Ignite Magazine

EVERY SQUARE MILE

OHSU is so much more than what happens within a clinic or classroom

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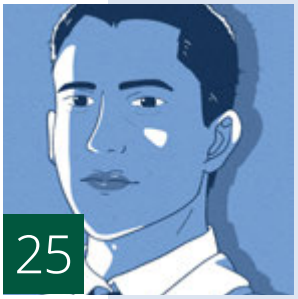

Cover photo by Bobby Cuadra


(Jordan Sleeth/OHSU EdCOMM)

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If you are inspired to make a gift to one of the impact areas you read about in this issue, please contact one of the following development officers about your interests and to learn more.

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Message from OHSU Foundation President Kate Azizi

Raising funds for academic medicine — whether to fuel new discovery, educate the next generation of health care providers, or provide the best treatments and outcomes in patient care — is my passion and life's work. It's one of the main reasons I came to OHSU and the OHSU Foundation less than a year ago, and it's one of the main reasons so many donors give to OHSU.

Kate Azizi, M.B.A., CDE

As Oregon's only public academic health care system, OHSU is a nationally distinguished research university dedicated solely to advancing health sciences. OHSU also provides unique, specialized care unavailable anywhere else in Oregon or the Pacific Northwest.

We have a lot to be proud of as Oregon's only public academic health system. But there are significant headwinds ahead. Many of you have reached out to me to share your concerns about the potential impact of federal executive orders on OHSU and proposed funding cuts at the National Institutes of Health (NIH). Our partners at OHSU have been working diligently to prepare for and respond to the implications of these potential sweeping changes.

At the OHSU Foundation, our work to inspire the power of philanthropy is more important than ever. My colleagues and I are energized to tackle big, bold fundraising strategies that will empower OHSU to be as strong as possible and support its renowned education programs, health care and excellence in scientific research. **The recently created OHSU Research Response Fund will help protect the science that yields groundbreaking discoveries.**

I would like to share a recent gift story that demonstrates the impact philanthropy can have on advancing scientific discoveries that ultimately benefit human health.

The Johnson Family Foundation recently made a gift to advance groundbreaking research into Parkinson's disease, led by Vivek Unni, M.D., Ph.D., the John Hammerstad M.D. Professor of Basic Research of Movement Disorders at OHSU. The Johnson Family Foundation has long invested in Unni's lab, emphasizing support for the mentorship of promising young researchers. This philanthropic gift continues that legacy by funding both Unni's research as well as an M.D./Ph.D. student position in his lab, adding skilled research capacity to the continued progress in understanding and treating neurodegenerative diseases.

When I meet with our donors and dedicated volunteers, it is always energizing and inspiring to hear what fuels their passion to give back. Everyone cares deeply about the role and impact of OHSU in the community and is steadfastly committed to ensuring its success and stability in the years ahead. The world needs scientific research advancements like the ones OHSU is leading, and we are fortunate to have funders like the Johnson Family Foundation — and many others — who invest in this important research at OHSU.

Now more than ever, together we can help ignite the power of philanthropy to ensure OHSU can continue to be a national and local leader in breakthrough research, lifesaving care and educational excellence.

With gratitude,

Kate Azizi

READ MORE

Learn about the OHSU Research Response Fund and how OHSU research saves lives: **ohsuf.org/research**

Message from OHSU Interim President Steve Stadum

This June, we celebrate the 10-year anniversary of the completion of the Knight Cancer Challenge. I remember fondly the excitement and energy around Phil and Penny Knight's $1 billion challenge and the pride we felt announcing our success in matching the Knights' gift and setting a fundraising record.

Steve Stadum, J.D.

Over the last 10 years, the OHSU Knight Cancer Institute has become a beacon of hope and healing for countless people in our region as the only National Cancer Institute-designated Comprehensive Cancer Center between Seattle and Sacramento. As we prepare to celebrate this milestone, I am pleased to share that Shivaani Kummar, M.D., FACP, has been appointed interim Knight Cancer chief executive to build on the momentum of the past 10 years and carry forward the Knight's mission to end cancer as we know it.

"Ten years ago we had a unique opportunity to reshape cancer care in our region and have global impact; and today we continue working toward further establishing OHSU as one of our country's best academic health centers."

But OHSU's evolution throughout the past 10 years isn't limited to just cancer. In 2015 OHSU had about 14,000 employees. Today we have more than 22,000. This growth is in response to the needs of Oregonians and those who rely on OHSU from outside our state for patient care, research and education. We have a state-mandated mission to attend to the health and well-being needs of Oregonians, and as the demand for our services increases, we have a duty to respond to the best of our ability. People from across all 96,000 square miles of Oregon travel to OHSU every day seeking the tertiary and quaternary care that only we can provide. We regularly operate at a 100%-plus bed occupancy rate, and our Emergency Department (ED) is full of patients coming in with more complex needs than ever before due to delayed care, Oregon's mental and behavioral health crisis, and access challenges throughout the region. At the same time, the wait times for primary care — which supports preventive care and can help reduce the need for specialty services and trips to the ED — are also far too long. In short, the status quo of health care in our state is not acceptable, despite the incredible and heroic efforts of our members. Fortunately, we have two transformative opportunities ahead of us to help address this crisis: the construction of the new inpatient building, Vista Pavilion, and a plan to expand our Emergency Department.

However, these projects come at a time when external threats to funding from the federal government could have devastating implications across each of our research, education and health care missions. Contingency planning continues in response to various scenarios. Our Government Relations team remains active at the federal and state levels, communicating with the governor, legislators and congressional

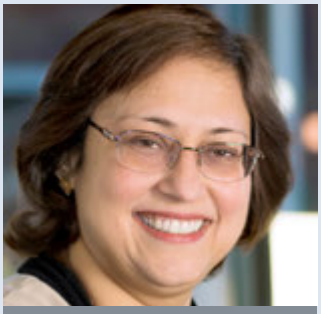
representatives. We are also partnering with other institutions and organizations, such as the Association of American Medical Colleges, to demonstrate the value and impact academic medicine has for our country.

Ten years ago we had a unique opportunity to reshape cancer care in our region and have global impact; and today we continue working toward further establishing OHSU as one of our country's best academic health centers. We could not achieve our accomplishments without the unwavering commitment of our donor community, and in the current environment, your support and advocacy are more important than ever before. Thank you for helping us carry forward our mission to the state of Oregon.

Sincerely,

Steve Stadum

Shivaani Kummar appointed interim Chief Executive of the Knight Cancer Institute



Shivaani Kummar, M.D., FACP

Shivaani Kummar, M.D., FACP, has been named interim Knight Cancer Chief Executive of the OHSU Knight Cancer Institute and provides strategic leadership for the Knight Cancer Institute's research, clinical and education programs. She will serve until OHSU's new president is able to recruit a permanent leader for the institute. Kummar was recruited to OHSU in 2020 from Stanford University to lead the Division of Hematology and Medical Oncology in the OHSU School of Medicine and serve as co-director for the Knight Cancer Institute's Center for Experimental Therapeutics. Her clinical work is focused on conducting early phase clinical trials and caring for patients who enroll in those trials.

Have questions or comments? Please contact Leslie Constans, AVP of Foundation Communications:

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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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Steven E. Mansoor, M.D., Ph.D. (Christine Torres Hicks/OHSU)

Steven E. Mansoor, M.D., Ph.D.: balancing science and care for medical progress

Navigating the worlds of research and patient care requires both precision and passion, and Steven E. Mansoor, M.D., Ph.D., finds fulfillment in this work as a physician-scientist. At the intersection of heartbeats and breakthroughs, Mansoor pioneers research that could revolutionize how we treat vascular and neurological inflammation.

Mansoor's love of clinical cardiology was established during his M.D./Ph.D. training at OHSU, which he maintains to this day. "Being a scientist makes me a better clinician, and being a clinician makes me a better scientist. They feed off each other in a way that I think is unique, interesting and beneficial to both my research and to my patients," Mansoor said. "My medical training gives me an understanding of the biological basis of disease that helps inform and frame my scientific questions. And the scientist part of me helps me better explain things to patients in ways they understand."

When it comes to his research in the Mansoor lab at OHSU, he and his team use structural biology to fight heart disease. Currently they focus on the basic science, studying the structure and function of ion channel proteins embedded in the membranes of cells, in an effort toward drug development. Recently, Mansoor and Adam Oken, B.A., a graduate student in Mansoor's lab, published an innovative paper on the complete structure of the P2X7 receptor, a protein whose overactivity is linked to various health issues ranging from coronary heart disease to nerve pain.

"We think about it like a lock and a key. The lock is the shape of the receptor, and the key is the drug that unlocks or locks it," Mansoor said. "We're trying to design keys that will fit into the specific part of a receptor, to lock it in place and prevent it from turning on, or to bind to it and open it. My research in a nutshell is trying to understand at a molecular level how these proteins work, so we can design drugs that effectively control them."

Now, Mansoor is collaborating with scientists in Europe to study how a drug they have developed together affects inflammation in mice. So far, results are promising when it comes to suppressing neurological inflammation, and Mansoor is hopeful this will apply to the vascular system as well.

"Hopefully we can design a key that only fits the P2X7 lock, because many times when people take a drug, it is effective, but it has off-target effects where it interacts with other receptors to produce unwanted side effects," Mansoor explained. "This drug we have developed seems very selective. ... Going forward, my plan is to study the drug here in Oregon and get it into some translational applications for cardiovascular disease."

READ MORE

Read Mansoor's full Changemaker profile and learn how philanthropy has impacted his work: **ohsuf.org/mansoor**

Service and outreach fuel M.D./M.P.H. student's goals

Threads of giving back and helping others weave through Tamana Ebrat's earliest memories.

