

UNM

medicine

FALL 2016

THE UNIVERSITY OF NEW MEXICO SCHOOL OF MEDICINE ALUMNI MAGAZINE

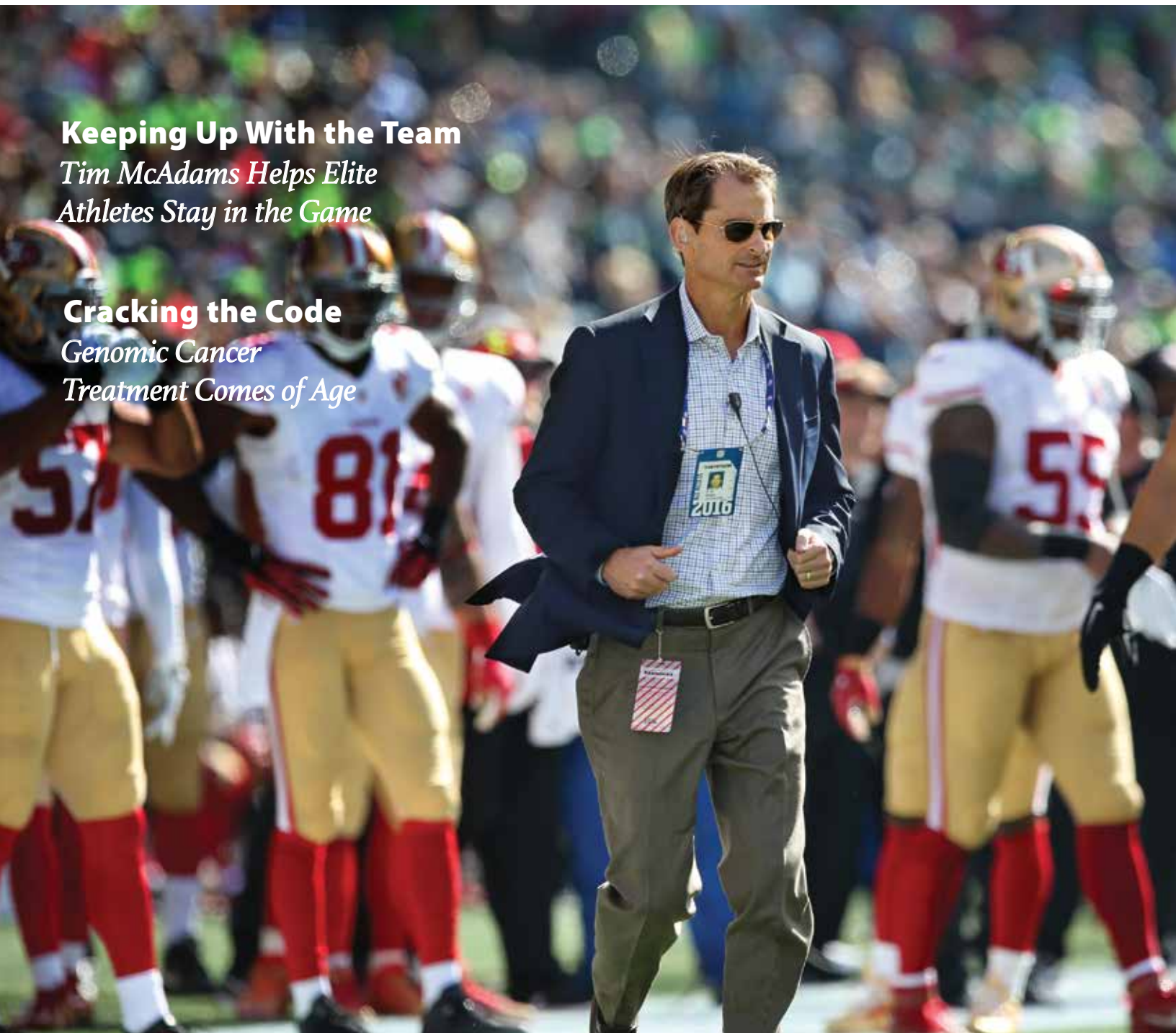
Keeping Up With the Team

Tim McAdams Helps Elite Athletes Stay in the Game

Cracking the Code

Genomic Cancer

Treatment Comes of Age



ALSO IN THIS ISSUE:

14 CAMP FUN

16 MUSICAL BRAINS

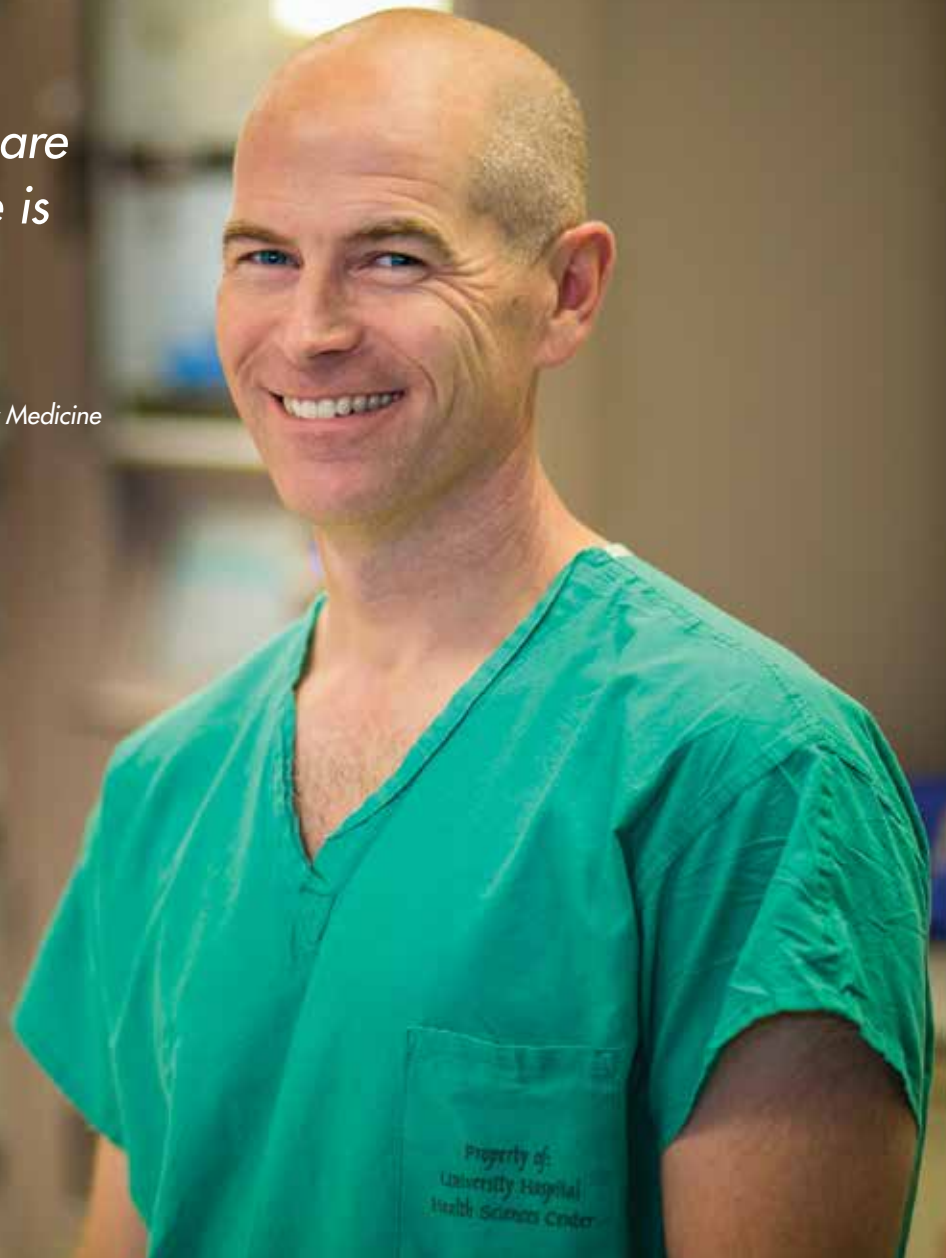
18 LIFE'S WORK

21 GEN MEDICINE

25 GIVING BACK

"A mentor's willingness to share knowledge and experience is invaluable."

— Steve McLaughlin, MD
Chair, UNM Department of Emergency Medicine



PRECEPTING IS GIVING BACK

The Department of Emergency Medicine takes pride in mentoring the students and residents at the UNM School of Medicine. Precepting the next generation of physicians is a great way to give back.





COVER STORY

Tim McAdams Takes the Field
*Team physician for the 49ers
and the San Francisco Giants
gets busy on game day.*

6

FALL 2016

TABLE OF CONTENTS

MANAGING EDITOR
Michael Haederle

GRAPHIC DESIGN/
ILLUSTRATION/ART DIRECTION
Sara Mota

ASSOCIATE EDITOR
Luke Frank

CONTRIBUTING WRITERS
Furhana Afrid, Cindy Foster,
Laura Hall, Leslie Payne,
Lori Peterkin, Michele Sequeira

CONTRIBUTING PHOTOGRAPHERS
Erika Anderson, Rebecca Gustaf,
Mark Holm, Don James,
Terrell Lloyd, Sara Mota,
Leslie Payne, John Storey

DEAN'S OFFICE
Paul B. Roth, MD, MS
Chancellor for Health Sciences
CEO, UNM Health System
Dean, UNM School of Medicine

CONTACT
UNM School of Medicine
Advancement and Alumni Relations
MSC 08 4720 • Fitz Hall #182B
1 University of New Mexico
Albuquerque, NM 87131-0001
505.272.5112

<http://som.unm.edu/alumni>

SUBSCRIPTION INFORMATION
mdalums@salud.unm.edu

EDITOR EMAIL
mhaederle@salud.unm.edu

We welcome the submission of
stories, photographs and letters
to the editor.

