WINTER 2017-18

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"

With the heroin

epidemic growing

exponentially by

the minute, why

making this rescue

kit an EMERGENCY

isn't Congress

PRIORITY..."



UTAH NALOXONE

["Siblings Unite to Confront the Overdose Epidemic," Spring 2016] What an amazing family and what an amazing way to turn tragedy into a positive and effective force for good in this world. I can't believe this rescue kit program isn't making national headlines. A drug that can instantaneously save lives, that ANYONE can administer, and that is completely safe and has NO side effects. With the heroin epidemic growing exponentially by the minute, why isn't Congress making this rescue kit an EMERGENCY PRIORITY, and putting this rescue kit into every home and office in the country?...

Annette*

TEACHING IN UTAH

["Facing the Teacher Shortage,"Winter 2016-17] I taught science for five years and had to quit because I couldn't afford to be a teacher anymore. Hoved teaching science, developing the curriculum, challenging my students with more and more STEM projects, and

really teaching them how to think like scientists. Teaching in Utah has become a volunteer job for people who can afford to spend their day serving their community....

Sarah C. Hansen* Bountiful, Utah

THOUGHTS ON A NEW U PRESIDENT

["What Do We Want in a U president?" Fall 2017] I think it's about time that the university had a woman president. And not just an interim president either. The concerns of 50 percent of the population need to be addressed, by someone who has experienced them.

Laurel Wright BA'12 Salt Lake City

I agree that it is time the U had a female president. Maybe even a minority female president. Half the student body is female, and a good

amount of students come from minority communities. How about hiring someone who looks like us?

Laura M. Gray BA'85 JD'91 Salt Lake City

I'd like a president who would be willing to go without his/her own parking spot until the parking problem has been fixed for everyone else.

Kimball Whitaker BS'93 Taylorsville, Utah

VOLLEYBALL AT THE U

["Digging It," Fall 2017] I saw the article on Jake Gibb playing volleyball and fondly recalled building the outdoor volleyball court at the dorm area between Van Cott Hall and Austin Hall in 1972. We held a marathon volleyball game to raise money for the artificial kidney machine at the Med Center. Fun times!

Laurel Oden Howat BA'74 Long Beach, Calif.

*Excerpted from longer comments made in response to articles online at continuum.utah.edu. Visit the site to read more.

CONTINUUM

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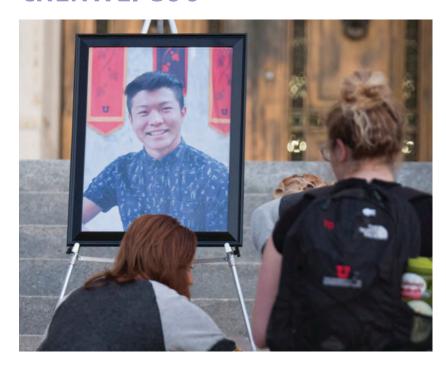
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MOURNING ONE OF OUR OWN: **CHENWEI GUO**



n a show of solidarity and sorrow, hundreds of students, staff, and faculty gathered for a candlelight vigil on the steps of the Park Building on Nov. 1 to honor U student ChenWei Guo, two days after his tragic death.

Speakers at the vigil, sponsored by the Asian American Student Association, recalled Guo's remarkable and positive character, echoing comments made by all who knew him. "Words cannot describe the pain, confusion, sorrow, and grief that come as a result of this," said Elena Jin, a close friend of Guo and his family. "ChenWei was most characterized by his selfless service, faith-filled lifestyle, and undefeatable positive attitude."

Guo, 23, was fatally shot by a 24-year-old man police described as a "drifter" in a failed carjacking near the gate of Red Butte Canyon on Monday evening Oct. 30. A second U student who was with Guo managed to escape. Law officers from across the Salt Lake Valley responded to the U campus to search for the suspect, later identified as Austin J. Boutain. He was arrested the next day after being spotted by a librarian at the downtown Salt Lake City Public Library and faces multiple criminal charges.

"This senseless act of violence has shaken our community and ended the life of a dear son, true friend, and promising scholar," U President David W. Pershing said. "By all accounts, ChenWei was a wonderful young man, and we mourn his death." Pershing canceled classes on Tuesday out of respect for Guo. The president also directed that flags at the university be flown at half-staff for the remainder of the week.

Guo was born in Beijing, China, and came to the U.S. in 2012. He graduated from Timpview High School in Provo, Utah, and then served a mission for The Church of Jesus Christ of Latter-day Saints in Provo. Guo transferred to the U from LDS Business College this fall. He was studying computer science and entrepreneurship and worked as a peer advisor in the U's International Student and Scholar Services Office.

In a bio written for his job, Guo described himself as an adventurous person who liked activities such as skydiving, skiing, horseback riding, dancing, modern fashion, and "French bulldogs!" He hoped to open a consulting business to "help more people feel good about themselves."

TO NATIONAL ACADEMY OF MEDICINE

Wendy Chapman, chair of biomedical informatics at U of U Health—whose informatics tools have been applied toward addressing a wide array of problems in health care—has been elected to the National Academy of Medicine (NAM). The high honor comes on the heels of receiving a top accolade in her field, the Donald A.B. Lindberg Award for Innovation in Informatics.

Chapman is most noted for developing informatics algorithms that are now considered a "gold standard" and have been translated into several languages to analyze clinical texts across the world. Her algorithms and tools for natural language processing use computational power to pull data from doctor's notes and health records that are otherwise hidden from automated analyses.

For instance, finding the word "pneumonia" in a record does not necessarily mean the patient was diagnosed with the illness. Chapman's algorithms put terms into context by determining if the patient had no pneumonia, a history of pneumonia, or perhaps was at risk. Such information can be applied to decision support tools, identifying cohorts for research studies, and optimizing processes such as billing.

Chapman was among 70 new U.S. members and 10 international members elected to the academy. She is the sixth U faculty member to be elected to the NAM, joining inductees Vivian Lee, Mario Capecchi, Sun Wan Kim PhD'69, Baldomero Olivera, and Carrie Byington.



MOST GRADS AND FRESHMEN EVER IN 2017



On the heels of saying goodbye in May to its largest graduating class ever (more than 8,500 students), the U broke yet another record this fall with the most incoming freshmen in its history, totaling 4,119—an overall headcount increase of 14 percent from the previous year. The average ACT score is also the highest on record at 25.3, and the number of domestic freshmen who are students of color increased by 15 percent. What an exciting time to join the University of Utah—welcome!

U REACHES RESOLUTION ON CANCER INSTITUTE

In October, the U's Board of Trustees approved a new agreement between the university and the Huntsman Cancer Foundation that resolves issues raised earlier in 2017. The agreement, signed by U President David Pershing and foundation CEO Peter Huntsman, supplements and clarifies previous understandings regarding the Huntsman Cancer Institute. The two leaders issued a joint statement reiterating the shared goal of the university and the foundation to eradicate cancer and provide compassionate care of those who suffer from the disease.

"We are gratified to have emerged from several months of discussion better positioned to bring together our shared resources," the statement says. "The agreement... ensures that we will continue to put the patient at the center of a variety of therapies that go beyond cancer treatment, while safeguarding the role of basic research into finding cancer cures, and preserving the resources the institute needs to fulfill its mission."

U REITERATES ITS STANCE ON FREE SPEECH AND DACA

olleges and universities across the nation faced a number of challenges this fall, including controversial speakers whose appearances sparked rallies and protests—testing the parameters of free speech laws—and concerns about President Trump's decision to phase out the executive order on the Deferred Action for Childhood Arrivals (DACA) program.

The U made national headlines in September alongside UC Berkeley (prompting both cheers and jeers) following an invitation for conservative commentator Ben Shapiro to speak on campus. The invite came not from the university itself, but rather from a registered U student group, Young Americans for Freedom. Shapiro described his speech as taking on "leftist myths of white privilege, trigger warnings, microaggressions, and diversity." U students and the community gathered on campus that evening to make their voices heard both for and against Shapiro's message. There were a few incidents that required police intervention, including two arrests, but the majority in attendance exercised their rights to share their views in a peaceful fashion.

Accommodating such speech is a role universities are specifically designed to fill, even when that speech is at odds with values the campus embraces. "Universities are classic free speech zones," says Michele Ballantyne JD'91, associate general counsel for the U. "A campus is supposed to be a place where people can question, they can formulate and express their thoughts. We believe that as students examine and discuss those thoughts with others of differing views, any flaws in those thoughts will be illuminated."

Also in September, the U responded to Trump's DACA announcement with a letter from U President David Pershing, in which he expressed his disappointment in the decision to end the executive order, which was introduced in 2012 to protect immigrants who came to the United States as children and allows them to enroll in college, work legally, and obtain a driver's license.

"Now, the future of DACA is up to our legislative leaders, and we, at the U, encourage them to recognize the talent and dedication of our students and the value they contribute to society by supporting legislation for them," wrote Pershing. "The University of Utah is unwavering in its commitment to undocumented students (with or without DACA).... We stand behind investing in these young people, who are such a vital part of the University of Utah community."

