


# FINDINGS

Summer/Fall 2024 • [omrf.org](http://omrf.org)



77 Ways to Say Thank You



**STARTING YOUNG**

Since 1979, OMRF has been hosting annual Junior Scientist Days for students from Putnam City Schools. It's the foundation's way of saying thank you to the district, which has raised almost \$4 million for cancer research at OMRF, including a \$106,000 gift in 2024.

# FINDINGS

Summer/Fall 2024

## FEATURES



### THE YEAR OF LIVING THANKFULLY

# 10

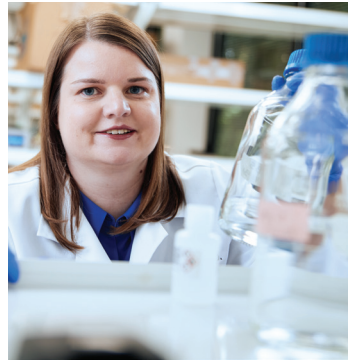
OMRF marked its 77th birthday with a statewide gratitude tour



### OUR PLACE IN HISTORY

# 18

OMRF's most important artifacts find a new home



### LONG TIME COMING

# 20

Dr. Heather Rice's return to OMRF marks the culmination of a two-decade journey

### ALSO IN THIS ISSUE

#### FINDING PURPOSE IN LOSS

**4** Grief reminds OMRF's president of the importance of the foundation's mission

#### VOICES

**5** Chase Tabor says his summer at OMRF was eye-opening

#### ASK DR. JAMES

**6** Making sense of the tangled web of dementia and breast cancer

#### MORE THAN MEETS THE EYE

**7** Researchers studying vision loss make a surprising discovery about the lungs

#### WHEN ART IMITATES SCIENCE

**8** A new sculpture salutes the life-changing work of one OMRF scientist

#### CLUES TO EXTENDING FERTILITY

**9** Can research from OMRF help women give birth later?

#### PAWS FOR RESEARCH

**22** OMRF's MS Center investigates if dogs can help patients with mobility issues



Chartered in 1946, OMRF is an independent, nonprofit biomedical research institute dedicated to understanding and developing more effective treatments for human disease. Its scientists focus on such critical research areas as cancer, diseases of aging, lupus and cardiovascular disease.

CHAIRMAN OF THE BOARD Len Cason, Esq.  
PRESIDENT Andrew Weyrich, Ph.D.  
EDITOR-IN-CHIEF Adam Cohen, Esq.  
ART DIRECTOR Jenny Lee  
WRITERS Kate Miller, Tony Thornton  
ILLUSTRATORS Olivia Lim, Book of Lai  
PHOTOGRAPHERS Brett Deering, Rob Ferguson,  
Charlie Neuenschwander

405-271-6673 • findings@omrf.org

©2024 Oklahoma Medical Research Foundation. All rights reserved. Reproduction in whole or in part without permission is prohibited.

COVER: Book of Lai

## PRESIDENT'S LETTER

# Finding Purpose in Loss

No parent should ever have to lose a child.

I write this after my wife, Amy, and I said goodbye to our son, Sam.

He passed away in June, just a few weeks shy of his 24th birthday.

As some of you know, Sam was born with a rare disease called Aicardi-Goutières syndrome. When doctors diagnosed him with this condition, they essentially told us to take him home and enjoy him, because he wouldn't live long.

Boy, did Sam prove them wrong.

He outlived his diagnosis by more than two decades. And he filled that time with more joy, love and adventure than most people experience during lifetimes that stretch several multiples of that.

When Sam died, it stunned us. Yes, we knew that he'd faced and continued to face profound medical challenges. And that every day he lived, he was beating the odds.

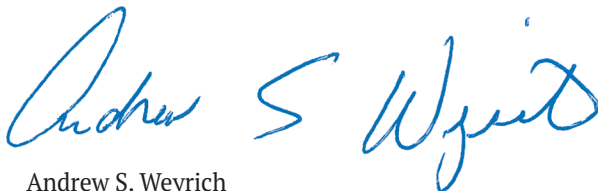
Perhaps we fooled ourselves into thinking that, because he'd overcome so many obstacles, he would continue to do so. Or maybe, as Amy and I and our daughter, Sarah, sometimes tell ourselves, Sam just decided he didn't want to burden us with his care any longer.

However, caring for Sam was never a burden. To the contrary, it was a privilege. He lit up our lives, and even months after his passing, we are still struggling to move forward without him.

Still, if we could find a silver lining in his loss, it's been the extraordinary show of compassion and support we have received from across Oklahoma and the OMRF community.

Sam loved his new home state and so enjoyed being part of the OMRF family. Amy, Sarah and I are so grateful to everyone we've met in Oklahoma for accepting him from day one and for making the final 2 ½ years of his life so wonderful.

We hope that Sam's beautiful spirit will serve as an inspiration – and that his life will remind us how important it is to strive to treat and cure human diseases like the one that afflicted him.



Andrew S. Weyrich





**This experience has opened my eyes to the scientific process that precedes the development of any treatment. If I'm ever in the position of prescribing a medication to a patient, I now have some understanding of the years of work leading up to it.**



## Chase Tabor

### John H. Saxon Summer Scholar

During his internship at OMRF this past summer, aspiring medical school student Chase Tabor of Frankfort, Illinois, experienced his first onion burger – “It was wonderful!” – and performed experiments under the supervision of Dr. Courtney Griffin, OMRF’s vice president of research. Tabor, a midshipman at the U.S. Naval Academy, was among four interns this summer in OMRF’s John H. Saxon Service Academy Summer Research Program. His career goal is to serve as a Navy physician.

## ASK DR. JAMES

# A Link Between Breast Cancer and Dementia?

Dear Dr. James,

Can metastatic breast cancer cause or contribute to dementia?

Stephanie Fowler  
Norman, OK



### Dr. James Prescribes

Understanding the relationship between breast cancer and dementia is quite complicated. Numerous epidemiological analyses, which look at statistics gathered from large numbers of people and attempt to establish correlations, have yielded decidedly mixed answers.

For example, a pair of studies from 2023 reached quite different conclusions. One, gathered from an analysis of Swedish women ages 50 and over during a 25-year period, found that those who had survived breast cancer had no greater risk of dementia than their cancer-free counterparts. However, the researchers determined that those women diagnosed with breast cancer after age 65 had a higher risk of dementia – a category that included Alzheimer’s disease as well as dementia from other causes – than their peers without a cancer diagnosis.

This finding ran contrary to a study from South Korea, which found that a diagnosis of breast cancer was associated with a “remarkably” decreased risk of dementia. That conclusion echoed those from earlier studies, which had likewise identified a so-called inverse association

between the two conditions. The newest findings, the authors wrote, “strongly suggest” that a diagnosis of breast cancer lowers a woman’s risk of dementia, “regardless of the adverse effects of cancer treatment on cognitive function.”

Still, “chemo brain” is a well-documented phenomenon. Following chemotherapy, up to 75% of patients report cognitive deficits that include difficulties with attention, concentration, planning and working memory. And those issues can continue for significant periods – sometimes, many years – following the end of treatment.