UNM *medicine* is published
by the UNM School of Medicine
Office of Advancement & Alumni
Relations and the UNM Health
Sciences Center Department of
Communications & Marketing.

Cover Photo: Terrell Lloyd

Printed in the USA © Copyright 2016
The University of New Mexico Health Sciences Center



12

SPECIAL FEATURE

DNA DIAGNOSIS

*UNM Cancer Center Leads
in Genomic Medicine*

11 Body of Evidence
Exhibit Traces Anatomical Study

14 Camp Rising Sun
Campers Connect

21 Family Traditions
Generations of Medicine

22 Board Report
Alumni Association Update

25 Giving Back
Alums Share Giving History

26 La Tierra Sagrada Society
Scholarships



25



16

DEPARTMENTS

2 Letter from the Dean

3 At a Glance | In the News

16 Vital Signs
Your Brain on Music

18 Life's Work
Marianne Berwick

19 Research Review

20 Student Affairs
A Look Inside Radiology

28 Back Story
Guest Essay: Jonathan Marinaro

letter from the

dean



This fall marks the 10th anniversary of the launch of UNM's Combined BA/MD program. In 2006 a diverse and talented group of New Mexico high school graduates started their undergraduate education in the College of Arts and Sciences.

Four years later, they enrolled in the School of Medicine – and embarked on their medical education. Now they are in residency training here and at hospitals around the country – proof positive of the great things we can accomplish when we invest in the people of our state.

I'm proud of this program, because it represents a home-grown solution to producing more doctors to address the serious shortages of health care professionals in New Mexico.

Our School of Medicine is a critical resource for educating students in medicine and other health professions at a time when U.S. health care is undergoing dramatic changes. Greater access to health coverage has led to surging demand for medical services, in turn exacerbating the shortage of doctors in New Mexico and throughout the country.

Academic health centers like ours face unique challenges in producing new members of the health care work force. We depend more on federal money to fund residencies and research, and we must balance those priorities with our primary mission of providing clinical care.

That's why the generous support of School of Medicine alumni is so important. We depend heavily on your contributions to help close the gap for our students, who incur substantial debt during their education. And your engagement with our students by serving as preceptors and mentors is invaluable.

The unique strength of our School of Medicine has always been tied to our steady commitment to engaging with the communities we serve. With your help we will continue to graduate students who exemplify the very best our state has to offer.

With Warm Regards,

Paul B. Roth, MD, MS
Chancellor for Health Sciences
CEO, UNM Health System
Dean, UNM School of Medicine

UNDER NEW MANAGEMENT

Chairs Join School of Medicine

The UNM School of Medicine is welcoming new chairpersons to two of its largest departments this fall.

David Rakel, MD, has joined the faculty as chair of the Department of Community & Family Medicine, and Mark Unruh, MD, a professor and division chief of Nephrology, has been appointed chair of the Department of Internal Medicine.

“Both Dr. Unruh and Dr. Rakel understand the importance of working with our communities in developing initiatives that will improve health outcomes throughout New Mexico,” said Martha Cole McGrew, MD, executive vice dean of the UNM School of Medicine.

With more than 250 faculty members practicing throughout New Mexico, UNM’s Department of Internal Medicine is the largest department within the School of Medicine. Unruh, who is board certified in internal medicine, received his medical degree from the

University of Chicago Pritzker School of Medicine.

“He understands the importance of our mission to treat complex medical cases and the unique challenges facing those practicing medicine in New Mexico,” McGrew said.

Rakel comes to UNM from the University of Wisconsin, where he was founder and director of the Integrative Medicine Program in the School of Medicine and Public Health. He is board certified in family and integrative medicine.

He has a career-long interest in rural medicine and also completed a two-year residential fellowship in integrative medicine at the University of Arizona Health Sciences Center.

Rakel is co-editor of the Textbook



David Rakel, left, and Mark Unruh.

of Family Medicine (8th and 9th editions), editor of Integrative Medicine (1-4 editions) and editor-in-chief of Primary Care Practice Update. He and his team were also awarded a six-year contract through the Veterans Health Administration to help create a personalized, proactive and patient-driven cultural shift in health care delivery.

“Modern health care is a complex system,” Rakel said. “In order to support the community’s needs we must first listen and honor what they believe is important, rather than just giving them what we know is useful.” ◇

REMEMBRANCE OF THINGS PAST

MEMORY & AGING CENTER OFFERS NEW HOPE

Like many neurologists, Gary Rosenberg, MD, long puzzled over the difficulty in teasing apart vascular cognitive deficits from Alzheimer’s and other neurodegenerative diseases, which tend to share overlapping symptoms.

As founding director of UNM’s new Memory & Aging Center, Rosenberg thinks he now has the tools to make accurate diagnoses and offer thousands of New Mexicans new hope for effective dementia treatment.

“I started looking at this question many years ago,” says Rosenberg, who earlier this year stepped down after 30 years as chair of the Department of Neurology. He is joined by fellow neurologists Janice Knoefel, MD, MPH, and John Adair, MD.

He has developed a machine-learning method that weighs

multiple variables, including inflammatory proteins in cerebrospinal fluid, neuroimaging studies and neuropsychiatric exams, to accurately diagnose which form of dementia a patient is suffering from.

That, coupled with a shift in funding priorities by the National Institutes of Health, makes UNM an attractive site for conducting research and testing new drugs to treat Alzheimer’s and other diseases, Rosenberg says.

The new center, based in Pete and Nancy Domenici Hall, will help meet the needs of an estimated 37,000 Alzheimer’s patients living in the state. “There’s a big hole in the center of the country with no specialized centers,” he says. “I’m hoping we can make ourselves more available to people.” ◇

SHARING THE LOVE

Scientists Study How to Best Communicate Their Work

The UNM Health Sciences Center is partnering with actor Alan Alda and an innovative program he founded to help researchers learn how to better communicate their work to a lay audience.

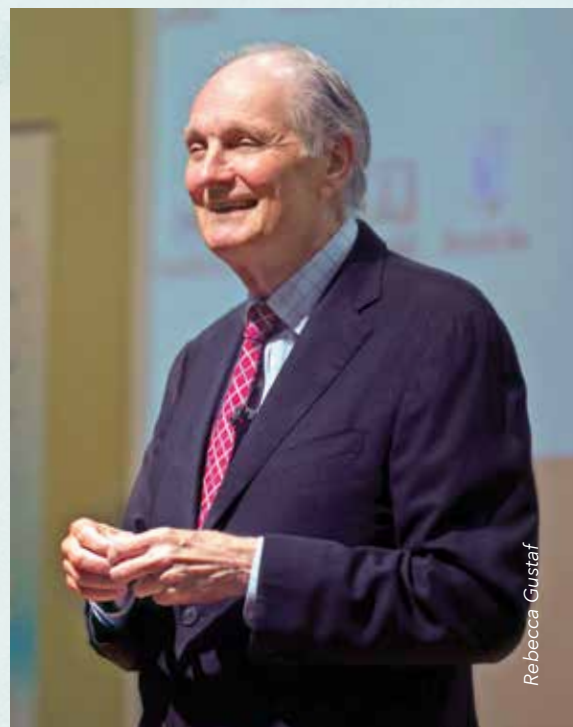
The Alan Alda Center for Communicating Science at Stony Brook University in New York will train personnel from the HSC's Clinical & Translational Science Center using a variety of techniques, including improvisational theater exercises, to help them learn to listen intently, read verbal and nonverbal cues and respond to listeners with greater empathy.

UNM will in turn serve as a hub for teaching effective communication

to researchers at 60 other institutions that share in Clinical and Translational Science Awards from the National Institutes of Health.

Alda, known for his roles on M*A*S*H, The West Wing and E.R., founded the center in 2009 after spending 15 seasons hosting Scientific American Frontiers on PBS. He visited campus Aug. 22-23 for a public talk and a training workshop.

Alda reminded a sold-out audience of the growing gap between scientists and laypeople. "The public is on a blind date with science," Alda said. "You're wondering, 'Who is this person? Does this person have my best interests at heart?'" ◇



Rebecca Gustaf

Alan Alda says the public is "on a blind date with science."

FACULTY ENGAGEMENT: Working to Improve Provider Satisfaction

The UNM Health System has embarked on MISSION: Excellence – a journey of cultural transformation aimed at improving clinical outcomes and enhancing provider and staff satisfaction.

This journey will propel the Health System forward in a rapidly changing health care landscape, ensuring that it becomes – and remains – the best place for patients to receive care, for physicians to practice medicine, for employees to work and for students to learn.