NEW GRANT TO HELP TREAT CHRONIC BACK PAIN USING NON-ADDICTIVE METHODS

he U's College of Health was awarded a six-year, \$6.5 million grant to study non-drug treatment of back pain among active duty members of the military as part of a larger federal partnership with National Institutes of Health, Department of Defense, Department of Veterans Affairs, and 12 universities across the country.

"Back pain is the No. 1 non-cancer pain complaint for which people get prescriptions that can lead to misuse of opioids," says Julie Fritz, associate dean of research and principal investigator on the project. "Back pain can be the gateway to addiction."

Research to find viable alternatives to addictive pain medication is especially pressing in Utah, which ranked seventh in the U.S. for drug poisoning deaths from 2013 through 2015, according to the Utah Department of Health. Most Utahns who die from a drug-related death suffer from chronic pain and take prescribed medications.

Fritz, a faculty member in the Physical Therapy and Athletics departments, and her team of scientists at the U and military hospitals in Texas will study



treatment options using a "stepped approach," starting with broad and less costly treatments that could benefit a wide range of patients. "We are trying to take a really holistic approach. We will start with patient education, sleep management, exercise, and stress reduction," Fritz says. "For those who don't respond right away we could move into mindfulness, acupuncture, and other non-pharmacological treatments."

NIH Director Francis S. Collins says finding solutions for chronic pain is critically important, especially for military personnel and veterans who are disproportionately affected. "Bringing the science to bear through these real-world research projects will accelerate our search for pain management strategies for all Americans, especially as we work to address the nation's opioid crisis." Studies report that nearly 45 percent of soldiers and 50 percent of veterans experience pain on a regular basis, and there is significant overlap among chronic pain, post-traumatic stress disorder, and persistent post-concussive symptoms.

SAFEU: NEW SAFETY WEBSITE

he colors are straight from the '60s, but the message of posters that showed up around campus this fall is about the here and now: Everyone on the U campus has a part to play in making this a safe, inclusive campus for all—to "make a pact to act."

The posters announced the roll-out of a new, comprehensive resource website that brings together information about campus safety, from how to report sexual assault to where to sign up for bystander intervention training and much more. The website is *safeu.utah.edu*. A sexual assault response page, part of the main safety website, also can be found at *sexualassault.utah.edu*. The SafeU website is also accessible on the menu bar at the top of the U's main homepage.

The website is one of the initiatives undertaken by the Presidential Task Force on Campus Safety, formed by President David Pershing early in 2017 to review the university's approach to safety and how its response could be improved and better promoted. Barb Snyder, vice president for student affairs, and Michele Ballantyne JD'91, associate general counsel, co-chaired the task force. The group specifically looked at prevention, physical safety, support personnel, and training.



U APPOINTS FIRST MORMON STUDIESPROFESSORSHIP



The College of Humanities has appointed Paul Reeve PhD'02, professor of history, as the first Simmons Mormon Studies professor.

"With the appointment of Paul, the U has moved into the front rank of schools engaged in the vibrant, intellectual exploration of The Church of Jesus Christ of Latter-day Saints, its institutions, history, and people," says Bob Goldberg, director of the U's Tanner Humanities Center, which houses the Mormon studies initiative. "He will help advance our goals of fostering understanding, respect, and tolerance while expanding the breadth and depth of our program."

Reeve, who received his doctorate in history from the U, teaches courses on Utah history, Mormon history, and the history of the Western U.S. His most recent book, *Religion of a Different Color: Race and the Mormon Struggle for Whiteness*, received the Mormon History Association's Best Book Award, the John Whitmer Historical Association's Smith-Pettit Best Book Award, and the Utah State Historical Society's Francis Armstrong Madsen Best History Book Award.

The appointment will allow Reeve to continue his research and begin a new digital history project, "A Century of Black Mormons." The project seeks to build a digital database that names all identifiable black Mormons baptized into the faith between 1830 and 1930 and document their existence through primary source research. The database will become publicly available, including the primary source documentation.

CAMPUS COMMITS TOMORE RENEWABLE ENERGY

he U plans to reduce its total carbon emissions by 25 percent through an agreement to source 50 percent of its electricity from carbon-free solar and geothermal energy sources. The university's agreement is the largest long-term green power contract of any U.S. university, according to the U.S. Environmental Protection Agency's Green Power Partnership rankings.

Cyrq Energy, a Utah company based in Salt Lake City, and Berkshire Hathaway Energy Renewables (BHER) will provide 20 megawatts of geothermal energy and 10 megawatts of solar energy for the next 25 years. Rocky Mountain Power will facilitate the purchase and delivery of this energy to the university through one of its innovative green tariffs, which allows Rocky Mountain Power's customers access to renewable energy. All agreements will be reviewed by the state's Public Service Commission.

"We are very pleased to have this opportunity to bring more renewable resources to the grid in Utah and are truly grateful for the shared efforts of our partners, Cyrq, BHER, and Rocky Mountain Power," says Amy Wildermuth, chief sustainability officer. "Not only are geothermal and solar energy key components in the diverse array of energy sources in our state, the university has substantial and continuing research efforts in both areas. To be part of a project like this demonstrates the practicality and affordability of these carbon-free energy sources, which we hope can serve as a model for others."

In 2008, the university signed the American College and University Presidents' Climate Commitment, dedicating the U to carbon neutrality by 2050. In addition to this purchase, the U will continue to advance a multi-layered carbon-neutrality strategy, including energy efficiency measures and on-site energy creation such as rooftop solar and solar parking canopies.

A study is under way to determine what percentage of the university's energy demand could be produced on campus, and where those projects might be located. In addition to working on university emissions, the U has also helped to spur the local renewable energy market through U Community Solar, an innovative group-purchasing program.



BOOK PICKS FROM A SOCIOLOGIST

hen she was a junior in high school, Ming Wen—like all students in China—had to decide which version of the national, three-day college entrance exam she wanted to take: STEM or humanities/social science. Her mother, a high school physics teacher, felt STEM was the better and more prestigious choice. So, STEM it was.

Wen graduated in information science from Peking University in Beijing in 1989. "I didn't like it at all," she says of her major. Her passion, it turns out, was really for the social sciences. After landing her first job at a fast-growing IT company, Wen realized she wanted to take her career in a different direction. She set her sights on graduate school and applied to universities in the U.S., eventually receiving a scholarship to the University of Chicago. "It took a lot of effort to get a scholarship," she says. "There was no way we could afford my graduate education in the U.S. otherwise."

Wen arrived in the U.S. in 1995, and both her new home and sociology studies proved to be perfect fits. She joined the U's faculty in 2003 and has served as chair of the Department of Sociology since 2015.

Here, a snapshot of some of her recommended reads.

WHAT ARE YOU CURRENTLY READING?



I'm reading about positive youth development in the U.S. and China and recently finished *Liberty: Thriving and Civic Engagement Among American Youth* by Richard M. Lerner. The idea is that many teens are developing well and are healthy, but they are not immune from risky behavior.

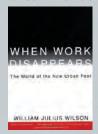


WHAT KIND OF BOOKS DID YOU READ AS A CHILD?



The original version of 20,000 Leagues Under the Sea by Jules Verne was a favorite in elementary school. In junior high, I was taken with Greek Mythology and read it numerous times. I subscribed to The Journal of UFO Research for three years in high school, which made me want to major in astrophysics in college.

WHAT IS ONE BOOK YOU THINK EVERY STUDENT SHOULD READ?



When Work Disappears: The World of the New Urban Poor by William Julius Wilson. He was my first U.S. sociology professor. I think people, especially in the business world, may want some exposure to this kind of work about the structural causes of poverty. I feel people should understand that these forces are very strong, often beyond an individual's control.

WHAT IS YOUR FAVORITE BOOK OF ALL TIME?



Jane Eyre by Charlotte Brontë. The first time I read it, I was 12 or 13. I was very small and thin, so I related to Jane. I grew up in a single-mom family in China, which was very rare at that time. The way Jane looked at herself and her surroundings was so inspiring to me. She was deprived as an orphan but got an education, and I felt education could change people's fate—that you could gain intellectual power

and maneuver your way through an alienating world. The happy ending was very good for me. She was poor but never gave up.

CAN YOU QUOTE A LINE FROM ANY BOOK YOU'VE READ?



Even after having lived in the U.S. for more than 20 years, Chinese philosophy still has a deep impact on me. I can quote a line from *The Importance of Living* by Chinese scholar Lin Yutang (published 1937):

'除了把事情做好的崇高艺术,还有把事情搁下不做的崇高艺术,人生的智慧在于 剔除没有必要的事物'

'Besides the noble art of getting things done, there is the noble art of leaving things undone. The wisdom of life consists in the elimination of nonessentials.'



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NEW LESSONS FROM ANCIENT ROMAN CONCRETE

hile modern marine concrete structures crumble within decades, 2,000-year-old Roman piers and breakwaters endure to this day and are stronger now than when they were first constructed. Why? U geologist Marie Jackson and colleagues have found that seawater filtering through the concrete leads to the growth of interlocking minerals that lend the concrete added cohesion.

Romans made concrete by mixing volcanic ash with lime and seawater to make a mortar, and then incorporating into that mortar chunks of volcanic rock, the "aggre-

gate" in the concrete. The combination of ash, water, and guicklime produces a cementing reaction, a trick the Romans may have learned from naturally cemented volcanic ash deposits called tuff. Modern Portland cement concrete also uses rock aggregate, but its sand and gravel particles are intended to be inert, as reactions with the cement paste can expand and crack the concrete.

