Celebrating philanthropy's catalytic impact on Oregon Health & Science University and Doernbecher Children's Hospital | Spring 2024

Ignite Magazine

THE CHANGE MAKERS

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Photo of Kathleen Carlson, Ph.D., by Jason Hill

Message from OHSU Foundation Interim President Jill Eiland

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Oregon Health & Science University FOUNDATION

Donor support of Oregon Health & Science University sparks the flame of hope for a healthier future for all. *Ignite Magazine* captures those sparks and turns them into stories of impact, inspiration and innovation — stories of lives made brighter by OHSU's exceptional people and programs, and by our community of generous supporters.

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There are so many words to describe the profound impact OHSU and philanthropy have on the health and well-being of the people in our community and across our region. Groundbreaking. Lifesaving. Changemaking. Inspiring.

Speaking of groundbreaking, the OHSU Hospital Expansion Project is underway with the construction of a new multi-story inpatient addition on the Marquam Hill campus. Due to open in 2026, the new building will address the growing needs across the region for more hospital beds, improved access to state-of-the-art inpatient care and a greater capacity to serve patients requiring advanced cancer care and complex surgical treatments. The Break New Ground campaign is an invitation to join us to advance the world-class care, training and research OHSU provides now and will expand into the future. We do hope you will join this call to action to break new ground for OHSU and help support the critical role OHSU plays as a health care leader in our region.

No expansion would have the ability to touch so many lives without the passion, expertise and commitment of the amazing people who are building a healthier future for us all. We invite you to read more about these changemakers who bring OHSU's missions of healing, teaching and discovery to life every day. From holistic clinical care and research breakthroughs to initiatives that improve health care outcomes, equity and access, you will learn about what makes OHSU such an influential leader in bringing hope and health to the people and families we serve.

As we continue to ignite the power of philanthropy together, I hope you will be inspired and energized with the same passion I feel for the impact of this ever-important work on those who need it most.

Jill Eiland

Message from OHSU President Danny Jacobs

With more than 24,000 changemakers who are part of the OHSU community, selecting members to feature in this issue's "changemaker" series was no small task. It's a reminder of the inspirational and exciting innovations our people make happen every day, and the possibilities before us as we continue to transform health, health sciences and well-being in the Pacific Northwest and beyond.

More than a traditional health system, different from most universities and distinct from other research institutes, OHSU brings together patient care, teaching and research in a way that amplifies each individual mission and enhances the overall extraordinary OHSU experience. OHSU offers tertiary and quaternary care services that are not available elsewhere in the region. Our research mission blazes trails, bringing scientific breakthroughs from the bench to the bedside and back, and our learners are immersed in an environment of innovation and discovery.

We embrace the most difficult challenges and seek to answer the impossible questions. You'll read just a sample of those stories in this issue related to health equity, pediatrics, neurology, infectious disease, cancer, reproductive health and more.

One of these stories features OHSU's award-winning changemaker David Huang, M.D., Ph.D., who holds the Wold Family Endowed Chair in Ophthalmic Imaging and is the recipient of a 2023 Lasker-DeBakey Clinical Medical Research Award. Laskers are the most distinguished biomedical research awards given in the United States, and are often referred to as "America's Nobels," as 95 recipients have gone on to receive the Nobel Prize.

This is the third Lasker award we have had in OHSU's history, a remarkable achievement. Huang co-invented optical coherence tomography, or OCT, which has been used to prevent and treat blindness and eye disease, and is increasingly used to diagnose and treat conditions of the heart, brain, skin and more. His work has had an incredible impact on so many, and I invite you to learn more about him and his story.

Another challenge researchers, clinicians, learners and advocates are addressing at OHSU Doernbecher Children's Hospital is the crisis in youth mental health. In this issue, you'll learn more about the remarkable evidence-based, holistic and empathetic approach our team is taking to help young patients and families in need.

There are many things that make OHSU unique — the views of Mt. Hood from Marquam Hill, the tram, our presence in every corner of the state and the way we combine patient care, research and education — just to name a few. But the one thing that makes us really stand out is our people. It always has been and always will be about the people who live and breathe our missions — those who have dedicated their passion and talent as "changemakers" — and all of you, whose support and generosity make it all possible. Thank you for your continued partnership as we seek to enhance human health and well-being.

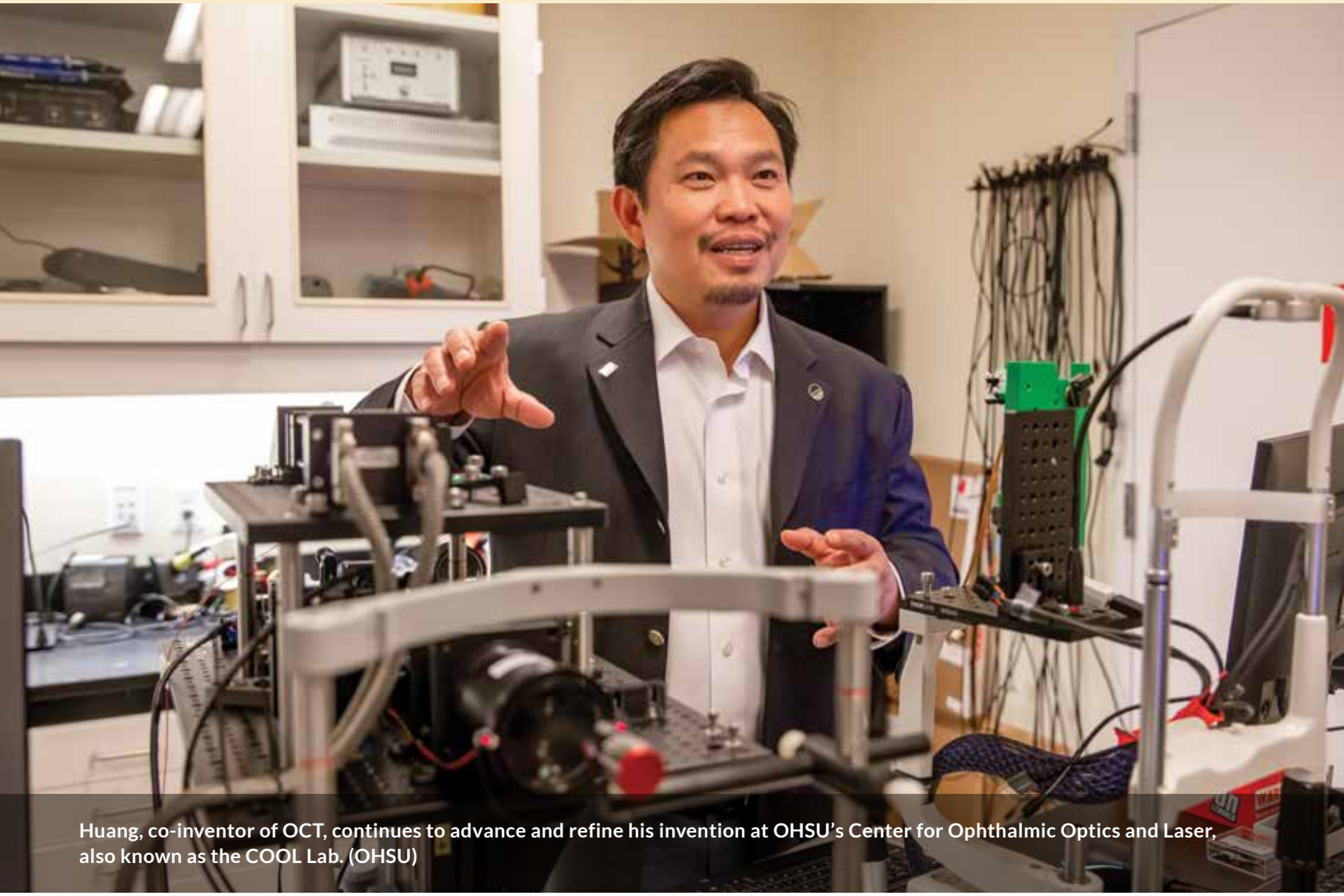
"It always has been and always will be about the people who live and breathe our missions — those who have dedicated their passion and talent as 'changemakers' — and all of you, whose support and generosity make it all possible."

— Danny Jacobs, M.D., M.P.H., FACS

Groundbreaking, transformative and life-saving work happens across OHSU and OHSU Doernbecher Children's Hospital every day.

Researchers push the edges of science in pursuit of new answers. OHSU students expand, embrace and redefine the future of health. Clinical teams provide exceptional, patient-centric care.

Here are four selected stories that illustrate donor impact across the missions of research, education, health care and advocacy. Philanthropic support makes the life-saving work of OHSU and Doernbecher possible.