Attempting to separate these effects from other forms of cognitive decline, especially in older populations, can prove extremely challenging.

Meanwhile, other studies have looked at breast cancer treatment using adjuvant hormone therapies such as tamoxifen and aromatase inhibitors. They have found a lower incidence of Alzheimer’s disease and other forms of dementia in breast cancer patients who were treated with these therapies.

Research will continue to examine ways to prevent, or at least delay, dementia in breast cancer patients. For example, at OMRF, our newest principal investigator, Dr. Rufe Lu, is focusing on the impact of inflammation and autoimmunity in neurodegeneration. This is important not only in autoimmune diseases like multiple

sclerosis, but also in cancer, aging and other chronic inflammatory conditions.

The studies I’ve mentioned here represent only a small portion of the research in this area. But I think they offer a flavor for how confusing the picture is. With so many factors involved, it seems unlikely we’ll soon have a clear answer about the relationship between breast cancer and dementia.

*Dr. Judith James is OMRF’s executive vice president and chief medical officer. Submit your health questions at [omrf.org/AskDrJames](http://omrf.org/AskDrJames).*

### Breast Cancer Risk

In women, breast cancer is the second most common form of cancer, trailing only skin cancer. Each year, doctors diagnose more than 300,000 new cases in the U.S., representing roughly 30% of all cancer diagnoses. A woman has a 1 in 8 chance of being diagnosed with breast cancer in her lifetime. The average age of diagnosis is 62, and the five-year survival rate is 91%.

*Source: American Cancer Society*

# More Than Meets the Eye

Researchers studying vision loss make a surprising discovery about the lungs

**D**r. Courtney Griffin has a word for vascular biologists: “lucky.” Griffin, OMRF’s vice president of research, studies the development and maintenance of our blood and lymphatic vessels. Because these vessels span the entire body, scientists who investigate them often go where the science takes them. Most recently in her lab, it was to the lungs – by way of the eyes.

In 2020, Griffin and Dr. Chris Schafer, a postdoctoral researcher on her team, made an exciting discovery about reversing vision loss caused by excess blood vessels. In a follow-up experiment, Schafer found one of the proteins involved in controlling the growth of vessels in the eyes was doing something curious in the lungs.

In infections, immune cells travel through blood vessels to fight pathogens. A protein called ERG acts as a gatekeeper, telling vessels when to become porous for these cells to escape where the body needs them most. Sometimes, those holes become too big and stay around too long.

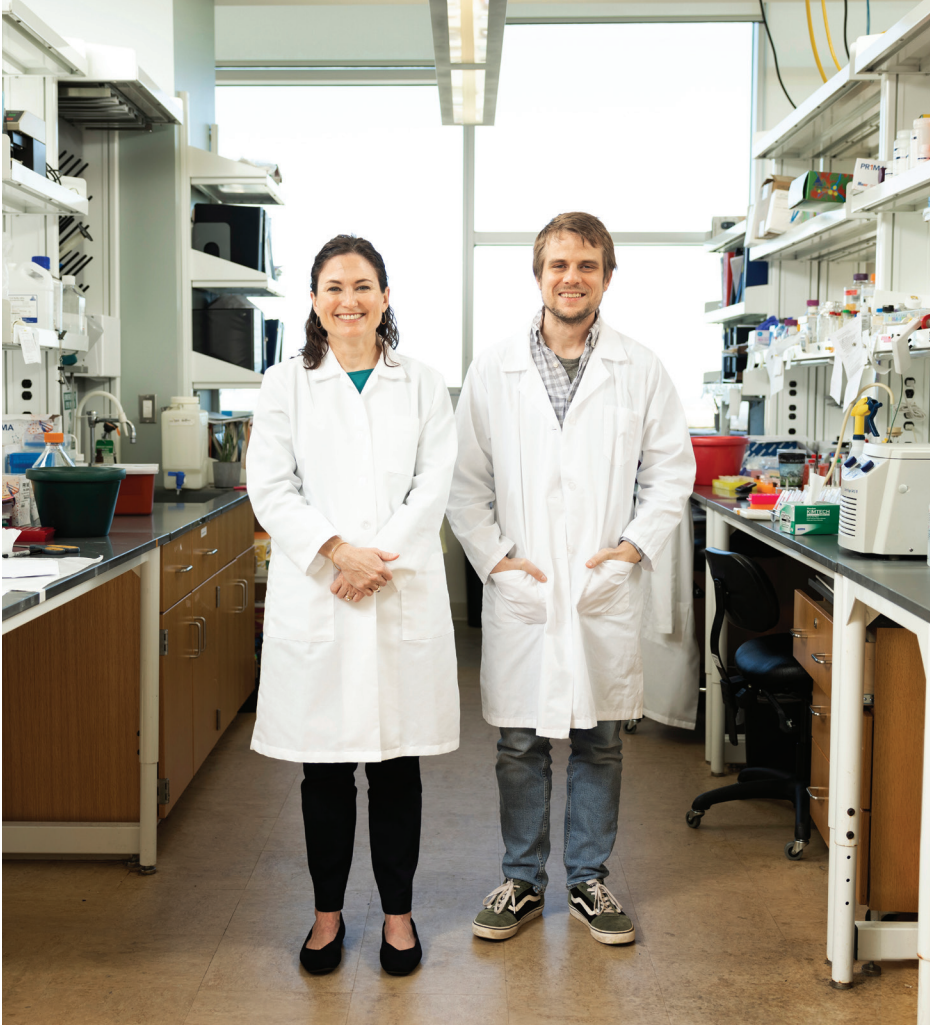
In the case of infections like influenza, Covid-19 and sepsis, that can spell trouble for the lungs.

“This can flood the air sacs in the lungs with fluid,” says Schafer, who joined Griffin’s lab in 2016.

The overreaction can lead to acute respiratory distress syndrome, or ARDS. The condition makes breathing difficult and prevents oxygen from getting into the body. Often, it requires treatment with a ventilator. About 190,000 Americans are diagnosed with ARDS annually, according to the American Lung Association. Of those, the death rate is as high as 40%.

Schafer found that in research models of certain respiratory viruses and sepsis, the body stops producing ERG only in the lungs. Without the gatekeeper protein, the lungs fill with fluid.

“It happens extremely quickly,” he says. “What we’re searching for is a way



**Drs. Courtney Griffin and Chris Schafer hope their research leads to therapies for a deadly lung condition that affects about 190,000 Americans annually.**

for the body to counteract the immune overresponse and begin making ERG again as rapidly as possible.”

Ideally, says Griffin, who holds the Scott Zarrow Chair in Biomedical Research at OMRF, “that would come before a patient needs a ventilator.” Ventilators can increase the risk of pneumonia, lung damage, blood clots and secondary infections.

The pair is now trying to understand what’s inhibiting ERG in lung cells in the first place. “Once we know that, we’ll have our target for intervention,” Schafer says.