Jackson and colleagues began studying the factors that made architectural concrete in Rome so resilient. One factor, she says, is that the mineral intergrowths between the aggregate and the



mortar prevent cracks from lengthening, while the surfaces of nonreactive aggregates in Portland cement only help cracks propagate farther.

Given the durability advantages of Roman concrete, why isn't it used more often, particularly since manufacturing of Portland cement also produces substantial carbon dioxide emissions? "The recipe was completely lost," Jackson says. Additionally, "Romans were fortunate in the type of rock they had to work with," she notes. "They observed that volcanic ash grew cements to produce the tuff. We don't have those rocks in a lot of the world, so there would

have to be substitutions made." She is now working with geological engineer Tom Adams to develop a replacement recipe, using materials from the western U.S.

Still, Roman concrete takes time to develop strength from seawater and features less compressive strength than typical Portland cement. For those reasons, it's unlikely that Roman concrete could become widespread. But it could be useful in particular contexts. Jackson recently weighed in on a proposed tidal lagoon to be built in Swansea, United Kingdom, to harness tidal power.

QUALITY OVER QUANTITY FOR FAMILY TIME

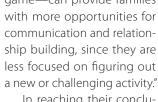
Instead of focusing on creating more family time, parents of teens should focus on creating quality family time, new U research suggests. "In today's busy world, where parents and teenagers are two incredibly busy groups of people, family time or family leisure is

one of the things that can bring them together," says Camilla J. Hodge, assistant professor in Parks, Recreation, and Tourism.

According to her study which analyzed decades of research into both the amount of family leisure and the satisfaction with family leisure—"satisfying" leisure was the more important factor for a higher family quality of life.

Creating satisfying family leisure depends on the goals of the family, according to Hodge. "Novel or challenging experiences—like trying cross-country skiing for the first time may help families explore new situations and develop new





In reaching their conclusion, Hodge and her team conducted a meta-analysis of published and unpublished studies, quantitatively synthesizing 25 years of family leisure research. This type of study had never been conducted.



OLD FAITHFUL'S PLUMBING REVEAUED

Old Faithful is Yellowstone National Park's most famous landmark. Millions of visitors come to the park every year to see the geyser erupt every 44-125 minutes. But despite Old Faithful's fame, relatively little was known about the geologic anatomy of the structure and the fluid pathways that fuel the geyser below the surface—until now.

U scientists have mapped the near-surface geology around Old Faithful, revealing the reservoir of heated water that feeds the geyser's surface vent and how the ground shaking behaves in between eruptions. The map was made possible by a dense network of portable seismographs and new seismic analysis techniques. The results are published in Geophysical Research Letters. Doctoral student Sin-Mei Wu is the first author of the study, with assistant professors Jamie Farrell MS'07 PhD'13 and Fan-Chi Lin, and Robert Smith PhD'67 BS'72, a longtime Yellowstone researcher and Distinguished Research Professor of geology and geophysics. The study is the culmination of more than a decade of planning and comes as Smith celebrates his 60th year working in America's first national park.

Dozens of structures surround Old Faithful—including hotels, a gift shop, and a visitor's center—and some are built over thermal features that result in excessive heat. As part of their plan to manage the area, the Park Service asked U scientists to conduct the geological survey.



TREATMENT REVERSES SIGNS OF ALS AND A SIMILAR BRAIN DISEASE

NEURON

U scientists report a significant step toward combating two degenerative brain diseases that chip away at an individual's ability to move and think. A targeted therapy developed at the U slows the progression of ataxia symptoms in mice, while a nearly identical treatment improves the health of mice that model

Amyotrophic Lateral Sclerosis (ALS), commonly called Lou Gehrig's disease. Along with alleviating symptoms, researchers say the new therapy could even reverse changes and bring back some abilities for those affected.

The findings benchmark a new approach toward alleviating these previously untreatable conditions. Additional work needs to be done to determine whether the regimen is safe and effective in humans. But the scientists say the discovery may lead to advances in other neurodegenerative diseases such as Alzheimer's and Parkinson's. They hope to start clinical trials in five years.

Stefan Pulst, chair of neurology at U of U Health, is senior author on the ataxia study and a collaborator on the second. Both studies utilized a modified DNA called antisense oligonucleotides. Pulst says that while much work remains to be done, he now faces his patients with a renewed optimism fueled in part

by another recent development. In December

2016, the FDA approved the first drug to

slow a neurodegenerative condition, a childhood disease called spinal muscular atrophy. That medicine is also based on antisense oligonucleotides, demonstrating that the technology can effectively treat this class of disease in people.

"Our combined work is an example of how understanding a rare disease can impact more than the small number of people affected

by it," says Pulst. "It is leading to insights into treatments for more common diseases."

HUMANS OF THE U

RALPH MOFFAT

"I'm 98 years old. I came to the U and graduated in the first class of pharmacists in 1950. Five years later, I entered dental school and worked nights as a pharmacist to support family and pay for my education.

I practiced dentistry until I was 70. I originally started driving buses for UTA, who trained me, and I drove during the 2002 Olympics. Afterwards, I came to the U and now work about 20 hours per week. I mentor 70 drivers and ride with each of them about every three weeks. I tell them all to be cautious and stay within the speed limit.

In the summer of 2016, short first-person stories from U students, staff, alumni, faculty, and others began appearing weekly on the U's social media channels and website under the moniker "Humans of the U" or hashtag #HumansOfTheU. A direct ode to Brandon Stanton's Humans of New York blog, the U's effort has the same goal to share powerful human stories that help people connect.

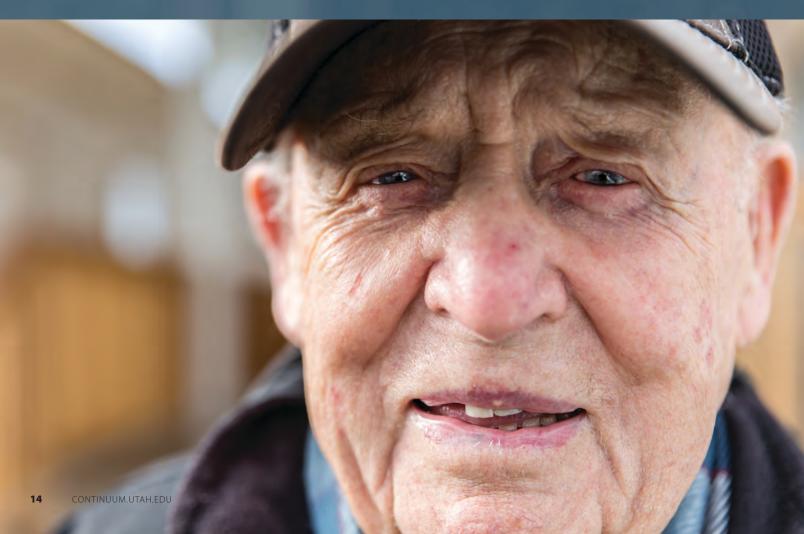
"These stories turn the institution into a collection of real human beings with unique life experiences and perspectives," says Annalisa Purser, associate director of communications, who helped get Humans of the U off the ground. "At the end of the day, that's really what the U is all about—learning and growing together and helping society move forward."

Here, we highlight just a few of the many inspiring stories.

I'm grateful for this opportunity and what I have that gets me out of bed in the morning. I've seen a lot of changes up here. When I was here as a student, Presidents Circle was the only thing there was to the university.

Every day I work, I associate with a great group of people, all of whom are very courteous and friendly; they are very good to me, and I love them all dearly."

—Ralph Moffat BS'50, past driver/current mentor for Commuter Services drivers



MARINA GOMBERG

mama, a human rights activist, a columnist

for The Salt Lake

"I grew up Jewish and gay in Utah, so appreciating being different was a matter of survival. In fact, being able to capitalize on even an inkling of hope or to find positivity where others might see the opposite is, I've come to appreciate, my superhuman strength. I call myself a practicing optimist because having hope hasn't always come easily. It's a muscle I've had to exercise, but developing the skill of seeing what's good saved my life and has now even shaped what

I do for a living. So as wife and new communications and marketing team for the U's College of Fine Arts, I get to spend the majority of my waking hours sharing positivity. In my role as a board member of the LGBTQ advocacy organization Equality Utah, I help turn the pain of inequality into the transformation of discriminatory policies, ultimately creating a more fair and just Utah.

Here at the U, I not only get to promote the diverse array of arts experiences on campus, but I get to help illuminate how the arts go beyond just aesthetic and entertainment, and act as agents for change that shape our perceptions, our research, our understandings, and our lives.

It's a beautiful world, and I'm just living in it."

—Marina Gomberg BS'06, associate director of





Years of Service

THREE
DECADES ON,
THE LOWELL
BENNION
COMMUNITY
SERVICE CENTER
REMAINS
TRUE TO ITS
FOUNDATION
OF STUDENT
LEADERSHIP.

