

ONWARD

SUMMER 2019



FORCES OF CHANGE

Meet the women
reshaping cancer
research



On the cover: Amanda Bruegl, MD, is working to improve cancer care in Native American communities. She is part of a world-class team of researchers at the OHSU Knight Cancer Institute.

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Glenn and Marilyn Hart

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ONWARD

THE OHSU FOUNDATION MAGAZINE
SUMMER 2019

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As I near my one-year anniversary as leader of the OHSU Foundation, I've been reflecting on the magnitude of what I have learned during the past 12 months.

In short, OHSU is an even greater place than I knew it to be when my family and I arrived in Oregon last summer.

Many of you are fortunate to have years' worth of deep knowledge of OHSU and Doernbecher Children's Hospital. You've come to expect extraordinary outcomes in research, care delivery and medical education, since that's what our institution has consistently delivered. Being new in town, I've been observing with fresh eyes, and what I see is impressive.

OHSU is Oregon's only academic health center. That's a heavy responsibility, and one this 17,000-person team takes seriously. They are deeply devoted to serving patients, achieving breakthrough discoveries in the lab and empowering the health

Welcome to **ONWARD**

care leaders of tomorrow, while staying equally focused on broader challenges that OHSU is uniquely prepared to address. For example, Joel Nigg, PhD, a world leader in ADHD research (and profiled in this issue of *ONWARD*) will tell you his career has been spent on far more than just zeroing in on causes and cures for a common neurodevelopmental disorder. He has devoted his professional life to raising awareness about — and solving — a major public health problem that manifests itself in higher drug addiction, suicide and homelessness rates.

OHSU tackles the toughest health challenges, and it continues to attract top-tier talent to do it. Countless promising young scientists are learning from great mentors and quickly becoming health care innovators themselves. You'll find these up-and-coming leaders throughout the university, including at the Knight Cancer Institute, where women make up a growing percentage of scientists and clinicians.

Finally, but significantly, I've been struck by the intense level of gratitude toward OHSU and Doernbecher. We have all seen firsthand how

lives are transformed by only-at-OHSU care. We get to witness health care careers take off due to a superior OHSU education. We eagerly anticipate news of the next researcher turning defeat into hope with a breakthrough discovery. I am incredibly fortunate to be reminded each day of how OHSU is changing lives — lives of people like Glenn and Marilyn Hart, whose story we share on p. 26.

Each of your stories is humbling and inspiring. So is your continued generosity. I'm grateful to be spending my first summer in Oregon, and witnessing the power of philanthropy.

Thank you for all you do for OHSU and Doernbecher.



Matt McNair
President, OHSU & Doernbecher Foundations



/// Joel Nigg, PhD, will lead new center for ADHD research

BEYOND ADHD

\$12.5 million in matching funds
available to support research

ADHD IS SO MUCH MORE THAN A KID SQUIRMING AT HIS DESK.

That's still the public perception of attention deficit hyperactivity disorder, said Joel Nigg, PhD, an OHSU professor of psychiatry and one of the world's top ADHD researchers. The perception: just a bit of inattentiveness and fidgeting. Easily solved with medication. Nigg knows better.

This is what ADHD too often leads to, Nigg said: Depression. Drug addiction. Mental illness. Homelessness. Shortened life spans. Suicide.

And often sidetracked lives — because no one understood what was happening in a child.

“However,” Nigg said, “the many new discoveries happening now make this an exciting and hopeful time.”

ADHD is one of the most common childhood mental disorders, affecting up to 11 percent of school-aged children. It’s characterized by unusual levels of inattention, impulsivity or hyperactivity. Children with ADHD often find it difficult to focus on a task, to sit still when needed, or to get along with others.

ADHD is typically the first mental health issue to emerge in young children, Nigg said. Diagnosis and treatment can help. But even then, ADHD often leads to problems that derail — and put at risk — children’s lives as they become adolescents and adults.

Adults with ADHD often have difficulties at their jobs, and in their personal and family relationships. Often, they have unrelenting feelings of frustration, anger or guilt. Very often, children and adults with ADHD develop other mental health issues.

“ADHD doubles the risk of depression,” Nigg said. “ADHD doubles or triples the risk of addiction, depending on the drug. For adults with ADHD, it quadruples the risk of early death — from accident, suicide or illness.”

“Once you break it down, you realize — wait a minute, ADHD is a really big part of many problems we are grappling with as a society,” Nigg said. “ADHD is like a gateway.”

Nigg has spent 20 years trying to understand and change that. He’s now getting a whole lot of help.