The work will take time, and they don’t know where the road will weave along the way. But one thing’s for certain: they both feel fortunate to be on it.

# When Art Imitates Science

A new sculpture salutes the life-changing work of one OMRF scientist

**D**r. Rod McEver spent decades on experiments that would lead to a first-of-its-kind treatment for sickle cell disease. During that time, countless thoughts crossed his mind. “I bet this research will one day inspire a piece of art” was not one of them.

Still, thanks to a grant from the Fred Jones Family Foundation, that’s what happened earlier this year.

At a ceremony in June, OMRF unveiled Perseverance, a sculpture honoring McEver’s work. Created by artist Stan Carroll, known for the iconic SkyDance Bridge spanning Interstate 40 at Oklahoma City’s Scissortail Park, the 12-foot-tall installation serves as the centerpiece of renovations of OMRF’s central courtyard. The project also includes new landscaping and shade structures that serve patients, their families and OMRF employees. The renovations were made possible by a Mary Eddy Signature Gift, which provides \$75,000 for beautification at an Oklahoma City nonprofit.

Kirk Hall, chairman and president of the Fred Jones Family Foundation, helped dedicate the space, which he says will be “a respite, a place of solace, a piece of community where people can celebrate the great work of OMRF.”

At the ceremony, Dr. Judith James, OMRF’s executive vice president and chief medical officer, emphasized that the reimagined space would bring members of the OMRF community together. “Here, scientists and patients can cross paths,” she said. “Our researchers can see people impacted by the diseases they study, and our patients can see that there is hope on the horizon.”

McEver, who retired as OMRF’s vice president of research in 2023, discovered a protein that plays a crucial role in inflammation and blood clotting. His work culminated in Adakveo, the first FDA-approved treatment for the pain crises associated with sickle cell disease. The condition, named for the misshapen blood

cells that cause the debilitating and potentially life-threatening condition, affects an estimated 100,000 Americans and 5 million people worldwide.

“No one reaches their highest potential without the help of others,” says McEver. “I am happy to be a small part of the lab, foundation and global research communities that made this critical work possible.”

Carroll’s sculpture offers a sharp, abstract representation of a sickled blood cell. The piece’s title, Perseverance, recognizes that scientific discoveries rarely happen overnight, but rather result from a career of intensive focus and diligence.

“It also honors the perseverance of the people who live with sickle cell and other diseases,” says Dr. Courtney Griffin, who succeeded McEver as the foundation’s vice president of research.

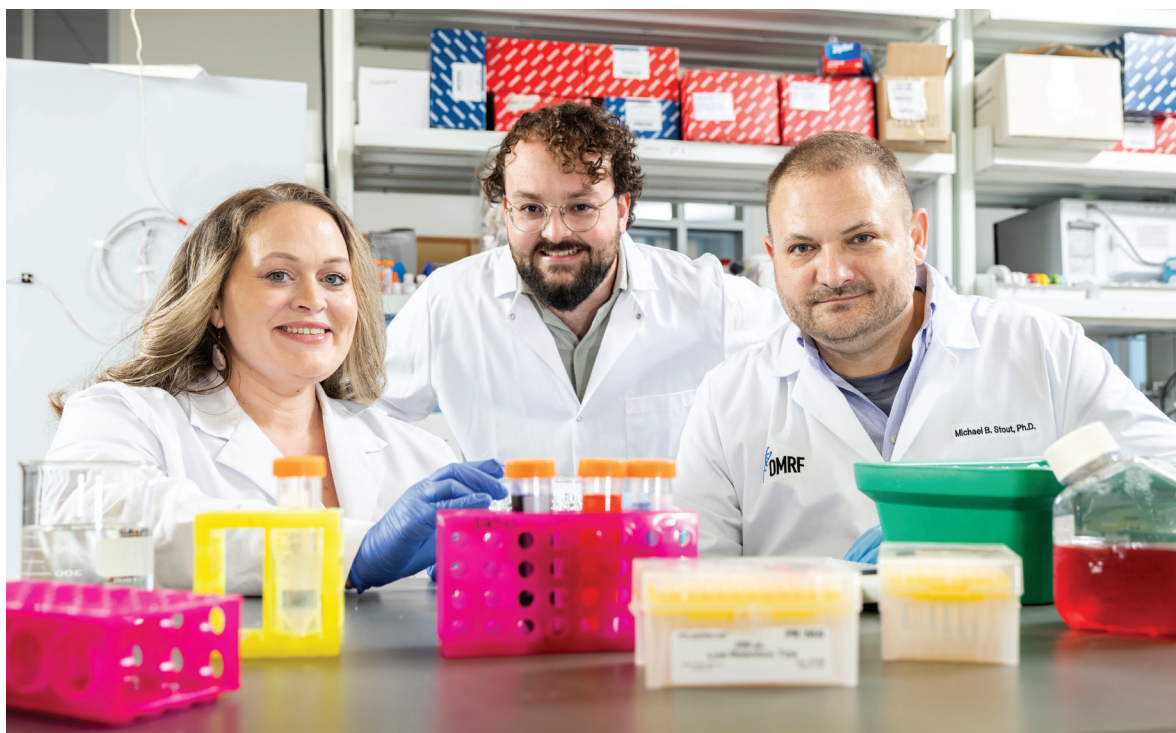
The sculpture is Carroll’s second to adorn OMRF’s campus. He also created Oklahoma Wind, which hangs in OMRF’s research tower.



**Fred Jones Family Foundation Vice President Wendy House holds the ribbon as Foundation Chairman and President Kirk Hall dedicates Perseverance, a sculpture honoring the work of Dr. Rod McEver (left).**



## EUREKA MOMENTS



**Drs. Sarah Ocañas, José Victor Isola and Michael Stout have found that inflammation and an accumulation of immune cells may prevent or complicate later-in-life pregnancies.**

# Clues to Extending Fertility

Can research from OMRF help women give birth later?

**M**enopause officially signals the end of female fertility. But for the majority of women, their ovaries begin to decline around the age of 35, many years before their menstrual cycles cease. This process can lead to a host of reproductive issues, ranging from difficulties conceiving to birth defects.

The driver of that reproductive downturn isn't clear, but recent experiments conducted by OMRF scientists Drs. José Victor Isola, Sarah Ocañas and Michael Stout offer new clues. And with the upward trend in the age of pregnant women, the knowledge is critical. According to 2020 data from the Centers for Disease Control and Prevention, nearly 19% of all pregnancies in the U.S. were in women ages 35 years and older.

Isola, Ocañas and Stout demonstrated for the first time that, in preclinical models that correspond to a woman in her mid- to late 30s, a particular type of immune cell

accumulates more rapidly in the ovaries. "Now we can begin trying to understand why this is happening," says Isola, a postdoctoral researcher in Stout's lab. "Our findings represent a potential step toward trying to slow the ovarian aging process."

---

**Nearly 1 in 5 pregnancies are now in women ages 35 or older**

---

The experiments also showed that around the same time, inflammation forms in cells that encircle developing eggs. The inflammation complicates the process of an egg maturing to the point it can be ovulated and fertilized.