By Annalisa Purser

n the 1970s, Irene Fisher participated in a rally opposing the demolition of a low-income apartment complex to make way for a parking garage. She and the others wanted to give voice to those whose lives would be impacted by the change. While at the rally, Fisher needed to use the restroom. She recalled asking a "little old lady with hair like mine is now" (white), who was a resident of the apartments and was also attending the rally, if she could use her bathroom.

"She was gracious and agreed to let me into her home," Fisher remembers. As she walked in through the living room, Fisher saw pictures of the woman's grandchildren on the tables and embroidered cloths on the back of the couch. She listened to the woman talk about how she had already moved four times as a result of exactly what was happening then—low-income apartment buildings being torn down. "I'm not one to get angry," Fisher says "But this was earth-changing for me."

It was this experience that shifted Fisher's focus from her prior work of providing reports full of data and facts to enact change—which laid the foundation for Utah's dramatic successes fighting chronic homelessness—to work centered







on service, built on emotion. Fisher remained involved with the community as a member of the League of Women Voters and became especially focused on supporting people living in poverty. In 1987, she learned about a new service center opening at the U and wanted to help future community leaders have the kind of experiences she had. "I lobbied incessantly and got selected as the first director," she says.

When the Lowell Bennion Community Service Center opened its doors 30 years ago, Fisher was the sole employee directing a small group of students. Today, the center has 11 full-time staff members and approximately 150 student leaders supporting thousands of student volunteers. Service opportunities both local and abroad are facilitated through nearly 50 programs run by the center, from week-long service trips during school breaks to Saturday Service Projects to hosting underserved elementary kids on campus. And as the center has grown and changed over the decades, its legacy of student leadership has become a staple that continues to be recognized across the nation.

ALL ABOUT THE STUDENTS

In 2009, a team of 10 individuals from the University of Nebraska at Omaha began planning for what would become a 55,000-square-foot building dedicated to campus-wide community engagement, known as the Barbara Weitz Community





Engagement Center. With it still in the conceptual phase, the group embarked on a series of site visits to clarify its vision. The first stop was the Bennion Community Service Center.

"I still think the Bennion Center is the gold standard for student engagement when it comes to volunteerism," says Sara Woods, director of the Weitz Center at UNO, who was associate dean of UNO's College of Public Affairs and Community Service and a member of the center's advisory committee at the time of the site visit. "It has all the really critical components. It engages students in a meaningful way, focuses on leadership development, and is respectful of the role of community partners by looking at them as more than beneficiaries of a service."

Woods also recalls that the Bennion Center was full of energy and bustling with students during the visit. "What we really loved was the way these students were so energized and informed about what they were doing," she says. "We were captivated by the way the room felt so student-focused. It was for and about students. They were driving a lot of the work. It wasn't a place where administrators were driving agendas. Instead, the staff worked as facilitators and supporters."



This is exactly what current Bennion Director Dean McGovern says makes the U's model unique. "It's a careful balance that we have to be mindful of," he says. "We've hired professional staff members who want to do a great job but who are educators and mentors first. They've created a learning laboratory for our students." Because of this, the center has maintained the student-focused, student-run approach that has defined it since the beginning.

In fact, this focus on student leadership is what Fisher attributes to the early success of the center. Because she was initially the only staff member, Fisher says, "If we were going to get things done, it was the students who were going to do it." Immediately, there was too much going on, she remembers. "If something didn't get done, it wasn't good, but it was a learning experience." There was no organizational chart or set of rules or expectations in those early days. They just started doing service.

Although the center began operating in 1987, its benefactor had naturally begun thinking about it a few years earlier. After learning about Stanford University's new service center, U alum and successful developer Dick Jacobsen BS'68 wished to help establish a similar center at his alma mater. Through an initial endowment gift



from Jacobsen, the center was established and named in honor of Lowell L. Bennion BA'28, whom Jacobsen had admired since high school.

Bennion was a Utah icon with an international reputation for compassion, service, and commitment. At the time of the center's founding, he was serving as both the associate dean of students and director of the U's LDS Institute. By naming the center after such a well-known figure, Jacobsen knew it would immediately have a set of values and a philosophical foundation on which to build.

VISION MOVING FORWARD

To take it into the next 30 years, the center's helmsman, McGovern—who joined in 2014 as the fourth director—envisions reaching even more students by integrating community-engaged learning experiences into more classroom curricula. While the center connects with nearly a third of undergraduate students annually, McGovern is passionate about expanding access to every single student, not only because of the vast community need but also because of the powerful learning experiences students have when they connect their academic learning to the community.

From an early age, McGovern learned from his parents that community involvement was part of adult life. But it wasn't until he took a course from Professor Rick Chavez that McGovern became enamored with the role of higher education in connecting students to service.

In a kinesiology course at Colorado State University, Chavez implored his students to participate in a program he ran called Tuesdays for Tots, where they would play games and do activities with children who attended the program after school. As the semester went on, McGovern began to understand why his professor asked his students to attend. In class, Chavez referenced their activities-Frisbee, Nerf ball, soccer-and explained the movements behind the games. At the end of the semester, he talked to the students about how many hours they had volunteered and about how helpful it was for the parents of these children to have an educational place for their kids to be during the time between school and when they finished work.

Looking back, McGovern was impressed by Chavez's ability to subtly connect his students to a community need while helping them to think beyond themselves. "He was engaging us in a community project that made a genuine impact in

Mission

The Bennion Center fosters lifelong service and civic participation by engaging the university with the greater community in action, change, and learning.

Service Highlights

(2016-17 ACADEMIC YEAR)



ALTERNATIVE BREAKS
11,596 hours



BENNION CENTER SCHOLARS **9,870 hours**



COMMUNITY-ENGAGED LEARNING CLASSES 93,420 hours



PROJECT YOUTH **1,925 hours**



SATURDAY SERVICE PROJECT

2,938 hours



SERVICE CORNER
753 hours



SERVICE HOUSE

1.055 hours



STUDENT-DIRECTED PROGRAMS

32,775 hours



UTAH READS **19,706 hours**

the lives of people while he was teaching us the course content," he reminisces. "When I think about it, I'm amazed at how influential he was to be able to get young college students to think about their community and the larger world."

It was this experience that compelled McGovern to build infrastructure at the Bennion Center to drive course-based efforts such as this campus-wide. Through development of a task force, faculty incentives, recognition programs, and more, community-engaged learning courses are expanding across the U.

"Students are here, first and foremost, to participate in an academic program and get a degree," McGovern says. "For students who want something more, the Bennion Center offers a variety of service options, but getting at the academic component is our charge. If we can enhance academic courses by encouraging and training more faculty to integrate community engagement into their syllabi and partner with community agencies, we will be able to reach every student."

SERVICE IN THE CLASSROOM

Kristina Hosea, a senior from Holladay, Utah, says that after participating in the Bennion Scholars program, she couldn't imagine her life without the experience. As she describes it, the program is for students who want to find passion and purpose in an academic setting.

The Bennion Center considers the program the ultimate form of academic-based service and civic engagement. It is an exceptional opportunity for students interested in immersing themselves in a capstone project that merges their academic expertise with a community need, and students who participate in the program complete at least 400 hours of community service.

Before students commit to becoming a Bennion Scholar, they take a course called Introduction to Civic Leadership, in which they learn about leadership styles, working with nonprofits, and how to create a timetable, prioritize their time, and collaborate with different partners. Students then form groups to complete a project with a local nonprofit. I'm impressed
with my ability to
take what I learned
in the classroom and
actually apply it in
the community."



Hosea spent hundreds of hours working with the nonprofit Amanaki Fo'ou ("A New Hope" in English, translated from the Tongan term), which aims to decrease the debilitating effects of diabetes in the South Pacific. Volunteers work to address immediate needs, such as treating severe wounds, while also educating the population and supporting them in making lifestyle changes that can prevent diabetes.

A human development and family studies major, Hosea focused her project on developing a training program and video designed to provide a cultural orientation for volunteers and help them understand the history of diabetes among the population.

Hosea spent two weeks with the organization in Tonga during summer 2017. While there, she interviewed the volunteers who had completed her cultural competency training and learned that it had a profound impact on their experience. "Volunteers who participated in the training were happier to be there and more prepared for what to expect," she says. "They appreciated the Tongan people so much more because they understood their background and history. They were able to interact with the people without pointing fingers, blaming, feeling anger, or misunderstanding them."

Students who complete the Bennion Scholars program have an extra tassel on their mortar boards at commencement and receive a special designation on their transcripts, but Hosea said those things are just the cherry on top. "After completing my project, I thought, 'Wow, I cannot believe I did this,' "she says. "I'm astonished by the relationships I developed, impressed with my ability to take what I learned in the classroom and actually apply it in the community, and filled with love and gratitude for those who worked with me."

The effort opened her eyes to a new future for herself. "I often think about how certain experiences pull out certain colors in who we are," she says. "I used to think of myself more one-dimensionally, but when I got involved in the community, it pulled out so many other colors I didn't know I had."

Hosea's experience illustrates what Fisher knew from the beginning: Students are powerful forces for good and are capable of leading important work to improve their communities. As more students are given the opportunity to connect with the world around them, built right into their academic coursework, we can look forward to a bright (and colorful) future.

—Annalisa Purser is associate director of communications at the U.