In June, OHSU established the Center for ADHD Research, which Nigg will lead. It also announced that Steven and Patricia Sharp, through their Abracadabra Foundation, have agreed to commit \$12.5 million to fund a matching campaign. The aim is to raise up to \$25 million for the center to accelerate the team’s successful and innovative research.

The center’s goal will match what Nigg has been working toward for two decades: to understand different causes and influences for ADHD, find ways to detect it better and earlier, and then develop more effective treatments.

Nigg is director of the Division of Psychology within OHSU’s Department of Psychiatry, and a professor of psychiatry, pediatrics and behavioral neuroscience at OHSU. He was recruited to OHSU 11 years ago from Michigan State University to build OHSU’s ADHD program into one that’s nationally recognized. He’s done that, as he now works with more than a half dozen OHSU colleagues who have their own national scientific reputations.

“It’s one of the best groups of researchers studying ADHD in the country, if not the world,” Nigg said.

The team’s efforts focus on three primary areas. They work to better understand and differentiate the many types of ADHD through cognitive and other assessments of children who have it. They also are searching for possible biological “markers” of the condition or of treatment response — a way to see in a child’s blood, brain imaging or other biological characteristics something that correlates with ADHD, explains what’s wrong or identifies a best treatment. This includes team members’ pioneering efforts in brain imaging and genetics. Finally, they are beginning to understand how health and environmental factors affect a child or a child’s mother — even before a child is born — to create a risk of ADHD.

All three paths lead in the same direction: toward



better ways to explain, detect and treat ADHD — and perhaps even prevent it from emerging.

For Nigg, it's a matter not only of biology but also of family and society. After earning his bachelor's degree from Harvard, he spent four years in inner-city Detroit, first working with homeless former psychiatric patients and then at a youth center for children and teenagers. He then worked for four years as a social worker in an inpatient psychiatry unit, seeing the devastation of mental illness and studying patients' early life histories. He grew to understand how social, psychological, developmental and behavioral issues affect a person's life and well-being.

All of that, along with work on his PhD, helped Nigg develop a holistic view of ADHD that many in the field don't have.

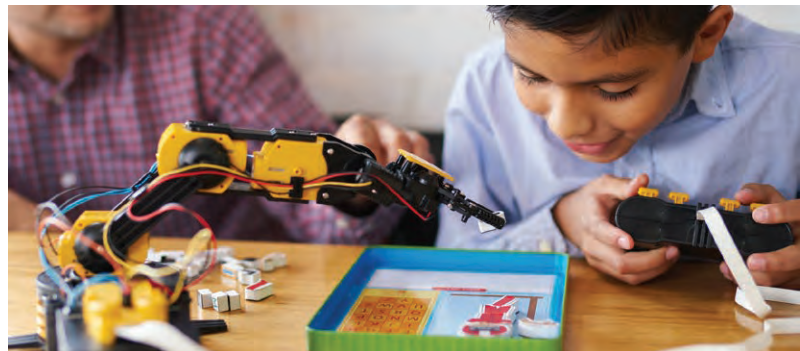
Stephen Hinshaw, a professor of psychology at the University of California, Berkeley, and a noted expert on ADHD, was Nigg's mentor when Nigg worked toward his doctorate at UC Berkeley and has tracked his career closely. He said Nigg "clearly knows the underlying neurobiological vulnerabilities that shape ADHD. But he's also been a pioneer in looking at environmental factors — including toxins in the environment — that have been overlooked for decades as potential additional causal agents" of ADHD.

Added Hinshaw: "He puts things together — rather than reducing it to biology versus environment."

"It's important to look at all the factors at play in this complex equation," Nigg said about ADHD. "We want to get a better understanding of the biology, to go with our understanding of the social and behavioral side of this, and the psychological side of it. That integration is a really important theme in my work."

If medicine can identify biological markers or social or behavioral predictors of certain types of ADHD, Nigg said, "that will help us know earlier

"If you can turn the tables early on, you can help a child get their life on track."



who's going to possibly get ADHD, and then that might be helpful to parents or clinicians.

"Maybe there would be different techniques parents could use to minimize the risk or effects of ADHD. There may be dietary changes that could help, or anti-inflammatory therapy. We're researching to see whether some of those things could be true — and we're fairly unique in that."

"He's relentless in his quest for knowledge," said Hinshaw.

But Nigg said his research and pursuit of answers have been hampered — like they have for all ADHD researchers — by insufficient public attention to the problem. There's little public understanding that improving outcomes for kids and adults with ADHD can be part of a solution to the pressing and related problems of depression, addiction and homelessness, he said.