Her grandparents emigrated from Afghanistan in the 1980s to escape the Afghan-Soviet War. Despite arriving in the U.S. with little else but what they could carry, they were always giving. One of Ebrat's earliest memories is of her mother giving a homeless woman the shoes off her feet. Several of Ebrat's family members have chronic illnesses, and as a child she would act as a translator between her family and providers during hospital stays and doctor visits.

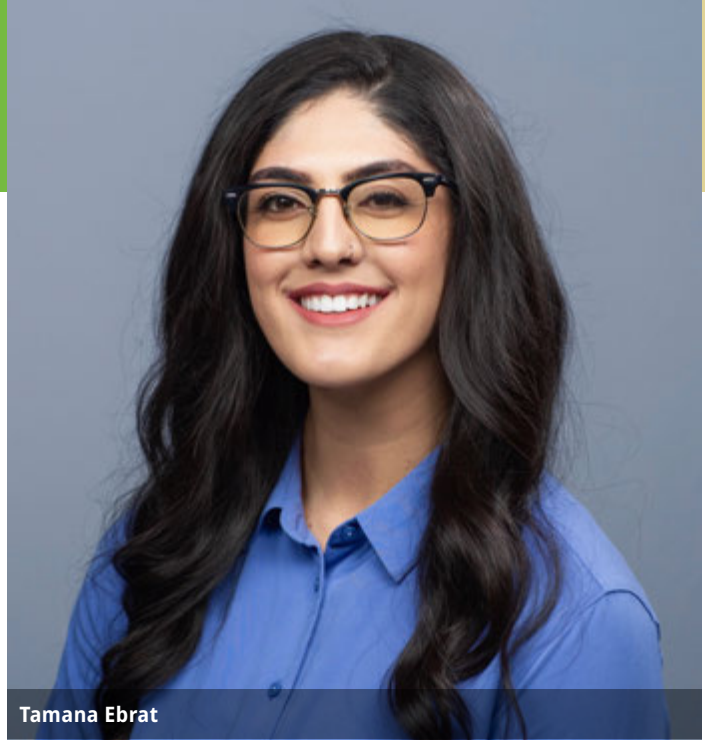
Those foundational moments are what guide Ebrat's journey as a student in the OHSU School of Medicine M.D./M.P.H. dual degree program.

"It was always ingrained in me that we have a collective responsibility for others," she said. "I think our humanity is what connects us, and this culture of service, giving back and taking care of others is a part of medicine that I'm truly passionate about."

Ebrat has always wanted to work in health care, but a medical sociology course she took as part of her undergraduate education at the University of the Pacific inspired her to merge her dream to be a doctor with her passion of advocacy for others.

After earning her undergraduate degree in biological sciences, she volunteered with a houseless outreach group while in a post-baccalaureate program at California State University, East Bay. When OHSU representatives visited during a career event, Ebrat learned how OHSU could help her bridge public health advocacy and patient care.

"The way they spoke about OHSU, they really emphasized social justice, and that's something that spoke to me,"



Tamana Ebrat

she said. "That's when I was like, 'Oh, this program has exactly what I want. It seems like they're a program that really cares about the community.'"

Ebrat, who is part of the M.D./M.P.H. Class of 2026 cohort, strives to better understand not only how social determinants of health negatively impact a person's wellness, but how she as a provider can advocate to dismantle those social determinants of health in the first place. She also spent the first three years of her program as a student wellness representative on the OHSU All-Hill Student Council, where she developed programs that emphasized the importance of self-care.

When Ebrat looks at her fellow students, she sees a generation set on reducing causes behind social determinants of health to foster a healthier future.

"My classmates are some of the brightest, most passionate folks I've ever met," she said. "I do think this generation is becoming more acutely aware of how policy and public health intersect with medicine. I'm hopeful."

READ MORE

Read Tamana's story: **ohsuf.org/ebrat**

Place-based health centers equity efforts on communities, builds trust

Brian Park, M.D., M.P.H., medical director and director of community health justice for OHSU's Health Equity Organization and an associate professor (family medicine) in the OHSU School of Medicine, isn't just sensing a change in how health systems address inequities in health care — he's helping OHSU be the change.

Through place-based health, an emerging approach to outreach that centers the community, builds sustainable partnerships, and promotes relationships and trust-building to improve health care access, OHSU is meeting people where they are and honoring community knowledge and wisdom.

"In health care, we tend to develop programs that are aimed at delivering health care services in health care settings. There's nothing wrong with that; we have to do that as part of our work," Park said. "Place-based health is developing a 'both/and' model, one that shifts the paradigm so we can deliver health care not only in health care settings, but also in community settings where folks already feel they belong."

Place-based health, Park says, is oriented around three core tenets. The first tenet — people — centers patients as world experts of their own lives, creating spaces where lived experiences drive the design of health programs. The second tenet — place — acknowledges where a person lives as a key driver of their wellness and aspires to improve neighborhood conditions to promote health. The third tenet focuses on power. Where do power imbalances exist in health care and in our broader community? What groups tend to be given disproportionate power to act on their own agency and values? How can power and resources be shared to better include people and groups who are often excluded?


Brian Park, M.D., M.P.H.

"Place-based health is about reorienting the health care system; how we design, implement, deliver and evaluate programs, in a way that centers people, place and power," Park said.

A recent collaboration that illustrates place-based health's three core values is a partnership with Equitable Giving Circle, a Black women- and femme-led Portland-based nonprofit focused on empowering Black, Indigenous, Latine, Asian and other people of color by shifting economic power. Equitable Giving Circle hosts a weekly free market, and every other week members of the OHSU Health Equity Organization set up a booth providing health information, blood pressure screenings and glucose checks. Over time, the plan is to expand services informed by Equitable Giving Circle leaders and community members.

Being a consistent, welcoming presence in a space where people feel they belong, Park says, goes a long way toward building bridges of trust.

"Building trusting relationships is health," Park said. "We can be people that show up consistently and engage with communities on a human level and seek to restore and build trust as a face of health care."

LISTEN

Listen to a conversation about place-based health with Brain Park: **ohsuf.org/bpark**

Pediatric epilepsy patient thriving thanks to Doernbecher care

Hazel Wells' energy is infectious.

Whether she's playing board games in the living room with her family or stacking Magna-Tiles in her room with her older sister, Charlotte, Hazel's enthusiasm fills the Wells' home with joy.

"I would say Hazel is this charismatic, incredibly happy, funny child that's really present," said Hazel's dad, Taylor Wells.

"She's her own person, and she really embodies just this beautiful, bright light," said Hazel's stepmother, Jen Wells.

Hazel, 9, has lived most of her life with a rare genetic disorder, PCDH19-epilepsy, a condition characterized primarily by seizures with other symptoms including cognitive and developmental delays. Hazel was diagnosed when she was 6 months old. About a year after diagnosis, the seizures began to increase in severity and frequency.

"She'd be seizing every hour, and they would cluster," Taylor Wells said. "Then she would stop breathing. Pretty brutal as a father to have to watch your child really suffer."

For the next year, Hazel went to OHSU Doernbecher Children's Hospital about once a month, where she would stay for up to 10 days at a time while providers tried to get her seizures under control.

"The team at Doernbecher was amazing," Taylor Wells said. "When Hazel would go into the ICU, I knew that she was being taken care of by these incredible staff, incredible nurses. ... They made a very tragic experience into something tolerable and welcoming and loving."

The OHSU Comprehensive Epilepsy Center is the only Level 4 epilepsy center in the state of Oregon, which denotes its status as having all the staffing, technology and resources to diagnose and treat the most severe

Hazel Wells

epilepsy-related conditions. Hazel's care team within the Doernbecher Childhood Epilepsy Program was able to implant a vagus nerve stimulation device, which sends electrical impulses into the brain, to modulate brain activity and help suppress seizures before they start.

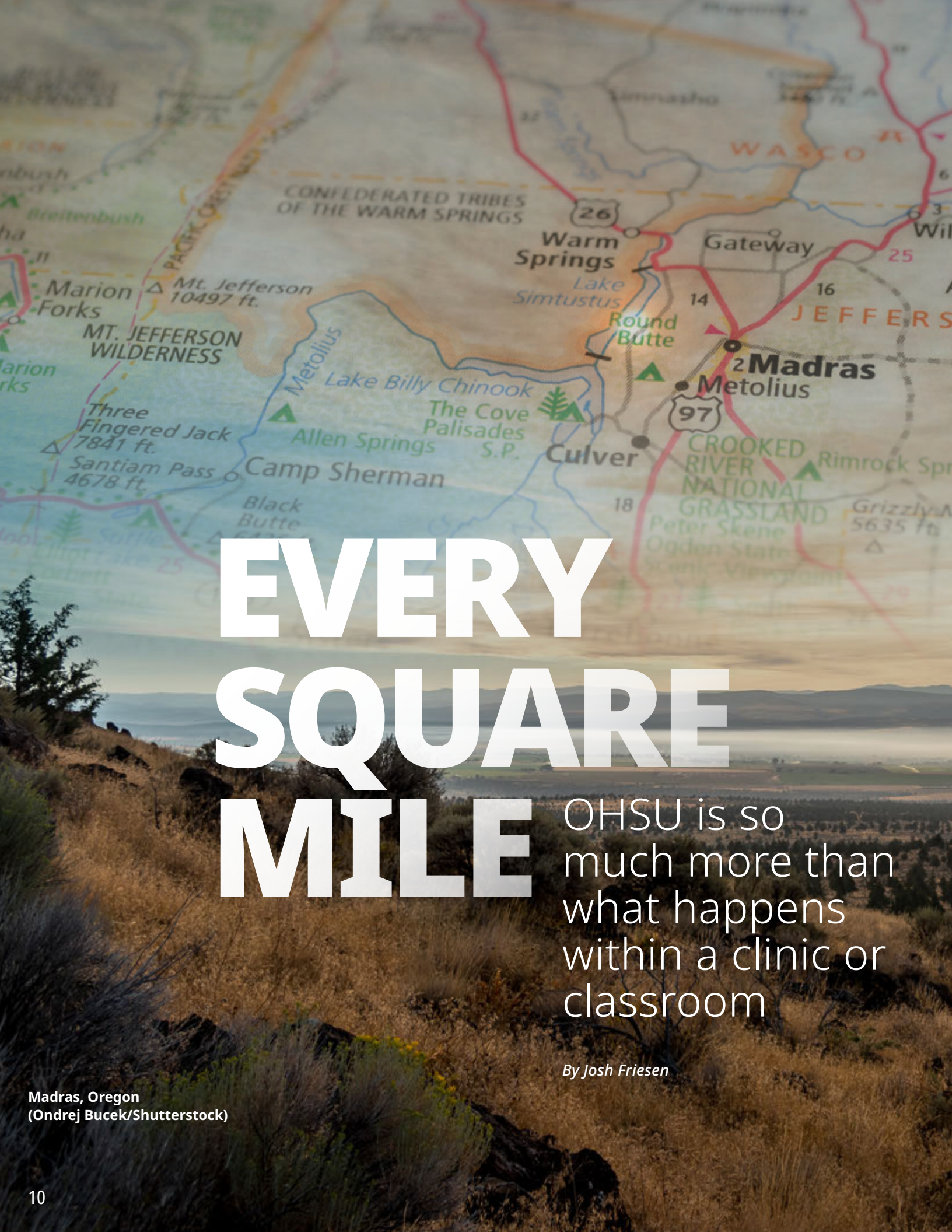
"Receiving the diagnosis of epilepsy can be a very stressful experience for a family," said one of Hazel's providers, Colin Roberts, M.D., director of the Doernbecher Childhood Epilepsy Program. "We try to provide the support we can and help them through those times. We seek to do that not just through offering therapies that are appropriate for a particular condition, but also by really understanding how that therapy and how the condition affects the child and the family."