Huang, co-inventor of OCT, continues to advance and refine his invention at OHSU's Center for Ophthalmic Optics and Laser, also known as the COOL Lab. (OHSU)

Fresh eyes can usher in new ways of understanding. That was certainly the case when David Huang, M.D., Ph.D., pursued an imaging project as a graduate student in a laser laboratory at MIT. That project transformed into the novel invention of optical coherence tomography (OCT), a technology that has since revolutionized the field of ophthalmology. OCT has been so influential that Huang and his co-inventors James G. Fujimoto, Ph.D., and Eric A. Swanson, M.S., received the 2023 Lasker-DeBakey Clinical Medical Research Award, otherwise known as "America's Nobel."

Trusting the process

Huang started his graduate studies entirely outside the field of ophthalmology. At the Harvard-MIT Program in Health Sciences and Technology, Huang first worked in tissue mechanics to generate artificial ligaments, but a gut feeling told him to explore other fields. Intrigued by the potential applications of lasers in medicine, Huang made the switch to optics.

In 1990, the idea for OCT began to take shape in Huang's mind. Though OCT is now the gold standard of ocular imaging, the method was originally an exploratory project assigned to Huang by Fujimoto, Huang's Ph.D. thesis advisor.

"OCT started as a small side project in this large laser laboratory. My setup with the interferometer occupied a tiny corner of this optical table," Huang remembered. An interferometer is a tool that analyzes the interaction between two light waves. In Huang's case, he was using it to measure the time-of-flight of light reflected from biological tissue.

Serendipitously for Huang and the field of ophthalmology, Huang happened to begin this investigation by measuring light reflected in the eye, and he soon ran into unexpected findings that led to a breakthrough. "I found that it was not easy to measure retinal thickness. So, I scanned the beam of light laterally to form a cross-sectional image. The image beautifully revealed many layers inside the retina, a structure that is as thin as a strand of hair."

Huang and his team had invented a new technology that could see 10-100 times finer detail than other imaging modalities. They got to work building the necessary technology to translate this discovery into a clinical instrument. They published the first OCT images of the retina and other tissues in 1991 in the journal *Science*. That article has now been cited more than 18,000 times.

Despite OCT's revolutionary imaging capabilities, there was still pushback from others in the field.

"Some people were in love with it right away; they could see the potential even though the images from first-generation OCT systems were grainy," Huang said in a recent episode of the *Experts InSight* podcast, hosted by Benjamin K. Young, M.D., assistant professor of ophthalmology in the OHSU School of Medicine. "In the other camp were people who weren't impressed with the images. They thought this was a tool to make people forget the art of detailed retinal examination... By 2002 [when high-quality OCT imaging became clinically available], I don't think anyone could reasonably say that their retinal examination could produce diagnoses as accurate as retinal OCT."

A transformational impact

OCT is now widely accepted and used in more than 40 million imaging procedures yearly to diagnose and treat the leading causes of blindness. The imaging method also helps physicians determine when to provide injections for wet macular degeneration, which often leads to fewer injections and reduces cost. Huang and his colleagues reported that between 2008 and 2015, this saved Medicare and its patients a combined $11.2 billion.

Beyond monetary benefits, the ease of OCT's use aids the Casey Eye Institute's goal to eliminate preventable blindness in Oregon and beyond.

Continued next page

Huang *(right)* demonstrates a structural eye scan with OCT. (OHSU)

"The reason OCT is used so much in ophthalmology is because it's noninvasive, fast and inexpensive," Huang said. "OCT is perfect for our outreach mission because it's portable and economical, so we can put OCT systems in rural communities, use them to detect eye diseases and make referrals to eye specialists when needed."

Looking to the future of OCT imaging, there is great potential for its applications with diagnoses in other fields, including dermatology and gastroenterology. Reflecting on how far OCT has come, Huang is grateful for his chance to make a major contribution to medical science and is excited for what's to come. "I think we'll see OCT used more in other tissue structures in the future because of the continual technology improvement," he told Young. "Being able to see things that were invisible before can be very powerful."

The vital importance of early career scientists

Early career researchers bring new ideas, fresh perspectives, energy and enthusiasm to their fields. Huang brought curiosity and innovation to the field of ophthalmology — and it transformed the entire future of optical imaging.

Huang agrees with the power of graduate research. "I think a graduate student has the enviable freedom to devote one's time to learn a wide variety of subjects and to experiment with ideas within the constraints of the resources provided by the mentor's laboratory," he said.

Graduate students power the research engine at academic medical centers such as OHSU. It's also a demanding role. Doctoral students, in particular, must immerse themselves fully in learning the fundamentals of their discipline while also working long hours in the laboratories of their faculty mentors. They are the ones who most often perform the painstaking, day-to-day bench science at the foundation of every major breakthrough.

Yet as Huang himself experienced, this demanding regimen of study and work lengthens the time it takes even the most exceptional students to complete their degree requirements. "When my father visited me at MIT during my thesis research, he asked why it was taking me so long to finish my degrees," Huang said. "Neither of us were sure it was worth adding an extra four research years to the already lengthy four-year medical school curriculum. But, in retrospect, those years yielded tremendous benefits to myself and to medicine."

The average M.D.-Ph.D. student needs seven to eight years to complete the program, with a growing number taking 10 or more years to graduate. Too many promising future leaders are forced to quit due to financial strain alone. Private philanthropic funding and scholarships make a substantial impact in graduate research — keeping these bright, fresh minds within their fields of study.

Because the reality is: You never know when the next OCT might happen.

When graduate research students are encouraged to follow their instincts — and have the financial stability to do so — scientific breakthroughs are made possible.

There are multiple reasons a future dentist would choose to study at the OHSU School of Dentistry.

Annelise Shaw and Ali Sultan are two students whose motivations connect with OHSU's commitment to innovative research and compassionate patient care. The pair can point to the moments that inspired their educational journeys and influenced their decisions to come to OHSU.


Annelise Shaw


Ali Sultan

For Shaw, it was curiosity. A third-year slated to graduate in 2025, Shaw grew to be inquisitive from an early age. As a child, she and her grandfather would venture outside collecting and categorizing plants. When she was fitted for braces in middle school, she was so interested in the process that she began shadowing her orthodontist. Before long, Shaw knew she wanted to become a dentist.

"My grandpa was really fascinated with details and how everything was formed, and me being with him every day really instilled that in me," said Shaw, who earned her bachelor's degree in biology from Azusa Pacific University. "Dentistry is always changing, always improving. I'm curious about what's happening in this field. His influence has definitely gotten me to the place I am now."

For Sultan, it was a desire to help others. A fourth-year set to graduate in 2024, Sultan came to the U.S. from Bahrain when he was 16, went to high school in Tennessee and earned his bachelor's degree in philosophy from the University of Alabama in Huntsville. One summer during his undergraduate studies, Sultan went home to work as an assistant for his father, who owns a dentist practice in Bahrain. Serving people's oral health care needs was fulfilling in a way that supplemented his interest in philosophy.

"I want to be a provider who always tries to serve patients to the best of my ability. OHSU aligned with the type of person that I am."

— Ali Sultan, OHSU dentistry student

"Growing up around my dad, he helped so many people," Sultan said. "He gave a lot of free care. People really respected that and admired what he did. My moral philosophy classes really made me think about what my responsibility is toward other people. We as humans have a responsibility to serve people. In that moment, I felt like my calling was through health care — specifically dentistry."

As their undergraduate programs wrapped up, Shaw and Sultan began looking for a dental school that would align with their ideals. Shaw sought an innovative program that had state-of-the-art technology. Sultan's ideal school championed service to others and diversity. OHSU checked all their boxes.

"I was looking for schools that were up to date with their technology, that had good faculty who were well known in their field," Shaw said. "I did research in undergrad and wanted to continue it here. The field of dentistry is improving with technology, and that was something I wanted to be involved in."

"When I started applying to dental schools and interviewing, I felt very comfortable here," Sultan said. "I want to be a provider who always tries to serve patients to the best of my ability. OHSU aligned with the type of person that I am."

Rebecca Johnston's future, goals and passions all hinged on one monumental decision: Should she amputate her leg?

Johnston was diagnosed with osteosarcoma, a type of bone cancer, in her femur in 2017. A Hood River native, she was preparing to play volleyball at Whitman College in Walla Walla, Washington. One morning, she woke up after a day of volleyball training to a leg so swollen and painful, she could hardly move it. A biopsy revealed her bone cells had grown out of control, forming a large tumor inside the long, thick bone in her left thigh.

Johnston was referred to the OHSU Knight Cancer Institute, where she met her oncologist, Lara Davis, M.D., assistant professor of medicine at the OHSU School of Medicine and director of the sarcoma program, who began treatment with chemotherapy to keep the tumor from growing. To remove it, however, she needed surgery. Her surgeon, James Hayden, M.D., Ph.D., associate professor of orthopedics and rehabilitation in the OHSU School of Medicine, performed limb-salvage surgery to remove a third of Johnston's femur and replace it with a length of titanium.

"I really liked my team," Johnston said. "Dr. Davis is one of the smartest and most capable doctors I've ever met. She's an amazing person. We got to know each other so well. Same with Dr. Hayden. I got the best treatment possible. They were great at supporting me. I was ready to get this tumor out and get on with my life."