"If we consider ADHD's influence on these other conditions in terms of early development, it's as big a factor as any of them," he said. "And yet

relative to its importance, ADHD gets overlooked and doesn't get funded the way it should."

Nigg said he is very appreciative of the philanthropic support his work has received from the Sharps even before their newest transformational commitment. That sort of private support is invaluable — and will be with the new center — because it allows him and the OHSU team to pursue pathways of research that likely wouldn't get financial support from the federal government.

"We are grateful for all the federal grant support we have received. But to get federal grant support, you usually want really strong evidence of probable success," Nigg said. "These are public funds and aren't put into too many high-risk strategies."

But high-risk strategies pursuing novel ideas can pay off with game-changing discoveries, Nigg said.

"With philanthropy, we can take bigger risks," he said.

Nigg, a football fan, likens it to offensive strategies in the sport. "You can always try for a first down," he said. "The National Institutes of Health naturally have a responsibility to be cautious and so they want to fund you to try to get a first down. That's necessary and good. But to balance it, we want to go for the end zone sometimes, take a gamble on hitting big. And philanthropy enables us to do that."

The successes from that work can then lead to more support from traditional sources.

"For every million dollars in philanthropy, our group has generated \$5 million in federal grants," Nigg said. "That's because we can leverage our successes; the advances we make through philanthropy help us get more grants."

All of that can lead to the ultimate goal, Nigg said: improving the future lives of millions of children and adults.

"If you can turn the tables early on — before ADHD can emerge or before it can develop into these other problems — you can help a child get their life on track. They can gain the freedom to make and carry out their choices and achieve their own calling. That, to me, would be the ultimate success." ///

To support ADHD research, visit support.ohsufoundation.org/ADHD

ADHD IN THE U.S.

**MORE THAN
6 MILLION CHILDREN**

in the U.S. have
been diagnosed
with ADHD



**ONE
IN 20**

U.S. children
are medicated
for ADHD

2/3

of U.S. children diagnosed with
ADHD will also suffer from
depression, anxiety, conduct
disorder or addiction in adulthood

Adults
with ADHD are

4X

as likely to face an
early death from
accident, suicide
or illness

50%

of children
diagnosed
with depression
or anxiety also
have ADHD

**ADHD IS
5 TO 10
TIMES**

more common
in the prison
population





FORCES OF CHANGE

Meet the women reshaping cancer research

In the world of cancer research, OHSU continues to break new ground — not just in medical discoveries, but also in building a world-class team of female scientists.

Mary Stenzel-Poore, PhD, chief of research operations at the OHSU Knight Cancer Institute, is one of those scientists. With more than 20 years' experience as an NIH-funded researcher, Stenzel-Poore has a background in neuroimmunology, and is an expert in protecting the brain against damage caused by stroke.


In addition to running her own lab focused on immunotherapy research, she has held many roles at OHSU, including dean of research at the School of Medicine. Today she is responsible for strategic leadership of the Knight Cancer Institute's research mission.

According to Stenzel-Poore, the advancement of women in science is more than the right thing to do — it's critical to our ability to innovate.

"What women bring to the scientific world is so different and powerful," she said. "In the age of needing to solve problems that are transdisciplinary and team-based, women excel. We know how to collaborate."

We recently caught up with a few of the women at the Knight Cancer Institute who are making significant advancements in their chosen fields. While these eight remarkable scientists have very different backgrounds and interests, they all share one common trait: a fierce determination to conquer cancer.

Here are their stories.

A portrait of Mary Stenzel-Poore, PhD, a woman with short, wavy, light-colored hair, smiling. She is wearing a dark top, hoop earrings, a ring, and a bracelet. Her arms are crossed. The background is a solid blue color.

**“Having a diverse
workforce that
includes these
very strong, really
brilliant women truly
makes us better as
an organization, and
increases the odds of
making significant
breakthroughs that
can and will stop
cancer in its tracks.”**

MARY STENZEL-POORE, PhD



THE MENTOR

Kimberly Beatty, PhD

As a biomedical researcher, Kimberly Beatty, PhD, is doing more than making medical breakthroughs; she's also breaking down barriers for young girls who aspire to follow in her footsteps.

Growing up in Walnut Creek, California, Beatty was lucky — she had great teachers who encouraged her to pursue her passion for science. (Not all girls are so fortunate; statistically, interest in science and math drops off dramatically for girls by the time they hit middle school.)

During her work as an undergraduate student at University of California, Santa Barbara, Beatty got her first taste of research while studying the directed evolution of an enzyme. “That was notable, because it’s the same subject that was awarded the Nobel Prize in 2018,” she said.