The scientists found a buildup of collagen in the normally pliable ovarian tissue, causing it to become fibrotic. "This is very important," Ocañas says, "because when the tissue becomes hard

and stiff, it makes ovulation of the egg much more difficult."

"We still don't know which came first," Stout says. "Are those cells that encircle the egg drawing in all those immune cells, or are the immune cells causing the inflammation? That answer will require additional research."

The journal *Nature Aging* recently published the team's findings, which were made possible through funding support from the National Institutes of Health, Oklahoma City's Presbyterian Health Foundation, and the Global Consortium for Reproductive Longevity and Equality.

Stout and Isola now plan to test whether inhibiting a specific protein complex reduces inflammation in the cells encircling the egg. "We're still in the early stages of discovering why the ovary ages so fast and why it's one of the first human organs to lose its function," Isola says. "These experiments provided information that we can build upon."





# The Year of Liv

OMRF marked its 77th birthday with



By Adam Cohen • Illustration  
Photos by R



# Living Thankfully

with a statewide gratitude tour



Illustrations by Book of Lai  
by Rob Ferguson



Kingfisher



Andy Weyrich stood up in front of the crowd that had gathered at Pete’s Place, an Italian restaurant on the outskirts of McAlester, Oklahoma.

“Why are we here?” the president of the Oklahoma Medical Research Foundation asked. The audience was silent, save for the clinking of a few pieces of silverware as people put down their forks and knives to listen.

Weyrich, wearing a pair of khakis and an OMRF polo shirt, took a few steps away from where he’d been seated. He extended his arms, palms raised, and cocked his head to the side. “What’s the story behind this?”

Again, nothing.

Perhaps it had been this way 77 years earlier. In 1947, Gov. Roy J. Turner declared a statewide research week, and a dozen nationally prominent scientists from institutions like the Mayo Clinic and Rockefeller University were dispatched throughout the state. Their charge: to advocate for the creation of a new medical research foundation in Oklahoma.

Over the course of seven days in May, the scientists and other advocates crisscrossed Oklahoma in Edsels and Hudsons, holding 137 meetings in 42 cities. In auditoriums and banquet halls, they sketched pictures of an institute

that would, in the words of its founding documents, conduct “scientific investigations in the field of medical research to attack killing and crippling diseases about which little is known by science.”

How had the audiences reacted to this ambitious vision? Perhaps they’d risen to their feet and cheered. Or maybe they’d peppered speakers with skeptical questions. But, most likely, just like the group assembled that evening in Pittsburg County to hear Weyrich, they’d started out quiet. Listening. Wanting to understand. To learn and process.

If they had reactions, those would come later. After they’d had a chance to digest the presentation.

Unlike his forebears in 1947, though, Weyrich wasn’t painting a portrait of some theoretical institute. No, in 2024, he was talking facts. History. Concrete accomplishments.

You see, those first meetings planted the seeds for a statewide fundraising drive. And even though the concept of building a research institute from scratch might have been, as Weyrich told the crowd at Pete’s that night, “a hail Mary,” it resonated with Oklahomans.

They gave \$2 million, and OMRF was born.

Seventy-seven years later, the foundation has achieved breakthroughs its founders couldn’t have imagined. Life-saving medications for rare blood disorders. The first therapy approved by the Food and Drug Administration for the pain crises in sickle cell disease. Discoveries that have transformed

# OMRF modeled 77 for 77 after the campaign that gave birth to the foundation

the treatment landscape for HIV/AIDS, rheumatoid arthritis and lupus.

Weyrich would detail all of this and more in his presentation that night. And the folks who'd come to see him would ask plenty of questions and say plenty of nice things about OMRF. But before all that, OMRF's president would start by answering the questions he'd posed.

What was he doing in Krebs?

"Really," he told the audience, "it's pretty simple." He grinned. "This is a gratitude tour. We're here to thank you."

**THAT GRATITUDE TOUR** kicked off on Aug. 28, 2023, the 77th anniversary of OMRF's founding. In OMRF's Gaylord Pavilion, 300 or so friends and supporters of the foundation gathered to launch the initiative. In front of a massive state map, Weyrich detailed the plan.

Weyrich and the OMRF team had broken the state into 25 districts, which mirrored the blueprint OMRF's founders had drawn up in the initial fundraising campaign in the 1940s. For this 77th anniversary tour, Weyrich explained, OMRF would host events in 25 "focus" cities, one located in each district.



Along the way, Weyrich would touch down in all 77 of the state's counties.

The effort, which Weyrich dubbed "77 for 77," was emphatically not a fundraiser. Invitations to events made clear that attendees should "leave [their] checkbooks at home." Weyrich wanted only to acknowledge and thank the communities that had built OMRF. And he'd do so by going out into those very communities.

The first foray beyond Oklahoma City happened in September, in Woodward. Events in Duncan, Ardmore, Chickasha, Stillwater and Weatherford soon followed.

The team quickly established its routine. Vice President of Philanthropy & Community Relations Penny Voss and Vice President of Government Relations & Advocacy Lisa Day identified community members willing to serve as local chairs. Working with those chairs, as well as OMRF's internal donor data, they'd put together an invitation list.

Meanwhile, members of OMRF's Philanthropy team would go out into the community to select a venue. On the day of the event, they'd arrive – in cars or, if the crew was big enough, a rented sprinter van – hours beforehand to get the place



ready. Some planted OMRF flags out front, while others set up inside: pop-up banners and registration tables stocked with guest lists, nametags and OMRF giveaways like lip balm and mints. They'd make sure the WiFi was enabled so people could don virtual reality goggles that allowed them to "tour" OMRF's labs. And they'd get the audio and visual systems ready for presentations by Weyrich and OMRF scientists, who took turns making the trips from Oklahoma City so audiences could get a taste of the projects underway in the foundation's labs and clinics.

By the time the road show arrived in Guymon a few weeks before Thanksgiving, says Voss, "We had it down." Still, she was concerned. Guymon sits in Oklahoma's Panhandle, 263 miles from OMRF. How interested would people be to learn about a research foundation a four-hour drive away?

She needn't have worried. At the event, the Guymon district chair, Dr. Martin Bautista, kicked off the proceedings with a rousing rendition of "My Way," the Frank Sinatra standard. And while he belted out the lines "Regrets, I've had a few," Bautista certainly had none that evening. A gastroenterologist who'd been practicing in Texas County for more than a quarter century, he'd mustered a crowd that filled a local venue almost to overflow. They listened attentively as Weyrich said his thanks for all that Guymon residents had done to support the foundation and then to Dr. Bob Axtell, who explained how his lab at OMRF had made a series of new findings about multiple sclerosis and a related neurodegenerative disorder.

By the time the evening was done, Weyrich knew that he'd found someone special in Bautista. "We hoped 77 for 77 would help us identify some new friends and champions for OMRF," he says. "The energy and enthusiasm that Dr. Bautista showed in putting together such a successful event just blew us away – especially when you consider that when he did that, he'd never even been to OMRF." In May, Bautista joined the foundation's Board of Directors. And that, he says, has provided him with a new mission: spreading the word about OMRF beyond the foundation's Oklahoma City core.