Thanks to the vagus nerve stimulation and medication, Hazel has been mostly seizure free for the past three years.

"Her ability to stand in the face of adversity, continue to fight and probably live to the fullest more than us is just so incredible," Jen Wells said. "She's just really, really special."

WATCH

Watch Hazel's video story:
ohsuf.org/hazel



EVERY SQUARE MILE

OHSU is so much more than what happens within a clinic or classroom

By Josh Friesen

Madras, Oregon (Ondrej Bucek/Shutterstock)

OHSU is a part of Oregon. Its impact spreads through every corner of the state — from the beaches of the Pacific coast and the rugged Cascade peaks to the bustling urban centers and windy grasslands of the Columbia Plateau. Through innovative collaborations and outreach efforts, OHSU works alongside communities to address barriers to care, promote health equity and meet people where they are.

Forging impactful partnerships with communities has always been vital to OHSU's focus on advancing research, education and outreach to improve human health and well-being. This steadfast dedication continues to inspire connections and open new doors for community clinics, culture-centered research, innovative education initiatives and free health screenings. These collective efforts foster deeper connections between health care providers and the communities they serve, stretching OHSU's missions of teaching, healing and discovery far beyond its walls.

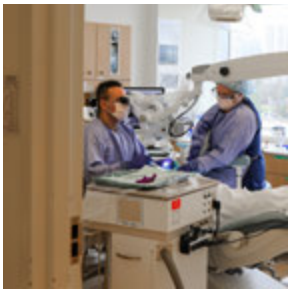
The following stories highlight just a few of the ways OHSU is working to make a difference, painting a picture of an institution that isn't just in the community, but a key part of it. Private philanthropy is a boon to these programs, partners and people, each of which demonstrates the depth of OHSU's reach, impact and connection across all 96,000 square miles of Oregon.

RUSSELL STREET DENTAL CLINIC

For half a century, the Russell Street Dental Clinic has been a Portland staple and an early model of community care.

The clinic was established in 1975 by David Rosenstein, D.M.D., M.P.H., then an associate professor in the OHSU School of Dentistry, to provide free, high-quality dental care to an older population and homeless, low-income and migrant worker communities. In the 1980s, the clinic became a haven for people who tested HIV-positive,

Portland, Oregon
(Manuela Durson/Shutterstock)



many of whom were refused treatment elsewhere.

Today, the clinic, staffed by OHSU dental students and faculty and led by director Michele Pindyck, D.M.D., is both a place of care for community members and learning for students. The clinic sees 75 students on rotation every year and cares for approximately 1,200 patients. Fifty years after its founding, the clinic continues to honor Rosenstein's mission to never turn away a patient — a mission that has gone a long way in maintaining the trust of the community.

"The emphasis of Russell Street is serving the underserved," Pindyck said. "A lot of times, our patients are comfortable being at Russell Street as opposed to someplace else."

Along with offering a variety of dental services, including fillings, root canals, crowns, dentures and extractions, the clinic also provides treatment for people with HIV. The Ryan White HIV/AIDS Program, a federal grant that provides HIV/AIDs treatment and services to people who are uninsured, began supporting the clinic in 1990.

Russell Street partners with the Multnomah County Health Department, the OHSU Partnership Project and the OHSU Division of Infectious Disease to coordinate treatment of new patients with HIV. The clinic also maintains collaborative relationships with local HIV organizations.

"We have the flexibility and the backing of OHSU to make sure we're doing what's right for the patient population," Pindyck said. "And I feel patients really tend to feel that from us."

Above: OHSU's dental clinics offer general dentistry services and specialty care to members of the community while providing unique learning opportunities for students and residents.

HPV SELF-COLLECTION

In spring of 2024, the FDA granted approvals for two self-collection screening tests that detect human papillomavirus (HPV) in the cervix — a common sexually transmitted infection that can lead to cervical cancer.

Vanderlene Kung, M.D., Ph.D., an assistant professor of pathology and laboratory medicine in the OHSU School of Medicine, is partnering with community organizations to help spread the word and raise awareness about HPV and cervical cancer.

"We're trying to supplement testing with education," said Kung, who also directs DEI in the Department of Pathology and Laboratory Medicine. "What is cervical

Above: Vanderlene Kung, M.D., Ph.D., front row, second from the left, and a team of OHSU pathologists and researchers offer free HPV screenings in partnership with various community organizations, including the Chinese Friendship Association.

cancer? What is HPV virus, and what does it mean to have it? Why is testing important, and who needs it? It's great to be able to be a resource and help answer those questions."

HPV vaccination is a widely available way to provide safe and lasting protection against HPV and has been available since 2006. According to the CDC, the vaccine can prevent more than 90% of the cancers caused by HPV.

There are significant disparities, however, in HPV vaccination among low-income populations and within certain racial and ethnic groups.

"Cervical cancer screening used to require a sample from the cervix, which required people to go into a traditional doctor's office and get a pelvic exam," Kung said. "That's invasive and time-consuming. For cultural or religious reasons or for people who've experienced trauma, [that exam] can be something they just don't want to do. The approval of the self-collection led us to say, 'We need to get this out to the populations who are under-screened.'"

Since that FDA approval, Kung has worked with local organizations such as the Chinese Friendship Association and Adelante Mujeres to coordinate classes and integrate education into existing community events.

"Encouraging vaccination in these communities is a huge part of the effort as well," Kung said. "It's a cancer that is preventable. We've got to use the tools we have to close the gap in cervical cancer."

NOVEL INTERVENTIONS IN CHILDREN'S HEALTH CARE

Linda Martin Stanger introduces herself to patients and their families as their "second brain."

Anything a patient or a caregiver might need — help scheduling appointments, connecting with community resources, navigating health insurance, securing transportation or even just lending a listening ear — Stanger is there.

Stanger serves the Coos and Curry counties region as an interventionist for Novel Interventions in Children's Healthcare (NICH), a program housed within OHSU Doernbecher Children's Hospital that supports and

advocates for families of pediatric patients with complex or chronic health conditions. Interventionists, who are embedded in communities across Oregon, are the do-it-all resource and liaison between patient-families and the health care system. NICH was able to expand into the Coos and Curry county region in 2022 thanks to more than $200,000 in grant funding from the Judith Ann Mogan Foundation.

The families NICH supports are often navigating other significant social challenges, including homelessness, food insecurity, language/cultural barriers and transportation issues. Interventionists collaborate with local organizations to help connect families to resources outside of health care.

"If you have a child who has a complex or chronic medical condition and who also carries significant social burden, there is no infrastructure," said NICH co-founder Michael Harris, Ph.D., a professor of pediatrics in the Institute on Development and Disability at OHSU and Doernbecher Children's Hospital. "The medical system looks to the community for answers, while the community looks to the medical system for answers. That's where the NICH magic happens, bridging the medical system with the community in supporting our most vulnerable youth."

NICH interventionists work with families to empower them to learn not only how to navigate their child's care on their own, but how to navigate other resources at their disposal.

"A lot of times, families don't know what they don't know," Stanger said. "Navigating the health care system is a big challenge. We can help point them to resources and help them learn those mechanisms to advocate for themselves."

Above: Michael Harris, Ph.D., director of Novel Interventions in Children's Healthcare.

The NICH program has proven successful at easing burdens on patient-families and improving access to medical care while overall reducing health care costs for the system. In one example, Harris mentioned a teenager living with Type 1 diabetes who'd been admitted to OHSU 22 times in one year. After NICH intervention, the patient's blood sugar levels improved to the point where they no longer needed hospitalization.

Initial support from The Leona M. and Harry B. Helmsley Charitable Trust helped disseminate the NICH model at two other children's hospitals: the Lucille Packard Children's Hospital at Stanford University and Benioff Children's Hospitals at the University of California, San Francisco.

"A really important part of the interventionists' position is to collaborate with community resources and assist families in obtaining those resources, because we ultimately want to keep those families in their communities," Harris said.

THE SHARP STUDY

Innovation is sometimes inspired by a simple change of perspective.