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A CONVERSATION WITH DIANNE HARRIS, A CHAMPION FOR THE DISCIPLINES

Story by Ann Floor | Artwork by Pilar Pobil

h, the humanities. History, literature, languages, philosophy, and more... these subjects have always occupied a place of central importance at the University of Utah. The earliest curricula at the U focused on liberal arts and classics, and the College of Humanities will celebrate its 50th anniversary as a free-standing college in 2020. Yet today, with increasing emphasis on the disciplines of science, business, and technology, the value of a humanities education has become a debated topic on campuses, in workplaces, and on the political scene.

According to a 2016 analysis from the American Academy of Arts & Sciences published in *Inside Higher Ed*, the number of humanities undergrad majors has been on a slow decline, hitting an all-time low in 2014. Meanwhile, and probably not coincidentally, employers across the country express concern that newer hires often lack the very skills learned through humanities courses, such as critical thinking, contextual understanding, and the ability to write well. Then there's the annual hold-your-breath ritual around the question of federal public funding for the National Endowment for the Humanities, which divvies out funds to the 56 state humanities councils across the country, dependent on its largess to produce education programs for college faculty and public programs that enrich personal and civic life.

These trends and ongoing discussions are paramount to those who champion the humanities, including Dianne Harris, a history professor and former dean of the U's College of Humanities. Harris recently left the U after serving two years as dean to

take an impressive position as senior program officer in higher education and scholarship in the humanities with the Andrew W. Mellon Foundation of New York City, which is committed to the humanities, the arts, and higher education.

And while she has enjoyed serving as dean and calls Salt Lake City "one of the most welcoming and beautiful cities on earth," she acknowledges that joining the Mellon Foundation is a once-in-a-lifetime opportunity to support the humanities in higher education at a time when doing so feels especially urgent. "It provides an opportunity to have a positive impact on the humanities at an unparalleled scale," she says. Harris began in her new role November 1. But before she left the U, we asked her to share why she believes the humanities matter.

Q: YOU RECENTLY WROTE IN AN OP-ED, "WE NEED THE HUMANITIES NOW MORE THAN EVER." WHY IS THAT?

Dianne Harris: We are living in profoundly complex times that demand mastery of the skills we teach in the humanities to successfully navigate many key aspects of daily life. The future of our democracy depends on a citizenry that deeply understands its past; that communicates clearly and effectively; that is able to read texts with care and discernment so that fact can be sorted from fiction; that understands ethics and the underpinnings of logic and what is at stake in the leading of an ethical life; that understands how to frame a clear and compelling argument based in rigorously produced research; that embraces the rich mosaic of difference in all its forms and understands that our



In the wake of national trauma, we look to the poets and writers, to artists, historians, musicians, and philosophers... to help us ease the pain."

differences are what make us great; that is multilingual and values diverse modes of communication.

We need to strive for a population that is as widely educated as possible in the critical realms of knowledge that are not simply aimed at problem-solving, but that instead permit our citizens to understand how to frame the most pressing problems that exist now, and to forecast what those will be in the future. That requires creative thinking, not just problem-solving capabilities. If we don't ensure such an educated citizenry, one that is steeped in a humanities education, our future looks far less bright, and our democracy will be increasingly destabilized.

Q: WHAT ABOUT THE CONCERNS SOME STUDENTS AND PARENTS HAVE ABOUT THE EARNING POTENTIAL OR JOB PROSPECTS OF STUDENTS WHO STUDY HUMANITIES?

Harris: All the available data that have been collected over the past decade by reputable sources such as the American Academy of Arts and Sciences (see their Humanities Indicators project) show us that humanities degree holders do every bit as well financially over the span of their working lives as do those who hold degrees in business, education, and in many of the sciences. But just as important, we also know from that data that humanities degree holders have among the highest rates of lifelong job satisfaction and fulfillment because they are pursuing meaningful work and enriching their lives—and the lives of others—by using the skills they acquired through their humanities majors.

It might be going too far to say that studying the humanities makes you happier over the long haul of life, but I do think the humanities give us the tools to seek out enriching and deeply rewarding resources that move us towards fulfilled lives of meaning and purpose. There is no question that STEM education is tremendously important as well. But in the absence of a strong background in the humanities, STEM education alone will leave our society impoverished and ill-prepared for the rapidly changing world ahead. Far from being degrees to nowhere, humanities degrees—as all the data show us—are degrees to everywhere.

Q: WHAT WAS YOUR PERSONAL EXPERIENCE OF FIRST REALIZING THE VALUE OF THE HUMANITIES IN YOUR OWN LIFE?

Harris: Like many, I was fortunate to have parents who read to me when I was very young, and who frequently took me to the local public library when I was a child. We also read in school, of course, but I particularly remember the ways reading fiction became a mainstay of everyday life in the summer. Instead of summer camp, we would head to the library every week and check out books to keep us busy. We lived in a place where it was too hot to play outdoors during much of the day in the summer, so indoor reading kept us occupied and out of trouble for hours at a time. At first, reading was simple entertainment, but books quickly became an entry point into entirely unknown worlds of adventure, mystery, fantasy, history, and more.

I surely couldn't have articulated it as such at the time, but the Baker Street branch of the public library in Bakersfield, California, changed my life by making reading—and thus the humanities—essential to my world. Also, my father was a geologist, and he had a profound sense of the earth as an historical document that could be read. Every road trip with my father turned into some sort of teachable moment that wove together the history of the earth with the history of the people living on the planet. Those early conversations forever shaped my sense that we are responsible to and for other humans and for the planet.

Q: YOU OFTEN SPEAK ABOUT THE IMPORTANCE OF HUMAN-ITIES BEYOND THE WALLS OF HIGHER EDUCATION. HOW DO THE HUMANITIES BENEFIT US AS A SOCIETY?

Harris: The humanities are crucial to a healthy democracy, just as they also provide opportunities for fulfilled and gainful employment and an enriched life. But I'm also recurringly struck by the ways in which we consistently and necessarily turn to the humanities and arts for answers, for healing, and for resolution in the most difficult and trying of times.

In the wake of national trauma, for example, we look to the poets and writers, to artists, historians, musicians, and philosophers, for the tools that help us ease the pain of trauma into memory, and to help us process grief and sorrow. We also look to those same humanities and arts disciplines when seeking how best to express joy and to celebrate human achievement. I can't imagine, nor do I wish to do so, a life without the beauty of artfully crafted texts, images, and sounds.

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GENESAND



illions of Americans are spitting into tubes and sending the saliva samples to labs to discover their ancestry or if they carry genetic variants that could lead to diseases such as Alzheimer's or Parkinson's.

One day, could they take a similar test to discover if they are biologically prone to drug addiction? Would they be more likely to experiment if the answer is no? Should they undergo prevention treatment if the answer is yes?

Those intriguing questions are posed on a University of Utah website on genetics and addiction meant to provoke conversations among teenagers and potentially influence their choices for the better. Packed with easy-to-understand explanations about the brain's reward pathway and how drugs hijack the system and rewire brain connections, the website—called The Science of Addiction: Genetics and the Brain—is proving popular around the world as more families and communities struggle to understand the roots of addiction and how to treat and prevent it.

The site, its home at *learn.genetics. utah.edu*, and its companion *teach. genetics.utah.edu* are thought to be the most widely used online genetics education resources in the world, with

ADDICTION

THE U'S RENOWNED GENETICS EDUCATION WEBSITE HELPS PEOPLE UNDERSTAND THE ROOTS OF DEPENDENCE.



more than 16 million unique visitors and 60 million page views a year, according to Louisa Stark, a professor of human genetics and director of the U's Genetic Science Learning Center, which developed the sites.

"Our website constitutes one-third of traffic through the *utah.edu* portal. We know that our site is used in every country in the world," she says, including by police officers, judges, patients, and family members trying to understand addiction.

"Like cancer, addiction has a high level of attention in our society right now," Stark says. "What's different with addiction is that people used to view it as something wrong with the addict personally; it was considered a moral failure to become addicted. Hopefully today the view is shifting to seeing addiction as a disease."

Understanding the science—both the genetics and neurobiology of addiction—helps people make that shift. And the U site is part of that effort.

GENETIC VULNERABILITY

Glen Hanson PhD'78 calculates that he's given hundreds of presentations about addiction, from his time overseeing the U's now-defunct Utah for up to 60 % of a person's vulnerability to addiction. The rest is due to environmental factors.

ROUGHLY 10% OF ALL PEOPLE WHO EXPERIMENT WITH DRUGS BECOME ADDICTED.

"Just because you're vulnerable doesn't mean it's inevitable. It just says you've got to be careful."

Addiction Center think tank to when he was director of the National Institute on Drug Abuse (NIDA). There's one thing listeners always want to know: What's the link between addiction and genes?

The short answer is that genetic factors account for up to 60 percent of a person's vulnerability to addiction. The rest is due to environmental factors, including peer pressure, community poverty, lack of parental supervision, and exposure to trauma and drugs, among others. But there isn't one addiction gene; instead there are more than 100 genetic variants associated with addiction, says Hanson, who is a featured voice on the *Learn*. *Genetics* addiction web pages.