After receiving her doctorate in chemistry at Caltech, Beatty worked at University of California, Berkeley, before being invited to join the Knight Cancer Institute in 2012. It was an easy decision to make, although she admits that the climate took a little getting used to. “That first year in Portland, I think it rained nine months straight,” she laughed.

At the Knight Cancer Institute, Beatty’s work focuses on visualizing cancer at the molecular level using chemical probes. “We’re trying to figure out how we can use chemistry to light up the biology inside cells and tag proteins that are associated with disease,” she explained. This could lead to a better understanding of why some patients develop drug resistance and help develop new treatments that cancer cells won’t be able to evade.

Beatty said one of the best parts of her job is mentoring the grad students that she works with. She also regularly invites high school students to get a feel for life in the lab. “I didn’t get those kinds of opportunities until later in my education,” she explained. “So I want to give them to younger students whenever I can.”

That generous spirit extends outside the lab as well. Beatty volunteers for a local chapter of STEM Like a Girl, where she leads projects to help girls get excited about careers in science, technology, engineering and math. One of the most recent projects she led? Making fizzy bath bombs. “It’s all acid-base chemistry,” she smiled.

“Kids think that research is a solitary pursuit done by an old guy in a stinky basement lab, but it isn’t. It’s fun and exciting and something we get to do as a community.”

KIMBERLY BEATTY, PhD



“Persistent and collaborative efforts are required when it comes down to curing cancer and improving the quality of life for every individual.”

ANUPRIYA AGARWAL, PhD

“When we’re assembling a team, our goal is to have it be as diverse as possible. When we get too narrow, we start to lose sight of the bigger picture.”

SHANNON MCWEENEY, PhD



THE INDEPENDENT

Anupriya Agarwal, PhD

Anupriya Agarwal, PhD, has always preferred to blaze her own trail. Growing up in a small town in northern India, where it was not common for women to pursue higher education, she aspired for more. “I was inspired by all the female scientists and researchers I learned about in school,” she said.

Agarwal chose to pursue the field of medicine. “I had one of those toy doctor sets for kids, and I played with it for as long as I can remember, so medicine was a pretty obvious choice,” she laughed.

After completing her undergraduate studies, Agarwal went on to receive a master’s degree and PhD in microbiology. Then she got married and got on a plane to join her husband, who was already working in the United States. It was a rough transition at first.

“I didn’t have a work visa or a driver’s license yet, so those first few months I just stayed home and read,” she said. Having lost a beloved uncle to cancer, Agarwal immersed herself in articles about cancer and soon found herself volunteering at a medical college that was doing breast cancer research. “Having seen people suffering from cancer so closely, I wanted to make a difference in people’s lives by finding

new treatments, and I realized research was a way I could do it,” she explained.

Plenty of research jobs presented themselves, but Agarwal was drawn to the Knight Cancer Institute. “I knew I didn’t want to work in a corporate lab following someone else’s research goals,” she said. “I was much more interested in pursuing my own ideas, and I’ve been able to do that here.”

For Agarwal, those ideas are focused on discovering which genetic drivers affect the growth of leukemia cells at the earliest stages of disease. The implications are huge — because figuring out what happens to these cells at the pre-cancer stage could lead to early detection or even prevention. “For those who are diagnosed with acute myeloid leukemia, a form of leukemia that is notoriously difficult to treat, the ability to catch it sooner would make the treatment window so much bigger,” she explained.

Not only are the implications enormous, so are the research expenses — which is why Agarwal relies heavily on the generosity of donors. “For every dollar that’s given, I feel a huge responsibility to pay it back through the work that I do,” she said. “It doesn’t feel like work; it’s more like a calling.”

THE VISIONARY

Shannon McWeeney, PhD

Solving some of cancer's most challenging riddles requires the ability to see the big picture. Luckily, this is something that Shannon McWeeney, PhD, is exceedingly good at.

As the head of bioinformatics and computational biology and associate director of computational biomedicine, McWeeney and her team helped to create a new data visualization platform called Vizome. The platform takes massive amounts of data and turns it into easily interpretable information to help facilitate new breakthroughs.

The need for such a platform became apparent during a study of acute myeloid leukemia. It was the largest study of its kind, generating so much data that it had potential to overwhelm scientists and clinicians. "Our goal was to develop a new approach to manage, integrate and visualize data in a way that would fuel exploration," she said. "The last thing we wanted to do was isolate them from knowledge discovery."

Many times after large datasets are created, they sit in limbo because there are barriers created by their size or complexity. "Vizome removes this research bottleneck so we can accelerate biomedical research more quickly," she explained.