For Raina Croff, Ph.D., that perspective sits at the intersection of anthropology and neurology. The innovation is the SHARP study.

"I'm an anthropologist who didn't go to medical school, didn't get an M.P.H.," said Croff, an associate professor of neurology in the OHSU School of Medicine and the Oregon Alzheimer's Disease Research Center. "Coming to OHSU, I had a different perspective than most. I centered culture, people's values and their approaches to life."

Croff's program, SHARP, or Sharing History through Active Reminiscence and Photo-Imagery, combines the benefits of exercise and communal relationships with historical reflection. The study enlists older Black adults to walk predesignated routes through historically Black neighborhoods in Portland — neighborhoods that have since undergone drastic changes through gentrification. During the mile-long walks, participants are prompted to reflect with one another on the history of their location through old photos, newspaper clippings and advertisements.

Above, from left to right: Vickie Naylor, Bernadine Clay, and Donna Maxey take part in the Sharing History through Active Reminiscence and Photo-Imagery (SHARP) study.

The study was established to examine ways to maintain and improve cognitive health in a culturally celebratory way. Participants demonstrate measured improvements in mood, health and memory retention. Recent findings also showed improvements in participants who began the study with mild memory loss, indicating the potential for benefits among those affected by Alzheimer's disease.

Establishing community relationships has been pivotal to SHARP's success. Croff developed focus groups in tandem with the Urban League of Portland and PreSERVE Coalition for African American Memory and Brain Health, collaborations that have provided data to supplement SHARP's findings.

The SHARP study is expanding outside of Portland, with routes being established in communities in Seattle and Oakland. Croff is also coordinating with a local theater company to turn participants' conversations into onstage productions.

"If you want to do community work, you need to be part of the community. You need to show the community you're interested in the long haul," Croff said. "To do that, you need to be connected with community groups."

THREE SISTERS RURAL TRACK PROGRAM

In June 2024, three OHSU residents became the inaugural class of the Three Sisters Rural Track Program (RTP), a collaboration between OHSU and the St. Charles Health System in Madras, Oregon. The program is Central Oregon's first graduate medical education program and is aimed toward increasing health care access and meeting the needs of rural Oregonians.

"Having those learners here just adds a new dynamic to the level of care we're going to be able to provide,"

"If you have students you're teaching who someday might end up back in your community or working side by side with you, that's a huge way OHSU integrates themselves into communities and creates that trust and partnership." — Jinnell Lewis, M.D., RTP, Director, Three Sisters Rural Track Program

Deschutes River, Central Oregon
(Jarred Decker/Shutterstock)

said Jinnell Lewis, M.D., RTP, director and a family medicine physician at St. Charles. “By putting this program in a rural area where we know there’s a shortage of providers, over time, we’re going to build the number of providers that stay not only in this community but in other areas where there’s need.”

A 2025 Oregon State University report pointed to a lack of primary care providers in the state’s rural areas compared to urban areas. In 2024, the primary care capacity ratio was 1.16 in urban areas. In rural and remote areas, the ratio was 0.69. Data also shows that among residents who graduate from their program, about half stay within 100 miles of where they were trained. RTP, which was inspired by the Cascades East Family Medicine Residency Program in Klamath Falls, Oregon, aims to replenish health care providers in central Oregon by educating them in those communities. Fostering trust between rural health care centers and the community is vital to ensuring that transition.

“The trust between OHSU and those communities needs to be strong, otherwise that pathway doesn’t happen,” said Jessica Latham, program manager for RTP and manager of rural education and expansion at OHSU.

Jana Charl, RTP program coordinator, agrees, adding that developing a program influenced by the community it is a part of was crucial.

“Having a distinct residency with our own identity is important,” she said. “You see people you know in the community all the time because it’s small. We navigate the help we get from OHSU to build the program while also making it our own.”

RTP’s first cohort will spend its first year of the program receiving advanced medical training at OHSU’s Portland campus. They will spend the second and third years in the program at St. Charles in Madras.

“If you have students you’re teaching who someday might end up back in your community or working side by side with you, that’s a huge way OHSU integrates themselves into communities and creates that trust and partnership,” Lewis said.

The program’s launch was supported by the U.S Department of Health and Human Services’ Health Resources & Service Administration and a $1 million Healthy Oregon Workforce Training Opportunity grant. Donations to St. Charles Foundation will support ongoing training and recruitment efforts, technology upgrades and additional needs as the residency program grows.

Above, from left: Three Sisters Rural Track Program program manager Jessica Latham, program coordinator Jana Charl, and director Jinnell Lewis, M.D.

COMMUNITY CANCER CONTROL SPECIALISTS

For Carina Garcia, Hermiston, Oregon, is home.

It’s where she grew up. She knows the community, the people, their values. Garcia’s connection to Hermiston, Umatilla County and eastern Oregon is invaluable to her role as a community cancer control specialist for the OHSU Knight Cancer Institute.

“My connections to people who serve in different community-based organizations or do different work with the Latino community here has been very important,” Garcia said. “It’s led me to be able to have opportunities to get our message out to this community.”

The Community Cancer Control Specialists program is part of Knight Community Outreach and Engagement. The four specialists in Oregon serve Eastern Oregon, the Columbia River Gorge region, the south Oregon coast and the Willamette Valley. Specialists establish partnerships

Above: Carina Garcia (left), cancer control specialist for the OHSU Knight Cancer Institute, at a community outreach event in Pendleton, Oregon, in support of breast cancer awareness.

Bullards Beach, Coos County, Oregon
(Manuela Durson/Shutterstock)

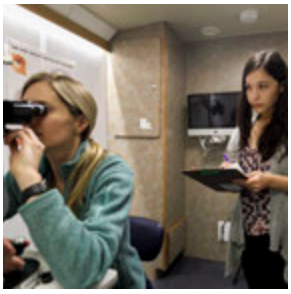
between the Knight Cancer Institute and local community organizations to implement cancer prevention and education activities. Their efforts contribute to the implementation of the Oregon Comprehensive Cancer Control Plan, a strategy devised by the Oregon Health Authority with support from the Knight Cancer Institute that aims to better understand and address causes of cancer, improve screening rates for at-risk populations and implement evidence-based, culturally informed interventions.

One of the community organizations Garcia has connected with is the Pink Lemonade Project, a nonprofit that advocates for and empowers people in southwest Washington and Oregon impacted by breast cancer. With Garcia's help, the Pink Lemonade Project has developed a community health worker training that focuses on the unique needs of rural Oregonians. Garcia has been able to parlay that connection into developing in-person community health trainings in collaboration with the Eastern Oregon Coordinated Care Organization.

More broadly, Garcia and the other specialists collaborate with schools, local health departments, providers and nonprofits to address their specific region's cancer-related needs.

"There are a lot of organizations that serve this community. Hermiston is actually one of the few regions in Oregon where Latinos are likely to become the majority demographic in the future," Garcia said. "It's important to do outreach with this community and to be able to get information in their language. Our connections to these organizations have been very important and have led to opportunities to get important health-related messaging out."

OREGON VISION HEALTH NETWORK



The OHSU Casey Eye Institute has a long history of outreach with the goal of increasing access to high-quality vision care for every Oregonian.

In 2021, the institute leaned into the power of community with the establishment of the Oregon Vision Health Network (OVHN), a coordinated effort that weaves technology and community partnerships together. By training local community health workers as Vision Health Navigators and expanding telehealth outreach deeper into rural Oregon, the OVHN leverages the institute's existing relationships to meet people where they are in the effort to eliminate preventable blindness in Oregon.

"We've done a great job at ensuring that our top priority is outreach," said Dove Spector, research manager for the Casey Eye Institute's community outreach program and program manager of telehealth expansion. "Because of Casey Eye's long track record of community engagement, it's made our efforts so much easier getting these services rolled out because relationships were already established."

Above: Meryl Sundy, M.D. (left) works with Ashley Wirth as they volunteer with the Casey Eye Institute Outreach Program.

"Our students are out in the community — at schools, at senior centers, at care facilities — engaging with the population and trying to get a sense for what the health care needs are. They really become connected to the people in those rural communities, and the rural communities love having the students." — Patricia Barfield, Ph.D., RN, PMHNP-BC

Grande Ronde Valley, La Grande, Oregon (Jesse Stephens/Shutterstock)

The Casey Eye Institute's mobile outreach program has long been a point of excellence, providing vision screenings for thousands of people with limited or no access to vision care across nearly every one of Oregon's 36 counties. But they knew they could do more. The screening is important, but engaging community partners to ensure effective follow-up care and identifying specific barriers to access are vital to completing a comprehensive standard of care.

"It was important to ensure the community partners we're collaborating with have the tools and resources to facilitate efficient and effective follow-up care," Spector said.

To address that gap, the Vision Health Navigator training was established through the Oregon Health Authority Office of Equity and Inclusion. OHSU trains local health care workers in helping patients who receive screenings take the next step — determining if they need glasses or if they might be developing sight-threatening diseases.

In addition, support from the Roundhouse Foundation and the Judith Ann Mogan Foundation is allowing the Oregon Vision Health Network to expand its telehealth capabilities. When telehealth sites in Coos Bay and Madras finish onboarding summer of 2025, there will be seven total.

"Not only the way we interact with partners, but the level of care we provide is outstanding," Spector said. "I truly believe we give the highest quality care possible. When we are out in community, in addition to knowing we're in the community's space, we know we're representing the Casey Eye Institute, and we take that to heart."

OHSU SCHOOL OF NURSING, LA GRANDE

The OHSU School of Nursing in La Grande has always taken a community-centered approach to its education mission.

Every fall, 32 nursing students enter the School of Nursing in La Grande's program, completing their coursework on Eastern Oregon University's campus. Their clinical rotations are administered through collaborations with 64 different clinical partners that span 11 counties in Oregon, Washington and Idaho. Upon completion of the three-year program, about 70% of graduates stay in the region.

