain"

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10 Things We Like About You

Even if you saw her self-titled Hollywood biopic starring Claire Danes, there are likely a few things you didn't know about renowned animal-husbandry expert and autism activist **Dr. Temple Grandin**, who makes UCalgary's vet-med school a second home whenever she can

If you could do anything for a living, what would it be?

I wanted to be an astronaut. I was in love with the space program as a kid, but I couldn't do the math to go into engineering — I had to find something else that didn't require algebra and calculus.

When and where were you happiest in your life?

When I was about 10 years old, flying my kite on the beach. I remember finding a message in a corked wine bottle when I was looking for shells there and running home to get a corkscrew. I wrote back, and I remember being very happy.

Who or what has had the greatest impact on the person you've become? My high school science teacher, Bill Carlock. When I was a poor student in high school, he gave me interesting science projects that had visual illusions. He motivated me to study and that was a pathway to my goal of becoming a scientist.

What do you like most about yourself?

That I'm someone who is able to get things done.

If you could travel anywhere you wanted today, where would you go? I'd like to go to the [International] Space Station.

Describe the most beautiful place you've ever been.

The Australian outback. I flew over it a few years ago, heading south from Darwin, in a little tiny plane. I was in the co-pilot seat. Maybe the outback isn't exactly beautiful, but it's just — wow, I can't believe how big it is. It's meaningful because it got me to thinking about how we use this land and one way is grazing animals. You can't grow crops there, but why not raise food?

When you're restless or unhappy, what do you do to improve your mood? In my 20s, when I got nervous, I would make sure to get home at 4 p.m. to watch *Star Trek*. Now, I make sure to get a certain amount of exercise every day.

Current guilty pleasure?

Dark chocolate candy with raspberry filling.

Who or what in life brings you the most joy? I feel a lot of joy when my students do really well.

If a song played whenever you entered a room, what would it be? Led Zeppelin's *Stairway to Heaven*. — JM •

Dr. Temple Grandin, PhD, is a professor of animal science at Colorado State University. She is a frequent visiting lecturer for UCalgary's School of Veterinary Medicine's behaviour and welfare class and often presents to student clubs and industry groups in Calgary. Grandin recently co-authored a paper on rodeo animals with Dr. Ed Pajor, PhD, professor of animal behaviour and welfare and director of W.A. Ranches at the University of Calgary.



Photos: Rosalie Winard

You said 'aim high.' And together, we did.

Because of your support, *Energize: The Campaign for Eyes High* is the third-largest successfully completed fundraising campaign in Canadian history.

We have more than \$1.4 billion reasons to celebrate, but the most important reason is **you**.

Together, we have elevated and strengthened our university, our students, our research and our community.

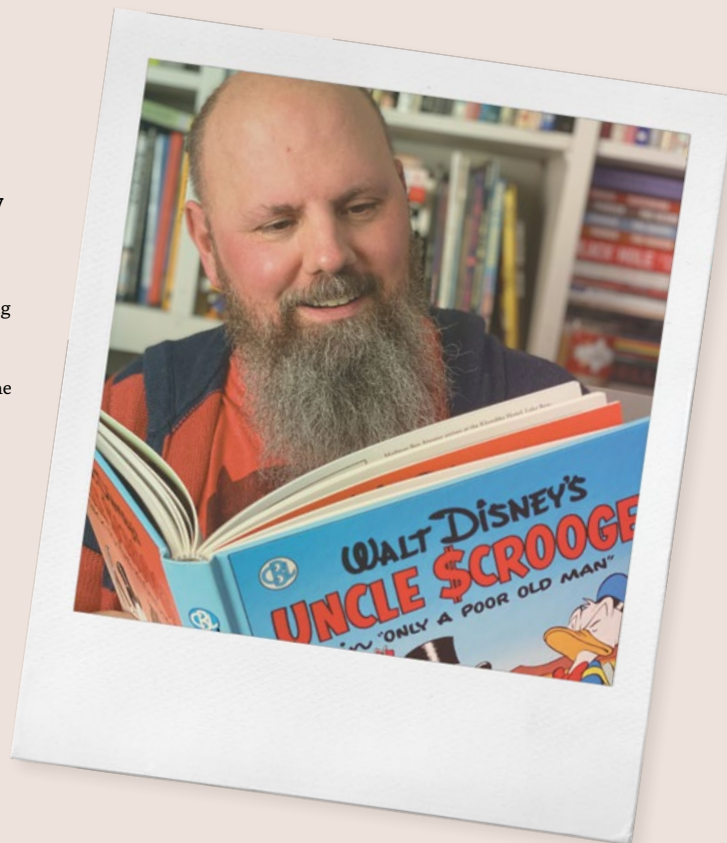
Thank you — when we combine our energy, anything is possible.

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Energized by **you**.



Kapow! **Dr. Bart Beaty** turned a childhood love of comic books into a career spent teaching and exploring some of the most popular, least-studied cultural artifacts of the 20th century (p. 46).



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