Hanson often says that abuse and addiction can definitely cluster in families. "We look at some families and it seems like everybody's addicted to some drug, whether it's alcohol, nicotine, illegals, prescription drugs," he explains. But even if you have one of the variants doesn't mean you are doomed to become an addict. In fact, life experiences may determine whether genetics even come into play in making someone susceptible to addiction through the process of epigenetics, a mechanism that switches genes on and off, according to a 2015 special supplement sponsored by NIDA called Nature Outlook: Addiction.

"Just because you're vulnerable doesn't mean it's inevitable," Hanson says on the U site. "It just says you've got to be careful and that if circumstances are right, the chances that you'll get into difficulty are greater than most people."

GENES TO TREATMENT

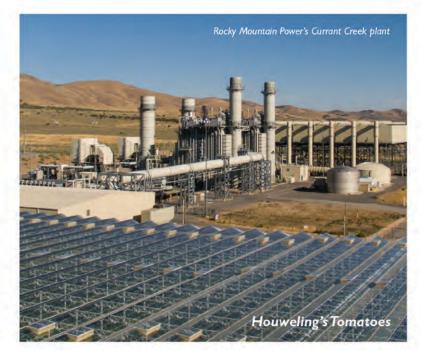
The science hasn't advanced to the point that you can be tested for those vulnerabilities, Hanson says. Still, researchers are hunting for biological differences that may make someone more or less susceptible to addiction, according to the U site, in the hopes of finding ways to prevent and treat abuse.

They've found genes or variations that are connected to specific drugs [see breakout box on page 34] and variations that affect underlying temperament and how the brain functions that can make some more likely to try drugs and become addicted, Hanson explains.

For example, how your brain synthesizes dopamine, if you are impulsive, if you have anxiety or depression, how able you are to control thoughts and behavior (known as executive function)—these factors are inheritable and make a person susceptible to taking drugs, he says. "There may be a genetic vulnerability to starting drug use. There may be genetics for how much it activates your reward system when you take it," Hanson explains. "It's the difference of, 'Well, I used cocaine and it kept me up. Other than that it was a real drag' to 'Wow! That was great!"

As scientists identify susceptibility genes, pharmaceutical treatments can









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Teens take risks because of their underdeveloped prefrontal cortex, the part of the brain responsible for reasoning and decision making and which regulates impulses.

90% OF SMOKERS STARTED AT OR BEFORE AGE 18. be developed to target them. They are also seeking ways to fix brain circuitry damaged by addiction. And, just as treatments have been developed to help addicts quit smoking—think of Chantix, which is thought to break nicotine addiction by attaching to nicotine receptors in the brain so that nicotine can't—drugs could be developed for other addictions.

Researchers want to know whether the antidepressant bupropion (Wellbutrin) also helps methamphetamine addicts, with the idea that the drug could aid in withdrawal since it affects the amount of dopamine and norepinephrine in the brain. And a phase 2 clinical trial recently ended that looked at whether the compound TV-1380 could help cocaine addicts because of how the compound metabolizes and inactivates the illicit drug.

TEENS AND RISK

Experts don't need a genetic test to know teenagers are particularly vulnerable to trying drugs. Evolutionarily, they are primed to turn away from their parents, seek out their peers, and take risks, says Kristen Keefe, who studies the neurobiology of addiction as a neuropsychopharmacologist and U professor of pharmacology and toxicology.

They take risks because of their underdeveloped prefrontal cortex, the part of the brain responsible for reasoning and decision making and which regulates impulses. While it grows during the pre-teen years, it is pruned back during adolescence, according to the U site, and finishes developing in the mid-20s. Meanwhile, the parts of the brain that guide emotion (the amygdala) and that seek pleasure and reward (the nucleus accumbens) mature more quickly.

This one-two-punch of susceptibility has been described by psychologist and author David Walsh as if a teenager's brain has an accelerator but no brakes. "In most species, you want the juveniles out of the natal unit to prevent inbreeding," Keefe says, explaining why evolution would make teens vulnerable. "That risk-taking behavior and affiliation with peers is going to put kids in risky situations."

The earlier a person starts experimenting with drugs, the more likely she will develop an addiction compared to the person who waits. For example, those who start drinking by age 13 have a 43 percent chance of becoming alcoholics, whereas people who start drinking at 21 have only a 10 percent chance, according to the U's website.

And using drugs as a teen can change brain development. Studies have shown that teens recovering from alcohol dependence have reduced volume in the hippocampus, or the brain's memory region. And chronic marijuana use in adolescence has been shown to reduce IQ levels that aren't recovered if they quit as adults. Changes are also made to the areas of the brain critical to judgment, decision making, learning, and behavior control, according to NIDA, further reducing teens' ability to stop taking drugs—which is why, the U site notes, one researcher says she'll pay her daughter \$1,000 if she won't try any drugs until she's at least 21.

SCARED SMART?

What you won't find on the site is any moralizing. Nowhere does it say, "Don't do drugs." And that's intentional, says Stark. The addiction site, designed with the help of about 20 middle and high school science teachers from around the country, was funded by NIDA to help teens understand the neurobiology and genetics of addiction.

That's why it is written in easy-tounderstand language and has engaging graphics, videos, downloadable worksheets, and games that not only help teens but have also made it a go-to place for parents, patients, counselors, and others trying to understand addiction. "Students have seen the 'This is your brain on drugs' message with the frying pan. They've heard 'Just don't do drugs.' They don't pay attention to it," says Stark. "The teachers suggested that sharing the science of addiction might make a difference for students."

This scientific approach is what Keefe takes when she presents information to the community about drugs and the brain during the country's annual antidrug Red Ribbon Week events and the U neuroscience program's Brain Awareness Week. Using resources including the *Learn*. Genetics site, Keefe explains how drugs tap into brain circuitry that has developed to drive survival of the species by releasing dopamine, a neurotransmitter that registers reward and pleasure. Drugs "hijack" the system by flooding the brain's reward circuits with more dopamine than natural rewards can generate, creating a strong drive to take more drugs. "You don't know

DISCOVERING ADDICTION GENES

When scientists look for "addiction genes," what they are really looking for are biological differences that may make someone more or less vulnerable to addiction. For example, some people may feel sick from a drug that makes other people feel good, or they may have more severe withdrawal symptoms if they try to quit. Below are specific examples of ways genetics may influence drug-taking behavior, according to the *Learn.Genetics* site, the National Institute on Drug Abuse (NIDA), and the National Center for Biotechnology Information. Some of the factors have been found in mice and others in humans.

- The A1 allele of the dopamine receptor gene DRD2 is more common in people addicted to alcohol or cocaine.
- Alcoholism is rare in people with two copies of the ALDH2 gene variation.
- Nonsmokers are more likely than smokers to carry a protective allele of the CYP2A6 gene, which causes them to feel nausea and dizziness from smoking.
- A rare variant of the gene OPRM1 presents a decreased risk for addiction to heroin or cocaine.
- Variants of the serotonin transporter gene are linked to heroin dependence.

VISIT THE WEBSITE:
LEARN.GENETICS.UTAH.EDU/CONTENT/ADDICTION



TEENS WHO
START
DRINKING
BY AGE 13
HAVE A 43%
CHANCE OF
BECOMING
ALCOHOLICS.

THOSE
WHO START
DRINKING
AT 21 HAVE
ONLY A 10%
CHANCE.

what your genetics are. You really only have a choice once, and that's the first time you choose to use," Keefe tells the students. "Once your brain becomes hardwired to seek that drug... you don't have control over that. It's hard to undo."

And she emphasizes that quitting drugs isn't a matter of will, using an analogy she learned from Hanson: Telling an addict they would stop using if they really loved their family is like telling someone with Parkinson's disease they'd stop having tremors and walk faster if they just tried harder. "The brain of an addict is fundamentally changed," Keefe says.

She recalls a student at a local high school who confided that her father was an addict. Up until the girl heard about the science, she thought he was just a bad person. "In light of what we know about the biology and where the science of addiction is at this point," Keefe says, "I think it's wrong to moralize this issue. It's an issue of basic biology, the pharmacological effects of these drugs."

Keefe and Hanson are cautious about saying that teens would necessarily be deterred from using drugs after learning how it hijacks their brains. That kind of thinking about the future and planning to avoid risks relies on teens using their prefrontal cortex. "I know kids' brains," Keefe adds. "That's asking them to think really long term," a skill they are still mastering.

Still, Hanson says there are ways to accelerate the development of the prefrontal cortex—and education is key. Not rote memorization tasks or multiple choice tests, but giving children and teens opportunities to gather data and use what they learn to come up with solutions or conclusions. Taking subjects that require a student to suppress a naturally inclined behavior and substitute it with something more difficult would help, too. Learning a foreign language is a prime example, but so are difficult subjects like advanced math or physics, he says. And giving youth responsibilities with expectations and consequences will also build that executive function muscle.

Just as there are many paths toward the road to addiction, there are and will be many more ways to prevent and treat it. Understanding the genetics and neurobiology opens up more possibilities than ever before. "I don't think we're ever going to get rid of abuse or addiction," Keefe says. "I think the question is, how is the brain changed in the setting of addiction so when and if somebody becomes addicted, how might we be able to reverse that, facilitate their recovery, and stop that behavior?"

—Heather May BA'98 is a former Salt Lake Tribune reporter who now works as a freelance writer.



STUDENT SUCCESS



TOP DINOSAUR MYTHS

They're all dead.