Patricia Barfield, Ph.D., RN, PMHNP-BC, is one of the many dedicated and passionate people at the heart of it all. As campus associate dean for the School of Nursing in La Grande and regional associate dean for OHSU's Campus for Rural Health in Northeast Oregon, Barfield oversees the development and delivery of the program. Her role allows her a front-row seat to the impact students have on the region through clinical rotations and volunteering opportunities — impacts that carry on after graduation.

"Our students are out in the community — at schools, at senior centers, at care facilities — engaging with the population and trying to get a sense for what the health care needs are," Barfield said. "They really become connected to the people in those rural communities, and the rural communities love having the students."

The health care needs of rural Oregonians are different from those in urban areas. Rural communities have higher rates of chronic disease, substance use disorders and mental health challenges but fewer resources to address them. Areas like eastern Oregon have fewer specialists and less advanced equipment, necessitating more providers with a wider scope of practice to best serve their patients. The La Grande nursing curriculum keeps this knowledge at its core, preparing its students to care for a wide range of patient needs.

"Our job is to prepare expert generalists that can step into a rural health system and take care of anybody who walks through that door," Barfield said. "We work with and care for our family, friends and neighbors. Partnership and collaboration are how rural communities operate."

Above: OHSU School of Nursing La Grande students volunteer at a community-based flu clinic in Umatilla County.

Just for Kids: the vital role of pediatric research

By Darby Kendall

(David Sims/OHSU Foundation)

Products and goods made for children are often simply smaller versions of their adult counterparts — shoes, plates, guitars and toy cars, all shrunk down to a petite scale. When it comes to children's health care, however, there's nothing small about it.

In the medical world, research on adults cannot be simply sized down for the pediatric population. Kids aren't miniature adults. Their bodies, systems and brains are still developing and growing. Research conducted on adults can't just shrink to fit their developing bodies and minds.

And because kids have their entire lives ahead of them, it's especially important to minimize long-term side effects of any new therapy or treatment.

We spoke with OHSU Doernbecher Children's Hospital providers from a variety of specialties for insight into the vital and life-saving importance of pediatric research. Doernbecher's decades-long leadership in the field has led to leaps and bounds in children's health care, and these professionals are making sure the progress never stops.

Deborah Lewinsohn, M.D.

Monika Davare, Ph.D.

Trevor Hall, Psy.D., ABPdN

Panelists

Deborah Lewinsohn, M.D., is the vice chair of Research at OHSU, interim director of the Papé Family Pediatric Research Institute, and Wayne L. Tracy professor of Infectious Disease. Her pediatrics specialty is in infectious diseases, and she's the assistant director of the Center for Global Child Health Research.

Monika Davare, Ph.D., is the assistant director of the Papé Family Pediatric Research Institute and the Sada and Rebecca distinguished scholar of Pediatric Hematology Oncology. She is a cancer scientist with a lab at Doernbecher focused on pediatric hematology and oncology.

Trevor Hall, Psy.D., ABPdN, is a pediatric neuropsychologist specializing in care for youth with central nervous system complications.

Q: What drew you to the field of pediatrics and children's health?

Trevor Hall: I tried on a couple of different hats in college. I eventually declared psychology as my major area of study — mostly because I thought human behavior is interesting. When I started graduate school in clinical psychology, my mentor quickly realized that my high energy and youthful temperament might be well-suited to working with children. Obviously, I agreed, and for the past 24 years the focus of my professional life has

been wholly focused on children, adolescents and their families.

In short, I love my job! With the risk of sounding cliché, to me, my work does not really feel like work. Don't get me wrong, the work is often hard and filled with complexity, but the joy, meaningfulness and sense of purpose that comes from helping a pediatric population is something I view as a gift. I am motivated by seeing children not only survive, but by doing what I can (as part of a team) to help them thrive as they recover and re-enter back into their lives.

Deborah Lewinsohn: I went into children's health care because as pediatricians, we can positively influence a child's health trajectory over a long lifespan. I chose infectious disease because infections are the leading cause of illness and death of children worldwide and in many cases, we can prevent disease with effective vaccines.

Monika Davare: Children represent our future, yet for those diagnosed with chronic or life-threatening illnesses, that future is profoundly altered. Unlike adults, children are among the most vulnerable patients — they cannot advocate for themselves, making it essential for researchers and clinicians to champion their needs.

When my own daughter faced a health issue very early in life, I experienced firsthand how deeply a child's illness affects not only the parents but the entire family and surrounding community. It was a stark reminder that pediatric health is not just about treating a single patient — it is about preserving the well-being and stability of families, support networks, and ultimately, society as a whole. Seeing a child in distress, knowing how much is at stake, and understanding that better treatments could change the course of their life is what fuels my dedication to this work.

Q: How is research in pediatrics different from research on adult populations?

Lewinsohn: When pursuing pediatric research, we have to consider that as the child is developing, the biology that we are studying changes with age, making the design of studies and interpretation of results more complex. For example, from birth to around 5 years of age, the immune system undergoes significant maturation. As the immune system is very immature at birth, newborns are very susceptible to severe infection and are unable to respond as well to vaccinations as older children and adults. Understanding how the immune system works at different ages is important for new innovations in preventing, diagnosing and treating childhood infectious diseases.

Hall: I firmly believe that children are the most important people on the planet. As such, I think they deserve innovative and high-level research programs focused on child-specific concerns with an emphasis on long-term health and well-being. Unfortunately, in comparison to research on adult health, pediatric initiatives are woefully underrepresented and those that do exist commonly receive less support.

Davare: Pediatric cancer research has historically been underfunded and lags behind adult oncology in terms of new treatment options. Many current therapies are based on decades-old protocols, often leading to significant long-term side effects for survivors. Unlike adult cancers, which benefit from substantial investment by the pharmaceutical industry, pediatric cancers receive less attention from the private sector due to the relatively smaller market size. As a result, progress in developing targeted therapies has been slow, leaving young patients with limited options.

This reality drives my work. By focusing on pediatric cancers, I aim to help bridge this gap — bringing new, more precise treatments to children and adolescents, improving survival rates while also minimizing the lifelong health consequences of outdated, highly toxic therapies. Children deserve more than just the chance to survive; they deserve the opportunity to thrive.

Q: Why is working at an academic health center beneficial to your research?

Hall: Working in an academic health center is critical for the type of work I do. From a clinical standpoint, as part of a multidisciplinary team, I support children and families from the time they come to Doernbecher to even after they go home, for as long as needed. From a research standpoint, the same children and families help our multidisciplinary team to understand how to better support others in the future. Being housed in an academic health center allows for all the teamwork to happen.

Davare: Working at OHSU provides the agility and flexibility to pursue innovative and high-risk ideas in discovery science. It fosters a collaborative environment where I can engage with both clinical colleagues — who continually reinforce the urgency of the clinical need — and outstanding basic and translational scientists, with whom I can co-develop novel ideas, tools and breakthroughs. This ecosystem ensures that our research remains both cutting-edge and directly relevant to patient care.

Equally important, an academic health center offers the opportunity to train and mentor the next generation of scientists and physicians. Investing in young minds, guiding their research, and shaping their approach to scientific inquiry is one of the most rewarding aspects of my work. These interactions not only advance the field but also inspire a continued commitment to pediatric cancer research.

Lewinsohn: Only an academic health center can support the infrastructure, faculty and research trainees and staff, all of which are necessary for research innovation. In particular, graduate students, medical students, residents, post-docs and fellows are engines of research progress. Pediatric faculty, including academic clinicians, physician scientists and Ph.D. scientists, provide the catalyst for child health research by collaborating to address the current gaps in knowledge within the field.

Q: How has philanthropy contributed to your professional efforts?

Davare: Pediatric cancer research would not be possible without philanthropic support. Despite the profound impact of childhood cancer, only about 4% of national cancer research funding is allocated to pediatric cancers — a stark gap in mission-critical work that philanthropy helps to fill.

In my own laboratory, philanthropic contributions have been transformative. Key pieces of equipment, funded through generous donations, have dramatically increased our research capacity, allowing us to test hundreds of drugs at a time rather than just a handful. These advancements have accelerated the pace of discovery and expanded our ability to identify promising therapeutic strategies. Additionally, discretionary philanthropic gifts have been instrumental in recruiting and retaining talented staff researchers, whose expertise is essential to driving progress. To say that philanthropy has been critical to my laboratory's success would be an understatement.

Hall: I serve on a multidisciplinary team of clinicians in the Pediatric Critical Care and Neurotrauma Recovery Program (PCCNRP). Philanthropy has been a vital component to the PCCNRP's success!

"Children represent our future, yet for those diagnosed with chronic or life-threatening illnesses, that future is profoundly altered. Unlike adults, children are among the most vulnerable patients — they cannot advocate for themselves, making it essential for researchers and clinicians to champion their needs."

— Monika Davare, Ph.D.

As an example, our research shows sleep problems complicate recovery in over 50% of pediatric brain injury survivors, leading to worse physical, cognitive, and emotional morbidities as well as poorer quality of life. To address this, the Friends of Doernbecher group provided us with financial support to develop and pilot test a tailored cognitive behavioral therapy intervention for children and their parent/caregiver while still hospitalized, with online supplemental resources targeting healthy sleep to significantly reduce sleep problems. The study is ongoing, but a successful early intervention that prevents sleep problems after pediatric brain injury has the potential to greatly accelerate recovery. We intend to leverage the funds that were generously provided by the Friends of Doernbecher into a larger and more comprehensively funded clinical trial.

Lewinsohn: Philanthropic funding has always been an important adjunct to NIH funding for all child health researchers, including myself. My research program has benefited from support from large philanthropic organizations, including the Bill and Melinda Gates Foundation and the Thrasher Fund, as well as smaller grants. However, going forward, we are going to have to rely on philanthropic support far more than even before — to be able to retain research staff, bolster our infrastructure, and grow in research areas in which we have strengths.

