Lessons from the land

With their hands in the soil, U of M students learn about food, farming, and sustainability
Beyond the walls

The walled village of Lo-manthang, Nepal, has remained relatively isolated since its founding in the 1300s, opening to foreign tourists only in 1992. Tashi Wangdi Gurung, a University of Minnesota Crookston (UMC) graduate who’s now finishing his master’s degree in science, technology, and environmental policy at the U’s Hubert H. Humphrey School of Public Affairs, hopes to make a positive contribution to his village by sharing and applying what he’s learned at the U. “The region is very vulnerable to climate change,” he says. “People are concerned about their future.” Gurung’s interest in climate change and agriculture drove him to be part of a group of students who advocated for a campus garden at UMC. See story on page 10.
Earning one B.S. in chemistry and another in biochemistry and molecular biology at the University of Minnesota Duluth (UMD), sophomore Luke McCutcheon works part time at UMD’s Marshall W. Alworth Planetarium, where his duties include giving presentations at the new Charles L. Matich GeoDome Theater. “The GeoDome is a portable learning environment that we take to schools and other venues,” says McCutcheon. “Kids are crazy for it. They go into this cool 13-foot-high dome, see stars and planets up close, and take a simulated tour to the edge of the known universe.”

McCutcheon plans on staying with the planetarium through graduation. And when he’s not there, he’s working toward his goal of going into neurology. “When I was younger, I had a juvenile form of epilepsy that’s now under control,” he says. “In the future, I’d like to make a difference and further the progression of neurotechnology”

McCutcheon credits the Philip Edward Budden Scholarship for helping him focus on his education. “I love UMD and the opportunities it provides,” he says. “For me, that includes hopes of getting into medical school at the U and working in a neurology laboratory.”

The GeoDome was funded by a bequest from Charles L. Matich, a longtime UMD geology professor who passed away in 2014.

Why the University of Minnesota?
The College of Design offers an undergraduate degree in environmental design that allows access to master of landscape architecture courses. I’ve been accepted into the accelerated program, so I can complete my bachelor’s and master’s in six years rather than seven.

How do you hope to help your home country?
I want to develop flood control solutions and ways to secure, purify, and reuse runoff for drinking, gardens, and other green spaces. This would require me to practice in the U.S. and countries that are already applying these techniques.

How have scholarships helped?
I wouldn’t be where I am right now without scholarships or having had the chance to study in Rome and Istanbul, which truly tested my skills.

What brought me to gerontology nursing?
I saw how devastating a fall was to my grandma and how it changed her life and the lives of those in my family. In caring for this family friend, who lived to 100, I saw an example of healthier aging. Seeing that, contrasted with my grandma’s experiences, really motivated me to want to help older adults stay active. My research focuses on barriers to physical activity for older adults with multiple chronic conditions and the implications of physical activity and sedentary time in this population.”

—Mary Whipple, 14 B.S. current Ph.D. student at the U of M’s School of Nursing, recipient of multiple scholarships

One of the highlights of her college experience has been doing undergraduate research. As a sophomore, she helped create digital 3-D recreations of a guinea pig’s brain in a lab that was exploring hearing problems such as tinnitus. Last summer, she analyzed data from a study called the TeleFamilies Project, which investigated how care for children with multiple medical needs is affected when families have telephone or videoconference access to an advanced practice nurse.

McKissick says the interdisciplinary nature of the research was inspiring to her. “If we’re going to solve some of these grand challenges in health care, it’s going to take more than just one specialty,” she says.
Closing the gaps

WHAT IS THE ACHIEVEMENT GAP? The “achievement gap” is usually defined as gaps in academic test scores and high school graduation rates between white students and students of color. Gaps persist through college enrollment and graduation, job opportunities, income, health, and more.

WHAT THE U IS DOING

In President Eric Kaler’s first “State of the U” address after taking office in 2011, he called on the U to be a leader in achieving educational equity. Here’s what’s happened since.