Recovery, however, was complicated. Six months after the procedure on her leg, Johnston still couldn't bend it. Procedures to remove scar tissue were unsuccessful. After continuing physical therapy and rehabilitation, it became clear that Johnston's leg was never going to be the same. Johnston, who'd connected with players on the USA Sitting Volleyball Team, began looking at amputation as an option.

She researched amputation, spoke with athletes with physical challenges and discussed her options with

Rebecca Johnston

Hayden. Finally, in May 2020, Johnston made the decision: She was going to amputate her leg. Hayden performed the surgery, amputating her left leg just above the knee.

Six months later, Johnston received a prosthetic knee specifically designed for athletes, thanks to a grant from the Move For Jenn Foundation. She took up snowboarding and connected with U.S. Paralympian snowboarder Noah Elliott, who'd also lost a leg to osteosarcoma. Before she knew it, Johnston was preparing for a career in competitive snowboarding. Now, she is training to compete in the 2026 Winter Paralympics.

"Cancer is a terrible thing to have," she said. "It sucks. But you've got to move forward. You've got to lean into it. I kept a positive outlook. It helped my body heal. You take it one day at a time. Sometimes you take it one hour at a time. Cancer will always be a part of you, but one day you will look back on this and be grateful you kept on fighting."

The OHSU Knight Cancer Institute's mobile outreach van drives down a rural Oregon road.

Though significant strides have been made in cervical cancer prevention, underserved populations suffer its impacts at drastically higher rates. Underinsured patients, minority and migrant populations, residents who lack citizenship or documentation — these are the people who have an overwhelming share of the burden of cervical cancer. According to the American Cancer Society, there are nearly 14,000 new cases and approximately 4,000 deaths due to cervical cancer each year in the United States.

Amanda Bruegl, M.D.

"We can vaccinate. That is the most powerful thing we can do," said gynecologic oncologist Amanda Bruegl, M.D., an associate professor of obstetrics and gynecology in the OHSU School of Medicine. "Finding ways to increase participation in our screening programs: Pap smears, HPV self-collection. Communities who are suffering a greater disparity from this disease, do they have access to these programs? And if not, why not?"

"It's all about partnerships because no one can do it alone."
— Cirila Estela Vasquez Guzman, Ph.D., M.C.R.

These questions lie at the heart of several health equity efforts happening across OHSU.

The OHSU Knight Cancer Institute is committed to ending cancer as we know it. Key to that mission is ensuring that all the advancements made in the clinic and research labs reach *everyone*.

How do we increase access to cancer screenings and other early detection efforts? How can we best listen to and engage underserved populations on what they need most — and what barriers they face?

There isn't a single answer, but rather multiple, intersecting solutions aimed at increasing access and removing barriers.

OHSU is currently involved in several initiatives to reduce health disparities and increase access, including mobile clinics — vans that are staffed by mobile health teams who bring education, screenings, vaccines and outreach to underserved communities. The university is also focused on a robust patient-navigator program, increased participation of underrepresented populations in clinical trials, community outreach and population research.

"Health is a human right," said Jessica Currier, Ph.D., a research assistant professor at the OHSU Knight Cancer Institute. "We have a responsibility to help do what we can to make sure that this basic human right is realized by everyone."

Cirila Estela Vasquez Guzman, Ph.D., M.C.R., assistant professor in the OHSU School of Medicine, said, "For me, preventative services with cancer have to be a lot more innovative. We need more ideas, more perspectives, different passions. Bench science is critical. Having high-level technologies is critical. But we need to also partner up. Are you working with someone who does policy? Do you have someone on your team that's involved with the community? It's all about partnerships because no one can do it alone."

Jessica Currier, Ph.D.

Cirila Estela Vasquez Guzman, Ph.D., M.C.R.

WATCH

These equity efforts are featured in *Healing Within Reach*, a new documentary-style short film that focuses on the life-saving importance of equity and access in cancer prevention and care. View the film at **healingwithinreach.com**.

Donn Spight, M.D., FACS, FASMBS

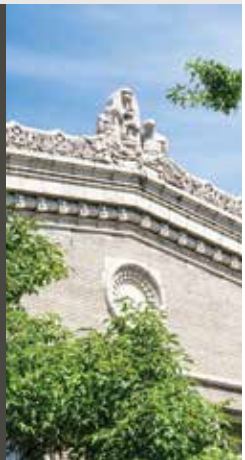
Everyone should receive excellent health care. That's the driving philosophy for Donn Spight, M.D., FACS, FASMBS, a professor of surgery in the OHSU School of Medicine and the university's vice president of health equity.

"The OHSU mission is, 'Enhance health and health care in every community.' That is health equity," Spight says.

LISTEN

Listen to Spight speak on the importance of health equity in this new audio story: **ohsuf.org/spight**.

For more stories of impact across OHSU's missions: **ohsufoundation.org/stories**



Doernbecher Freestyle 20

JOIN TEAM FREESTYLE

As part of a remarkable partnership between OHSU Doernbecher Children's Hospital and Nike, Doernbecher Freestyle gives young patients the once-in-a-lifetime opportunity to design limited edition footwear and give back to the hospital that has given them so much.

This year celebrates the 20th anniversary of the program, and six new Doernbecher patient-designers will create a shoe that tells their story and inspires people near and far.

We invite you to join the team as a Doernbecher Freestyle 20 sponsor and help support a program that has raised nearly $37 million for Doernbecher. Sponsors are among our most important supporters, helping ensure every dollar raised through Doernbecher Freestyle goes directly to helping kids and families at Doernbecher.

For more information about sponsor benefits and this year's event at the Portland Art Museum on October 18, 2024, please contact: Christina Carl at 503-412-6364 or carlc@ohsu.edu

doernbecherfreestyle.org

THE CHANGE MAKERS

By Josh Friesen / Photos by Jason Hill

Photo of Danielle Pinn by Bryon DeVore

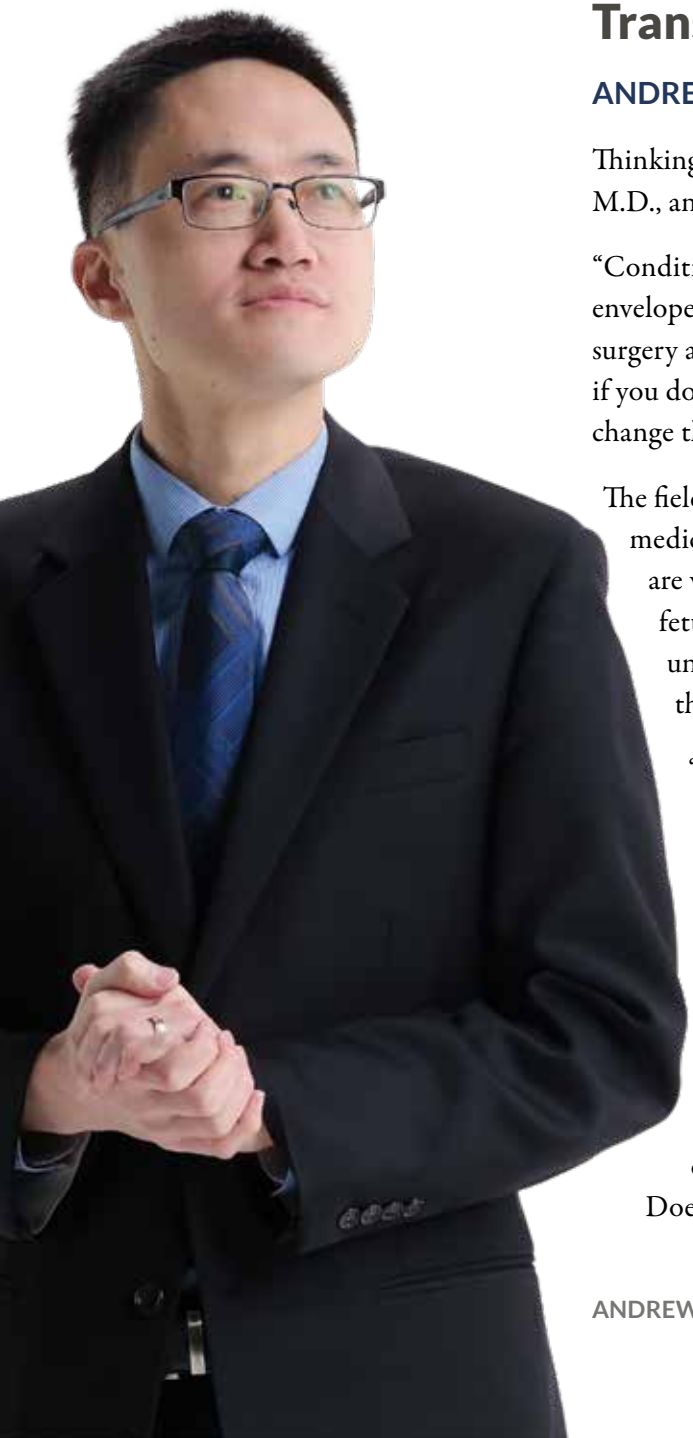
The future of health is **changing.**

While so much progress has been made, OHSU is still pushing forward. OHSU and OHSU Doernbecher Children's Hospital are building a future that brings health and well-being to everyone in Oregon and beyond.