With the guidance of Studer Group, a nationally recognized organization that coaches health care systems

to achieve and sustain a culture of clinical and operational excellence, the Health System is in the process of adopting best practices that will roll out over the next few years.

"We know that the strength of our organization lies in our providers and staff, and their unwavering commitment to those we serve," says Martha Cole McGrew, MD, executive vice dean of the UNM School of Medicine and executive sponsor of MISSION: Excellence. "That is why we gave this journey a name that reflects our focus on the UNM Health System mission and our passion for achieving and maintaining excellence in all that we do." ◇



Leslie Payne

AROUND THE STATE

...around the country and around the world

E-magazine **UNDARK** (October 26, 2016), an online publication of the Knight Science Journalism Program at the Massachusetts Institute of Technology, published a feature article by Ben Daitz, MD, professor in the Department of Family & Community Medicine, about the School of Medicine's involvement in providing crisis intervention training with the Albuquerque Police Department. The piece highlights how Project ECHO is teaching police officers to better manage the people they see every day, many of whom, present with mental illness.

NBC News (October 26, 2016) quoted UNM physicians Tracy George and Rama Gullapalli in a piece entitled, "How \$9 Billion Blood-Testing Startup Theranos Blew Up." It's the story of a flawed idea that just kept going until a man committed suicide, a company imploded and an entire industry was left reeling. Theranos claimed that Edison, its proprietary lab device, could run a battery of tests with just a few drops of blood taken from a finger prick – and could do so at a fraction of the going rate, returning results within hours instead of days.

The Paris Guardian (August 10, 2016) featured the School of Medicine's Christophe Lambert, PhD, principal investigator for a \$2.4 million grant to chronicle the impact of commonly prescribed drugs on Americans with bipolar disorder. The money is being used to fund the collection and analysis of the "de-identified" electronic medical records of more than a million Americans. Lambert will measure the

impact different prescription drugs had on patients with bipolar disorder in hopes of identifying the best treatments for patients based on their history of disease.

The Silver City Sun-News (July 21, 2016) reported on three UNM School of Medicine students who returned home to Grant County for six-week rural rotations as part of their Practical Immersion Experience. Peter Holguin, Megan McClean and Alexandra Edwards met with patients, conducted physical examinations with their preceptors and performed a community project geared toward suicide prevention. "We noticed that there had been a rash of suicides here in Grant County, so we decided to see what kind of solution we could come up with for the public," said McClean, a Cobre High School graduate.

Project ECHO's leading role in using telehealth technology to fight opioid addiction was highlighted by **Politico Magazine** (July 18, 2016). The U.S. Department of Health and Human Services is awarding \$9 million in grants to improve opioid addiction treatment in primary care practices. The recipients in Oklahoma, Colorado and Pennsylvania will employ ECHO's technology to provide telementoring for primary care doctors practicing in rural areas.

NBC Nightly News highlighted Cheryl Willman, MD, CEO of the UNM Comprehensive Cancer Center, in a piece that ran on June 28, 2016. NBC reported how Willman and other researchers had discovered that Native American

and Hispanic children had unique genetic mutations requiring cancer treatments tailored just for them.

The Albuquerque Journal (June 6, 2016) spotlighted UNM Hospital's new endovascular stroke team. It followed a patient who collapsed with stroke symptoms at her home in Santa Fe. A UNM physician retrieved a clot from her middle cerebral artery using a specialized stent, restoring blood flow in time to prevent major damage. The technique gives doctors up to eight hours to treat clot-caused ischemic strokes, allowing more time to transport patients to UNM from around the state.

School of Medicine student Catherine Burke was profiled by the **Albuquerque Journal** (May 10, 2016) regarding her decision to come to UNM for physical therapy school. "Not only is UNM on par with the other schools I applied to in terms of quality of educational programming and caliber of teachers, but the program offered some pretty cool additional volunteering and learning opportunities," she told the newspaper.

KRQE TV (April 30, 2016) featured the School of Medicine's Body Donor Program in a two-minute piece that told how an Albuquerque woman's parents decided to donate their bodies to medical research. "It was kind of like, 'Oh my gosh, no, I don't think I want that to happen,'" said Gail Green, who was shocked to learn her parents had made a big decision. Their bodies ended up being used in the anatomy laboratory at the School of Medicine.



Tim McAdams at Levi's Stadium in Santa Clara, Calif.

FIRST IN THE FIELD

Orthopedist Tim McAdams Makes No Bones About His Love for Sports Medicine

By Michael Haederle

Photography: John Storey and Terrell Lloyd, San Francisco 49ers Team Photographer

Each fall, as Timothy McAdams, MD, enters the OR to repair an injured knee or shoulder for one of the San Francisco 49ers, he finds himself musing about what distinguishes these patients from everyone else.

It isn't just a stellar ability to make a tackle or catch a football.

"If I drill a tunnel for an ACL reconstruction, these NFL players will have bone that is literally smoking from the heat generated by how hard and durable it is," McAdams marvels. "They're at a separate level. There's something about them that sets them up to be stronger."

McAdams, who completed his orthopedics residency at the University of New Mexico School of Medicine in 2000, has plenty of occasion to wonder. He has been the 49ers medical director since 2007, attending every game – both home and away – and performing most of the team's orthopedic surgery.

He's also one of four team physicians for the San Francisco Giants – and he somehow manages to teach and maintain a full-time clinical practice at Stanford University.

This flourishing career almost didn't happen. As an undergraduate biology major at UCLA, McAdams dreamed of becoming a doctor, but had himself convinced he'd be better suited for the business side of medicine.

"Between my sophomore and junior year of college, I had this epiphany," he says. "I said, 'I know the reason why I'm not applying to medical school: I'm scared I won't get in.' That's a terrible reason not to do something. So from that day on, I decided, 'I'm going for it.'"

McAdams went on to graduate magna cum laude from Georgetown University Medical School, and then completed a residency at UNM. "I tell that story often to people who come to me for career advice," he says. "If you follow your passion you'll be OK."

Sports has been one of his passions from an early age. McAdams grew up in Saratoga, Calif., a few miles from the Stanford campus. His father served as chief financial officer for several companies in what would later become known as Silicon Valley.

"I played everything as a youth, including soccer, tennis and wrestling in high school," he says. "I was too small for football – I had a growth spurt late in high school." Tall and lanky, he still plays soccer.

McAdams took his time settling on orthopedics as a specialty. "When I went to medical school at Georgetown, I said, 'I'll throw myself into every course as if this is the one I want to go into,'" he says. He realized he loved spending time in the anatomy lab and found himself gravitating toward orthopedics during his third-year clerkship.

"The anatomy of the bones, joints and tendons was fascinating to me from a biomechanical standpoint," he says. "Then there was the patient population, which for the most part is active and eager to do whatever they can to get back to optimum health and quality of life. And, I've always enjoyed sports. This is a way to integrate sports into my life."

Graduating from Georgetown, McAdams identified UCLA and UNM as his top two residency picks. He was initially disappointed when UCLA turned him down, but after interviewing at UNM, he says, "I definitely knew I would fit in."

He and some fellow residents rented a house from an attending physician on Vassar Drive, a few blocks from UNM Hospital. "It was a perfect location for call," McAdams says, noting



Examining a patient at his Redwood City, Calif., clinic.

“If you follow your passion you’ll be OK.”

— TIM McADAMS

that at the time there were no restrictions on how many hours a resident could work in a week.

“We worked our tails off,” he says. “The experience that we got by working those long hours was unmatched, because we were so well prepared for whatever came our way.”

In his sparse free time, McAdams enjoyed mountain-biking, hiking in the Sandias and skiing at Los Alamos. “I wouldn’t change it for anything,” he says. “Not only did I flourish at UNM, but I made lifelong friends there. It was a fantastic experience.”

UNM is also where McAdams met his wife, Myriam Curet, MD, during his first-year general surgery rotation.

Curet, who specializes in laparoscopic surgery, is the daughter of Luis (Ben) Curet, MD, longtime professor in the UNM Department of Obstetrics & Gynecology. She was an associate

He enjoyed spending time in the microsurgical lab repairing the tiny femoral arteries of rats. “It’s a way to replicate putting fingers back on,” he says.

Curet and McAdams married in March 2000. She had already adopted her daughter Tatiana, now 22. “I met Tatiana when she was 2,” McAdams says. “When we got married I adopted Tatiana at age 5. Instant family.” The couple had twins Alyssa and Dylan, now 9.

McAdams graduated from his UNM residency that same year and won a hand surgery fellowship at Stanford, thanks in part to a recommendation from one of his mentors. “They were so impressed that George Omer called the hand surgery service here,” he says. “I was ecstatic to be able to get back here.”

The couple originally had planned to return to New Mexico following the fellowship. “After a year I got a good job opportunity here,” he says. “Here we are 16 years later. It was a very difficult decision not to go back.”

McAdams began performing more upper extremity surgeries and was asked to help treat players on the Stanford athletics teams. “I really enjoyed that,” he says. “I wanted to be able to treat the whole athlete.” He went through a second fellowship in knee surgery at Santa Monica Sports Medicine in 2006.