"I want to help make the Panhandle aware that such a magnificent organization exists, and that it was built upon the grassroots efforts of Oklahomans," Bautista says. "It deserves our attention and support."

**WHILE VOSS AND HER TEAM** devoted their energy to organizing get-togethers in 25 focus cities – events in which Weyrich played a central role – OMRF's president mapped a course around the state heavy on two-lane highways and county courthouses. After all, he says, he'd named the campaign "77 for 77" for a reason. "That meant I needed to visit all 77 counties in Oklahoma," he says. "No exceptions."

Often, he and his family, who accompanied him, would take to the road both the day before and the day after a scheduled event. That would allow them to spend time in surrounding counties, where they enjoyed a mix of scheduled meetings and improvised stops. Whenever possible, the Weyrichs arranged to spend time with longtime OMRF supporters.



Norman



# BRINGING SCIENCE TO OKLAHOMA'S CLASSROOMS

For Kim Henry, Oklahoma's former First Lady and a co-chair of 77 for 77, the campaign offered more than a way to connect OMRF with communities around the state. It also presented a chance to promote science education in classrooms.

In partnership with the Sarkeys Foundation, where Henry serves as executive director, OMRF built an "experiment in a box" that it distributed over the past year to 217 seventh-grade classrooms across Oklahoma, including at least one in every focus city and in 74 of the state's 77 counties.

Created by OMRF Vice President of Research Dr. Courtney Griffin and Sarah Specht, a science teacher at Marlow Middle School, the experiment involved making a substance essential to wound healing. For classrooms of 12- and 13-year-olds, it didn't hurt that the compound had a consistency similar to gummy worms. "We identified seventh-grade students because they seem to be the right age to learn from and enjoy this experiment," says OMRF Vice President of Government Relations & Advocacy Lisa Day.

The project also paid small stipends to every science teacher who oversaw the experiment in their classes. The teachers, who completed surveys following the experiment, gave the experience uniformly high marks. "They all want to do it again," says Day.



Some of the first donors they met this way were a mother and a daughter in Jefferson County, which sits on the state's southern border. They'd first come into contact with OMRF in the 1980s, when a family member received care at OMRF and the neighboring Oklahoma City VA Medical Center, the daughter told Weyrich as he sat on their front porch. She called the experience "transformative," says Weyrich. "It added years to his life." They've given to OMRF ever since.

A bit to the north, in Murray County, the Weyrichs paid a visit to a local high school, where Andy had agreed to speak to a science class. He gave his spiel about OMRF, but, as teenagers are wont to do, the students grew restless. So, Andy's wife, Amy, decided to change things up a bit.

Amy, an exercise physiologist, stepped to the front of the classroom and introduced their son, Sam, who lived with a rare genetic disease. She also introduced Baby G, who served as Sam's service dog and constant companion.

Amy then proceeded to teach an impromptu lesson about service animals and the support they can provide. "The students loved it," remembers Andy. And the best part? At the end of the session, Baby G went "off duty," and the kids got a chance to pet the amiable black Labrador. "It definitely wasn't your typical anatomy and physiology class," says Andy.

For Amy – who, like Andy, is new to Oklahoma – the campaign offered the chance to get to know her new home state. It was an opportunity she wholeheartedly embraced.

"I love to go to small towns, and I love to stay off highways, so it's like a trip that was tailor-made for me," she says. "It let me dive into the state's history, too, and that's been fantastic."

The Weyrichs' photo library is now filled with shots of them at local courthouses and historical societies, at diners and pharmacies. "My favorite stops are the ones that aren't

scheduled," says Amy. "They're the ones where we just walk into a place and strike up a conversation."

One of those conversations took place in Sayre, when the Weyrichs stopped in to grab a cup of coffee on the heels of a visit to the Beckham County Courthouse. Andy began chatting with another patron in the coffee shop. It turns out the man had worked with OMRF years ago, when he'd trained as a first responder. Later, he'd gone into the funeral home business; he told Andy he'd always made it a point to recommend that, in lieu of flowers, people consider making a memorial donation to OMRF.

"It was the darnedest thing," says Andy, shaking his head and smiling at the memory. "We were in this little coffee shop in western Oklahoma. And then, within a few minutes, everything had connected back through OMRF."

**THE CAMPAIGN PAUSED** over the winter holidays, then kicked back into gear the week after New Year's in Miami. Events in Alva, Kingfisher, Muskogee, Bartlesville and Lawton soon followed. By the time Andy stood in front of the crowd at Pete's Place, he and Amy had traveled nearly 8,000 miles. This presentation would mark his 23rd in a focus city, and the Weyrich family had by then visited all but a baker's dozen of Oklahoma's 77 counties.

You'd imagine so much driving, so many nights away from your own bed, that it would sap your energy. Make you eager to get back home. Back to your regular routine.

And sometimes, for Andy, it did. But just as often, when he was in Oklahoma City for a week or two, he'd find himself getting antsy. He'd envision loading up the family's minivan for a three-day trip. Then hitting the road with Amy, Sam and Baby G.



Over the past year, OMRF touched down in all 77 of Oklahoma's counties, with visits to 128 cities and towns. All told, the journey covered 8,644 miles.

# “It doesn’t matter who you are politically. OMRF just does what’s important to save lives.”



The Weyrichs’ daughter, Sarah, even joined them on one leg of the trip. An actress, she was rehearsing to star in a production of “Oklahoma!” at a Michigan dinner theater. Thanks to 77 for 77, she got to visit a museum in Claremore dedicated to the state’s namesake musical.

For decades, Andy had spent the lion’s share of his life in a lab. Now, 77 for 77 had given him a chapter he’d never expected. A chance not only to explore his new home but to do so with the people he loved most. And the preciousness of that time would become even clearer when Sam unexpectedly passed away a few weeks shy of his 24th birthday.

The loss was devastating to the Weyrichs, but they took comfort in knowing Sam had reveled in nearly every moment of the experience. “Sam was game for anything,” Amy says. “So, traveling through Oklahoma for a year on an OMRF adventure was a dream job for him.”

Sam had a special connection with animals, especially horses. In Murray County, the family visited a ranch where wild mustangs roamed free. That night, remembers his father, “Sam was in heaven.”

Most of all, says Amy, “Sam liked any social situation. With 77 for 77, he got to meet so many people.”

Sam’s condition made eating extremely difficult, so his parents often had to supplement his meals with high-calorie liquids. The family’s journey through Oklahoma provided an unexpected way to do this.

Each day they were on the road, Andy and Amy would find a Sonic, a Braum’s or a local drugstore with a soda fountain. When their minivan came to a stop, Sam knew one of his very favorite treats would soon follow. His face would light up in anticipation of that chocolate malt.