McWeeney didn't always plan to go into cancer research. She was originally focused on modeling

marine ecosystems. Then one summer, she attended a seminar about population genetics and disease applications. "That's when I realized that my true north was no longer marine ecology," she admitted. Shifting gears, she went to University of California, Berkeley, and studied statistical genetics to focus on complex diseases. Then it was off to the University of Pennsylvania to study computational biology.

In the midst of all this, her mother was diagnosed with breast cancer.

"That was really a turning point. Suddenly, cancer became very personal," she said. McWeeney accepted a position at the Knight Cancer Institute and began working on ways to combat drug resistance in cancer patients. She also studies cancer drugs that already have been approved and figures out ways to repurpose them for new treatments. "It's all about looking at what's already in our arsenal and thinking about how they can work in other ways," she said.

While McWeeney's accomplishments have earned her an impressive list of awards, she is quick to point out that she doesn't do it for the accolades. "All of this is for the patients," she smiled. "None of it is for me."

THE SEEKER

Missy Wong, PhD

Why are we here? What is the purpose of life?
Those are the kinds of big questions that Missy Wong, PhD, pondered as a little girl.

The daughter of a surgeon and a teacher, Wong always figured she'd go into medicine — then she watched her dad do a total knee replacement. “I was like, ‘Nope!’” she laughed. “Surgery was definitely not my thing.”

Still, with Wong's inquisitive mind, science was a natural fit. “I've always been curious,” she admitted. “And I've always liked understanding how things function.” Studying biology at the University of Colorado and working in a lab, she found a way to use science to make a positive impact on human life. “My parents instilled in me a desire to leave the world a better place than I found it, and cancer research seemed like a challenging way to do this.”

After receiving a PhD in molecular pathobiology at Wake Forest University, Wong trained at the Washington University School of Medicine before joining OHSU and the Knight Cancer Institute in 2001. In the Department of Cell, Developmental and Cancer Biology, she continues her pursuit of answers — in this case, to questions like, *how can we tell if someone has cancer? Are there ways we can find out sooner?*

Wong is currently working on a project to develop a biological marker that will lead to

earlier cancer diagnosis. “If we can catch cancer early, we give the clinician the best chance to help the patient,” she explained. “Our mission is to develop new ways to detect cancer at the earliest possible stage.”

The work is generating promising results, and Wong said she's grateful for the donors who have allowed her team to get this far. “Our science challenges the dogma and sits outside of the box, and novel ideas aren't easily funded by government agencies. It takes donor funding to develop this science to the point where it is competitive for government funding.”

Throughout her quest for knowledge, Wong knows that for every “a-ha” moment, there are also plenty of setbacks. Those just motivate her to work harder. “We're scientists, so we're realists,” she smiled. “There are times when everything goes right and you can see the end game, and then there are times where you're baffled. That's when I say, ‘OK, bring it on!’”

As a mother of three, Wong knows that she's leading by example — and she takes the responsibility seriously. “I've always taught my two daughters to stand up and be heard,” she said. “That lesson extends to my son, too; we need to educate our boys to pursue their dreams, but to support women as well.”

A portrait of Missy Wong, PhD, a woman with short dark hair, smiling. She is wearing a dark button-down shirt. The background is a gradient of blue and green. The quote is overlaid on the right side of the image.

“Women bring
such a unique
perspective
and a different
voice to the
conversation.
I think the best
way to really
have progress is
to listen to all of
the voices.”

MISSY WONG, PhD

**“I think our
ability to
innovate and
challenge
paradigms
requires
curiosity-driven,
disruptive
ideas.”**

AMANDA LUND, PhD



THE CHALLENGER

Amanda Lund, PhD

Cancer research is filled with preconceived notions — and there's nothing Amanda Lund, PhD, loves better than challenging them. Through her study of the lymphatic system in melanoma and other skin cancers, she's shining a light on an area of research that previously hasn't gotten much love.

"Lymphatics are rarely studied, but they could be incredibly helpful in fighting cancer. I think it's fun to challenge the thinking around which ideas are worth pursuing and which aren't. That's really a main motivator for me," she said.

Born and raised in Connecticut, Lund credits a high school biology teacher for encouraging her to pursue science. After earning her PhD at the Rensselaer Polytechnic Institute and completing a postdoc in Switzerland, she turned her sights to the Knight Cancer Institute.

"One of my mentors was building a program here around tumor microenvironments and immunology. What I wanted to do was at the intersection of those two things, so I decided to join her team," she explained.