Caring for Stanford players expanded his suite of skills, McAdams found. “Many of them were getting ready to go professional,” he says. “There were countless Olympians from different countries. The breadth of experience was fantastic.”

And the range of athletes from different sports was an added bonus. “There’s a significant learning curve in seeing the different sports and seeing the injuries associated with them,” he says. “A hand fracture might not be a big deal for a linebacker, but it’s a major injury in the dominant hand of a tennis player.”

Given his turn toward sports medicine, McAdams is often asked whether his six years of training to operate on hands were wasted. He doesn’t think so.

“The surgical skills needed for hand surgery still benefit me to this day in any of the cases that I face and it puts me at an advantage,” he says. “The delicate touch and precision of hand surgeons exceed any other orthopedic surgeon, in my opinion.”

Soon after McAdams returned from his knee fellowship, the 49ers asked him to become their team physician. Bay Area baseball and basketball teams soon came calling. In 2012 he was team physician for both the Golden State Warriors and the 49ers, as well as the Giants, he says.

“It was a very difficult year, because of the time required,” he says. “It was an honor, but there’s a cost, because it took time away from each team, and it takes a huge toll on the family – it’s just not something I’m willing to compromise.”



Meeting with 49ers Head Athletic Trainer Jeff Ferguson at Levi's Stadium.

professor of surgery at UNM for seven years prior to joining Stanford's Department of Surgery.

Today, she is chief medical officer at Intuitive Surgical, a Sunnyvale, Calif., manufacturer of surgical robots and other devices. She is also a consulting professor in surgery at Stanford with a part-time clinical appointment at the Palo Alto Veterans Affairs Medical Center.

During his residency McAdams focused on the most delicate form of orthopedic work – hand surgery. “UNM has a very strong hand surgery program,” he says. “I was heavily influenced by my mentors, Moheb Monim, George Omer and Chuck Pribyl. They were so meticulous and skilled.”



On Stanford University's campus.

He stepped down from his post with the Warriors in 2014. In addition to his work with the 49ers and the Giants he serves as team physician for Stanford's men's and women's soccer programs.

"This is all extracurricular," McAdams says, adding that his sports obligations might occupy between 10 and 50 percent of his time, depending on the season, and it's all outside the scope of his full-time clinical practice at Stanford.

"So it's nights and weekends," he says. "That's why it's important to involve the family. My wife's a big fan and goes to all the games. My kids are big fans. I'll bring them to the training room on the weekend occasionally, so they'll meet the players and perhaps enjoy the journey with me."

In his capacity as the 49ers medical director, McAdams belongs to the NFL Physicians Society. "We get to know each other very well," he says. "We'll often share experiences, based on what we've gone through."

He directs the team's consultants in areas like nutrition, strength and conditioning, chiropractic care, massage, radiology and oral surgery. "There's an unaffiliated neurological consultant who helps with the management of any head injury," he says. "That's made my job easier as an orthopedist. I can focus on my joint injuries, and not try to play concussion expert."

McAdams estimates that players on the 49ers roster require between 10 and 20 orthopedic surgeries each season. "You see

more injuries in the preseason because you have almost twice the number of participants, going from a 90- to a 53-man roster," he says.

McAdams has cared for some very well-known players, whom he can't name. "It has been a nice surprise, actually," he says. "The person we see on television is really not the personality when I meet with them in the clinic room."

A key difference between collegiate and professional players has to do with who is advocating on the patient's behalf, McAdams says.

"The agents in professional sports are a necessary part of the business, and for the most part are great to work with," he says. "But in collegiate sports you have the athlete's parents, who sometimes can be more inquisitive. I have to be prepared to defend my clinical judgment and decisions."

Given the huge player compensation levels in professional sports, McAdams knows each surgery has a high-stakes outcome.

"It doesn't change the way I care for them, but it absolutely increases the stress level, because the repercussions of any untoward outcomes are magnified," he says. "If you're not able to handle that, you should get out of the business as fast you can, because it's part of the deal."

Misinformation often spreads like wildfire when a high-profile athlete is injured. "I tell people, having been on the inside



McAdams tends to a fallen player in Seattle.

Terrell Lloyd

for many years, ‘Don’t believe everything you hear or read on sports talk radio,’ he says. ‘From a medical perspective I shake my head at some of the things that are said.’

McAdams’ experience in treating elite athletes has translated into some advantages for his other patients.

‘It has given me an experience in a variety of injuries and ways to optimize return to prior activity levels,’ he says. ‘Even if someone doesn’t have the ability to quit their job and dedicate themselves to rehab 24 hours a day, you can motivate them to get to that point.’

It also can translate into unrealistic expectations on the part of some patients. ‘I get people who say, ‘Why is it taking me this long to get back from my rotator cuff injury when I saw that your quarterback a few years ago got back much quicker,’” McAdams says. ‘I say, ‘They’re a third of your age, and they’re an elite athlete.’”

In McAdams’ own case, he had an arthroscopy on one knee at 20, and returned to playing soccer in three weeks. He had another arthroscopy at 40 and it took three months to get back on the field. ‘Our bodies change as we age,’ he observes. ‘I spend a lot of time trying to manage patient expectations, because they see what’s in the paper and it’s all over ESPN when a player comes back and they wonder, ‘What’s wrong with me?’”

Elite athletes truly seem to be a breed apart, McAdams says.

‘I see a difference in bone quality, and muscle and tendon strength and size,’ he says. ‘These people have been selected from hundreds of thousands of people who started at the youth level. They’re really good at what they do, so they have a great skillset – but there are hundreds of others with the same skills who got weeded out in high school and college. I truly believe there’s some survival of the fittest based on how people come back from injury to get to the level of the pros.’

With his busy career, McAdams’ thoughts sometimes wander back to New Mexico, with its more relaxed lifestyle and wide open spaces.

‘I would love to be able to climb to the top of the Sandias and clear my head,’ he says. ‘When I think of UNM, there’s a fondness in my heart for the memories I made there. It was a special time in my life. It’s because of the people – the residents, faculty and staff I worked with.’

The New Mexico years were another lesson in learning not to be bound by expectations.

‘We try to plan out our lives,’ McAdams says. ‘I wound up somewhere I didn’t know as much about and benefited incredibly. I wouldn’t change it for anything.’ ◇



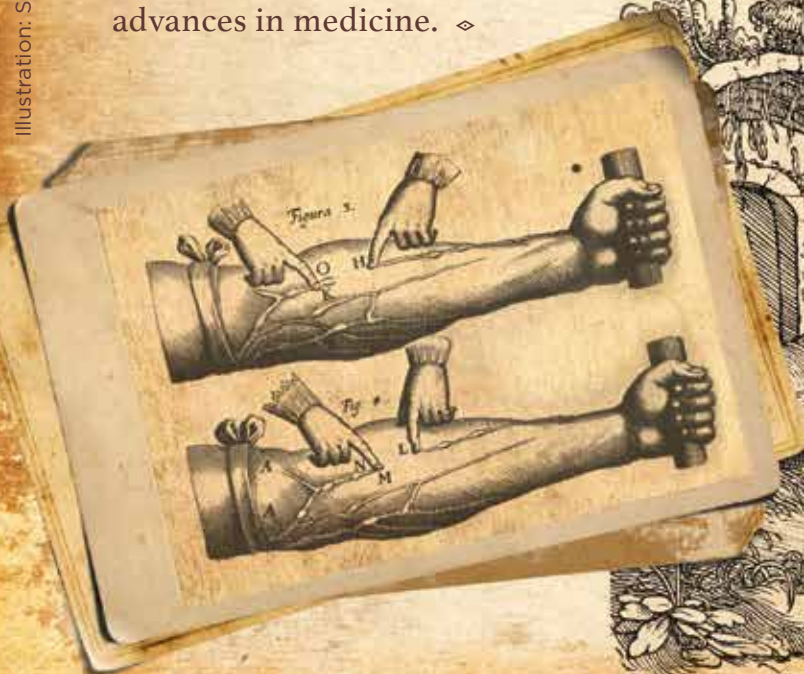
ON THE FABRIC OF THE HUMAN BODY

A History of Anatomy

BY LAURA HALL

"On the Fabric of the Human Body: a History of Anatomy," is a locally curated exhibit on display in the University of New Mexico's Domenici Center for Health Sciences Education – West Lobby, now through June 15, 2017.

The exhibit spans nearly 2,500 years of exploration into the very makeup of the human body. Starting in Classical Greece, continuing through the Renaissance, the Age of Enlightenment and into the modern era, the exhibit highlights the portrayal of human bodies and the burgeoning science of anatomy with corresponding advances in medicine. ♦



One Size Does Not Fit All

By Michele Sequeira
Photography: Don James

Eighteen-year-old Raylene M. received some shattering news shortly after giving birth: she had leukemia.

A 30-day induction course of chemotherapy dramatically reduced her leukemia cell count, but not by enough. Billions of cells still remained in her bone marrow and she was at high risk for relapse. She needed something new, and different.

That's where Scott Ness, PhD, associate director of the UNM Comprehensive Cancer Center, came in. Armed with Raylene's initial bone marrow sample and a sample taken after her induction chemo, Ness and his team began searching her genome for the mutation driving her leukemia.