In 2013, a gift from Carmen and Jim Campbell established the Campbell Leadership Chair, held by Michael Rodriguez, to promote University-wide collaboration in finding interdisciplinary solutions to achievement gaps.

The College of Education and Human Development is pioneering ways to better prepare teachers, such as giving undergrads hands-on teaching experience in diverse settings early in their degree program.

The Educational Equity Resource Center provides access to experts and programs across the U’s campuses.

The College Readiness Consor- tium created Ramp-Up to Readiness, an advisory program designed to help all students achieve postsec- ondary success.

Researchers at the U are studying how gaps in preschool development persist throughout a child’s education—and developing tools to better prepare early childhood educators.

MINNESOTA’S RANKING AMONG THE 50 STATES IN ON-TIME GRADUATION RATES FOR THE 2014–15 SCHOOL YEAR

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MINNESOTA’S RANKING AMONG THE 50 STATES FOR 2015 FOURTH- AND EIGHTH-GRADE NATIONAL MATH TESTS

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In the American Southeast—where Gullah/Geechee people, descendants of freed and escaped slaves who trace their ancestry to the West Coast of Africa, have been affected by environmental changes and policies made because of these changes—Derickson, a faculty member in the Department of Geography, Environment, and Society, is working on a book on race and natural resource management in the American Southeast and an atlas of the Gullah/Geechee Nation.

Gullah/Geechee people, descendants of freed and escaped slaves who trace their ancestry to the West Coast of Africa, have been affected by environmental changes and policies made because of these changes.

Maximum plant

What does it take to get to that moment when a pa- tient receives a pancreatic cancer drug never before used in modern medicine? “We did here with Minnelide we did it at the speed of light,” says Gunda Georg, who directs the College of Pharmacy’s Institute for Therapeutics Discovery and Development. “Going from drug design to clinical trial in just five years is almost unheard of. Ten years is more typical.”

Minnelide is derived from a perennial Asian vine that’s long been used to treat rheumatoid arthritis and other inflammatory diseases. Scientists at the Masonic Cancer Center, University of Minnesota—funded by the Eugene C. and Gail Y. Sit Chair in Pancreatic and Gastrointestinal Cancer Research, the Dr. Robert and Katherine Goodale Pancreatic Cancer Research Fund, and the Wellner Family Fund in Pancreatic Cancer Research—discovered that the active compound in the vine stopped pancreatic cell growth in mouse studies.

Enter chemist Georg, holder of the Robert Vincent Endowed Chair and the McKnight Presidential Chair in Medicinal Chemistry, whose team turned the compound into an inject- able drug for human use.

In 2013, oncologist Edward Greeno began enrolling about 30 people who had pancreatic cancer for a Phase 1A clinical trial. “We’ve seen tumors shrink at this early stage, so, yes, I think people should be excited about the potential,” says Greeno, executive medical director of University of Minnesota Health Care. Researchers eventually hope to evaluate Minnelide’s efficacy against brain, breast, liver, prostate, and blood cancers, as well.

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What do inmates experience when their parents are jailed? This ques- tion intrigued Rebecca Shlafer, developmental child psychologist and assistant professor in the U of M’s Department of Pediatrics. Shlafer did applied research into risk factors for children’s health, including having mentally ill or incarcerated parents. This area is especially pertinent because 66 percent of male inmates and 57 percent of female inmates in Minnesota are parents.

Research shows that having incarcerated parents is associated with some level of trauma. How can we help break this cycle of trauma and dysfunction? Shlafer asks: “It benefits mom and dad and the kids, and ultimately that benefits the community.”

With support from the Univer- sity’s Clinical and Translational Science Institute and donors like the Women’s Founda- tion of Minnesota, Shlafer can spend more time in the field. She does multi- plexed research into the challenges faced by families with incarcerated parents, including evaluating the Minnesota Prison Doula Project, which supports and educates pregnant inmates.

Shlafer also investigated children’s visiting expe- riences at county jails. Her research led to changes in Washington County, where staff are working to make the environment more family friendly while main- taining security. That means reminding children to take one last potty stop and having kids’ books in the secure visiting area, where they can’t bring personal belongings and there is no bathroom.