MAKING AN HISTORIC INVESTMENT IN PEDIATRIC RESEARCH

Cheryl Ramberg-Ford and Allyn Ford believe in the importance of children's health research and the mission of Doernbecher's Children Hospital, so much so that they gave an historic gift last winter.

The $16 million gift to Doernbecher from Cheryl and Allyn will establish a comprehensive clinic for children with pediatric neuromuscular disorders. The gift — which stands as the single largest private donation in Doernbecher's 98-year history — was made in memory of Cheryl's brother, Douglas Ramberg, who passed away in 1965 from complications of muscular dystrophy, the most common neuromuscular disorder.

The Fords' gift will establish the Ramberg Ford Pediatric Neuromuscular Disorders Center, envisioned as a dedicated, purpose-built space for highly coordinated, multidisciplinary patient care, family support and clinical research.

"This gift will ensure that the Ramberg Ford Pediatric Neuromuscular Disorders Center will always be there to provide these courageous children and their families with exceptional care, comprehensive support and the hope that comes from research," said Dana Braner, M.D., Doernbecher physician-in-chief and Credit Unions for Kids Chair in Pediatrics.

BUILDING THE TEAM TO END CANCER AS WE KNOW IT

(Brad Feinknopf)

Twelve years ago, Phil and Penny Knight issued an historic philanthropic challenge to the OHSU Knight Cancer Institute: raise $500 million within two years, and they would match it — creating a $1 billion investment to advance cancer research. As Phil said when delivering the challenge: Is there a higher calling than curing cancer?

In 2015, with the help of thousands of donors, the OHSU Foundation successfully raised $500 million, securing the Knights' matching gift. The Knight Cancer Challenge became the largest documented challenge pledge to succeed, and the milestone brought with it a renewed hope toward ending cancer as we know it. A significant part of that hope was a fresh focus on the early detection of lethal cancers — one of the biggest unmet needs in cancer care at the time.

One year later, the creation of the Knight Cancer Institute's Cancer Early Detection Advanced Research Center (CEDAR) marked the beginning of a new era in precision early detection. CEDAR was founded with a single mission: detect and stop lethal cancers at the earliest stage because early detection saves lives. In the years since its opening, the center has employed 174 professionals, conducted over 290 philanthropy-funded research projects and authored more than 170 peer-reviewed publications.

Multidisciplinary scientific collaboration is an essential component of CEDAR's success. Fulfilling the promise of the Knight Cancer Challenge, the Knight Cancer Institute and CEDAR have recruited, organized and empowered dozens of brilliant, passionate people from radically different scientific backgrounds to come together around a common goal and solve complex problems. From bioprinting human tissue to utilizing super-resolution microscopy, these scientists are bringing early cancer detection into a new era.

Here are just a few of the incredible people at the Knight Cancer Institute working to transform cancer science, early detection and the future of patient care.

ECE EKŞI, Ph.D.

Joined OHSU from University of Illinois at Chicago

Assistant professor at CEDAR and the Division of Oncological Sciences

Ekşi's research explores how the nervous system communicates with tumors, particularly in prostate and pancreatic cancers. The nervous system can actively help cancer grow and spread to other organs — Ekşi and her team investigate how interactions between nerves and cancer happen at the molecular level, with the goal of preventing it.

Her work uses advanced imaging and AI to analyze large datasets, increasing the understanding of cancer cell behavior and potentially leading to new treatment options.

In 2022, Ekşi was awarded an International Alliance for Cancer Early Detection Grant for her research on prostate tumor progression.

"At the Knight Cancer Institute, we have great opportunities around technology and having a network of scientists from different backgrounds. My research cannot exist in a silo. It requires collaboration between engineers and computational biologists, pathologists and radiologists, and geneticists. The Knight Cancer Institute and CEDAR provide that collaboration for innovative research."

LUIZ BERTASSONI, D.D.S., Ph.D.

Joined OHSU from Harvard Medical School and MIT

Founding director of the Knight Cancer Precision Biofabrication Hub, professor at the Division of Oncological Sciences and co-section head for Discovery and Translational Oncology

Bertassoni leads a multidisciplinary research group working on several groundbreaking uses of biofabrication to study cancer, including 3D bioprinting, organs-on-a-chip, and stem cell regenerative medicine.

Bioprinting healthy and diseased human tissues helps understand cancer complexity in a controllable and manipulable way. This level of detail isn't possible with the classic research methods of animal models or patient samples, because engineered models can be manipulated to either replicate or change the characteristics of tumor evolution and how they spread in the body. This gives scientists a better understanding of how tumors grow and change, so ultimately cancerous tumors can be detected earlier on.

In 2023, the Biofabrication Hub secured more than $1 million in funding, half of which was contributed by the M.J. Murdock Charitable Trust and matched by OHSU and other funders.

"There's a tremendous amount of excitement with the possibility of enabling a better, faster solution for patients. It's this dream of being able to take all the complexity of one patient's cancer and replicate that same tumor 100 times and expose it to all types of drug combinations or stressors that you could imagine, to find the best, most effective drug combination possible or predict which patients are more at risk. For patients, I think that gives them a lot of hope. It's one of the directions that we're working hard to enable, because we believe that this can make a big difference for patients' lives."

THUY NGO, Ph.D.

Joined OHSU from Stanford University

Associate professor in the Department of Molecular and Medical Genetics

Ngo's work involves analyzing blood samples for signs of early disease, aiming to detect signals from the body that mark transitions from healthy to cancerous states. In collaboration with other scientists, Ngo uses data science to analyze extensive sets of patient information with the goal of finding a cure for late-stage cancers, rather than just prolonging the lives of patients.

In 2022, Ngo and her team devised a way to test blood to see if a pre-cancerous condition is escalating to outright liver cancer, potentially enabling treatment early in tumor development when liver cancer is often more curable. These tests set the stage for a simple, affordable method to screen people at risk by taking a small blood sample a few times a year.

Ngo's lab and research is supported in part by funding from the Kuni Foundation.

"In order to end cancer and find a cure, early detection is the way to go. We are doing both basic research and translational research that will help us to shift the paradigm from treating patients to curing the disease or even preventing the disease from happening."

CAROLYN SCHUTT IBSEN, Ph.D.

Joined OHSU from Imperial College London

Assistant professor at CEDAR and the Department of Biomedical Engineering

Schutt Ibsen and her research group collaborate with the Knight Cancer Precision Biofabrication Hub, bioprinting tissues modeling early-stage breast cancer to study how the disease progresses in response to tumor-promoting factors and overexpression of oncogenes — genes that have the potential to cause cancer.

Using ultrasound waves, she is able to remotely control the behavior of cells deep within the tissues she engineers, allowing for precise genetic changes that don't disrupt the tissue structure. Schutt Ibsen's work is driven by ultrasound's ability to non-invasively trigger molecular signals in cells and alter cell behavior to model disease or promote healing, which could lead to practical patient applications in the future.

In 2024, Schutt Ibsen was recognized at the 2024 Biomedical Engineering Society meeting as a Young Innovator in Cellular and Molecular Bioengineering.

"Biomedical engineering and biomaterials, when put together, can really play an important role in improving quality of life for cancer patients. I wanted to work in an area where we could both be creating something new as engineers and also have a translational impact on human health. I still come to work every day enthusiastic and excited by what we do."

(Illustrations by Chelsea Pham/OHSU Foundation)

JOSHUA MOREAU, Ph.D.

Joined OHSU from University of California, San Francisco

Assistant professor at CEDAR, the Division of Oncological Sciences, Department of Dermatology, and Department of Cell, Developmental and Cancer Biology

As an immunologist, Moreau focuses on understanding adaptive immune function, particularly in peripheral tissues like the skin. This translates to studying skin cancers like melanoma.

Moreau's lab has found promising research on a type of immune cell, the memory B cell, that could act as a therapeutic target for cancer. B cells move to inflamed areas in the body and help fight off infections upon arrival. Some of these B cells become memory cells, staying in the body and helping protect against future illnesses; these memory B cells can also be harnessed to fight cancer more effectively.

In 2024, Moreau received a Melanoma Research Alliance Young Investigator Award for his research on the disease.

"I don't think it's possible to end cancer in any context without understanding how to leverage the immune system and immune function. Our work, at a very basic and fundamental level, provides knowledge about how the immune system functions in the context of cancer and tumors."

CRISTIANE MIRANDA FRANCA, D.D.S., Ph.D.

Joined OHSU from University of Sao Paulo

Assistant professor at CEDAR and the School of Dentistry

Franca is a core faculty member in the Knight Cancer Precision Biofabrication Hub, recreating environments on-a-chip, such as mucosa and lymphatic vasculature, to study epithelial cancer development and invasion.

She is particularly interested in head and neck cancers, which are typically diagnosed in the late stages. Franca uses engineering tools to understand how early lesions that precede cancer evolve and interact with the immune system, with the goal of finding ways to develop strategies to achieve earlier diagnoses and stop cells from turning malignant.

Earlier this year, Franca was the lead author on an innovative study led by Luiz Bertassoni that uncovered how specialized cells surrounding small blood vessels contribute to blood vessel dysfunction in chronic diseases such as cancer, diabetes and fibrosis. The findings, published in Science Advances, could change how these diseases are treated.

"I am a dentist by training, and I did my Ph.D. internship in a cancer hospital. I moved to the U.S. and met Luiz [Bertassoni], and he agreed to be my postdoc advisor. We saw the opportunity to complement my clinical background with training in tissue engineering and organs-on-a-chip, in these cutting-edge technologies that he does so well. That started a very fruitful partnership. ... At CEDAR, it's fascinating — their philosophy, the resources, the critical mass that they have fosters a lot of collaboration, and I've been very fortunate to be here and contribute to CEDAR's and the Hub's mission."

MATTHEW RAMES, Ph.D.