Sure, there was that mass extinction 66

million years ago when a giant asteroid

hit the earth, but not everything died. So,

which dinosaurs are still alive? Birds! That's

right: birds are dinosaurs. One of several

By Randall Irmis and Michael Mozdy

One of the closest nonflying relatives of birds, *Velociraptor mongoliensis*, restraining a juvenile *oviraptorosaur* using the "mantling" technique, which has been proposed for these animals and is done by modern birds of prey. *Illustration by Durbed*,





2.

If it ends in "-saurus," it's a dino.

"Saurus" comes from ancient Greek and means "lizard" (not dino). So, although *Tyrannosaurus* means "terrible lizard" and is a dinosaur, "phytosaur" means "plant lizard," and it wasn't a dinosaur or a crocodile (which it looked like) and didn't even eat plants! A phytosaur is a reptile, which is the point in the family tree it shares with dinosaurs. Here's what the lineage looks like:

Animalia
Vertebrata
Tetrapoda
Amniota
Reptila
Archosauria
Dinosauria

Each of these groups are nested within each other (think Russian dolls), so a dinosaur is also an archosaur, an archosaur is also a reptile, and so on. Therefore, dinosaurs are really a sub-grouping of reptiles. But that doesn't mean they look like today's typical reptile, which brings us to...

A *phytosaur*, which is neither a dinosaur nor a crocodile but is actually a carnivorous reptile. *Illustration by Lucky Lemontina*

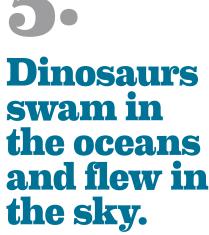


All dinosaurs had scales.

Actually, paleontologists now think that many dinosaurs had some form of feathery covering! Skin impressions of dinosaurs and carbonized remains of feathers have shed much more light on what their external coverings looked like, and they were more feathered or downy than we first thought. We now know that most meat-eating dinosaurs, and at least some herbivores, were adorned in this way.



While some were the largest animals ever to have lived on land—we're talking about you, long-necked, plant-eating sauropods—some were smaller than a housecat. And then there are the tiny living dinosaurs of today, such as hummingbirds. Dinosaurs came in all sizes.



Not a dinosaur! It's

Ornithocheirus simus,

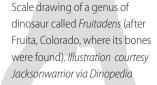
a pterosaur from the Early Cretaceous. *Illustration by Nobu*

Tamura

Nope. Dinosaurs from prehistoric times all lived predominantly on land, although the ones that evolved flight became birds. But when we think of the big pterosaurs ("pterodactyls") flying during the Age of Dinosaurs, these were not dinosaurs but a different archosaurian reptile. Likewise, ichthyosaurs, plesiosaurs, mosasaurs, and marine reptiles of that age were not dinosaurs, either. So in other words, not all prehistoric animals were dinosaurs.

—Randy Irmis, Ph.D., is the paleontology curator and Michael Mozdy MA'99 is a digital science writer for the Natural History Museum of Utah.





YOGA BEHIND BARS

ALUM ROSA VISSERS LEADS AN ORGANIZATION THAT TEACHES NEW COPING SKILLS TO INMATES.

By Amanda Taylor



hen Rosa Vissers MFA'07 came to America from the Netherlands for the University of Utah's dance program, she intended to stay three years, then go back to Europe to continue her creative career. "But life had other plans," Vissers says with a twinkle in her eye.

After earning her degree in Utah and taking a brief teaching stint in Idaho, Vissers moved to Seattle to dance. She took a postcard from somewhere—a coffee shop, a bookstore, she doesn't remember—and put it up on her bare wall for a little color. The card promoted an organization called Yoga Behind Bars (YBB), a program that teaches trauma-informed yoga and meditation to incarcerated individuals in the state of Washington. For an entire year, the postcard was in her eye line. But it took her that long to actually reach out to YBB and get involved.

Vissers began volunteering in 2010, and she now serves as YBB's executive director. Under her leadership, YBB has more than doubled its programs to include

18 prisons, jails, and detention centers in Washington. In 2015, she spearheaded YBB's launch of its Yoga Teacher Trainings behind bars, one of the country's first, and she has presented a TEDx talk on yoga in prisons.

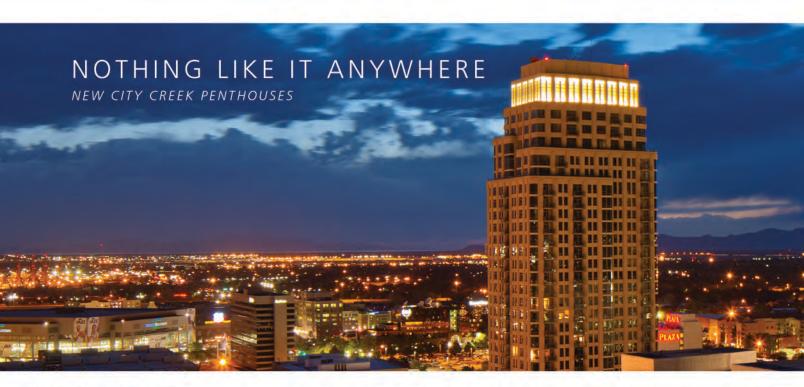
Over the years, Vissers has taught yoga to hundreds of inmates and trained more than 400 people to teach yoga and meditation behind bars. She says her classes are much more diverse in prison than a mainstream yoga studio—with a wide range of ages, races, and students from all walks of life. "We give people tools that they can utilize for the rest of their lives," Vissers says of YBB and the inner strength it helps its participants develop. "It's there, inside of them, and they change their self-image as well as gain new skills to cope."

Vissers cites one of her inspirations, Bryan Stevenson from the Equal Justice Initiative, and his advice to get close to the issues you are trying to solve. She explains that the inmates she teaches often come from poverty, have less access to education, and aren't treated for mental health issues. But yoga and meditation help provide

some tools and benefits that are at least a place to start. And, the inmates say they appreciate a time to reflect and to enjoy the uplifting and positive environment. In a letter to the program, one noted that his small cell made it impossible to extend his arms. "It may seem insignificant, but being able to take up space and to stretch is something I look forward to all week," wrote the inmate.

Vissers's time at the U gave her some of the essential tools for her current role. "The bridges of creative thinking and human connection are what I learned in my MFA program. I'm still working with movement and how we can use the body as a vehicle for transformation." And her peer-to-peer relationships with the U faculty gave her a lot of confidence, as well as a model for her own work. "My interactions with my professors at the U made me feel like they really cared for me as a person," Vissers says.

"First and foremost, my students are people," Vissers says firmly. "That's one of the most important messages of the program—to give people a sense of their humanity. It's a big step to having a more balanced nervous system and being less reactive. They're more at home in their bodies. No matter what they've done, nobody is just their sentence or the choices they've made or the circumstances that led them there."





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SAFI SAFIULLAH: TOUCHING MINDS AND HEARTS

By Ann Floor

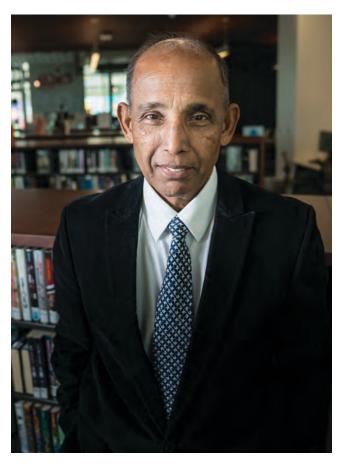
s a young boy in the '60s living in a rural Bangladesh village, Sheikh "Safi" Safiullah often dreamed of traveling the world and coming to America for an education. But first, he dreamed of improving his village's school situation. Safiullah's elementary school was a three-mile walk from his home. When he was in 10th grade, he and some friends took the initiative to build an elementary school for their own village. "We secured the land, bamboo for the walls was donated, and the roof was covered with dried rice leaves," he says. "Within one year, the five-room school house was ready to serve the children in the village." Since then, Safiullah has sought to make education accessible to all.

A resident of Salt Lake City for 35 years, Safiullah has made Utah his new home. Deeply influenced by his South Asian heritage and Islamic faith, he tirelessly creates opportunities to bring diverse groups of people together to experience and better understand other cultures. "If I can touch people's minds and hearts, they will accept me," he says.

In May 2017, Safiullah PhD'03 was named Librarian of the Year by the Utah Library Association. He received the honor in recognition of his accomplishments as manager of the Marmalade Branch of the Salt Lake City Public Library, his efforts to increase community engagement, and for his lifelong support of libraries and education around the world. The award is a fitting accomplishment for this man who has dedicated his life to bridging communities through education.

Safiullah has worked at the City Library since 2002 and at the Marmalade Branch since it opened in February 2016. He has established programs and partnerships that celebrate the different cultures found within the community served by the library. In an effort to enlighten Utahns on topics of current importance, his efforts have sparked dialogues on a wide array of topics including religious pluralism, redistricting in Utah, race and gender issues, police violence, and Islamophobia.