From advancing specialized treatments for cancer patients to changing the conversation about gun violence, people across OHSU are transforming their fields and inspiring change through innovation, empathy and hope.

Here are just a few of the incredible people at OHSU whose work is shaping the health landscape of tomorrow.

These are the Changemakers.



Transforming health through fetal medicine

ANDREW CHON, M.D., RAPHAEL SUN, M.D.

Thinking outside the box is a necessity for OHSU fetal surgeons Andrew Chon, M.D., and Raphael Sun, M.D.

"Conditions in which the outcome is fatal, if you don't try pushing the envelope, you're left with a fetal demise," said Sun, an assistant professor of surgery and obstetrics and gynecology in the OHSU School of Medicine. "But if you do try, you may be able to not only save a life, but you could potentially change the way we practice medicine."

The field of fetal surgery — or surgery on fetuses — is relatively new in medicine. As such, it must rely on innovation. Diseases and disorders that are well understood in adults or adolescents might be uncharted waters in fetuses. Advancements in maternal-fetal medicine have enabled increased understanding and discovery — and sometimes even treatment — of these conditions before birth.

"A disease like spina bifida, for example, the patient is left with long-term [neurodevelopmental impairment], an inability to walk or use [their] lower extremities," Chon said. "Now, we're intervening with minimally invasive procedures that increase the likelihood they'll be able to [walk] independently or have fewer neurological complications. It's a very promising, exciting thing to be a part of. What we do in the prenatal period could very well could change the natural history of conditions."

Chon's focus lies in high-risk, complex pregnancies. Sun's expertise centers around fetal and prenatal care. Their work is part of the OHSU Doernbecher Children's Hospital's Fetal Care Program, a comprehensive,

ANDREW CHON, M.D.

RAPHAEL SUN, M.D.

expert team of neonatologists, pediatric cardiologists, maternal-fetal medicine specialists, radiologists, pediatric subspecialists and anesthesiologists. It is one of only a handful of centers in the country to provide the highest level of maternal, fetal and neonatal care in one location.

"Dr. Sun and I have a unique pairing because, as maternal-fetal medicine pediatric surgeons, we encompass the full continuum of perinatal medicine," Chon said. "We take care of them together from a prenatal standpoint and, during that time, I'm able to bring in a unique obstetric perspective, while Dr. Sun has the postnatal, pediatric surgeon perspective and can provide insight into how a disease or condition might present postnatally."

Fetal surgery's potential to revolutionize medicine is limitless; Chon, Sun and Doernbecher's Fetal Care Program are just scratching the surface of what's possible. It's a responsibility and privilege Chon and Sun don't take for granted.

"When others say, 'No,' fetal surgeons say, 'Yes,'" Sun said. "What was not possible before is possible now. These are the most complex anomalies we see and can weigh heavily on our shoulders, but it can be very, very gratifying."

Changing the conversation about gun violence

KATHLEEN CARLSON, PH.D.

Gun violence in the U.S. is a public health crisis, and injury epidemiologist Kathleen Carlson, Ph.D., is trying to figure out why.

"As an epidemiologist, we quantify health conditions. We're still working on the challenge of quantifying gun violence in our populations," said Carlson, director of the OHSU Gun Violence Prevention Research Center and professor of public health in the OHSU-PSU School of Public Health. "We're working toward a total, inherent understanding of firearm injury as a public health issue that has solutions."

Carlson had always been interested in injury and violence prevention. Early in her career, she examined trends and patterns associated with everything from occupational injury and falls to sports injury and motor vehicle crashes.

One glaring exclusion, however, was in the realm of gun violence. Injury epidemiologists could not construct a clear picture of the injury and violence prevention landscape regarding firearms, in large part due to a congressional moratorium levied in 1996 that effectively banned federal funding for firearm injury prevention research. For years, the restriction stymied researchers like Carlson who wanted to study gun injury as a public health and safety issue.

Then on December 14, 2012, a gunman shot and killed 20 children and six adults at Sandy Hook Elementary School in Newtown, Connecticut. In the wake of that unthinkable tragedy, things began to change and restrictions preventing research began to loosen.

Carlson knew what she had to do.

"That got me thinking, 'I really need to do something. I'm a parent of elementary-aged kids. I have the skillset. I have the passion. I need to do something in this arena,'" Carlson said.

For the last decade, Carlson's work has positioned OHSU as a national leader in understanding the public health toll of firearm injury. She is a founding member of the Gun Violence as a Public Health Issue Initiative, an OHSU-PSU collaboration that brings researchers, health care professionals and community members together to leverage public health tools to reduce firearm injury. The OHSU Faculty Innovation and Excellence Award, made possible by the Silver Family Innovation Fund, also helped Carlson establish the OHSU Gun Violence Prevention Research Center, which serves as the go-to source of credible data on firearm injuries in our region.

Carlson is working with the Oregon Public Health Division to lead a first-of-its-kind analysis of data on firearm injuries treated in Oregon's emergency departments. This work paints a picture of the firearm injury landscape across the state, revealing troubling increases in gun violence each year and underscoring the need for solutions. In December of 2023, Carlson's team launched the Gun Violence Review Commission in Multnomah County, which brings together leaders with lived experience and across numerous disciplines — including health care, education, community violence intervention, law enforcement and public health — to identify and repair root causes of gun discharges and injuries in our region.

Curbing gun violence in the U.S. is a challenging undertaking. Carlson is optimistic the work will pay off.

"There is so much we haven't done that we can still do, need to do and will do," she said. "Things are moving, and we're seeing progress."

KATHLEEN CARLSON, PH.D.

JONAH SACHA, PH.D.

Paving a clear path to a cure for HIV

JONAH SACHA, PH.D.

More people worldwide are living with HIV now than in any other time in recorded history.

According to the World Health Organization, approximately 85.6 million people have been infected with HIV since the epidemic began in 1981. Of those, about 40.4 million people have died. Today, an estimated 40 million people are living with the virus. And, in 2022, 630,000 people died of HIV-related illnesses worldwide, including acquired immunodeficiency syndrome (AIDS).

Though not as prevalent in the global social consciousness as it once was, the HIV/AIDS pandemic has never eased its grip on humanity.

Jonah Sacha, Ph.D., a professor at OHSU's Oregon National Primate Research Center, is confident he can help change that.

"What we've come to realize is that we can actually cure HIV," Sacha said. "For the first time, there's a real, very clear pathway forward."

The roots of Sacha's work developing a cure for HIV go back to 2007 — the first known case of HIV being cured via stem cell transplant. A man living with HIV — known then as the "Berlin patient" and later identified as Timothy Ray Brown — underwent a stem cell transplant to treat acute myeloid leukemia. The procedure, originally a bid to stymie his cancer, spurred a resistance to HIV infection, eventually eliminating HIV cells and functionally curing Brown of the disease.

Since then, four more people have similarly been cured. Recently, Sacha met with three of them. It was the first time multiple people who'd been cured of HIV had been in the same room.

"It was one of those eureka moments," Sacha said. "I'm standing here with these people who went through this

grueling stem cell transplant process but are actually cured of HIV. Hearing them tell their stories was just inspiring, and it made me realize, 'This doesn't have to be just them. We can do this for everyone.'"

Sacha is working to reverse-engineer the process that cured those five individuals of HIV. In 2023, he led a study that shone new light on the molecular mechanisms and immune responses behind those cases. Those groundbreaking insights will illuminate the roadmap to HIV-specific immunotherapies — a cure.

"This isn't just some big, pie-in-the-sky idea," Sacha said. "I'd like to see treatment for everyone. In the United States, there's a dichotomy between those who can access treatment and those who can't. When we cure HIV — because we will cure HIV in my lifetime — I hope to see that it is available to everyone."

Building a future that brings health and well-being to all

SHANDEE DIXON, PH.D.

How can we guarantee everyone equal access to the benefits of innovation?

Every day, Shandee Dixon, Ph.D., gets closer to answering that question.

Dixon, research thread director of the Wy'east Post-Baccalaureate Pathway in the Northwest Native American Center of Excellence, began her career as a bench scientist. A microbiologist and immunologist by training, Dixon was immersed in research and focused on new technologies and discoveries that would change medicine. As a first-generation college student raised by a single parent, however, she often wondered how her contributions would impact her own family.

"I always thought to myself, 'Would my family even be able to afford this? Would they even be able to benefit from this discovery? Would this innovation ever reach my community?'" said Dixon, also an associate scientist in the Oregon Clinical and Translational Research Institute. "I realized I wanted to have more of an impact."