“It makes sense that we would support this critical piece of who these parents are and help them be better connected to their kids,” says Shlafer. “So they don’t come back, and their kids don’t come back, 15 years later.”

Powerful plant

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Breaking the cycle

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A little nudge

As Michael Brooks climbed into the dental chair to get ready for a check-up, he heard, “Don’t sit there.” His dentist, knowing the college sophomore was an excellent student who was considering various careers, had cleared his schedule to talk about dentistry before beginning the appointment. “You have the passion for it,” he told Brooks. “Don’t let mental obstacles weigh you down.”

It was the nudge Brooks needed, and three years later he was studying at the University of Minnesota School of Dentistry. Soon he was nudging other young people toward dentistry, spending two Saturdays a month volunteering with the U’s Building Bridges to a Career in Dentistry Program. Now practicing at Northpoint Health and Wellness Center, which serves a low-income population in Minneapolis, Brooks spends his time caring for patients, most of whom have few resources and many needs. He says the Holland/ Jansen and Roland R. Jones scholarships he received as a student made it possible for him to take a job that paid less than others because he had manageable debt when he graduated in 2013.

Brooks says his mission is simply to “help those who need the most help.” As he knows, a little help can have a big impact. “Without a couple of subtle reminders about pursuing your passion and the financial assistance, I probably wouldn’t be where I am.”

SEEDS OF HEALTH

Generations of extreme poverty and the loss of traditional foods have resulted in poor diets for many Native Americans. And that has led to increasing and disproportionate rates of obesity, diabetes, and related health problems.

In November 2015, the Shakopee Mdewakanton Sioux Community (SMSC) announced a $1 million gift to the U to fund three major projects to help improve nutrition in Indian Country. The gift is being made under the tribe’s Seeds of Native Health campaign.

“The University is a world-class research and teaching institution in agriculture, food science, nutrition, and public health,” says SMSC chairman Charlie Vig. “We are fortunate to have them as one of our closest partners in this important effort.”

IMPACT

RAISING CAPABLE KIDS

Jean Illsley Clarke wants parents to know that over-indulging children isn’t just about buying them too many iPhones and designer clothes. “The problem isn’t, at heart, about too much stuff,” she says. “Overindulgence includes doing things for kids that they can do themselves, not enforcing rules, and not expecting kids to do chores,” she says. “All of these can have serious repercussions for a child’s development.”

True to her passion, she’s provided both funds and expertise to support University of Minnesota Extension in developing training tools, videos, curriculum, and other resources that strengthen families, especially in the area of overindulgence.

Family life has evolved since Clarke earned her bachelor’s degree in 1948, her master’s degree in human development, and her honorary doctorate from the U’s College of Education and Human Development, which named her as one of its 100 most distinguished alumni. At age 90, she keeps up a vigorous schedule of work with University of M Extension and Concordia University in St. Paul.

“Making charitable gifts is important to me,” says Clarke. “It’s also important to plant the seeds of philanthropy in the younger generation.”

WHAT DRIVES YOU?

Music as art

Stanisław Skrowaczewski, renowned composer and conductor emeritus of the Minnesota Orchestra, believes musical training must be grounded in the humanities. His vision for the scholarship he established in the School of Music’s conducting program reflects his desire for students to benefit, as he did, from an education immersed in art, poetry, and music.

Skrowaczewski came of age in Poland during the German occupation. His exposure to the painters, poets, and musicians who went underground had a big impact. “Without a couple of subtle reminders about pursuing your passion and the financial assistance, I probably wouldn’t be where I am.”

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Are musicians born or made? Great musicians have a gift. Teachers can guide the gift, but they cannot give it to them. My mother was a concert pianist. When I was 2, I crawled under her grand piano during a chamber concert. It sounded like an orchestra. My formal education began at 4. Over the years my teachers corrected me, guided me, and taught me to listen and understand the nuances of a score and instrumentation. This is how I learned to compose and to conduct.