They found a novel mutation in a gene that encodes for JAK2, a type of protein known as a tyrosine kinase that plays an important role in controlling cell growth and

proliferation. Many leukemias result from tyrosine kinase gene mutations, but no one had ever seen the particular mutation Raylene had.

On the other side of the country, 11-year-old Luke T. was very sick. He wasn't responding to his induction chemotherapy either. His doctors at Children's Hospital of Philadelphia, one of the finest children's hospitals in the world, asked cancer center director Cheryl Willman, MD, for help. They overnighted Luke's blood and bone marrow samples to Albuquerque in an effort to save his life.

Willman's team started with an assay they had developed to test for gene fusions. Luke's test came back positive. So, the team began a full RNA sequencing of his expressed genome using the tools and equipment Ness oversees.



Ness's team from left: Kathryn Brayer, Scott Ness, Jason Byars, Jamie Padilla and Maggie Cyphery (not pictured: Jennifer Woods).

Over the next two days and nights they conducted the very complex analysis of his genomic sequence and found a JAK2 tyrosine kinase gene fused to a previously unknown partner gene.

Willman's lab was the first to discover that some Hispanic and Native American children do not respond to standard leukemia treatments and that these children have a mutation in genes encoding tyrosine kinases. Often, the mutation results from a translocation — parts of two different chromosomes switch places, fusing a gene encoding a kinase with another gene.

Identifying the driver mutation is only the first step. All genomic work for diagnosis and treatment must be verified in a lab that meets the standards of the federal Clinical Laboratory Improvement Amendments (CLIA) of 1988. Then, the medical team must find the right drug or treatment for each child.

In Raylene's case, Ness and her doctors, Jodi Mayfield, MD, and Stuart Winter, MD, met in the first Molecular Tumor Board, joined by scientists, clinicians, pathologists, pharmacists, genetic counselors, CLIA lab representatives and ethicists. The board evaluated the science, as well as the available drugs and treatment options. Mayfield and Winter were able to give Raylene a drug targeted to her specific mutation. She now enjoys her time with her growing son.

For Luke, the UNM team sent its results to his doctors in Philadelphia less than four days after receiving his samples. They also asked collaborators at St. Jude's Children's Research Hospital to use their expertise to verify the results. St. Jude's confirmed the unique gene fusion.

With the UNM and St. Jude's results in hand, Children's Hospital doctors applied for compassionate use of a JAK2 kinase inhibitor to treat their patient. Luke is now a growing preteen.

Using genomic research to improve patient care has long been a goal in cancer medicine, but it wasn't feasible before recent technological advances. Gene sequencing generates colossal datasets, which must be analyzed using state-of-the-art software tools and supercomputers. Some of these tools are available only at UNM.

The software uses very sophisticated techniques to discern a driver mutation. With Raylene, it not only found the different mutations she had, but it quantified how often each occurred and determined what changed as a result of her chemotherapy. The UNM team reviewed these results to decide which



Jodi Mayfield and Stuart Winter.

mutations played the greatest role in Raylene's leukemia, and those decisions guided her care.

Patient care also requires timely information. Whole-genome sequencing used to take years. Now it takes hours. Sequencing RNA is faster and cheaper than whole-genome sequencing and sheds light on the proteins the cells actually make. Newer techniques and automated tools can speed up sequencing work even more, and faster sequencing times can make a life-and-death difference for patients like Luke.

Other considerations, including ethics, costs and privacy, permeate patient care. Genome sequencing can uncover huge amounts of private information for very little cost. How that information ought to be used is a question that requires a team of experts in many different disciplines to tackle. UNM's Molecular Tumor Board assembles these experts under one roof.

It will soon have many more patients to evaluate, because Raylene and Luke are not alone. UNM has already sequenced the genomes of five other acute leukemia patients. Each had unique mutations in different tyrosine kinase genes, resulting in different forms of leukemia. Each received targeted tyrosine kinase inhibitors. All of these patients are now in remission.

UNM is preparing to launch a clinical trial to broaden this approach to leukemia and other cancers. Cancer is known to differ genetically from person to person. Now, the treatment can be tailored to the individual. <

CAMP RISING SUN

COUNSELORS AND CAMPERS BUILD LIFELONG FRIENDSHIPS

By Rebecca Gustaf

For two weeks every summer, Camp Rising Sun gives kids with autism spectrum disorder a chance to swim, hike, dance, learn new skills, build friendships – and most importantly, have fun! The camp, part of UNM's Center for Development and Disability, provides the structured environment and specially trained staff needed to ensure the campers safety, security and success during their week away from home.



Dave Shahani, MD, is a UNM pediatric neurologist and Katie Cushmanick, MD, is a third-year UNM pediatric resident. As camp doctors, they not only take care of bumps and bruises, but also make sure the campers stay on schedule with their medications.



Camp Rising Sun closes out the week with a dance for the campers. For some, the Neon Dance is the only teen dance they will get to attend, so everyone works to make it extra special.



Kathleen “Mo” Taylor, an occupational therapist with the Center for Development and Disability, has helped make Camp Rising Sun a model for other camps throughout the world. Here, she’s training Tanya Balchukova, a camp counselor from Russia.

MEASURE BY MEASURE

SIZING UP THE BRAIN ONE MUSICAL NOTE AT A TIME

By Luke Frank
Illustration: Sara Mota

The creativity enjoyed by dedicated musicians is associated with increased surface area in specific brain regions, according to UNM researchers. What remains unknown, however, is whether musical creativity enhances these brain differences – or arises from them.

Music professor David Bashwiner, PhD, and neuropsychologist Rex Jung, PhD, used structural magnetic resonance imaging (sMRI) to create brain images from a meticulously selected sample of subjects previously recruited for human creativity and intelligence studies.

In a paper published online at Nature.com last February, the pair reported finding greater brain surface area in regions related to musical expertise, default-mode cognitive processing and intensity of emotional experience combine to drive musical creativity.

Bashwiner, an accomplished musician and associate professor of musical theory and composition in UNM's Department of Music, was intrigued by Jung's previous work using sMRI to peer into the human brain.

Jung, a clinical professor in the Department of Neurosurgery, studies positive neuroscience – what the human brain does well. Bashwiner approached Jung about mining his data to identify common structural brain differences in musicians who compose or improvise new works.

Their study, supported by the National Endowment for the Arts and the John Templeton Foundation, reveals that musically creative people have greater cortical surface area in complex motor and information-processing regions of the brain.

Greater surface area also is found in the human brain's default mode network (DMN) – regions with increased activity when a person is not engaged in an explicit task – and in areas of the brain that regulate emotion.

"There are certain areas in the brain that we know are mission-critical for music," Jung says. "Specific regions for hearing, memory retrieval and pitch discrimination are heightened when 'creating' music."

At the same time, he says, other brain regions down-regulate, like those that process fact-checking. This perfect storm of activations and deactivations creates the ideal setting for both musical composition and improvisation.

The study employed a portion of Jung's existing database of 239 New Mexican men and women aged 16 to 32 involved in science, technology, engineering and math (STEM) fields, who self-reported their musical creativity.

Participants completed questionnaires measuring musical interest and acuity – from how often and long one practices, to whether or not one has created and performed an original score or improvises original music, to listening behaviors and preferences.

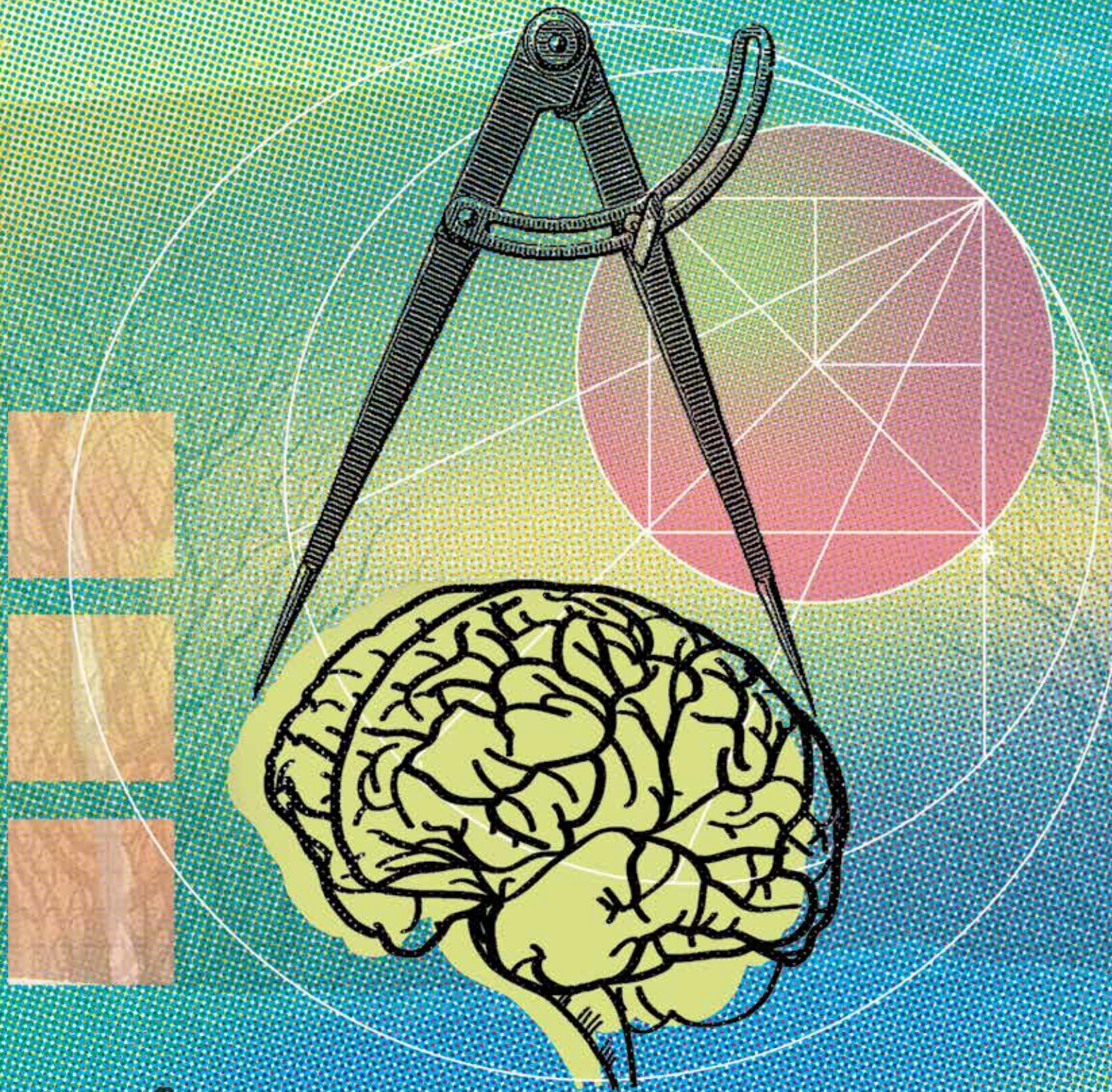
The original 239 participants were scaled down to 113 individuals who were then scanned using sMRI to measure the surface area of brain regions associated with musical creativity.