Lund's work is focused on understanding how the lymphatic system controls the immune system. "If we can understand that, perhaps we can manipulate it," she said. That could lead

to better retention of therapeutic drugs, or the ability to introduce more beneficial immune cells to help fight tumors.

"Cancer is tricky, because it's always adapting," she said. "But by harnessing the immune response through the lymphatic system, we can get our bodies to adapt as well."

Lund's contributions to this promising area of research have earned her numerous awards from the Melanoma Research Alliance, the National Cancer Institute and the National Institutes of Health. Most recently, she received the Cancer Research Institute Lloyd J. Old STAR award. Lund is one of five researchers across the nation to receive the \$1.25 million grant.


She had another remarkable achievement this year as well — Lund became a new mom.

"It's definitely been an exciting year," she laughed. Lund said that the role of motherhood brings a new sense of responsibility — not just to her baby daughter, but also to other women. "I want them to know that balancing a career in cancer research with being a mom is totally achievable. Plenty of women have done it before me; it's not a big deal. Just like in science, you learn to figure it out."

“We’re all given gifts in this world; the best way to honor and respect those gifts is to use them. I’ve been given this skill set, and I intend to use it for good.”

AMANDA BRUEGL, MD



A portrait of Lara Davis, MD, a woman with short, curly, light-colored hair. She is wearing a white blazer over a dark top and large, dark, geometric earrings. The lighting is dramatic, with a strong blue light from the right and a warm yellow light from the left, creating a high-contrast effect on her face and hair. The background is a solid, muted blue.

**“Treating patients in the
clinic gives me a reason for
doing the research. And
doing the research gives
me a reason to hope.”**

LARA DAVIS, MD

THE ADVOCATE

Amanda Bruegl, MD

Growing up as a member of the Oneida and Stockbridge-Munsee Nations in Wisconsin, Amanda Bruegl, MD, saw how difficult it was for her Native community to access good medical care. So from an early age, she resolved to be part of the solution. Originally, she thought she'd become a primary care doctor — then a few years into medical school, she realized that obstetrics and gynecology was her calling.

“Originally, I wanted to work on a reservation as a community doc. Once I switched to gynecological oncology, I had a lot of internal strife, because how was someone with a surgical sub-specialty going to go back and work with a small tribe?” she said. “Then I realized that this was another way I could serve my community.”

In looking for a job that would allow her to advocate for Native American women, Bruegl found that OHSU's values aligned perfectly with her own. “They strive to provide care for everyone, including rural and underserved populations. That really resonated with me,” she said.

The need for Bruegl's skills is immense — here in the Pacific Northwest, Native American women are 1.5 times more likely to be diagnosed with a cervical cancer. They're also twice as likely to die from it. Through outreach and education, Bruegl is hoping to change those numbers.

When she's not up on the hill at OHSU, you'll find her running outreach clinics in Salem and at the Confederated Tribes of Warm Springs Health and Wellness Center. Currently, she is one of only two Native American gynecological oncologists in the United States.

Besides caring for patients, Bruegl is studying human papillomavirus subtypes among Native Americans in the Pacific Northwest. “There is very little research around which strains of HPV primarily affect Native Americans, and no studies have ever been done in the Pacific Northwest,” she explained. Bruegl hopes that her research will allow care providers to offer more effective treatments to the local Native population — and save lives as a result.

In her free time, Bruegl enjoys running, hiking and doing traditional beadwork. She's also closely involved with the Northwest Native American Center of Excellence, which focuses on recruiting and training American Indian and Alaska Native students to MD and physician assistant programs at OHSU.

“If you don't have someone who looks like you as a role model, it can be tough to see all the possibilities,” she said. “The hope is that we can show Native youth that there are people out there like them who are doing great things.”

THE CRUSADER

Lara Davis, MD

For Lara Davis, MD, a physician-scientist, seeing patients drives home the importance of her research on a daily basis. All too often, she has to tell patients in her clinic that there are currently no medicines that can cure their sarcoma. “That’s not okay,” she said. “We need to be making more progress, faster progress.”

This sense of urgency is at the heart of Davis’ crusade to find new combinations of drugs that will be effective in treating sarcoma, a rare kind of cancer that affects the connective tissue in the body. Because nearly half of these cancers occur in adolescents and young adults, that’s Davis’ primary area of focus.

“This demographic has so much going on in their life — adolescents are just getting their first taste of independence, young adults might be starting a career or a family,” she said. “For them, a diagnosis of cancer is especially life altering. And because sarcoma isn’t that common, it can be very isolating as well.”