What’s your advice for budding conductors? Play an instrument and perform. It can be piano, violin, percussion, anything. Know the intricacies of the score and correct mistakes. Otherwise, I feel young conductors beat in the air and do not have enough rapport with the music. They are theoretically prepared, but they need to know the music as intimately as possible.

Young musicians today have opportunities to acquire knowledge and experiences in ways that were impossible until recently. They should take advantage of travel, mentoring, and contact with great orchestras.

How do you envision the future of classical music? The future of music as art depends on the development of humanity—what will happen in the new brave world (sic) and how it will look. Devoted musicians, exciting conductors, and gifted composers will inspire people to attend concerts and support their orchestras. We must make it a priority.
Building opportunity

The University of Minnesota Health Clinics and Surgery Center opened its doors in February. The 342,000-square-foot facility houses 37 medical specialties, as well as a lab and imaging services, a pharmacy, a café, an outpatient surgery center, and more. Minnesota Masonic Charities’ $10 million Partners for Life campaign equipped and built the Masonic Cancer Clinic on the building’s second floor.

The Clinics and Surgery Center makes its academic medicine mission prominent. Video monitors throughout the center promote clinical trials, and several kiosks offer quick access to StudyFinder, a U website that highlights health research opportunities for patients and healthy volunteers alike.

Ten-year-old Maria and 9-year-old Miller Williams have inquisitive minds, an aptitude for science, and an utter fearlessness of all things creepy-crawly.

The two siblings—children of Anna, ’97 B.S., and Nick Williams, ’98 B.S., ’08 M.B.A.—have been collecting natural history items since they were little. The siblings even share a bedroom to free up another room for their treasures. It also helps that Maria has known since age 2 that she wants to be a paleontologist (and the first to clone dinosaurs).

In January 2016, Maria and Miller shared their love of natural history—and their collection—with friends and neighbors, putting more than 150 objects on display in what they called the Tiny Natural History Museum near their home in Minnetrista. Miller was in charge of admissions ($2 a head) and Maria was the docent.

The two gave half the proceeds ($125.71, to be exact) to their favorite museum—the U’s Bell Museum of Natural History. There’s something to be said for tiny museums. And much to look forward to from these tiny curators.

“Between undergraduate and graduate school, I worked for Engineering Ministries International in Jinja, Uganda. I was working with a team of 60 Ugandan construction workers on an orphanage; we were building doors and windows using rudimentary tools like hacksaws. They did fantastic work, and it struck me that if they built furniture and exported it to the United States, we could use the profits to give back to schools in Uganda. The idea won third place in the Acara Challenge, the University’s social impact business competition, which opened up more funding opportunities. What stood out to me is that every time I learned something new, I realized the challenge is even greater than I expected. That’s a good lesson to learn.”

—Brice Aarrestad, ’08 B.A., ’15 M.Arch, founder of Help Desk Furniture, recipient of the Girard K. Gray Fellowship, Randy and Bill Vosbeck Fellowship, Sullivan Family Fellowship, Ron Kranck Vison Award

Photography by Brady Willette (Clinics and Surgery Center), Patrick O’Leary (Maria and Miller Williams), Courtesy of Porch.com (Asha Sharma)
LES SONS FROM THE LAND

IN GARDENS AND FARMS ACROSS THE U, STUDENTS ARE LEARN I NG ABOUT FOOD, FARMING, AND HORTICULTURE FIRSTHAND

BY MELEAH MAYNARD

For students interested in subjects like horticulture, sustainable agriculture, farming, and environmental studies—or even those who just want to know more about where their food comes from—experiential education opportunities abound in the many gardens and farms that have sprung up across the University of Minnesota’s campuses over the last decade. Most often run by students, these varying green spaces include rain gardens that retain storm water runoff, demonstration gardens of perennial and annual flowers, community garden collaborations between local residents and students, Native American gardens, and food-producing gardens and farms. Here’s a look at three of those student-run farms and gardens.