"Participants from the university, Sandia National Labs, Intel and other STEM-related professions identified a high representation in musical creativity," Jung says. "We found that increased mathematical ability – the language of STEM and music – is connected to higher musical ability."

The study authors say that, while regions in the DMN have frequently been identified in studies of musical improvisation and creativity, other areas in the brain are also implicated.

These regions are highly interconnected across the brain's left and right hemispheres by a portion of the corpus callosum, a bundle of nerve fibers that has been demonstrated to be larger in musicians, Bashwiner says.

"There are important implications here for our educational system," Bashwiner adds. "It's natural – and important – for us to teach basic skills and techniques. But creativity is important to society. It makes leaders and advances ideas through innovative thinking, reacting and responding to opportunities and challenges." ◇



Solving the Melanoma Puzzle, One Piece at a Time

Photo and Text By Furhana Afrid



This year, more than 75,000 Americans will be diagnosed with melanoma, a rare and deadly form of skin cancer, and 10,000 are expected to die from it, according to the American Cancer Society.

With melanoma cases on the rise, Marianne Berwick, PhD, is on a mission to avert more deaths.

"If we can prevent people dying from it and having a horrible, debilitating chronic disease for the rest of their lives, that would be fantastic," says Berwick, a distinguished professor in the Department of Internal Medicine. "I am trying to unlock one more piece of the puzzle."

Two decades ago Berwick launched the Genes, Environment and Melanoma study – or GEM – the world's largest melanoma investigation, at New York's Memorial Sloan Kettering Cancer Center.

The ongoing GEM study found that when specific genetic factors interact with sun exposure, people develop varying degrees of melanoma, affecting how long a patient may live.

Many studies find that sun exposure is beneficial and might protect people against other cancers, but there are questions about how much exposure actually causes melanoma.

Berwick believes intermittent exposure to the sun, rather than consistent exposure, is the culprit. "Your skin is adaptable," she says. "You adapt to sun exposure, and so I don't think the sun is bad for you."

Berwick recommends moderate sun exposure, coupled with preventive measures, like using sunscreen and wearing protective clothing.

In a new study, she is partnering with an Australian researcher to investigate the effects of solar exposure on newborns. "Is there a critical point in your lifetime when sun exposure is more important than another time?" Berwick asks.

In another proposed study, Berwick wants to investigate why some people die from melanoma while others survive it. She plans to study 1,000 tumors to search for biomarkers that might determine the probability of survival.

"Hopefully, we'll come up with markers that a clinician can use to help a patient and perhaps give treatment right away – or withhold treatment because you don't need it," she says.

Berwick also helped develop a smart phone app called "Mole Mapper" that analyzes photos of changes in the skin over time to detect the early stages of melanoma.

Berwick grew up in California and earned her PhD in epidemiology at Yale University before bringing her expertise in melanoma research to UNM in 2004.

Investigating melanoma turned into a mission when she led her first study as project director at Yale. A colleague assisting with the study lost her young daughter to melanoma. The loss intensified Berwick's interest in the life-threatening disease.

She emphasizes that her work involves solving just one part of a big puzzle. "I'm not changing the world," Berwick says. "I'm just trying to do a good job and ask questions about a small area." ◇

Research Review

Sanjeev Arora, MD, founder and director of Project ECHO and professor in the Department of Internal Medicine, received a \$5 million GE Foundation grant for Leveraging the ECHO Model to Improve Quality in FQHCs and Transform the U.S. Healthcare System.

Douglas Clark, MD, professor and Frederick H. Harvey Chair in the Department of Pathology, received a \$2.5 million grant from TriCore Reference Laboratories for professional and medical director services.

Arthur Kaufman, MD, the UNM Health Sciences Center's vice chancellor for community health and a professor in the Department of Family & Community Medicine, received a \$1 million grant from the University of Colorado for the Southwest Health Extension Partnership to Enhance Research Dissemination – Evidence Now Southwest.

Executive Vice Chancellor **Richard S. Larson, MD, PhD**, received a \$3.7 million cooperative agreement grant from the Center for Advancing Translational Sciences at the National Institutes of Health for the UNM Clinical & Translational Science Center.

Gary Mlady, MD, associate professor and chair in the Department of Radiology, received a \$1.3 million grant from the U.S. Department of Veterans Affairs for Radiological and Nuclear Medicine Diagnostics and Therapy Services.

Marcia Moriarta, PsyD, associate professor in the Department of Pediatrics and executive director of the Center for Development and Disability, received a \$2.9 million grant from the New Mexico Department of Health for autism programs and a second grant for \$2 million for Improving Quality (75/25 & 50/50 Medicaid Match) Supporting Child Development through Evidence-Based Practices.

Kimberley Page, PhD, MPH, professor in the Department of Internal Medicine, received a \$1.4 million grant from the National Institute on Drug Abuse for Acute Hepatitis C Infection in Young Injectors.

Melanie Royce, MD, PhD, professor in the Department of Internal Medicine, received a \$1.3 million grant from the National Cancer Institute for the Community Oncology Research Program.

Dan Savage, PhD, Regent's professor and chair of the Department of Neurosciences, received a \$1.7 million National Institute on Alcohol Abuse and Alcoholism grant for Fetal Ethanol-Induced Behavioral Deficits: Mechanisms, Diagnosis and Intervention.

Bill Shuttleworth, PhD, Regent's professor in the Department of Neurosciences and director of the Brain and Behavioral Health Institute, received a \$2.2 million National Institute of General Medical Sciences grant for UNM's COBRE P20 continuation.

Jennifer Ann Vickers, MD, associate professor in the Division of Child Neurology, received a \$1.4 million grant from the New Mexico Department of Health for an outside review project.

Cosette Wheeler, PhD, Regent's professor in the Departments of Pathology and Obstetrics & Gynecology, received a \$2.6 million National Institute of Allergy and Infectious Disease grant for the Epidemiology Prevention Interdisciplinary Center for Sexually Transmitted Infections.

Charles Wiggins, PhD, associate professor in the Department of Internal Medicine and director of the New Mexico Tumor Registry, received a \$2.9 million grant from the National Cancer Institute for Surveillance, Epidemiology End Results Program.

Cheryl Willman, MD, distinguished professor in the departments of Pathology and Internal Medicine, the Maurice and Marguerite Liberman Distinguished Endowed Chair in Cancer Research and director and CEO of the UNM Comprehensive Cancer Center, received two grants totaling \$4.5 million from the National Cancer Institute for the UNM Cancer Center.

Bridget Wilson, PhD, Maralyn S. Budke Endowed Professor in Cancer Cell Signaling and professor in the Department of Pathology, received a \$2.5 million National Institute of General Medical Sciences grant for the Center for the Spatiotemporal Modeling of Cell Signaling.

Interior View

The Role of Radiological Science in Team Medicine

By Jorge E. Licano

Last winter, while performing diagnostic imaging in the emergency room, I conducted a radiographic examination on a young patient with respiratory distress and tachypnea.

The radiographs suggested pneumonia and lung opacities. Two days later, this patient was imaged again, this time while on a ventilator, completely sedated, in the pediatric intensive care unit.

A few days after, I performed a fluoroscopy and a barium swallow study on this patient, now no longer connected to a ventilator.