Several months ago, in partnership with KRCL 90.9 FM and Utah Humanities, he hosted an event about "fake news," bringing together journalists and experts. He has organized celebrations to honor cultural holidays including Diwali (the annual Hindu festival of lights), Eid Al-Fitr (the Muslim holiday marking the end of Ramadan), Chinese New Year, Mexico's Day of the Dead, and Vietnamese Independence Day. He was especially delighted to succeed in arranging a presentation by the University of Utah's Nobel Laureate Mario Capecchi. And for the 10th anniversary of 9/11, Safiullah engaged around 30 partners, including Utah Valley



University and The Church of Jesus Christ of Latter-day Saints, to celebrate religious and cultural diversity and tolerance. More than 1,500 people attended the event.

At the University of Utah, where he earned his doctorate in history, Safiullah also continues to be involved. He teaches a Middle East history class each semester, and 10 years ago, influenced some friends to establish scholarships for U students. Since then, his friends have funded four scholarships for refugees and students from other underserved communities.

Being named Librarian of the Year confirms the obvious—Safi Safiullah already is recognized as an essential member of the Salt Lake City community.

And his home village is not forgotten. He has acquired some land next to the school that he and his friends built those many years ago, and next year he will travel there to build a second building, which will house a library, a study room, and a first aid clinic. U





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'70s



Stan Martin MBA'70—retired newspaper editor and publisher, former Army captain, Rotary leader, and longtime community

volunteer—has been named Warwick, New York's 2017-18 Citizen of the Year. During his 50-plus years in journalism, Martin worked in radio, television, and daily and weekly newspapers. He served as editor and publisher of Straus Newspapers, owners of The Warwick Advertiser, The (Monroe-Woodbury) Photo News, and The (Goshen-Chester) Chronicle. In the military, he served as an Army Signal Corps captain supervising communications sites in Northern Germany and Holland, providing support for NATO troops. Later he used the GI Bill to obtain his master's degree at the U. He has been a member of the Nicholas P. Lesando Jr. Warwick American Legion Post #214 for 27 years and currently serves as a vice commander and quartermaster.



Peggy Fletcher Stack BA'75 BA'80 (English) BA'80 (sociology), senior religion reporter at *The Salt Lake Tribune*, received the prestigious

Cornell Award for Excellence in Religion Reporting—Mid-sized Newspapers (for the third time!) from The Religion News Association, at its 2017 convention in Nashville. Along with numerous other national, regional, and state accolades, Stack was honored as a co-author of one of the stories in the Tribune's recent Pulitzer Prizewinning investigation of sexual assaults at Utah colleges. The judges said her excellent writing and extensive reporting provide depth and clarity on contemporary issues and noted her "crisp, informative, and readerfriendly style." Stack has covered the gamut of the religious—from the powerful to the common—with excellence and distinction since she joined the Tribune staff in 1991.

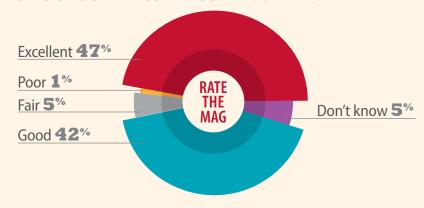
WE HEARD **U**

This fall, we surveyed our Alumni Association members to find out what makes their membership valuable and to get ideas for enhancing the program. Here are some highlights of the feedback we received.

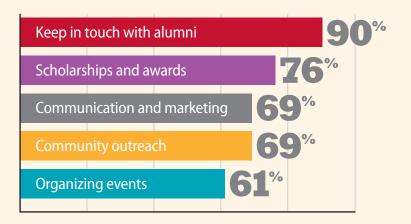
5 MOST POPULAR ALUMNI MEMBER BENEFITS



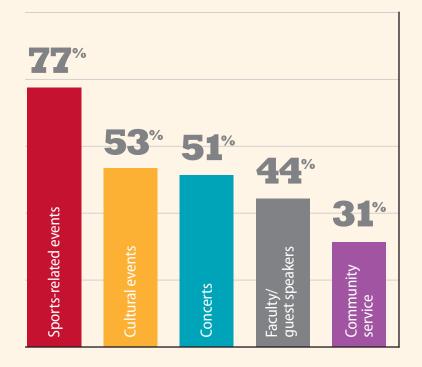
HOW DO YOU RATE CONTINUUM MAGAZINE?



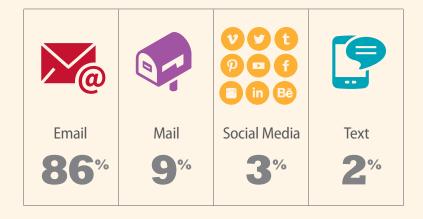
WHAT IS THE ROLE OF THE ALUMNI ASSOCIATION?



TOP 5 CHAPTER AND CAMPUS ACTIVITIES



PREFERRED METHOD OF COMMUNICATION



91%

WERE EITHER **VERY LIKELY** OR **SOMEWHAT LIKELY** TO RECOMMEND MEMBERSHIP TO OTHERS.

We welcome your feedback, too! Email membership@alumni.utah.edu



'80s



Paul M. Simmons
JD'85, an attorney
with the Salt Lake
firm Dewsnup
King Olsen Worel
Havas Mortensen,
has been named
Lawyer of the
Year by the Utah

State Bar. As both an attorney and a legal scholar, Simmons has briefed or argued more than 50 appeals in Utah and federal courts, and has contributed numerous articles to law-related publications. He currently serves on the Utah Supreme Court's Advisory Committee on Model Utah Jury Instructions and the Utah State Bar's Governmental Relations Committee. He received his juris doctorate from the U's College of Law, where he was a member of the *Utah Law Review* and Order of the Coif legal honor society. He has been admitted to the bars of federal courts throughout the country, including the U.S. Supreme Court.

'00s



Traci Statler

PhD'01, associate professor of applied sport and performance psychology at California State University, Fullerton, has been elected

2018-19 president of the Association for Applied Sport Psychology, the preferred organization for sport psychology professionals. Statler has worked with USA Track & Field and its national teams for 17 years and currently provides performance enhancement consultation and mental skills coaching. She also serves as the mental performance coach for the USA Women's National Volleyball team. An active member of the association for the past 25 years, she previously served on its executive board and certification review committee. Statler received her undergraduate degrees from the University of North Carolina at Chapel Hill, her master's degree from Fullerton, and her doctorate in exercise and sport science from the U.

'10s



Kathleen Shannon DorcyPhD'11—a
Seattle Cancer

PhD'11—a Seattle Cancer Care Alliance (SCCA) registered nurse and director

of nursing research, education, and practice—has been inducted as a fellow into the American Academy of Nursing (FAAN), marking the first time in SCAA's history that a nurse has achieved fellow status. Dorcy joins nearly 2,400 international FAAN nursing fellows representing 24 countries. The honor recognizes her nursing achievements in education, management, practice, and research. Dorcy holds a bachelor's degree in nursing from Seattle University, a master's degree in nursing in community health and ethics from the University of Washington, and a doctorate in oncology nursing from the U. She is a senior lecturer at the University of Washington School of Nursing in Tacoma, where she has taught for the past 25 years.



Kristin Riehl

MFA'10 has been recognized as an outstanding faculty member by Northwestern State University in Natchitoches,

Louisiana, for her contributions to the university's College of Arts and Sciences in scholarship, leadership, and service. She has taught at NSU since 2010 and is an associate professor and director of the dance program. She began formal ballet training in the Royal Academy of Dance method, continued her studies abroad at Bush Davies School of the Arts in East Grinstead, England, and returned to the U.S. to dance in New York City. She received a master's degree in ballet with an emphasis in teaching and choreography from the U. "It is our job as teachers and artists to touch as many lives as possible," she says.

WHY I REJOINED THE ALUMNI ASSOCIATION



ecently, I renewed my membership in the Alumni Association and have enjoyed how my membership has reconnected me to the U. My kids and I take advantage of the amazing Student Life Center (where was this when I was in law school?!), as well as two-for-one tickets to Utah men's basketball. We also hope to catch more U Ballet and Modern Dance, and the two-for-one tickets will make that easier. I enjoy receiving the *Continuum* four times per year, catching up on friends and colleagues, learning about interesting research and programs, and penciling in dates for upcoming events.

Taken together, all of these things help bring me onto campus and deepen my connection to the university. The kids and I ride bikes on the new bike paths, enjoy sticking our heads into the University Campus Store to look for a new T-shirt or hat, and have fun watching women's soccer and softball games. At the men's basketball games, I see friends and connect over other campus events and make plans to attend lectures or performances. At the Student Life Center, I like to wander over to Campus Outdoor Adventures and think about renting a sled for a winter ski trip or dry bags for a summer rafting vacation.

Bottom line, my Alumni Association membership makes it that much easier to stay connected with and take advantage of all the comings and goings at the U.

—Steve Bloch JD'97

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The End of Ed's

After nearly 50 years serving the U campus and surrounding neighborhoods, Big Ed's—the greasy spoon everyone loved near the corner of 200 South and University Street—closed in mid-September without explanation. Opened in 1968, the dimly lit, smoke-permeated eatery, known throughout the years as a place where you could meet friends for a drink after (or before) class—as well as for its "Gawd Awful" plate of two eggs on fried hash browns topped with chili, cheese, and onions (served all day)—is now just a memory. As the U tweeted, "Sad day for campus community. RIP Big Ed's. What you lacked in culinary skills you made up for in character."



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