CONNECTION WITH FOOD

Located on the University of Minnesota’s St. Paul campus, Cornercopia is a 5.7-acre certified organic farm
that got its start in 2004 after two horticulture students approached the U’s Minnesota Institute for Sustainable Agriculture (MISA) about the possibility of having an organic garden on campus. They got their wish, and started out with a 50-foot by 30-foot plot, which grew to an acre by fall and has been growing ever since.

The farm, which is a student program of both MISA and the Department of Horticultural Science, gives students the opportunity to learn how to plan, grow, and market food. Every season, student volunteers and interns produce more than 100 varieties of vegetables and fruits, which they sell at a campus farmers market and to local restaurants.

“Students are always saying they want more of a connection with their food,” says Courtney Trishla, student farm educational coordinator at the College of Food, Agricultural, and Natural Resource Sciences. “They want to know where it comes from and how to grow it, and they want a hands-on learning experience.”

Ali Schwier, a horticulture major who is interested in sustainable agriculture and holistic health, worked on the farm last year as part of an internship funded by the Theodora and Arnold Johnson Undergraduate Research Program. In addition to helping out with all aspects of food production, she also conducted research on cover crops to find out which ones beat pest most.

OUTDOOR LAB

In 2014, after more than five years of effort, three-quarters of an acre of city land next to the U of M Crookston (UMC) campus became the Allen and Freda Pedersen Garden. Funded by a mini grant from the U’s Institute on the Environment and a $25,000 donation from Freda Pedersen in memory of his late wife, Freda, the garden is intended to educate people on the importance of local food and sustainability.

Tashi Gurung, who earned a bachelor’s degree in environmental science in 2015, was part of a core group of students who advocated for the garden and helped get it started with support from UMC’s Center for Sustainability. Crookston Students for Sustainable Development and the Crookston Student Association. All of the produce grown in the garden, which students consider an “outdoor lab,” goes to the Crookston campus food service.

Food production is an important issue for Gurung, who is currently studying science, technology, and environmental policy at the Hubert H. Humphrey School of Public Affairs. Crops are not easy to grow in his hometown of Lo-mantang, a small village in the Himalayan mountains of Nepal. Through his research, he hopes to one day help people in Nepal produce crops more reliably. “The region is very vulnerable to climate change, and I want to help people find ways to better adapt,” he explains.

Gurung worked in the campus garden for several months before heading to the Twin Cities for graduate school, and he’s been back to visit since. “We tried for a long time to get the garden going, and I was so happy to have been a part of it when it finally happened. For me, it’s an example that anything is possible.”

Having that funding really opened doors for me because I was able to spend all my time on my project. I found out where my skills and interests lie, and the experience solidified for me what I want to do.”

—Horticulture major Ali Schwier, intern with the Theodora and Arnold Johnson Undergraduate Research Program

Schwier plans to use the data to help farmers choose pollinator-friendly options. “I found out where my skills and interests lie, and the experience solidified for me what I want to do.”

SENSE OF COMMUNITY

This spring marks the second season for the West Bank Community Garden, which is located between the Carlson School of Management and the Rarig Center. Environmental science major Louis Mielke was one of several students who presented a Living Laboratory proposal to the U’s Twin Cities Sustainability Committee to create a place where students, faculty, and community members could garden together.

Last year, the 2,000-square-foot garden included a variety of native perennials and pollinator-friendly plants, as well as kale, tomatoes, and herbs. (Rabbits ate the lettuce, broccoli, and other crops; students hope to deter rodents by putting up a fence this year.) The goal is to create a garden that encourages education and experimentation while also fostering a sense of community.

“We want to help bridge the gap between campus culture and the larger Cedar Riverside area,” says Mielke, who has received several scholarships, including the prestigious Udall Undergraduate Scholarship Honorable Mention in 2015. The Udall award is all about empowering and creating leaders who want to work on conservation and environment issues,” he explains. “I got the award in part for my work on the garden, which is great because it’s something I really wanted to do.”

No gardening experience is needed to participate in the community garden and, for now, plots are free to anyone who wants to plant and tend them.