Joined OHSU from University of California, Santa Cruz

Research engineer at CEDAR

After coming to OHSU as a Ph.D. student focused on high-resolution microscopy, Rames found himself overlapping with the world of cancer research. Rames' work with microscopy and imaging technologies allows him to look at cellular structures like mitochondria and the ways they're impacted by cancer.

Rames' microscopic images give a precise picture of how the mechanisms behind cancer function. Since completing his Ph.D. in biomedical engineering in 2022, he now has a special focus on precision oncology and aims to use his imaging data to identify therapeutic vulnerabilities in cancer patients.

In 2024, Rames contributed to a team project on antibody bioengineering and intercellular communication that won an award in the translational research category from the Innovation Showcase at the Oregon Biotech Summit.

"CEDAR has been a great place to learn and grow and develop. It's multidisciplinary; it's a very different type of research environment. It's been wonderful to grow alongside CEDAR, because back when I joined, we had maybe 20 people, and now we're at our full operating size of around 200. It's great to be a member of such a large, very knowledgeable, diligent center here trying to figure out the complexities of early cancer and how we can learn and develop ways to both understand it and treat it. I'm excited to further develop interdisciplinary methods for unraveling complexities in both early cancer and emerging precision oncology treatments."

XUBO SONG, Ph.D.

Joined OHSU from California Institute of Technology

Scientific co-director of the Center for Biomedical Data Science and professor at the Division of Oncological Sciences, the Department of Medical Informatics and Clinical Epidemiology and the Department of Biomedical Engineering.

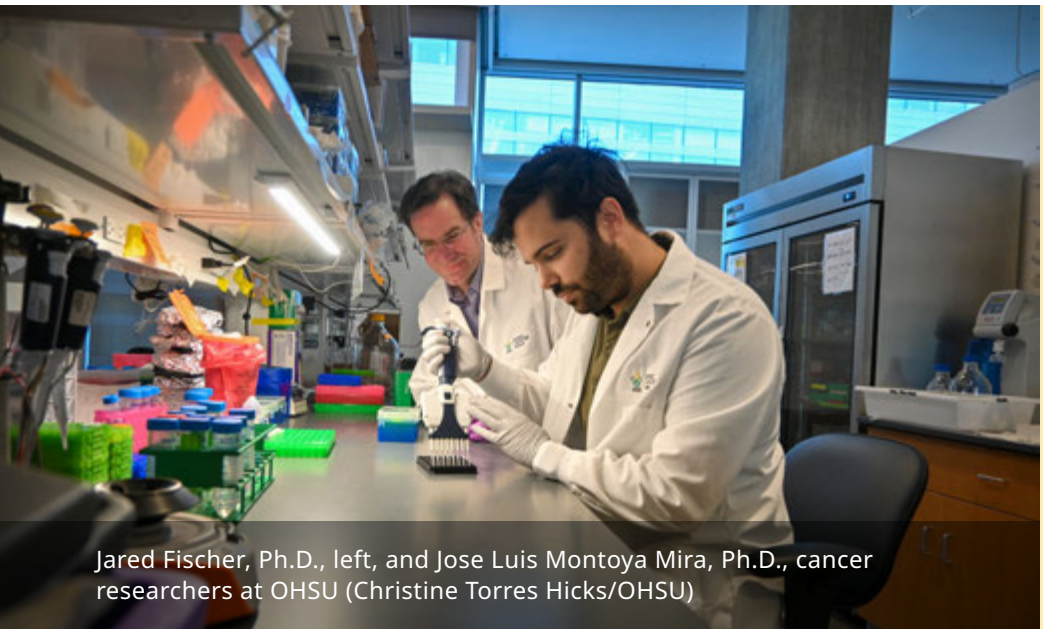
Song specializes in machine learning and AI, applying them to biomedical data, especially images focusing on cancer research. A past project of hers was the study of dynamic contrast-enhanced MRI images to predict chemotherapy responses for breast cancer. Currently, she's using AI to integrate MRI, pathology and molecular imaging for prostate cancer patients' outcome predictions.

Advancements in AI have empowered Song's studies, allowing for more accurate data analyses — which in turn support physician decisions and enable precision patient care.

The Center for Biomedical Data Science, co-directed by Song, was fueled by a $10 million gift from Mary and Tim Boyle in 2020.

"We now have deeper measurements, richer data, and that, coupled with the advancement of the AI, provides powerful tools. The measurement advancements give me much more data. We can now measure millions, even billions of cells, and acquire millions of images, which need to be quantified and analyzed. Now we have the tools, the algorithms, in deep learning and AI, that allow us to understand this rich data."

(Illustrations by Chelsea Pham/OHSU Foundation)



Jared Fischer, Ph.D., left, and Jose Luis Montoya Mira, Ph.D., cancer researchers at OHSU (Christine Torres Hicks/OHSU)

"This test isn't just about detection — it could also help us measure how well treatments are working and guide therapeutic options. If we can track a patient's response to therapy in real-time, we can make better treatment decisions and improve outcomes."

— Jared Fischer, Ph.D.

Shared ideas yield innovative results

A new blood test developed by CEDAR researchers Jose Luis Montoya Mira, Ph.D., and Jared Fischer, Ph.D., identifies hard-to-detect pancreatic cancer with 85% accuracy. The test could help doctors identify pancreatic cancer earlier, leading to improved survival rates for patients.

"Our test could be used for people at high risk of pancreatic cancer, which is not targeted by current tests," Montoya said. "It allows for a more robust and less invasive screening, unlike an endoscopic ultrasound and other liquid biopsy tests that require large volumes of blood, thus allowing our test to be performed more frequently for earlier detection."

Pancreatic cancer is often diagnosed at an advanced stage when treatment options are limited. Current tests are good at indicating prognosis but aren't sensitive enough for early-stage detection. Montoya and Fischer led the development of a test that requires a small blood sample to detect changes in protease activity, a key indicator of the most common and deadly form of pancreatic cancer.

The researchers created a non-invasive test using blood samples from 350 patients from OHSU's Brenden-Colson Center for Pancreatic Care and CEDAR. While this test is not yet available to the public, there are plans for more trials, specifically an investigator-initiated trial in patients at high risk of developing pancreatic cancer.

"This test isn't just about detection — it could also help us measure how well treatments are working and guide therapeutic options," Fischer said. "If we can track a patient's response to therapy in real-time, we can make better treatment decisions and improve outcomes."

Both Montoya and Fischer operate within CEDAR as cross-collaborators with other scientists, a mainstay of the center's goal to bring diverse expertise and ideas together. It is minds like theirs that are working to transform cancer research, early detection and the future of fighting this disease.

LISTEN

Listen to audio stories featuring these researchers:
ohsuf.org/cedar-researchers

WHY I GIVE

CELEBRATING THE KUNI FOUNDATION'S $20 MILLION IN GIVING

By Josh Friesen

IT'S HARD TO OVERSTATE THE KUNI FOUNDATION'S IMPACT ON CANCER RESEARCH AND CARE AT OHSU AND THE OHSU KNIGHT CANCER INSTITUTE.

Since 2020, the Kuni Foundation has awarded 10 Discovery Grants and 24 Imagination Grants to cancer researchers at OHSU. The Kuni Foundation's support totals $20 million, which has funded research for 39 principal investigators from 18 departments across the institution and established two endowed chairs for lung and prostate cancer. In 2024, Wesley Yu, M.D., director of the Melanoma and Skin Cancer Program at the Knight Cancer Institute, became the first Kuni Foundation Cancer Research Fellow. The Kuni Foundation is committed to advancing promising ideas that translate into catalytic methods of cancer detection, treatments and cures. Inspired by their founders' profound commitment to innovation and community service, the Foundation's investments in Discovery and Imagination grants, as well as endowed faculty positions, have helped researchers at the Knight Cancer Institute move ever closer to ending cancer as we know it.

"We believe that meaningful progress in cancer research requires courage, collaboration and the willingness to take risks," said Angela Hult, Kuni Foundation president. "We support scientists who explore uncharted territories and challenge conventional thinking, and the more we invest in these bold approaches, the more it increases the chances for new breakthroughs and accessible, affordable treatments. Our support of OHSU's transformative work reflects our deep commitment to advancing the kind of scientific innovation that saves lives and reshapes the fight against cancer."

The OHSU Foundation caught up with four recent recipients of the Kuni Foundation's generosity to learn how their innovative efforts are pushing us toward a future free from the burden of cancer.

RAMON BARAJAS JR., M.D.: KUNI FOUNDATION IMAGINATION GRANT RECIPIENT

Ramon Barajas Jr., M.D.

Even with the best treatment, the median survival time for patients with glioblastoma — one of the most aggressive and deadly types of brain tumor — is 17 months.

Ramon Barajas Jr., M.D., an associate professor of

"I think we have a great idea — I'm convinced we do. I'm convinced we have an idea that will help people, but it otherwise wouldn't have seen the light of day if not for the opportunities presented to us by the Kuni Foundation."
— Ramon Barajas Jr., M.D.

Kuni Foundation support is enabling OHSU teams to engage with the Confederated Tribes of the Warm Springs and other tribal communities to understand and address their unique barriers to cancer screening, treatment and clinical trials. (OHSU)

diagnostic radiology in the OHSU School of Medicine and faculty member of the Knight Cancer Institute, is taking an unconventional approach toward extending that prognosis, potentially redefining treatment strategies not just for glioblastoma, but for brain tumors as a whole.

“It’s pretty exciting stuff,” Barajas said. “We’re at the knife’s edge of trying to advance therapies from a radically different approach.”

Much of glioblastoma’s aggressiveness stems from its ability to corrupt immune cells in the brain, tumor-associated macrophages (TAMs), to promote its own growth. Barajas’ research seeks to leverage the power of hibernation to reprogram TAMs in and around the tumor back to their original function, a process that would also activate other immune cells in the brain called microglia. By restoring TAMs’ original function and stimulating microglia, Barajas hopes to develop a novel immunotherapy to reconfigure the immune microenvironment, stop the tumor’s growth, and target and kill glioblastoma cells.