**THROUGHOUT OMRF’S 77TH YEAR**, each event in each focus city proved different. Crowd sizes ebbed and flowed, from packed halls to smaller groups gathered around a table or two. Venues had their idiosyncrasies. And no two OMRF presentations were the same. Sometimes, researchers described their work on lupus and autoimmune disease. Others counseled listeners about how to age healthily.

“We’ve had a lot of miles and a lot of smiles, all in the name of science,” says Dr. Courtney Montgomery, a Duncan native and OMRF data scientist who joined the campaign for several stops around the state.

At Pete’s Place, Dr. Patrick Gaffney talked about how genetic sequencing he’d conducted had alerted doctors to a cancerous tumor hidden in a teenager’s kidney. “We may have saved his life,” Gaffney explained to the audience.

Following the presentation, Dorothy Crone, a retired nurse and transplant patient, recounted how an OMRF physician-scientist had provided her with much-needed counsel during the pandemic. “I’m immunocompromised, and I was turning into the hermit of McAlester,” she said. But the guidance she’d received from OMRF’s Dr. Judith James helped her map a safe course forward, she said, “so, I finally was able to get out of my shelter at home.”

Although she’d never met James, Crone said, “I feel like I know her.” And, “When I saw OMRF was coming to Pittsburg County, I just knew I had to go.”

A few seats away, Dr. William Wynn nodded in agreement. A dentist, Wynn had come in late, delayed by work. But, he said, “This was too important for me to miss.”

Wynn had a friend and colleague, Dr. Greg Watkins, who also practiced dentistry in McAlester. Watkins’ life had been changed by a discovery at OMRF, a drug to treat the rare blood disorder that afflicted him. “Every day, I’d wake up and wonder, ‘How will I deal with the fatigue and pain? How will I make it through the day?’” remembers Watkins. In the 17 years since he’s been taking the drug, he says, “Those are no longer questions I ask myself.”

And so it seemed to go in every community OMRF visited. One way or another, the foundation had made a difference in the lives of the people who turned out.

Weyrich and his team had conceived of 77 for 77 as a way to say thank you to Oklahomans. And yet, those who came to the events often did so to say thank you to OMRF.

**THE CAMPAIGN WRAPPED UP IN JULY**, with an event at the headquarters of the Choctaw Nation in Durant, the 25th and final focus city. Technically, there remained a few loose ends to tie up. A reception to celebrate 77 for 77’s conclusion would take place the next month at the Oklahoma Historical Society in Oklahoma City. And before then, the Weyrichs would touch down in the last few of Oklahoma’s 77 counties they’d yet to visit.

It was a little after noon when the OMRF team climbed into the Durant-bound black sprinter van parked in front of the foundation’s main building on 13th Street in Oklahoma City. As they had for a year, Philanthropy staff members filled the back of the van with flags, a folding wagon, and a bevy of blue plastic tubs loaded with the equipment and materials they’d need once they’d made the 152-mile drive.

One OMRF staffer liked to joke that 77 for 77 had taught the group lots of skills they’d never use again. But Weyrich had recently decided the campaign had done such an effective job at building grassroots connections and support that he wanted to continue it beyond OMRF’s 77th year, with annual presentations rotating through different cities in the state’s four quadrants, plus yearly events in Oklahoma City and Tulsa.

OMRF’s president imagines this kind of robust and consistent outreach, especially to rural parts of the state, will pay untold dividends to the foundation over the coming years. The more people are exposed to OMRF, the more Weyrich hopes they’ll come to see the foundation like Kingfisher district chair Paul Schulte does.

“It doesn’t matter who you are politically,” Schulte said when he introduced Weyrich at a 77 for 77 stop in February. “OMRF buries the hatchet.” And with that, Schulte made a gesture as if he were interring an ax in the earth, where it would no longer serve as an implement of war. “OMRF just does what’s important to save lives.”



**OUR PLACE IN**

# History

**OMRF'S MOST  
IMPORTANT ARTIFACTS  
FIND A NEW HOME**

**By Tony Thornton**

There's a storage room tucked behind OMRF's Wileman Learning Center that Adam Cohen doesn't like to think about. It's dark and it's dusty and it's crammed with exactly the sort of detritus you'd imagine an organization would assemble over the course of three quarters of a century: file cabinets, unwieldy stacks of documents, and uncategorizable odds and ends. Here's a lamp built with a piece of an actual torpedo shell, right next to an office chair with a peeling vinyl seat, right next to a collection of paintings of individuals who generally give the impression of being important but not particularly happy.

"Yeah, it's not the ideal space to serve as a repository for OMRF's most precious documents and photos," says the foundation's senior vice president and general counsel.

Still, for as long as anyone seems to remember, that's precisely how OMRF has used the storage room.

As OMRF's chief legal officer – and unofficial historian – Cohen had, from time to time, poked around the archives in search of this document or that. "I'd never felt great about keeping our institution's history in what was essentially grandma's attic," says Cohen. His uneasiness grew more acute with preparations for OMRF's 77th anniversary and accompanying 77 for 77 campaign.

Around that time, OMRF President Dr. Andy Weyrich took a tour of the Oklahoma History Center, which serves as a

repository and showcase for the documents, photos and objects that form the backbone of the state's past. He and Cohen talked, and the two agreed: The Center would make the perfect home for OMRF's archives.

"We're proud of our history, and we want to preserve it," says Weyrich. "We also want to share it, because we believe OMRF is an important part of our state's story."





DOMESTIC SERVICE		INTERNATIONAL SERVICE	
Check the class of service desired; otherwise this message will be sent at full rate telegram		Check the class of service desired; otherwise this message will be sent at the full rate	
FULL RATE TELEGRAM	SERIAL	FULL RATE	DEFERRED
DAY LETTER	NIGHT LETTER	CODE	NIGHT LETTER
CASH NO.		TIME FILED	
NO. WDS.-CL. OF SVC. PD. OR COLL.		CHARGE TO THE ACCOUNT OF	
Oklahoma Medical Research Foundation		9:15 a.m.	
May 24, 1949			

Send the following message, subject to the terms on back hereof, which are hereby agreed to

SIR ALEXANDER FLEMING  
THE WRIGHT-FLEMING INSTITUTE OF MICRO-BIOLOGY  
ST. MARY'S HOSPITAL MEDICAL SCHOOL  
PADDINGTON, LONDON. W.2, England

Delighted to receive your cablegram acceptance of plans for your dedication of Oklahoma Medical Research Foundation July 3. Respectfully request you write us following information. Biographical material; titles you prefer for press, radio usage; latest glossy photographs for newspaper use. Will make travel reservations requested including aeroplane New York to London July 14. Representatives of Foundation will meet you in New York when boat docks June 28. All Oklahoma feels honored that you will visit us. Will send full information concerning plans as they develop.

Hugh Payne, General Manager  
Oklahoma Medical Research Foundation

(Send by cablegram)

Telegraph your order for America's favorite magazines—HOLIDAY, 1 yr., \$5 • the Post, 1 yr., \$5 • LADIES' HOME JOURNAL, 1 yr., \$3. All prices U. S. only. No charge for subscription or when billed by publisher.