When we met on the day the patient was discharged from the hospital we shared our gratitude toward one another.

I still remember the patient's humility, and I was thankful for having the privilege to participate in providing care. I was also grateful for modern medicine, because it had enabled this young patient to survive.

As a radiologic technologist, I have often experienced scenarios like this. These encounters usually involve endovascular strokes, heart attacks, trauma or other serious medical events, and I am reminded that radiologic science is a multidisciplinary field that plays a vital role in medicine.

For example, we can perform intraoperative imaging, fluoroscopy, diagnostic x-ray, computed tomography, magnetic resonance, nuclear medicine, positron emission tomography, radiation therapy, interventional procedures and much more.

We must be knowledgeable about radiobiology in order to understand the varied and complex effects that electromagnetic radiation can have on biochemical processes. We also must understand physics, because we convert electrons into photons, photons into signals and signals into medical images, which are then used by physicians to diagnose disease and coordinate the patient's care plan.

I greatly enjoy producing these radiographs, especially during surgery, when deep brain stimulators are being inserted and radiographically guided in order to treat Parkinson's disease.

I owe a lot of my success to New Mexico's educational institutions. However, attending the UNM School of Medicine has really allowed me to excel. I am proud to have been one of the first two undergraduate students to graduate our program with departmental honors.

The work that I performed as part of my training also led to a national publication. For these and many other reasons, I plan to pursue my graduate studies in the UNM School of Medicine, and I will continue to be active with the organization. I thank the alumni for their support. ♦



Rebecca Gustaf

Jorge E. Licano, BSRS, RT(R) (ARRT), is a fourth-year student in the Division of Radiologic Sciences.

FAMILY AFFAIR

Three Generations of Engagement with the School of Medicine

By Cindy Foster



Lori Coors, Sydney Cooper and Manuel Archuleta share an alma mater.

When pediatrician Manuel Archuleta, MD '73, and his wife, Mary Lou Coors Archuleta, start counting the members of their blended family who hold some sort of UNM degree the total encompasses the immediate family.

Those degrees are varied and spread across multiple disciplines, but the past three generations have always included someone at the UNM School of Medicine. First there was Archuleta, then daughter Lori Coors, MD '99, an ophthalmologist in Dallas, and finally granddaughter Sydney Cooper, a first-year medical student.

Mary Lou credits her husband's lifelong enthusiasm for medicine for why so many family members have been drawn to health care.

"It all just sort of flowed naturally," says Mary Lou, who holds a nursing degree and an MBA from UNM.

Their granddaughter agrees.

"I remember when my Aunt Lori was attending UNM medical school," Cooper says. "My aunt and my grandfather practice two very different specialties, yet they have always been passionate about being able to make a difference in people's lives. I learned from them that there is nothing that will limit you in pursuing a fulfilling life."

Medicine was part of Manuel's childhood, albeit in a different way. He remembers how as a small boy he would accompany his grandmother to her doctor's office in Albuquerque.

"We would make a trip downtown to the office and it would be an all-day affair," he recalls. He credits those memories with sparking an interest both in medicine and in working to

create better access and experiences for patients.

Archuleta was on faculty at UNM for several years before going into private practice and has maintained close ties with the school (he was awarded the School of Medicine's Distinguished Alumni award in 2013).

Archuleta has enjoyed watching medicine evolve and become more patient-oriented and in watching his daughter and granddaughter join the field.

"When I was in medical school, you had formal training, listened to lectures and if you needed information, you found a book and read it," he says. "Maybe we saw patients once a week. Now, students are taught from the beginning how to deal with patients. That has such a positive impact on care."

As for the possibility of more doctors in the family?

"You tell them to be happy, and we certainly are going to support whatever they want to do," he says with a smile. ◊

Board Report

UNM SCHOOL OF MEDICINE ALUMNI ASSOCIATION

BOARD OF DIRECTORS

Robert Melendez, MD '00 (President)
Mario Pacheco, MD '86 (Vice President)
Jennifer Phillips, MD '01 (Treasurer)

Sandra Whisler, MD '89 (Past President)
Manuel Archuleta, MD '73
Valerie Carrejo, MD '04
Santana Fontana, MD '98
Diane Klepper, MD (Former House Staff)
Maggie McCreery, MD '74
Effie Medford, MD '68
Diana Noya, MD '78
Valerie Romero-Leggott, MD '92
Nate Roybal, MD '07
Linda Stogner, MD '83
Bert Umland, MD '71

EX-OFFICIO MEMBERS

Paul B. Roth, MD, MS
Chancellor for Health Sciences
CEO, UNM Health System
Dean, UNM School of Medicine

Amanda Bassett, Director
Advancement and Alumni Relations

ADVANCEMENT AND ALUMNI RELATIONS

DIRECTOR

Amanda Bassett

ASSISTANT DIRECTOR/

ADVANCEMENT AND SPECIAL EVENTS
Lori Peterkin

EVENTS PLANNER

Erika Anderson

CONTACT

UNM School of Medicine
Advancement and Alumni Relations
MSC 08 4720 • Fitz Hall #182B
1 University of New Mexico
Albuquerque, NM 87131-0001
505.272.5112
<http://som.unm.edu/alumni>

Dear School of Medicine Alumni and Friends,

Throughout the year we strive to build lasting relationships and provide support to students, residents and alumni. Thanks to your generosity, we award medical student scholarships and travel grants, provide emergency funding for students and residents in need and support them daily through our Nook coffee station in the alumni office.

In the first five months of this academic year we have already awarded \$25,000 in medical student scholarships. We also have funded the Class of 2020's White Coat campaign and have met numerous requests for emergency loans and travel grants.

Engaging with students and residents is a priority for the Alumni Association, but we are also here to connect and engage with you.

Moving forward, we will work closely with the School of Medicine's new Office for Community Faculty to provide additional opportunities for alumni to engage with our students. We hope to build a strong network for students to connect with and learn from you while keeping you connected with us.

We have worked hard to build relationships with alumni from across the country with our out-of-state receptions. We are gearing up for events in Seattle, Denver and additional destinations in the spring.

We hope to visit your city and connect you with other School of Medicine alumni in your area, hear about the exciting things you are accomplishing and give you the opportunity to visit with Executive Vice Dean Martha Cole McGrew, MD, to learn about the latest initiatives at the School of Medicine.

In this issue of UNM Medicine, you will meet some of the amazing alumni our School of Medicine has produced.

We are continually looking for new ways in which we can recognize you and your accomplishments. I encourage you to keep us updated with your current contact information and inform us as you progress in your career so we can highlight and better serve you.

Please consider getting more involved with UNM School of Medicine Alumni Association, as we have many opportunities we would love to include you in. We hope to see and hear from you this year!

Very truly yours,



Amanda Bassett, Director
Advancement and Alumni Relations
UNM School of Medicine



Building the Preceptor Pipeline

School of Medicine Opens New Office of Community Faculty

By Michael Haederle

Each year, hundreds of UNM School of Medicine students spread out around the state for clinical rotations with doctors, physician assistants, physical and occupational therapists and other providers.

It's an important part of their education that relies on the good will of the clinicians, many of whom are themselves UNM graduates.

That's why Martha Cole McGrew, MD, executive vice dean of the School of Medicine, has established the new Office of Community Faculty. It's designed to give would-be preceptors a single point of contact for connecting with students and gaining access to the benefits afforded to part-time faculty.

"One of the things we've realized is people get requests from all over the institution to be preceptors, so it's sort of confusing," McGrew says. "We want to give them one-stop shopping so we can talk about the needs they have, and so they can get credentials."

The new office is headed by Helene Silverblatt, MD, a professor of Psychiatry and Family & Community Medicine and director of the state's Area Health Education Centers network.

"We have a long history of engaging preceptors in creative ways and in ways that show our devotion to them," Silverblatt says. But outreach efforts have grown more fragmented, due to the growth of the program and the preceptors' busier practices.



Helene Silverblatt

Rebecca Gustaf

"We want to focus from the community in," she says. "We want to ask what a preceptor would need that would make her or his experience rewarding."

The office will help to match students and residents with attributes appropriate for each clinical practice. And by serving as a sole point of contact, it will help save preceptors from having to respond to multiple programs seeking placements for their students, she says.

The office will be the conduit to help preceptors gain faculty status, which is required when supervising students or residents. It also will arrange to provide them with access to information resources at UNM's Health Sciences Library & Informatics Center.

Another benefit could take the form of specially designed continuing medical education courses tailored to practitioners' busy schedules, Silverblatt says.

"We would like to treat them as faculty," she says. "In terms of showing our gratitude, we want to make their lives easier. If they need something, we'll have someone saying right away, 'We'll help you with this.'" <

2016 Distinguished Alumni

Distinguished Alumnus Award



Alfredo R. Vigil, MD
Class of 1977

Alfredo Vigil practices family medicine at El Centro Family Health in Taos. He headed the New Mexico Department of Health from 2007 to 2010. He also was medical director of Questa Health Center and in leadership at Presbyterian Medical Services. He is an active preceptor in the School of Medicine's primary care curriculum.

About the award: The true measure of the School of Medicine's greatness can be found in the achievements of its alumni. The Distinguished Alumni Awards recognize alumni who have made significant contributions to society, and whose accomplishments, affiliations and careers have honored a legacy of excellence at the UNM School of Medicine.