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GIFTS AT WORK LEATHERDALE EQUINE CENTER

Minnesota ranks in the top 15 states for horse ownership—and when those horses need veterinary care, their human companions turn to the U’s Leatherdale Equine Center. Part of the College of Veterinary Medicine (CVM), the center helps more than 1,000 horses each year through clinical services, research, education, and classes and community events.

1 The Leatherdale Equine Center, built in 2007, was named in honor of a generous lead gift from Louise and Doug Leatherdale. Doug, who passed away in December 2015, was CEO of the St. Paul Companies for 11 years.

2 Robert A. Merrill Memorial Scholarship recipient Zach Loggnow has spent three years as student trainer for Hercules, a 2,000-pound Belgian draft horse who serves as an equine blood donor and public ambassador.

3 Troy Trumble, CVM faculty member and veterinarian at the Piper Equine Hospital, confers with a student. Tad and Cindy Piper made the lead gift for the performance medicine and reproductive clinic in the equine center.

4 Sophisticated imaging equipment allows staff to take a peek inside Jealousy’s nostrils. Thanks to gifts from Bill Dudley and Tad and Cindy Piper, the center plans to purchase a standing MRI to allow 3-D viewing of injuries to horses’ feet and legs.

5 In 2015, veterinarian and assistant professor Christie Ward received the Zoetis Distinguished Teaching Award, given in recognition of character, leadership, and outstanding teaching abilities.
Free speech

AT A U OF M CAMP FOR KIDS WHO STUTTER, CHILDREN LEARN TO BE CONFIDENT IN THEIR COMMUNICATION SKILLS

BY AMY SITZE

Imagine ordering food you don’t actually want because the name of the item you do want causes you to stutter. Or spending three days with your stomach tied in nervous knots because you’re dreading an upcoming phone call with someone you’ve never met—someone who may react to your stuttering with surprise or laughter.

For the 3 million people in the United States who stutter, fear and anxiety can accompany even the simplest social interaction. “People who stutter get a lot of negative feedback from their environment,” says Linda Hinderscheit, clinical supervisor in the University of Minnesota’s Department of Speech-Language-Hearing Sciences. “They learn very quickly as children that stuttering is not good, so they try not to stutter, which might involve switching words if they know they’re going to stutter on a certain word. Or they might stop talking or responding in class. They might even purposely give the wrong answer because they don’t want to stutter.”

Speech therapy can help kids learn techniques to manage their stuttering, but there’s no known way to eliminate it completely. That’s why Hinderscheit feels it’s important to teach kids how to manage the emotions associated with stuttering—and why she calls the University of Minnesota Kids Who Stutter camp (UMKWS) “the best thing I’ve ever done professionally.”

LEARNING CONFIDENCE

The camp started back in 2009, when alumnus Leo Sioris and his wife, Cheryl, approached the department with a desire to give back. Sioris, CEO and cofounder of SafetyCall International and a professor in the U’s College of Pharmacy, had never forgotten how a University of Minnesota speech-language pathologist helped him in his own struggles with stuttering as both a child and a college student. “I wouldn’t be where I am today if I didn’t have that help back then,” he says.

Sioris, who received his undergraduate and doctorate degrees at the College of Pharmacy, remembers his college self as an “outstanding avoider” who...
no longer alone

William Hoff, an Edina High School senior who attended the camp in its inaugural year, says it was the first time he spent time with other kids who stutter. “It was a comfortable environment that helped you be OK with stuttering,” he says. “It’s nice to know other kids have the same experiences you do.”

Hoff, a football player and rugby captain, has also participated in two offshoots of the UMKWS camp: the Teens Who Stutter support group and now—because he’s heading to college this fall—the College Students Who Stutter group. Both groups provide continuing support to kids who are too old to attend the camp, and both are funded by the Siorises.

“If you’re feeling anxious or worried because you don’t have that many people in your life who stutter, talking about it is the best thing,” Hoff says. The insights he gained in camp—and in the support groups—have given him the confidence to be more open about his stuttering; since middle school, he’s emailed teachers before a new semester begins to let them know he stutters and share ideas on how they can help him succeed.