Publisher will, on subscriber's request, refund full amount paid for copies not previously mailed. Prices subject to change without notice.



**"I'D NEVER FELT GREAT ABOUT KEEPING OUR INSTITUTION'S HISTORY IN WHAT WAS ESSENTIALLY GRANDMA'S ATTIC,"**

OMRF put out feelers to the Oklahoma Historical Society, which maintains the state's archives at the History Center. The Historical Society's response was swift and enthusiastic.

"This collection will fill a considerable gap," says Mallory Covington, who oversees archival collections for the Historical Society. "Our goal is to include all aspects of Oklahoma's history, but until now we had very little representing medical research."

In a series of meetings, the two organizations sketched out a plan: OMRF would deed the entirety of its archives to the Historical Society, which would then catalogue and archive those photos and documents. The process would culminate with the creation of a digital, online iteration of OMRF's archives, which, along with all of the state's other collections, would be available to – and fully searchable by – the public.

For Weyrich, that last part was crucial. "At OMRF, we have always thought of ourselves as belonging to the entire state," he says. "Now, every Oklahoman will be able to access and learn about their medical research foundation."

Earlier this year, the first 40 or so boxes of items made their way from OMRF to the History Center, which sits across Lincoln Boulevard from the State Capitol. Another tranche will soon follow, ready to greet a newly hired library science graduate student who will perform the lion's share of the archiving under Covington's guidance. The project will be

underwritten by the Puterbaugh Foundation, a longtime OMRF supporter.

Puterbaugh Foundation President Justice Steven Taylor describes the project as "a perfect fit" for the McAlester-based philanthropy, which was created by coal magnate J.G. Puterbaugh, OMRF's second president. "Mr. Puterbaugh would approve of a gift that preserves the archives and the history of a place he dearly loved," says Taylor.

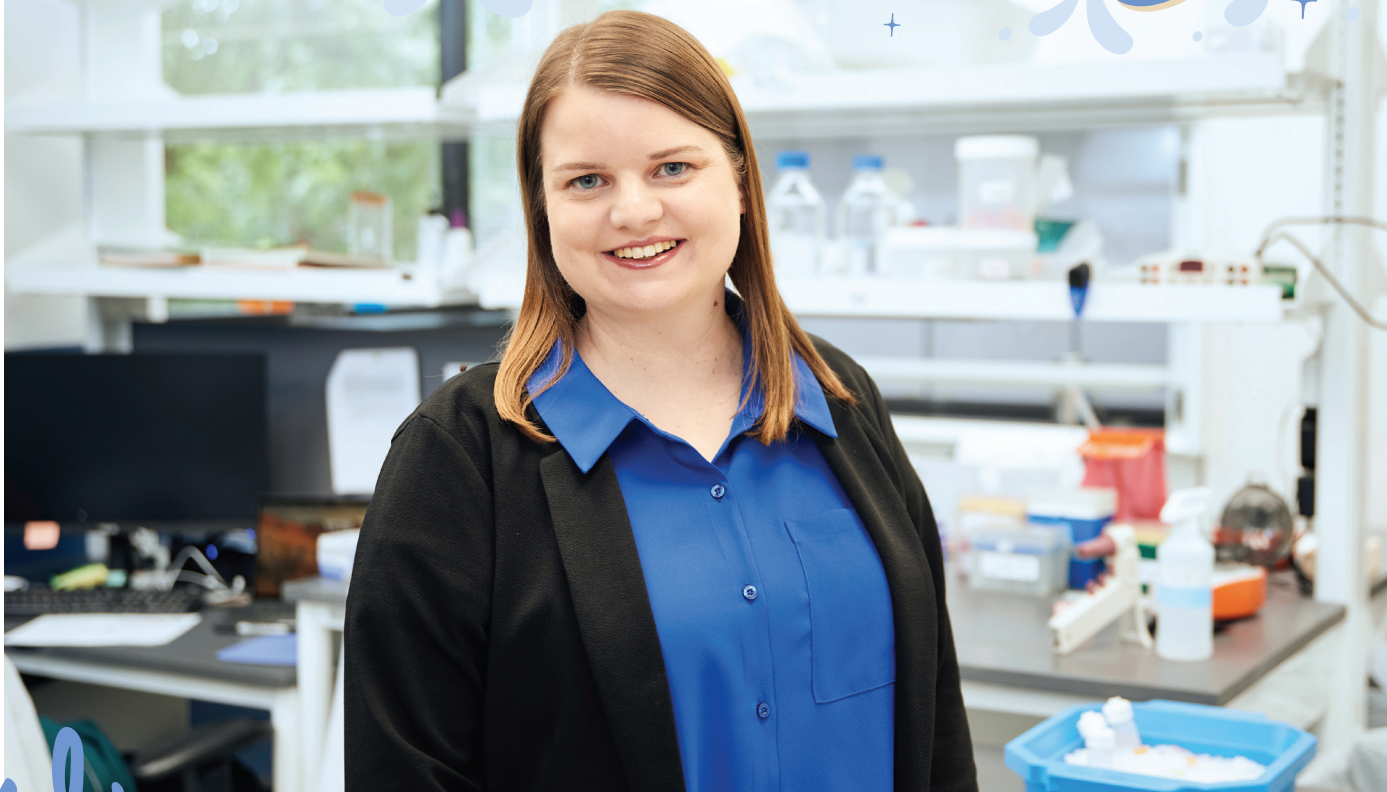
Like Puterbaugh, many other key figures in state history – Robert S. Kerr, Dean McGee, Fred Jones, E.K. Gaylord – played vital roles in the foundation's formative years. For Laura Martin, the Historical Society's deputy director of research, that underscores the value of the collection's addition. "These OMRF archives provide more background on some of the people who were influential in advancing Oklahoma and one of its key institutions," she says.

There's no timeline yet on when the project will be complete. However, the Historical Society provided a preview on Aug. 27, when it unveiled a year-long display of OMRF documents and photos at a celebration at the History Center marking the culmination of OMRF's 77 for 77 campaign.

Cohen, for one, says he's already resting easier knowing the collection is in good hands. "At OMRF, our medical research is indisputably world class. But our archiving skills?" He rolls his eyes and shakes his head. "Not so much." ■

# Long TIME Coming

BY KATE MILLER



When

Dr. Heather Rice looked out at the audience in Kingfisher, she saw a lot of familiar faces. “My whole family was there,” says Rice, an Alzheimer’s disease researcher who was presenting her research as part of OMRF’s 77 for 77 campaign.

Rice was born and raised in Watonga, a western Oklahoma community with a population of just over 4,000. When OMRF traveled to the area to share the foundation’s story in February of this year, she happily accepted an invitation to discuss her work, even though she’d opened her lab at OMRF a mere two months earlier. “I get a lot of motivation from sharing our science with people because, ultimately, they’re why we do what we do,” she says.

Rice also felt a special thrill in representing OMRF. The moment had been a long time coming.