Davis is no stranger to Portland — after graduating from Wellesley College, she headed here to do volunteer work and promptly fell in love with the city. In fact, she loved it so much that she decided to get her medical degree at OHSU. It was right around the time that

OHSU’s Brian Druker, MD, helped develop a breakthrough leukemia treatment with the drug Gleevec. “It was very apparent that we were entering a new era in cancer care,” Davis said. “I was excited by the science and the opportunity to make a difference.”

These days, Davis divides her time between treating patients, doing lab research and conducting clinical trials. “It’s really a multidisciplinary team,” she explained. “We’re doing all sorts of different things with chemo. We’ve got a trial around immunotherapies, and we’re looking at ways of combining radiation and targeted therapy. We’re also conducting a trial to help survivors improve their physical function.”

It’s rewarding work — but also emotionally challenging. “I love taking care of patients,” Davis said. “I’ve gotten to know some pretty amazing individuals. So when you lose them, well, it’s that much more difficult.”

Still, Davis said there are plenty of reasons to be optimistic. “There have been four new drugs approved by the FDA for sarcoma in the last few years, and our research is putting forward some really promising results,” she said. “There’s still a long way to go, but we’re getting there.”



**“Speaking
up may not
win you any
popularity
contests, but
who cares?
Your dog will
still like you.”**

BEVERLY EMERSON, PhD

THE OPTIMIST

Beverly Emerson, PhD

Tackling a problem as big as cancer is often a matter of moving one step forward, two steps back. It requires patience and persistence and an unwavering belief that the answer is out there — at least, that's the way Beverly Emerson, PhD, sees it.

“As a scientist, I approach my research with great optimism, thinking that solving any difficult problem is possible,” she said. “If I had been unable to work through uncertainties, I wouldn't have gotten very far.”

That attitude has served Emerson well throughout her storied career. She is a professor emeritus at the Salk Institute for Biological Studies in La Jolla, California, where she also served as chair of the faculty. More recently, Emerson joined the Knight Cancer Institute's Cancer Early Detection Advanced Research center (CEDAR) as a visiting Distinguished Scientist directing research initiatives.

Science wasn't the original plan for Emerson, who hails from Eugene, Oregon. “I was never very good at chemistry, and I really didn't like dissecting frogs,” she smiled. As a child, she wanted to be a boxer, like her dad, and was frequently his sparring partner. In high school, she thought she might pursue art — until she got to University of California, San Diego, and took her first biology class.

“We were studying DNA protein interactions at the molecular level to understand how genes

are regulated,” she said. “It was beautiful, almost like art in a way,” she said. “That's when science grabbed me.”

During her long career as a molecular biologist, Emerson studied gene regulation, working on the way that genes are regulated in red blood cells. Then she got to wondering: what happens when things become de-regulated, as they do in cancer? That simple question led to groundbreaking research on P53, a protein that suppresses tumors.

During her 31 years at Salk, Emerson made critical discoveries about the ways breast cancer cells become drug resistant and how tumor cells blunt the immune system's response to cancer. She also became a fierce advocate for women scientists, and filed a gender discrimination suit to ensure that she and her female colleagues were treated fairly. Though she believes that conditions are improving for women in the world of science, she said there's still work to be done.

“I think women need to know that it's okay to speak up and not always agree with the power structure,” she said. “You don't have to be strident, but you do have to be strong.”

As for her stint at OHSU, which was originally a six-month posting, well, she's already extended it. “I'm in heaven here,” she said. “There's an effort for transparency and an effort to include people that I haven't experienced before. It's a welcome way to do science.”

DONOR SPOTLIGHT

/// Glenn and Marilyn Hart



Marilyn Hart likes to joke that her longtime doctor, Casey Eye Institute Director David Wilson, MD, the Paul H. Casey chair in ocular oncology, once told her she could be a “poster child” for successful eye surgeries. She is deeply grateful for the care she has received at Casey Eye Institute over the last 25 years. An eye disease called keratoconus damaged her corneas, blurring and distorting her vision. She has undergone multiple cornea transplants as well as glaucoma surgery and the repair of a detached retina. “Were it not for Casey Eye Institute, Marilyn would have suffered blindness a long time ago,” said her husband, Glenn.

Marilyn credits her good health to her excellent doctors: Larry Rich; John Morrison, the Fred P. and Joan Thompson Family endowed professor; Winston Chamberlain; and Wilson. Having faced multiple health challenges over many years, Marilyn knows how important it is to have somewhere to turn, and a health care team

you can trust. “I’ve had a long association with a lot of fine people at Casey,” she said. “My doctors have been wonderful. It’s a comfort to know that these very professional people are so caring and concerned for their patients.”