So, Dixon shifted gears. Innovation is important — there's no doubt about that. Scientific and technological breakthroughs are vital to pushing medicine forward. But innovation done through the lens of health equity to ensure the fruits of that science are available to everyone? That's where Dixon knew she belonged.

"How do I make sure all of this work done by all these brilliant minds is actually going in a direction that serves everyone, where folks feel like they're being brought along and are part of the movement that makes everything better?" she said. "That was something that was really important to me."

Dixon mentors students from OHSU and Portland State University and helps guide them toward success. Also a

SHANDEE DIXON, PH.D.

faculty lead and career mentor for undergraduate research training programs at Portland State, Dixon helps students navigate and validate their place in their academic careers. Her work is building a future where health care providers and researchers look like and understand the people they serve, a future where structural gaps at the root of health inequities are filled.

"My impact comes from providing these opportunities for others," Dixon said. "My role in the future is clear — to empower the next generation of youth and students. They're the changemakers."

Improving the precision of brain surgery

AHMED RASLAN, M.D., FAANS

The human brain is an enigma.

Its sheer complexity is staggering. Billions of cells send and receive hundreds of billions of electrical and chemical signals every second. Every person's thought, sensation and movement is the result of an elaborate process that scientists have only begun to understand. And yet, for all the brain's intricacy, the flow of information connecting the physical and metaphysical worlds — or how we interpret and manipulate reality — is remarkably straightforward.

This dichotomy between incredible complexity and beautiful simplicity captivates Ahmed Raslan, M.D., professor and interim chair of neurological surgery in the OHSU School of Medicine and director of functional neurosurgery.

"The brain is the most complex organ in the human body, but it's also the most logical organ," Raslan said. "There's a logical flow of information from the brain down to body — the motor system. There's another logical flow of information from the outside world to the brain — the sensory system. That logical conclusion and flow captured my attention."

Balancing his efforts as a surgeon and researcher, Raslan has spent his career at OHSU on the leading edge of science and discovery in two primary areas: cognitive decoding enabled by interface technology, and focused ultrasound. Raslan's breakthroughs in interface technology give neurologists and neurosurgeons a clearer, higher-resolution picture inside the brain that reveals more about brain function, improves the precision of brain surgery and examines the processes behind memory, language and numbers cognition.

Focused ultrasound is a new, minimally invasive way to treat brain disorders, such as involuntary tremors,

AHMED RASLAN, M.D., FAANS

by targeting specific injured locations on the brain with sound waves. OHSU is one of only five sites in the U.S. to offer the latest advancement — high-frequency focused ultrasound — which has been used to treat more than 130 patients at OHSU since 2022.

Raslan enjoys the opportunity to impact patients in the operating room and indirectly through scientific innovation. At OHSU, he doesn't have to choose one over the other.

"I have a unique opportunity at OHSU that provides me access to patients and technology inside and outside the operating room," Raslan said. "Before anything, I'm a surgeon and health care provider. I like treating patients one at a time and forming relationships. However, being on the cutting edge of discovery and figuring out new ways to do things allows you to impact even more lives. OHSU provides a unique combination that is very hard to replicate anywhere else."

Advancing specialized treatments for cancer patients

DIVYA SOOD, M.D.

Divya Sood, M.D., sees patients who often have nowhere else to turn.

Sood, an assistant professor of surgery (surgical oncology) in the OHSU School of Medicine, specializes in treating patients with abdominal cancers, focusing particularly on metastatic cancers that have spread from one part of the abdomen to another. Historically, the primary treatment for metastatic cancers was chemotherapy and, until recently, surgery wasn't considered an option.

"Over the last several years, there's been a paradigm shift within the field. We are reconsidering how to treat metastatic cancers more aggressively," Sood said. "My work focuses on understanding who falls into that paradigm, who will benefit from this aggressive approach."

DIVYA SOOD, M.D.

OHSU is setting the tone in changing how oncologists approach and treat metastatic cancers. One treatment in particular, hyperthermic intraperitoneal chemotherapy (HIPEC), is offering something metastatic cancer patients have longed for: hope.

"The procedure has actually existed for a long time, but it's 'new' because we are now considering it to be a realistic treatment, and we're seeing real benefits," Sood said. "Oftentimes, my patients have seen a dozen providers before they've come to me who've told them no, who've said, 'There's nothing we can do.' They remain motivated in the face of rejection, and they've continued to maintain hope."

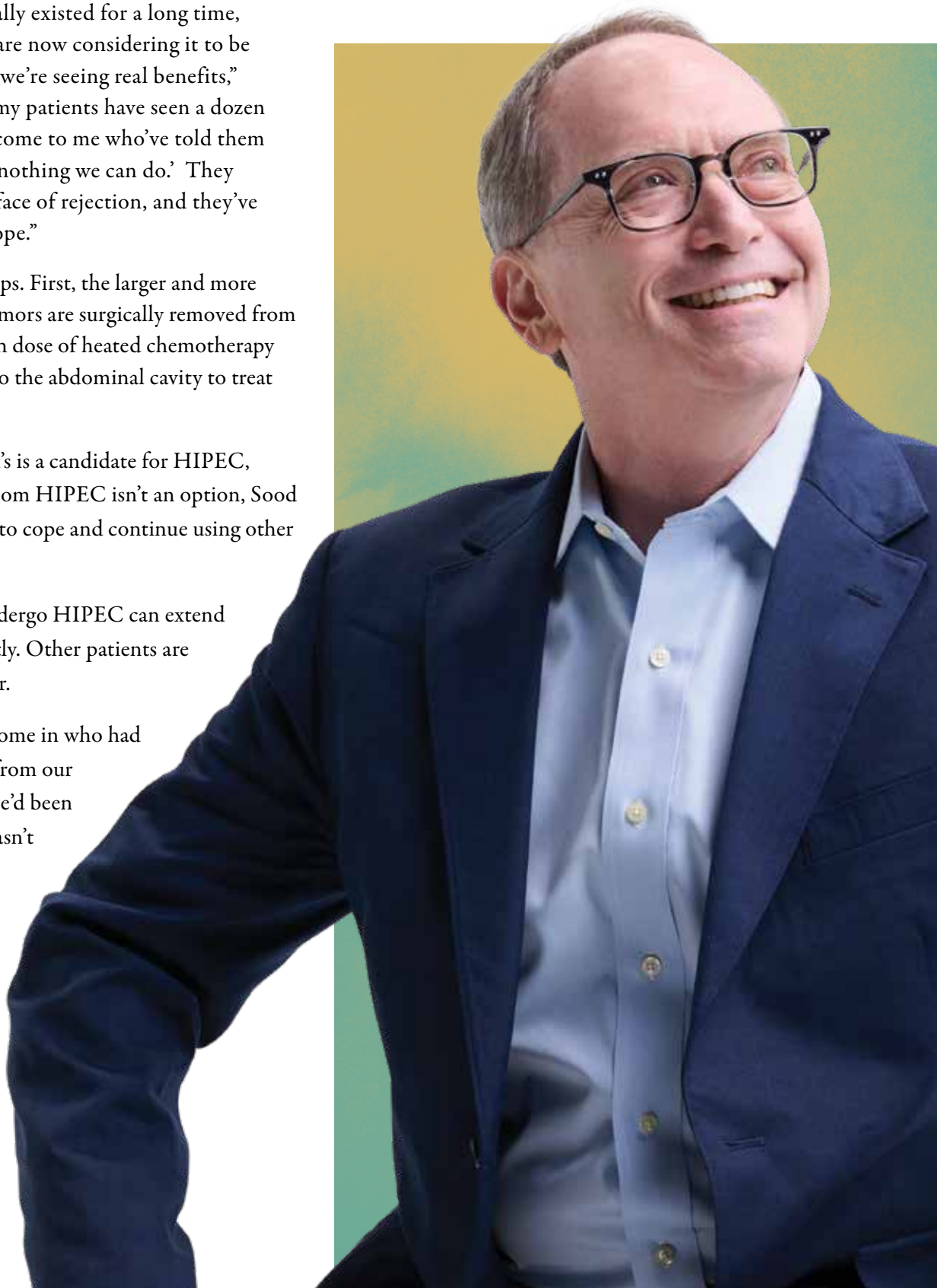
HIPEC has two major steps. First, the larger and more accessible metastasized tumors are surgically removed from the abdomen. Then, a high dose of heated chemotherapy medications is infused into the abdominal cavity to treat any remaining tumors.

Not every patient of Sood's is a candidate for HIPEC, however. For those for whom HIPEC isn't an option, Sood is studying ways for them to cope and continue using other treatment options.

Many patients who do undergo HIPEC can extend their prognosis significantly. Other patients are showing no signs of cancer.

"I had a patient recently come in who had her one-year anniversary from our operation," Sood said. "She'd been told multiple times she wasn't a candidate for surgery, that she'd be on lifelong chemotherapy. We were able to operate, and she's been off chemotherapy and has no evidence of disease. She's living her normal, healthy life.