In 2004, following her freshman year at the University of Oklahoma, Rice came to OMRF as a Sir Alexander Fleming Scholar, the foundation’s summer laboratory internship program for Oklahoma students. “It was the first time I ever walked into a lab or held

a pipette,” she says. “It sparked my interest in understanding the brain and set me on this path.”

Rice went on to complete her bachelor’s degree at OU in zoology and biomedical sciences, and then she earned a doctorate in neurobiology at Harvard University. After completing her post-doctoral training in Belgium at VIB-KU Leuven Center for Brain and Disease Research, she returned to her home state and joined the faculty at the OU Health Sciences Center in 2019. Still, when she learned four years later that OMRF was expanding its brain research group, she leaped at the chance to return to her laboratory roots.

Dr. Benjamin Miller, who spearheaded Rice’s recruitment to the foundation, calls Rice “the perfect fit” for OMRF’s expanding efforts in neurological disease research. “We’re always trying to bring in new blood, new ideas,” says Miller, who heads OMRF’s Aging and Metabolism Research Program. “We had been aware of her work for a long time, and the environment was finally right for her research to flourish here.”



**Dr. Heather Rice first came to OMRF as a college freshman in 2004.**

## DR. HEATHER RICE'S RETURN TO OMRF MARKS THE CULMINATION OF A TWO-DECADE JOURNEY.

A neurobiologist, Rice studies a protein known as amyloid precursor protein that breaks down as we age, with one of the resulting fragments becoming a hallmark of Alzheimer's disease. According to the Alzheimer's Association, more than 6 million Americans have the disease, and that number is on the rise.

"Alzheimer's disease is one of the most impactful diseases in our society," Rice says. "As we age, it affects how the people we care for think and behave."

Rice focuses on studying amyloid precursor protein before it breaks apart. "If we can define its purpose, we can better understand when something goes wrong and target that for treatment," she says.

Last December, she hit the ground running at OMRF, opening her laboratory. "I love it here," Rice says. "It's really nice to be at a place where everyone has the same mission, and everyone at all levels is working toward it together."

This past summer, life came full circle, as Rice welcomed two Fleming Scholars into her OMRF lab. "She's perpetuating the growth of the next generation of scientists just like her," says Dr. Ashley Cheyney, OMRF's assistant director of scientific training and outreach. "That's really cool."

Rice did her best to make the experience as friction-less as possible for her two summer trainees, Meena Seshadri and Parinita Varshney.

That mentorship made all the difference for Varshney, who is beginning at the University of Texas this fall. "I was nervous before I came, and I was a little overwhelmed getting started," she says. "But Dr. Rice created a supportive environment that turned those feelings into confidence."

When students get their first taste of the lab, "everything can seem so difficult," says Rice. "But I know where they're coming from and can help when they need it."

After all, it wasn't that long ago she was in their shoes. ☑



**Parinita Varshney (front), pictured here with fellow intern Meena Seshadri, says that Rice created "a supportive environment" in the lab that helped her build confidence.**

## BACKSTORY

# Are Six Legs Better Than Two?

OMRF's Multiple Sclerosis Center investigates whether dogs can help patients with mobility issues

In multiple sclerosis, the body's immune system mistakenly attacks myelin, a substance that surrounds and protects nerve fibers. With the destruction of myelin comes a host of symptoms, including the loss of mobility.

"One of the main issues that patients with MS have is increased difficulty with walking, ambulation, balance and strength problems," says Dr. Gabriel Pardo.

Pardo should know. In the course of a career that's spanned almost four decades, the neuro-ophthalmologist and director of OMRF's Multiple Sclerosis Center

of Excellence has treated tens of thousands of patients with the debilitating disease.

Like just about every other physician who cares for people living with MS, Pardo relies heavily on immune-modifying drugs to manage his patients' disease. While these powerful biologics, which are typically administered intravenously every few months, have made significant improvements in MS patients' symptoms, they do not halt the underlying progression of the illness. And, like so many medications, they are expensive and come with side effects.

So, Pardo and his team at OMRF's MS Center are always searching for ways to help patients that don't come in the form of a pill or injection. "Yes, we want to develop new science and new treatments," he says, "but we also want to be mindful of other ways we can improve the quality of life for those with MS."

Recently, Dr. Bobbette Miller, a physical therapist in the MS Center, had one such idea. You could call it an off-the-leash concept. But, really, it's more on the leash.

Miller's research focuses on increasing mobility and safety for MS patients. Previous studies, she says, have consistently demonstrated that the faster people walk, the less likely they are to fall. Miller, a self-described "dog person," wondered if our four-legged friends could help.

For MS patients with ambulation issues, Miller says, "there are physical impairments as well as an element of fear to overcome." Dogs, she says, "provide motivation and decrease stress in ways that may get people past those challenges."

To come up with a plan, Miller approached Amanda Mori, who is a

graduate student in physical therapy at the University of Oklahoma Health Sciences Center – and, not coincidentally, a fellow canine lover. Together, the pair developed a protocol: Participants will walk on a special mat that records walking cadence, stride length, speed and more, and Miller and Evans can compare their data while walking alone versus holding a leashed dog.


And not just any dog. All participants will walk with Mori's whippet, Java, once Java has completed classes to become a certified therapy dog, trained not to startle or chase after even the most tempting distractions.

Dr. Rebecca Ludwig hopes to be the first volunteer for the project. Following an MS diagnosis at 14, Ludwig faced challenging relapses that required her to relearn how to walk. Today, she participates in research studies whenever possible.

"Becoming a research participant gives you a sense of purpose, and it's a really unique way to serve the community," says Ludwig, who is an occupational therapist. "It's empowering to make progress."

Miller envisions this as the first of a series of studies examining whether dogs can assist with the therapeutic process. Her future research plans, which also involve graduate students Ben Bouchard-Miller, Celia Benedict, Autumn Rosenthal and Katty Whitt, include investigating whether the animals can help ameliorate stress, fatigue and other burdens of chronic illness.

"There's a lot of interest in what dogs can do for people, from service dog tasks to helping calm nightmares," Miller says. If any of it proves out, there will no doubt be extra treats in Java's future.



**Get Your Steps in**  
If you have MS and can walk 25 feet, you may qualify for this research trial. All participants will receive partial compensation for their time.

Interested? Contact Bobbette Miller at (715) 581-4415 or [bobbette-miller@omrf.org](mailto:bobbette-miller@omrf.org).



**Dr. Rebecca Ludwig (left) hopes to be the first volunteer in the study led by Dr. Bobbette Miller.**





825 NE 13th Street  
Oklahoma City, OK 73104



GiveSmartOKC  
Know More. Give More.



Nonprofit Org.  
U.S. Postage  
**PAID**  
Permit No. 639  
Oklahoma City, OK



# Oklahoma Standard

In 1950, Oklahomans representing all 77 counties gathered to celebrate a successful statewide campaign that gave life to OMRF. The foundation's unique start as an independent research institute funded by a statewide drive has shaped our path. While our scientists' discoveries have global impact, we remain Oklahoma's medical research foundation.