“I’ve never talked to my teachers or college professors about my stuttering— in fact, he tried to hide it from them— says he wishes he’d had a similar program when he was Hoff’s age. He’s visited the camp several times and came away impressed with how much the staff accomplishes in just one week. “These kids are talking to each other and relating and feeling good about themselves because they’re not all alone,” he says.

Hinderscheit plans to continue expanding the teen and college groups and would like to start a support group for parents of kids who stutter. Her dream, she says, is for stuttering to be better understood and accepted—a dream that’s already be coming true for many of them who have never done before.

1%

About 1 percent of the world’s population stutters.

About four times more adult males stutter than females.

Many people who stutter report that they experience group membership—sometimes they stutter a lot, and sometimes just a little.

Up to 80 percent of preschool children who begin to stutter appear to develop out of their stuttering. For those who continue to stutter into their school-age years and adolescence, however, there’s a much greater likelihood that the condition will be a permanent part of their lives.

NO LONGER ALONE

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No one knows the precise cause of stuttering, though current research indicates that it’s a genetically influenced condition involving neurological development in childhood. More specifically, stuttering seems to arise from a complex interaction among various aspects of a young child’s growth, including the development of language skills and motor skills. Here are some facts about stuttering:

1. Stuttering usually begins in childhood, between the ages of 2 and 5 years.

2. Most people who stutter describe it as feeling like their speech is out of their control. The loss of control is intermittent and unpredictable. This can be disconcerting and commonly causes embarrassment, anxiety, and fear.

3. Stuttering can be temporary or permanent, depending on how severe the symptoms are and how much help the person receives. For some people, stuttering can improve on its own, but for others, treatment may be necessary.

4. Stuttering can affect people of all ages and in all cultural backgrounds. About 1% of the world’s population stutters. About four times more adult males stutter than females.

5. Many people who stutter report that they experience group membership—sometimes they stutter a lot, and sometimes just a little.

To see that there are successful adults who have done great things and still stutter is really important.”

—UMKWS camp director Linda Hinderscheit

GET THE FACTS

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Knowledge is power

HOW YOUR FAMILY TREE ALLOWS U OF M SCIENTISTS TO ASSESS CANCER RISK—AND SAVE LIVES

BY BARBARA KNOX

Do you have an increased risk for cancer? Maybe two of your sisters got breast cancer, or both your dad and your granddad had colon cancer. But does that mean you’re next in line?

In recent years, experts at the cancer risk management team—part of the Masonic Cancer Center, University of Minnesota—have made huge strides in helping people answer those critical questions. These doctors, researchers, and genetic counselors know that understanding your cancer risk can translate directly to a better health outcome, whether through prevention or early intervention.

Consider what we already know: Between 5 percent and 10 percent of all cancers are caused by abnormal genes inherited from a parent. These mutated genes cause more than 50 known cancer syndromes, including some breast, ovarian, colorectal, and prostate cancers. However, even if you’ve seen your mom and two aunts die of colon cancer, that doesn’t mean you will get colon cancer. But what you should get is genetic counseling.

UNDERSTANDING RISK

In their quest to fight cancer more effectively, scientists at the U know that information is key. That led them to establish the William C. Bernstein, M.D., Familial Cancer Registry, which opened in 2008 with a $1 million anonymous donation given in the name of Bernstein, a surgeon who pioneered the development of the University’s colon and rectal surgery residency program in the 1950s.

The registry, originally designed to enroll people with hereditary and familial cancers, has now morphed
“One thing we’ve studied is why people don’t always go on to get genetic counseling once they understand that they may be at higher risk for a familial cancer. What are the barriers to seeking that counseling?”

—Kristin Niendorf, Bernstein Registry coordinator

The Bernstein Registry initially enrolled 500 patients, getting extensive family histories from people who have some sort of familial cancer. With that data in hand, researchers are now investigating several related questions.