"That's something she had a hard time envisioning before she came to see us at OHSU."



Expanding complete pediatric care beyond the walls of a clinic

BENJAMIN HOFFMAN, M.D., CPST-I, FAAP

Standing in an emergency department at a hospital in New Mexico, Benjamin Hoffman, M.D., was grappling with yet another preventable tragedy.

He was in his first pediatric position after residency at a hospital with the Indian Health Service on the Navajo Nation. Within a single month, he'd been called into the emergency department five separate times to help stabilize a child who'd been critically injured in a car crash. None of the children had been restrained in car seats or had their seatbelts on. The injuries were preventable, and Hoffman — angry at the failures of the systems that work to support children and families — knew he needed to work with the community to spark change.

"I knew I could, as a pediatrician in the clinic, talk to families and try and educate them, but that only goes so far," said Hoffman, now a professor of pediatrics at the OHSU School of Medicine and medical director of OHSU Doernbecher Children's Hospital's Child Injury and Prevention Program and Tom Sargent Safety Resource Center. "Stepping back and asking where the gaps were, what barriers existed and what assets existed in the community that we could collectively employ to build solutions was an incredibly powerful experience."

That was nearly 30 years ago. Hoffman realized that complete pediatric care expands beyond the walls of a clinic, needs to be viewed through a health equity lens and is influenced by lawmakers, community leaders and social justice advocates. His dedication to influencing policy, connecting authentically with families and communities and advocating for children's health and injury prevention has led to his recent election as president of the American Academy of Pediatrics.

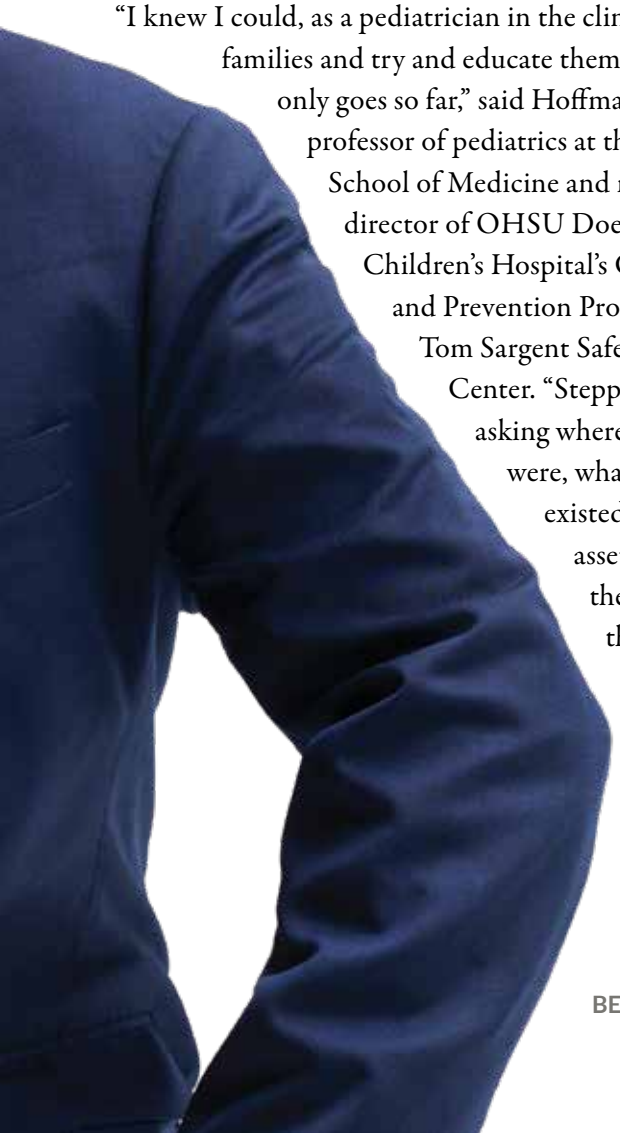
"The advocacy work — the community engagement work — it's crucial," Hoffman said. "Every child should have the opportunity to achieve their greatest potential, and there are so many structural barriers to that."

Hoffman arrived at Doernbecher in 2011 because the children's hospital values what he values. Doernbecher understands how children's health is fundamentally different from adult health — how a strong foundation of well-being early in life is crucial to positive health outcomes later.

Hoffman owes a lot of his work at OHSU to community support. Funds from Injury Free Coalition for Kids and the Credit Unions for Kids formed the Tom Sargent Safety Resource Center, and private philanthropy has been essential in furthering the Child Injury Prevention Program's mission. This support has helped establish OHSU Doernbecher Children's Hospital as one of the best children's hospitals in the U.S.

By empowering communities, inspiring a new generation of pediatric leaders and shedding light on historical, systemic inequities, Hoffman hopes to spur positive change for the future of children's health.

"It's not just lip service — we have a fundamental role in changing policy at the institutional level, the state level and the federal level," he said. "And I'm grateful for that work OHSU enables us to do."



BENJAMIN HOFFMAN, M.D., CPST-I, FAAP

Forging a brighter future for reproductive health

ALISON EDELMAN, M.D., M.P.H.

In the wake of increased efforts to restrict reproductive health access across the U.S., OHSU has made its stance clear: Abortion is health care.

"It's critical to have a community around us that recognizes and supports the care that we're doing," said Alison Edelman, M.D., professor of obstetrics and gynecology and division director of Complex Family Planning in the OHSU School of Medicine. "It's this support that enables us to provide this essential health care and expand services to meet the existing need for Oregonians while also caring for those forced to travel to our state."

Since the Supreme Court's June 2021 decision to overturn *Roe v. Wade*, 21 states have banned or severely restricted access to abortion. As a result, an influx of out-of-state patients have come to OHSU to receive abortion care.

"It was a rarity that we'd see someone from out of state before the *Dobbs* decision," Edelman said. "Now, we're seeing folks weekly traveling from not just Idaho, but from Arkansas, Oklahoma, North Carolina, Kansas — states we've never had patients from before."

Edelman acknowledges sexual and reproductive health care has always been stigmatized. Many don't understand the critical role abortion has in preventing maternal morbidity and mortality.

As an academic health center and one of the only hospital- and clinic-based abortion providers in the state, OHSU is uniquely equipped to address challenges to reproductive health access, serving both as a training and research hub and as a referral center for community providers and patients who require complex care.

For Edelman, training the next generation of OB-GYN providers, including those practicing in states where abortion care training is banned or restricted, is a major priority. Resident trainees in restrictive states are now coming to OHSU and the Center for Women's Health for this training.

The path to a brighter future is there to be forged.

"The most important thing is to continue ensuring we have the ability to provide people the medical care they need and deserve to have," Edelman said. "The team and the trainees coming through are amazing and so dedicated to the care. That gives me hope."

ALISON EDELMAN, M.D., M.P.H.

Prioritizing marginalized communities in the health care system

ARMANDO JIMENEZ, M.P.H., CPH

Transparent, honest and accurate communication isn't just key to increasing health care access — it's vital for establishing trust.

"Communication is everything," said Armando Jimenez, M.P.H. '20, CPH, the director of language services at OHSU. "If we do not prioritize the needs of an individual — be it linguistic or any other kind of need — we are violating the cardinal rule of trust."

Jimenez completed his graduate program from the OHSU-PSU School of Public Health in the spring of 2020 and immediately joined the effort to confront the COVID-19 pandemic. Working as an operations lead at the Hillsboro Stadium Vaccination Center, he saw firsthand how breakdowns in communication negatively impacted non-English speaking patients.

The initial response to COVID-19 fell short in its messaging to non-English speaking populations and highlighted the need for swift change. A lack of equitable, understandable communication not only obstructed care for communities with limited English proficiency, it validated and deepened their mistrust in a health care system by which they had already felt marginalized.

In Hillsboro, Jimenez advocated to increase language access, working with community partners and interpreters to close the health equity gap.

"We were very involved in rolling out vaccinations, but recognized the distrust in the community because of the lack of trusted messengers," Jimenez said. "When we provided language access to information through communication, through direct patient conversations, we were able to see that the community was more likely to participate in vaccination and prevention efforts."

ARMANDO JIMENEZ, M.P.H., CPH

Jimenez continues to advance language access at OHSU — in the last year, the number of employed translators and interpreters at OHSU has more than doubled. As director of language services, he oversees a team of interpreters, who specialize in verbal communication, and translators, who specialize in written messaging. Jimenez and his team work to ensure access to anything a patient might need in a non-English language.

Language Services is part of OHSU's recently formed Health Equity Organization, whose leadership team includes Jimenez. He hopes to inspire a future in which comprehensive language inclusion isn't an add-on to the health care system — rather, it's built in from the beginning.

"I hope to see a health care system and a society that continue to prioritize the needs of marginalized individuals and communities rather than having things like language access as an afterthought," he said. "I think it speaks volumes that we have a central department dedicated to managing language access. It demonstrates an investment by OHSU to making sure these services are provided."