Marilyn saw the same care and attention given to another family member, who was born with a rare condition that caused blindness in one eye. Like Marilyn, he underwent multiple surgeries at Casey and today is thriving.

It’s no surprise that the Harts are among the institute’s most loyal supporters. They are committed to doing what they can to help others preserve their sight.

Having built a thriving family business over more than 40 years, the Harts feel fortunate that they’re able to contribute through philanthropy. But they would be the first to tell you that their true wealth lies in their close-knit, multigenerational family.

Their story began when a mutual friend set them up on a blind date. Glenn had recently graduated from the University of Missouri; Marilyn was still a student there. They went out for burgers and a movie — and immediately clicked. “Marilyn has an upbeat, cheery personality,” said Glenn. “She was the kind of person I was looking for.” Marilyn was pleased to discover that her date was a full six inches taller than her own 5’8” frame. She was impressed by Glenn’s politeness. “We were instantly compatible,” she said. After Marilyn graduated and Glenn completed a term in the Air Force, they married.

With a degree in forestry, Glenn chose to pursue a career in building materials and the lumber industry, and the couple moved west to Oregon. “We’d never seen country this beautiful,” said

“Were it not for Casey Eye Institute, Marilyn would have suffered blindness a long time ago.”

Glenn. “We thought this was a place we’d like to make our home.” The Harts eventually settled in Lake Oswego, where they would raise their three children and grow their family business.

Glenn founded his own company, OrePac, in 1976 to distribute building products such as lumber, decking, doors, millwork and siding. Now, 43 years later, OrePac is still going strong. The family also acquired a second business, International Wood Products, which distributes building materials and select quality lumber products. Their two sons and daughter are now responsible for the executive management and operations of the family businesses.

“We’ve now turned it over to a second generation — and two of our grandchildren are the third generation working in the business,” said Glenn. This continuity extends to their employees. “We have several employees who have been with us 30 years or more,” said Glenn.

They created the Hart Family Foundation to fulfill their community service goals. “In the early years of growing a business and growing a family, there aren’t enough dollars to go

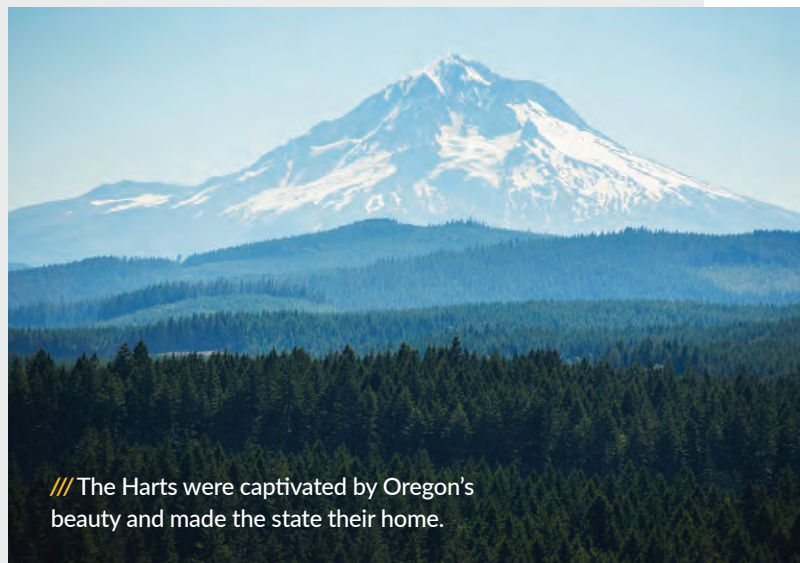
around,” said Glenn. “At this later point in our lives, we wanted to make sure that we share some of our successes.”

Their children have also become involved in the Hart Family Foundation, contributing to the Gary and Christine Rood Family Pavilion, OHSU’s new guest house for patients who must travel long distances for specialized care.

Marilyn’s experience teaching special education students at Eliot Elementary School in north Portland (now Boise-Eliot/Humboldt) and her strong faith inspired her passion for education. She supports learning opportunities and after-school programs such as Self Enhancement, Inc.

The Harts have contributed consistently to OHSU capital campaigns, including a special gift in 2018 to help build a new facility so that Casey Eye Institute can serve more patients and advance its groundbreaking research.

Today Glenn and Marilyn divide their time between Oregon and California and enjoy spending time with their three children and 11 grandchildren. “Not bad for a blind date,” said Marilyn. ///



/// The Harts were captivated by Oregon's beauty and made the state their home.



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