“One thing we’ve studied is why people don’t always go on to get genetic counseling once they understand that they may be at higher risk for a familial cancer,” says Kristin Niendorf, a genetic counselor and coordinator of the Bernstein Registry program. “What are the barriers to seeking that counseling?”

Typical stumbling blocks seem to be confusion about the process, concerns that counseling and testing may be time-consuming or expensive, or even a belief that discovering a specific risk factor won’t make a difference. Registry staff have moved quickly to address these concerns, replacing the old paper form with an easy online family-history questionnaire, which people can fill out at home. They’ve also stepped up education efforts; in one project, two University researchers—gynecologic oncologist Melissa Geller and social work professor Hee Yun Lee—have developed a cell phone app that educates ovarian cancer patients about genetic counseling.

**PERSONALIZED TREATMENT**

In the case of ovarian cancer, in which 25 percent of cases are hereditary, genetic testing can potentially save lives. That’s why Madoff recommends that all women diagnosed with ovarian cancer take part in genetic counseling. “If we find that the patient does indeed carry the mutated gene, that knowledge is crucial to other women in the family—sisters, daughters, granddaughters, nieces—who might also carry the gene,” he says.

That’s where the ripple effects of good family medical histories can be felt. “If those related women then get genetic counseling,” Madoff says, “we can identify which ones carry the gene and dramatically reduce their cancer risk by intervening early.”

As part of the University of Minnesota Health Cancer Risk Management Program, which began two years ago, genetic counselors meet with clients and review family history to develop a risk assessment. They look for red flags: multiple cases of a particular cancer in the family; rare cancers; cancers known to be associated with hereditary risk. This office visit, says Niendorf, is often covered by insurance. The counselor may then recommend testing—a simple blood draw—to identify risks that will allow doctors to develop a specific care plan designed around those risks. While many genetic blood tests are available, good genetic counseling up front guides the process and helps pinpoint the type of tests needed.

Madoff adds that while genetic testing has been available for years, new tests are being developed all the time; consequently, the Bernstein Registry follows enrollees over time and alerts them if they need to be reassessed for new risk factors.

“We’ve evolved from an era where everybody gets the same cancer treatment to an era where treatment is much more personalized,” explains Douglas Yee, director of the Masonic Cancer Center, University of Minnesota. “That is why cancer registries play such an important role; they enable us to study the family history, find out exactly why your risk is higher, and decide what to do about it.”

**FOREFRONT OF THE FIGHT**

“If you’re ever asked to participate in a registry, I encourage people to do it,” says Yee, who practices what he preaches; he and his wife recently volunteered to enroll in a cancer registry. “These registries are extraordinarily important because we need to follow as many people as possible—not because you’re sick, but because the more we can study large populations over time, the better we become at understanding risk and identifying markers. With this information, we can craft better public policies and save lives.”

Yee also urges Minnesotans to watch for the roll-out of a brand new University cancer registry—dubbed the 10,000 Families Registry, with a nod to the state’s 10,000 Lakes moniker—that is tentatively planned for this year’s State Fair.

“When the ultimate goal is to end cancer,” says Yee, “one of the best strategies is to never allow the cancer to develop. So risk assessment is at the forefront of the fight.”

Barbara Knox is a Twin Cities freelance writer.
Art through the ages

“At the Tweed Museum of Art at the University of Minnesota Duluth, you’ll find a rich collection of baskets, birch bark, beadwork, quillwork, and other art made primarily by the Great Lakes Ojibwe and Eastern Woodlands people. The Richard E. and Dorothy Rawlings Nelson Collection of American Indian Art reflects the visual culture of the Anishinaabe people and provides historical context for the museum’s expanding collection of contemporary American Indian works.

The newly remodeled Tweed houses a permanent collection of more than 10,000 items representing a range of cultures and time periods.

To take a closer look at these objects and others, visit give.umn.edu/legacy.”

“It has been a journey for me to reclaim an object that I initially perceived to be cold and repugnant and to take part in its metamorphosis.” — Artist Naomi Bebo, on Beaded Mask (2010), made from seed beads and deer hide on an Iraqi gas mask.