Advocating for the well-being of individuals experiencing homelessness

DANIELLE PINN, STUDENT
OHSU School of Nursing in Ashland

Danielle Pinn understands how a little hope can go a long way.

Pinn, a third-year nursing student at the OHSU School of Nursing in Ashland, experienced homelessness for over two years. In that time, she — along with many individuals facing homelessness — witnessed and experienced the shortcomings of the health care system.

Then, one day, a shred of hope changed her life.

"I've had experiences with nurses who weren't so great," Pinn said. "But there was one nurse when I was homeless who showed me an amazing amount of compassion, care, love and support. That's when I was like, 'This is what I want to do. I want to go and help people that need it. I want to make a difference.'"

Pinn, a student member of the OHSU Street Nursing Team in Ashland, works to spark change in the health care system and help educate on how far values like empathy, respect and dignity can go in caring for and building trust within the most vulnerable populations. By practicing

DANIELLE PINN

trauma-and-violence-informed care, Pinn channels the hope that was demonstrated to her so many years ago.

The OHSU Street Nursing Team is a grant-funded program that gives nursing students clinical learning opportunities by engaging people without housing in southern Oregon. Made up of nurse educators, nurse practitioners and students, it works to identify needs, coordinates foot soaks and wound care, provides mental health services and advocates for the holistic well-being of individuals experiencing homelessness.

When Pinn learned about the program her first year of nursing school, she knew that's where she needed to be. She knew she could help be an active leader in inspiring change.

"We meet people where they are," she said. "We're going to bring the resources to them. We're going to treat them with respect and dignity. I knew that was really important to me because I'd been in that position. I want to lead by example. I don't just want to go out there telling everybody what they should be doing. I want to show people what it is to be a great nurse."

Pinn's work on the OHSU Street Nursing Team is one step toward building trust between clinicians and patients experiencing homelessness. Often, this population is overlooked or cast aside by the health care system. Pinn strives for a health care future that treats every patient with the dignity they deserve.

"If we use trauma-and-violence-informed care and we treat people with respect, they're going to want to come in. They're going to want to get seen," she said. "There are a lot of misconceptions about the homeless population. Educating people about what's really going on is helping change minds and teaching how to care for them in a compassionate and holistic way." ■

The Kids Are Not Alright: How OHSU is addressing the youth mental health crisis

The nation has never seen a mental health crisis like the one our kids and teens now face. OHSU is meeting the challenge head-on through groundbreaking research, expanded services and ambitious outreach.

By Willow Bacon / Illustrations by Chelsea Pham

Worried sick

No matter what decade you grew up in, your teenage years were probably rough. However, today's generation of teenagers have unprecedented challenges to navigate — and it's taking a profound toll on their mental health.

The numbers are staggering. According to the CDC, 42% of U.S. high schoolers reported experiencing persistent feelings of sadness or hopelessness in 2021. Nearly 1 in 5 of them seriously considered suicide.

At the local level, the problem is even more acute. Currently, Oregon ranks as one of the worst states for youth who are struggling with mental illness. It has the third-highest rate of teen addiction. And, according to a national survey of child well-being, 73% of Oregon parents say their child would benefit from some form of mental health care.

Too many kids in crisis, not enough care

Just as the need has skyrocketed, the supply of specialized mental health services in Oregon has plummeted. Part of the problem stems from a chronic workforce shortage in mental health treatment centers, where low pay and high stress create high rates of turnover. The state's lack of investment in behavioral health services over the last 20 years has widened the care gap even further.

"Beginning in 2003, and escalating in the past eight years, Oregon lost more than 200 mental health residential beds for youth ," said Ajit Jetmalani, M.D., who directs the division of Child and Adolescent Psychiatry at OHSU and is a consultant to the Oregon Health Authority (OHA). "Statewide, there are now only four residential treatment centers for youth with mental health needs; we have the lowest number of psychiatric hospital beds per capita in the nation; we have very few residential beds for substance use disorders; and waiting lists are weeks or months long for some programs."

Big feelings, big problems

While mental health disorders can affect anyone at any age, teenagers are especially vulnerable. That's because the connections between the emotional part of their brain and the decision-making and regulatory center are still developing — and not always at the same rate.

No one knows this better than Bonnie Nagel, Ph.D., director of OHSU's Center for Mental Health Innovation. Her research focuses on understanding the development of emotional networks in the brain and how aberrations in those systems can impact mental health during the adolescent years.

"Adults tend to think more with the prefrontal cortex, which guides our judgment and impulse control," Nagel explained. "However, the frontal lobe is still maturing in teens, so they tend to be more emotional and reactive in the way they process information. When you have a heightened emotional response and an inability to put the brakes on those emotions, it can contribute to serious problems like depression, addiction and suicidality."

For teenagers already struggling with amplified feelings, the stress of recent history only added fuel to the fire.

"There have always been struggles for children who have experienced adversity in their life," explained Jetmalani. "But since 2008 or so, economic upheaval, racial injustice,

"Children and families in Oregon need our help more than ever. It's our collective responsibility as a state and an honor as a health care team to support their well-being as they journey through life."

— Ajit Jetmalani, M.D.

social upheaval and division and the rise of social media really impacted their emotional resilience."

And then the COVID-19 pandemic happened.

"The lack of social connection and loss of structure escalated things to a level that no one anticipated," said Liz Marx, a social worker on the OHSU Child and Adolescent Psychiatry team. "Now kids are coming in with really intense symptoms and behaviors that we haven't seen before."

When a child does show up at the emergency department (ED) in crisis, Marx or another social worker is there to conduct risk assessments, employ de-escalation strategies and connect families to resources beyond the hospital. She also works with the medical team to design an individual support plan for each young patient to guide their recovery once they go home.

"Our goal is to ensure that follow-up happens within seven days, which can be incredibly challenging given the lack of access to mental health care in our communities," she acknowledged.

Meeting the crisis on our doorstep

Across the board, OHSU providers agree: The youth mental health crisis is a complex problem that requires a multifaceted solution.

"We not only need to serve our patient population here at OHSU more effectively, but we also need to reach out and support the rest of the state as Oregon's only academic medical center," explained Jetmalani.

Here's how OHSU is accomplishing both.

Advancing research

OHSU is currently involved in two major federal initiatives to study the development of psychopathology in young minds. One is the largest study of adolescent brain cognitive development ever funded by the National Institutes of Health (NIH). The other one studies pregnant mothers and newborns to understand how perinatal and early childhood influences our mental health outcomes.

"To be a part of both of those is a really big deal," said Nagel. Her lab has also been conducting studies of Portland-area youth for the past 18 years, with aims toward identifying neurobiological and psychosocial markers of risk for addiction and depression.

"When we better understand how to predict risk and escalation of mental health problems in children and adolescents, we can deliver more targeted prevention and intervention efforts," she said. "One of our primary goals is to take our scientific findings and use them to inform care."

Expanding the team

With the help of donor support and a grant from Care Oregon, OHSU recently funded new positions in child psychiatry, psychology and Child Life therapy. They also expanded the adolescent medicine team to better support patients with eating disorders and tripled the number of

social workers to ensure consistent coverage in the ED at OHSU Doernbecher Children's Hospital.

"Back in 2020, there was only one social worker on the team," pointed out Marx. "Now we can provide daily coverage."

Emphasizing outreach

To help boost access to high-quality mental health care across Oregon, OHSU's Oregon Psychiatric Access Line about Kids (OPAL-K) includes free, same-day psychiatric consultations for pediatricians. In addition to offering practical advice, the program also provides valuable clinician education.

Further afield, the team partners with the State of Oregon to help kids in foster care, consults with schools to improve social and emotional supports for students and works with the OHA to implement mental health programs for youth and families statewide.

Prioritizing prevention

Of course, the best way to address mental health crises is to prevent symptoms from developing in the first place. And the opportunities to intervene occur earlier than you might think. Studies show that infancy is a crucial time for emotional development and, without a strong initial bond, children are less likely to grow up to become happy, resilient adults.

To help promote these early attachments, OHSU psychologists, researchers and nurse-midwives developed a mindfulness-based training program for at-risk expectant mothers. Proven to reduce the risk of depression and strengthen the bond between mother and baby, Mindful Moms Training can help set an infant up for a lifetime of emotional well-being.

Empathy and advocacy: what you can do

According to Marx, we can all do our part to support youth mental health — and that starts with removing the stigma around mental health conditions.

"Mental health is health," she said emphatically. "It is not separate, because we are a whole human and experience not only physical health concerns, but mental ones, too. It's important to change how we talk about that."