This approach leverages a pharmacological way to induce a hibernation-like state in a non-hibernating animal developed by Domenico Tupone, Ph.D., a research assistant professor in the Department of Neurological Surgery at OHSU.

“Induction of a hibernation-like state could be beneficial for the treatment of several pathologies,” Tupone said.

“We know that hibernation in animals basically causes the immune system to reset,” Barajas said. “When

"We wouldn't be where we are today and wouldn't have made the progress we've made without the support of the Kuni Foundation. I think myself and our whole research team is very aware of that, and we're very, very thankful."
— Claymore Kills First, Pharm.D.

animals go into hibernation, a lot of their immune cells go back to the organ systems they arose from. So, you have this complex interaction with the immune system that we think we can leverage to reset the immune system, recirculate immune cells and then activate native immune cells."

Though this research focuses on improving outcomes for glioblastoma, Barajas and his team are gaining knowledge that could lead to similar therapies for other diseases.

"We've been very focused on helping improve outcomes for glioblastoma," Barajas said. "But the knowledge we're gaining overall, if this pans out, could one day be widely applicable to many disease processes."

CLAYMORE KILLS FIRST, Pharm.D.:

KUNI FOUNDATION DISCOVERY GRANT RECIPIENT


Claymore Kills First, Pharm.D.

Pancreatic cancer affects Native Americans more than any other ethnic group in the United States.

The disease is the 10th most diagnosed cancer in the country, yet it is the third leading cause of cancer-related deaths. Compared to the U.S. population, Native Americans in Oregon are twice as likely to be diagnosed with pancreatic cancer, and nationwide, Native Americans have the lowest survival outcomes of any other racial or ethnic group.

Claymore Kills First, Pharm.D., a clinical oncology pharmacist at OHSU, is trying to figure out why.

"There aren't many studies that adequately include Native Americans to assess risk factors for cancer," said Kills First, an enrolled member of the Oglala Sioux Tribe and Miniconjou Lakota. "We have known risk factors: diabetes, alcohol, obesity, smoking, and there's familial, genetic components. But there's never been any study that tried to confirm the correlation between these risk factors and pancreatic cancer in Indigenous populations. That's what we're trying to do."

To shed light on the factors driving pancreatic cancer disparities among Native Americans, Kills First and his research team are leveraging existing relationships between OHSU and the Warm Springs reservation to study and address the barriers to clinical trial involvement within the tribal community. They then aim to replicate their study for additional tribal communities in Oregon. The long-term goals of these collaborative studies are to increase Native American enrollment in pancreatic cancer clinical trials and develop a first-of-its-kind Native American pancreatic tissue registry to determine if and how Native Americans have genetic predispositions to pancreatic cancer.

The first step toward those goals, however, is building trust and collaboration, a foundation of which OHSU is establishing through efforts such as the partnership between the Brenden-Colson Center for Pancreatic Care and the Knight Cancer Institute's Community Outreach, Research, and Engagement (CORE) program.

"We have quite a few Native American faculty in the School of Medicine, we have the Northwest Native American Center of Excellence, and we have joint partnerships with our providers out in tribal clinics who are doing such good work," Kills First said. "OHSU is doing a great job to bridge these gaps and to rebuild

"The Kuni Foundation's investment in my work and in my lab has had such a large impact on human health and has given people more birthdays, more anniversaries. This is critical. It's a catalyst for innovation." — Amy Moran, Ph.D.

these trusts. Our research team has sought to utilize those relationships as points of contact and build our own."

AMY MORAN, Ph.D.: KUNI FOUNDATION DISCOVERY GRANT RECIPIENT


Amy Moran, Ph.D.

Amy Moran, Ph.D., never set out to establish the intersection of sex hormones and cancer treatment as a whole new field of cancer research.

But when her 2022 study in Nature demonstrated how testosterone receptor suppression improves immunotherapy outcomes, that's exactly what she did. It has led to a world of opportunity that has the potential to add a breakthrough style of treatment to the cancer-fighting arsenal.

"This is never what I thought these studies would reveal. But it has," said Moran, an associate professor of cell, developmental and cancer biology in the OHSU School of Medicine and a faculty member of the Knight Cancer Institute. "It's opened a door that has led to a tremendous number of people around the world looking at sex hormone differences in cancer — cancer adverse events, cancer outcomes, drivers of cancer and cancer treatment outcomes — and that is exciting because it adds a critical layer of the whole person, their hormones, to the personalized medicine approach."

The seeds of Moran's research date all the way back to the 1940s when cancer researcher Charles Huggins discovered that prostate cancer uses testosterone as fuel to grow, a breakthrough that led to testosterone deprivation therapy as a treatment and a Nobel Prize.

In the years that followed, researchers haven't really explored how testosterone affects other types of cancer beyond breast cancer. Moran's research, however, is the first in the world to focus solely on how testosterone decreases the effectiveness of immunotherapy drugs.

At first, Moran's research focused on T cells — a type of white blood cell the body produces to help fight cancer. She has extended this work to reveal that cancer uses testosterone to hide from the immune system. The next step of Moran's research aims to begin building a more holistic picture, broadening the investigation to other immune cells to determine the impact of hormone suppression on the entire immune cell landscape in other diseases such as melanoma and breast, liver and bladder cancer.

If Moran's upcoming research yields results similar to those her team found in testosterone and T cells, it could revolutionize cancer treatment as we know it.

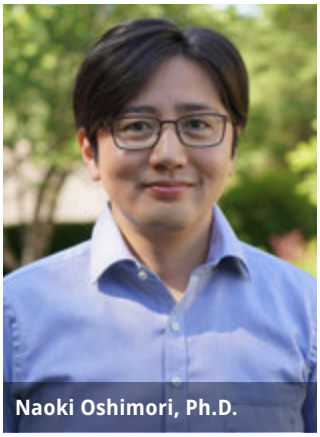
"This has shed unbelievable light on how many different tumor types might be using testosterone to support the tumor and suppress the immune system," Moran said. "It's provided a novel, targetable pathway in patients harnessing readily available testosterone blockers in cancers where this is not standard of care. We have clinical evidence that those patients might benefit from this treatment, improving the activity of their immunotherapy."

NAOKI OSHIMORI, Ph.D.: KUNI FOUNDATION IMAGINATION GRANT RECIPIENT

Cancer drugs have come a long way toward extending not only the length of life, but the quality of life.

For many whose cancer has gone into remission, however, the fear of it returning lingers. For as long as there has

"The Kuni Foundation, they hear our voice. They trust us. That support is very encouraging to have from such a prestigious foundation." — Naoki Oshimori, Ph.D.


Naoki Oshimori, Ph.D.

been research working to eliminate cancer, there has been research working to keep it from coming back.

Naoki Oshimori, Ph.D., an associate professor of cell, developmental and cancer biology in the OHSU School of Medicine and a faculty member of the Knight Cancer Institute, has shed light on the molecular mechanisms behind cancer recurrence and is using this newfound understanding to deprive cancer of its ability to return.

"How to prevent recurrence is one of the key questions in cancer research, at least in my mind," Oshimori said.

The human body owes a lot of its longevity to how its stem cells regenerate and repair tissue — an ability enhanced by a stem cell's capacity to remain dormant deep within niche microenvironments where their activation is regulated, and their stability and sustainability are protected.

Oshimori recently published a study that discovered how tumors develop their own dormant cancer stem cells, or CSCs, in their niches in tandem with their own growth. Like our bodies' stem cells, CSCs manage to shield themselves from harm, which, in their case, takes the form of chemotherapy and immunotherapy. Even if cancer treatment eradicates the majority of CSCs present in a tumor, the remainder can lead to that cancer's revival due to their niches.

Oshimori's current research hopes to target the molecular signal secreted by CSCs to undermine its niche microenvironment within the tumor, thus removing its stem-cell-like properties and deactivating its ability to regenerate the tumor.

"Our target is the environment," Oshimori said. "If we could disrupt the critical environment and destabilize the stem-cell property of these dormant cancer cells — because that is the key to cancer cells regenerating the tumor — the tumor can't come back. That is the ultimate goal."

THE VALUE OF PRIVATE PHILANTHROPY

Today's scientific research informs tomorrow's possibilities, and private philanthropy is imperative — perhaps now more than ever. The Kuni Foundation's backing is vital to researchers like Barajas, Kills First, Moran and Oshimori and supports the graduate students and post-docs working in their labs. More so, it encourages the scientists to let their curiosity guide their research, ask bold questions and helps fund pilot studies that yield answers full of promise.

Full of opportunities.

Full of hope.

Those answers may go on to elicit more research funding from larger entities like the National Institutes of Health or the American Cancer Society. But that initial support from places like the Kuni Foundation is the spark of innovation that ignites the flames of change.

READ MORE

Watch an interview with OHSU's Wesley Yu and Amy Moran and Kuni Foundation President Angela Hult: **ohsuf.org/kuni20m**

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Photo by Brad Feinknopf

This year, the OHSU Knight Cancer Institute community celebrates a remarkable milestone: the 10-year anniversary of the successful completion of the Knight Cancer Challenge.
In 2015, in an historic philanthropic commitment, Phil and Penny Knight matched a $500 million OHSU Foundation fundraising campaign that was fueled by thousands of donors, establishing a $1 billion investment to advance cancer care and research.

This milestone brought with it a renewed hope toward ending cancer as we know it and, in the years since, helped establish the Knight as a global leader in patient care and early cancer detection.

In recognition of this milestone, we have gathered powerful stories of impact — stories of what the OHSU Knight Cancer Institute has accomplished, as well as what lies ahead in our continued mission of freeing the world from the burden of cancer:

ohsuf.org/kcc-10years

OHSU KNIGHT CANCER Institute