Marx says advocacy is another critical piece of the puzzle, especially if you're the parent of a teen that's struggling. "Reach out to your state representative, write to the governor, call local policymakers and ask them to prioritize youth mental health services," she advised. "Your voice needs to be heard because it will help us build a mentally healthier future for our kids." ■

1 in 4
Oregon youth experienced a major depressive episode in the past year

14.5%
Number of reported youths with unmet mental health needs in Oregon

200
Residential beds in youth treatment centers lost since 2003

6
Number of Oregon counties without a single psychologist

95
Oregon youth who died by suicide in 2021

2 months
Average waitlist for youth outpatient mental health services

IN CONVERSATION

Child psychiatrists Ajit Jetmalani, M.D., and Craigan Usher, M.D., join Dana Braner, M.D., FAAP, FCCM, physician-in-chief at OHSU Doernbecher Children's Hospital, to discuss OHSU's response to the evolving youth mental health crisis. Listen at: **ohsuf.org/youth-mental-health**

OHSU Casey Eye Institute director Andreas Lauer, M.D. *(left)* and Fritz Fraunfelder, M.D.

An Ophthalmologist's Rx for a Fulfilling Retirement: Giving back

Text and photo by Darby Kendall

Frederick "Fritz" Fraunfelder, M.D., remembers the field of ophthalmology before the OHSU Casey Eye Institute ever existed. He transformed the specialty in Oregon after founding the institute in 1991. He may be best remembered for laying the groundwork for Casey Eye to become the powerhouse it is today, but Fraunfelder isn't ready to stop advancing the institute's impact on the health care landscape. Now nearly 90 years old and happily retired, Fraunfelder is turning to philanthropy to continue supporting Casey Eye's legacy of groundbreaking discoveries, exceptional care and improving the lives of millions through treating ocular conditions.

According to Fraunfelder, philanthropy is an essential element in his happy retirement. "There is scientific data that for people who philanthropically give, it makes them feel better," he said. "They have increased longevity, decreased blood pressure, decreased depression. People feel good."

Fraunfelder knows the importance of private philanthropy when it comes to progress in ophthalmology. Back when he and Kenneth Starr, M.D., were establishing the Casey Eye Institute, Fraunfelder led the nearly 100% private fundraising that built the Marquam Hill facility and broadened its mission to include research capabilities. Fraunfelder has made a qualified charitable distribution from his IRA and has left the Casey Eye Institute in his will. When exploring his philanthropic options, he worked with OHSU Foundation development officers to ensure his gift would have the largest impact possible.

"The fastest growing [area] in philanthropy is within health care because, I think, people are seeing that we have a dysfunctional health service. They realize as they get older, they're spending more time with doctors than they ever thought, " Fraunfelder said. "Health care is an excellent choice to help people, and helping people is

"The basis of philanthropy is to make somebody else's life better." — Fritz Fraunfelder, M.D.

what philanthropy is. The basis of philanthropy is to make somebody else's life better."

Fraunfelder believes in the work the Casey Eye Institute has done to improve lives across Oregon and the Pacific Northwest, but it's the people of Casey Eye that give him faith in the future impact of his investment. People like Andreas Lauer, M.D., who serves as Casey Eye's current director.

"We have done very, very well with quality leadership over the years," Fraunfelder said. Fraunfelder passed the baton of director to Joseph Robertson, M.D., M.B.A., in 1997, who in turn passed it to David Wilson, M.D. and then to Lauer. This intentional succession of visionary leadership has built a solid foundation for innovation and discovery. "Andy [Lauer], as Casey's newest director, is fantastic," Fraunfelder reflected. "During my years here, people kept saying from outside how well the Casey faculty got along together. In my discussions with Andy, we keep coming back to people. And as I look back on my life, it's people [who make a difference]."

Thanks to Casey Eye's strong community, the institute has become internationally acclaimed for its extensive research in and patient care for inherited eye disorders and gene therapy. Casey Eye also champions community outreach, offering free mobile clinics around the state and providing free vision screenings to preschoolers through the Elks Children's Eye Clinic.

As director, Lauer sees firsthand the impact donor funding has on research within the institute. He explained that without outside capital, a lot of exciting developments would be put on hold. "In order to land major grant support, you need to have some data to show that [the research] is promising," said Lauer. Private donations are a critical source of funding for researchers conducting the preliminary research needed to access transformational government grants.

Philanthropy like Fraunfelder's supports more than research. "Many of the activities that a trainee would engage in are supported by things other than clinical care or research dollars. It really requires philanthropy," Lauer explained. "For example, with our surgical simulation lab, the whole point is to make sure that young surgeons have a lot of practice so that when they are operating on actual patients, they're going to be a lot safer and more effective and provide better surgical care for folks. That kind of technology is not possible without philanthropy."

Both Lauer and Fraunfelder eagerly look forward to what the future of ophthalmology will bring. With progressions in artificial intelligence, ophthalmic imaging and telehealth, Casey Eye is poised on the precipice of inspiring growth. As for Fraunfelder, he's confident that his giving back will pave the path forward.

"I think my greatest happiness about Casey Eye is that, in a number of areas, we're one of the best in the world. We are — and I use 'we' because we're a Casey family — playing at that [global] level in so many areas," Fraunfelder said. "I'm just so proud of the Casey Eye Institute, its people and its impact." ■

IN CONVERSATION

Fraunfelder and Lauer sat down to discuss how philanthropy has helped fuel Casey Eye's growth.
Listen at: **ohsuf.org/fraunfelder**

A Century of Healing on the Hill *By Michael MacRae*

COUNTY HOSPITAL WILL BE MOST MODERN

Multnomah County Institution on Marquam Hill Will Be Second to None in West—Location Selected Is Ideal

Multnomah County Hospital

WITH the beginning of construction work last fall on the new Multnomah county hospital on Marquam heights plans which had been formulating for many months took definite shape whereby this county and the city of Portland will have a public hospital second to none in the west.

The structure was begun in early fall and at the present time the masonry and heavy work is well advanced, but it is expected it will be at least a year before the hospital can be made ready for occupancy. The cost of the building when completed will be over $1,000,000.

The building is located above Terwilliger drive, on the University of Oregon medical school campus, and the site is pronounced one of the finest possible for such a purpose. Away from the noise and confusion of the city, on the heights, where pure air is abundant, the location is an ideal one from the standpoint of the patient and the view is such as to give renewed vigor and interest to the invalid. The structure is being made of reinforced concrete and is about 140 feet square, five stories in height. There will be accommodations for about 150 patients, in addition to facilities for operations of all kinds, clinics, physicians' quarters and nurses' quarters. Although the work is being pushed as rapidly as possible, it is pointed out that hospital construction is unusually exacting, particularly from the standpoint of interior finish and installation of equipment, and it is scarcely possible that the year 1922 will see the building in actual operation, although it should be almost ready for use by the end of the year.

OHSU has been providing hospital care on its Marquam Hill campus for the past 100 years. Opened in 1923 and staffed by university faculty physicians, Multnomah County Hospital met a critical need for more hospital beds for seriously ill and seriously underserved Oregonians who had nowhere else to turn for care. OHSU Doernbecher Children's Hospital opened three years later, firmly establishing Marquam Hill as Oregon's premier destination for state-of-the-art health care for both adults and children. Fast forward to 2023, when OHSU broke ground on its new, 538,000-square-foot inpatient addition.

As it embarks on its second century of hospital care on its iconic hilltop campus, OHSU is taking aim at Oregon's leading causes of death, starting with the state's No. 1 killer: cancer. The inpatient addition will add 128 new beds on four floors and offer the region's most advanced cancer therapies and surgical treatments. The building will provide cancer patients with a new gateway to:

- **Oregon's largest stem cell transplant center.**
- **Treatments and clinical trials expanding the use of cutting-edge CAR-T cellular therapy for blood cancers, solid tumors and other diseases beyond cancer.**
- **The Pacific Northwest's only center offering hepatic arterial infusion pump treatments for liver cancers that are resistant to chemotherapy or are too large for traditional surgical removal.**
- **Oregon's only center offering hyperthermic intraperitoneal chemotherapy, a treatment administered during cancer surgery for patients with advanced gastrointestinal tract or gynecological tumors that have spread throughout the abdomen.**
- **An expanded range of larger cancer clinical trial opportunities.**

Construction advances on the new Multnomah County Hospital — "a public hospital second to none in the west." (From The Oregonian, Jan. 1, 1921)

With room to add up to 64 additional beds as future needs dictate, the addition will significantly expand the OHSU Knight Cancer Institute's capacity to provide patients with unsurpassed care and support throughout their cancer journey. And as these services move from their current locations in the Kohler Pavilion, it will open up space to serve more OHSU patients requiring advanced heart and brain care.

Design rendering of the inpatient addition now under construction on OHSU's Marquam Hill campus, by Motiv Studio and NBBJ

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JOIN US FOR THE *BIGGEST* GIVING DAY OF THE YEAR!

On **May 22**, join us for the 4th annual OHSU Give Day to support the transformative, life-saving work that happens every day at OHSU and OHSU Doernbecher Children's Hospital. ***Every* gift, including yours, makes an impact and helps build a healthier future — for all.**

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