Leonard M. Napolitano, PhD, Award



Karen Armitage, MD
House Staff, 1981

Karen Armitage is a pediatrician, public health physician and associate clinical professor in the Department of Family & Community Medicine. She was a 2014-2015 Robert Wood Johnson Foundation Health Policy Fellow and served as chief medical officer for the New Mexico Department of Health. She is an advocate for community-led interventions to address health disparities.

About the award: Dr. Napolitano was the School of Medicine's third dean (1972-1994). His many contributions include his commitment to knowing patients as people, which led to the development of UNM's nationally recognized primary care curriculum. The Leonard M. Napolitano, PhD, Award recognizes alumni who, like Dr. Napolitano, have been successful advocates and have shown dedication to the School of Medicine and its patients through innovation and commitment to education, all while building strong public and private partnerships.



Photos courtesy the Ogawa family.

Greg Ogawa's great-grandfather, Unpaku, who was a general doctor in Japan and then Hawaii, his great-grandmother Tsuni Ogawa and grandfather Ramond M. Ogawa as a small child. 1906

Rebecca Gustaf



Raymond, the first ophthalmology-only specialist in Hawaii, Gregory S.H. Ogawa (as an ophthalmology resident), and Gilbert M. O'Gawa (as a practicing ophthalmologist). 1990



UNM White Coat Day: First-year medical student Katherine H. Ogawa, MD '18, Gregory and Gilbert, now retired. 2014



The Significance of Service

Greg and Diane Ogawa Gain From Giving Back

By Laura Hall

When she says giving is in her family's DNA, Diane Harrison Ogawa isn't exaggerating. She and her husband Greg Ogawa, MD, were raised with the expectation that serving one's community "is just what you do."

The couple recently established the Ogawa Family Endowed Scholarship with matching funds from the endowment created by Diane Klepper, MD, a longtime associate dean for admissions and student affairs in the UNM School of Medicine and recipient of the 2014 Living Legend award.

Harrison Ogawa grew up watching her parents support their community. Her father was a fundraiser for higher education who "believed in the power of education," she says. He often would invite prospective donors home for dinner, and talk about connecting people with projects that would make a difference in the community.

"The word 'philanthropy' was never mentioned," Harrison Ogawa says. "Instead, we talked about how to help others."

Greg Ogawa, an ophthalmologist specializing in treating disorders of the cornea, is the 14th generation of medical doctors in his family. The tradition dates back more than 400 years to his paternal ancestors in Japan. Harrison Ogawa is executive director of the PNM Resources Foundation.

Their daughters, Katie and Allison, plan to continue in their father's footsteps. Katie, the elder daughter, is attending the School of Medicine and will become the 15th generation – and the first female – medical doctor in the family line.

"When Katie made the choice to go to UNM, we were impressed by the quality of medical education there," Harrison Ogawa says.

"One of the major problems in New Mexico is recruiting physicians," Ogawa says. He believes dedicated health care teams with ties to the state are needed in order to tackle this problem.

"In other places in the U.S., health care providers are competing for patients," he says. "Here, we have the opposite problem. There are not enough providers and too many people in need."

The first Ogawa Family Scholarship was awarded this fall, and will be presented annually at the La Tierra Sagrada Society scholarship dinner.

"What I learned from sitting around the family table as a young girl is the notion that giving back starts today," said Harrison Ogawa. "Not when you feel you have enough zeros in your bank account; not when you have enough time." ♦

LA TIERRA SAGRADA SOCIETY

Twenty Years of Supporting Students Through Scholarships

BY LORI PETERKIN

La Tierra Sagrada Society celebrated its 20th anniversary this fall by distributing a record \$150,000 in student scholarships. Thirty-three students received between \$3,125 and \$5,000 apiece at the society's annual awards dinner on Sept. 8.

The society has given more than \$438,000 in research grants and more than \$542,000 in scholarships through the years.

"Next year we look forward to reaching another exciting milestone by passing \$1 million in total scholarship and student research funding from La Tierra Sagrada," says society president Chuck North, MD. "The cumulative impact of our donors is truly making New Mexico a better place to live."

Through 2013, the society sponsored both research grants and student scholarships. By that time, the cost of a medical education had increased, as did student debt. Doctors were leaving New Mexico for higher-paying jobs.

During that same time, the UNM Health Sciences Center had grown and other sources of research funding became available. In 2014, the board of directors decided to suspend funding grants and use La Tierra Sagrada resources exclusively for student scholarships.

Today, the society has 20 endowments that were created with a matching gift established by Diane Klepper, MD, a long-time associate dean in the School of Medicine.

They are: Thomas M. Holmes, MD; Espey Family; Joseph A. Gorvetzian, MD, and Nancy A. Croker, MD; North Family; Obenshain Family; Zimmermann Family; Konstantin Konstantinov, MD; Krinsky and Benson Family; Robert L. Milne, MD, and Ann De Hart, MD; Ogawa Family; Morrison Greaves Family; Mary Ann Anamosa (Robin Dea, MD); Thornburg Family; Jeff Doll and Linda Novy-Doll; Laura Likar, MD; John and Pricilla Gaillour Memorial; Teodora Konstantinova, MD; Dr. C. Pardue and Marjorie Bunch Family; Kenneth Duane Fennell (Debra Atkins, MD) and Shelton and Maxine Cole (Martha Cole McGrew, MD).

Scholarships are also supported by the Dean's Endowment and the Thornburg Endowment for La Tierra Sagrada. Institutional scholarship sponsors include Greater Albuquerque Medical Association, UNM Comprehensive Cancer Center, UNM Hospital, UNM Medical Group, Inc. and the UNM School of Medicine Alumni Association.

To learn more about La Tierra Sagrada Society or how you can create an endowment, contact Lori Peterkin, lpeterkin@salud.unm.edu, 505.272.8085, or visit <http://som.unm.edu/giving/tierra-sagrada>. <



Erika Anderson

2016 Scholarship recipients.

La Tierra Sagrada was created in 1996 by Paul B. Roth, MD, MS, dean of the UNM School of Medicine, to provide an opportunity for individuals and businesses to make significant contributions to the School of Medicine's educational, research and patient care missions.

In 2003, with the proceeds from the Dean's Endowment and money raised by the society, La Tierra Sagrada made its first award – three research grants totaling \$24,000. La Tierra Sagrada awarded student scholarships for the first time in 2006 – five students received \$1,000 each.

CLASS ACTS

Caitlin Chestnut, MD '07, serves as lead physician at Presbyterian Medical Group's Wyoming Boulevard clinic, which includes a group of seven family practitioners and several advanced practice clinicians.

C. Jan Gilmore, MD '07, has been promoted to lead orthopedic surgeon for the Presbyterian Rust Medical Center practice on Albuquerque's West Side. Following his orthopedic residency at UNM, he completed an orthopedic sports fellowship at the University of Virginia.

Nancy Guinn, MD '96, is the medical director of Presbyterian Home and Transition Services, which has created innovative programs in home care, palliative care, hospice and hospital at home. Guinn trained in family and community medicine at UNM and completed her fellowship in palliative and hospice medicine at Stanford Uni-

versity Medical Center. She worked as a primary care doctor in a community health center and as a solo practitioner prior to joining Presbyterian in 2010. She co-authored the Medical Orders for Scope of Treatment (MOST) document and serves on the MOST advisory committee. She is a past president of the New Mexico chapter of the American Academy of Family Physicians.



Nate Roybal, MD '07, PhD, has returned to New Mexico after completing a fellowship in ophthalmology at the University of Iowa. He has accepted posi-

tions at UNM and Eye Associates of New Mexico.



All 30 members of UNM's 2016 class of physical therapy students passed the National Physical Therapy Examination on their first try – the first time UNM has had a 100 percent first-time pass rate, according to Burke Gurney, PT, PhD, chief of the Division of Physical Therapy. UNM students scored 694 (out of 800) on average, while the national average was 682.8, Gurney said.



Class of 1996 family medicine residents got together with current and former faculty to celebrate their 20-year reunion.

To the Editor:

I received my copy of UNM Medicine and enjoyed reading and learning what's happening with the UNM School of Medicine and alumni. I have one complaint: On the inside back cover there is an advertisement requesting scholarship donations entitled "PRIDE OF PURPOSE."

I noticed in this advertisement that radiologic technologists are referred to as "technicians." Oh, how this irks me. We are not technicians. Technicians fix the equipment that we technologists use to create the incredible images that aid in the diagnosis of broken bones and brain tumors, cerebral bleeds and herniated discs. We are professionals who are an integral part of the medical team.

I hope that if the advertisement is printed again the title can be corrected to properly reflect the training that is provided at the School of Medicine and the profession of which I am a very proud member.

Sincerely,
Jane Potter, BFA, AS RT (R) MR
Radiology Educator, University of New Mexico Hospital

 **UNM**
SCHOOL of MEDICINE | *Alumni Association*

Please share your updates and professional accomplishments. Contact Amanda Bassett at the UNM School of Medicine Alumni Association to submit information for inclusion in an upcoming issue of **UNM medicine**.

Telephone: 505.272.5700
Email: abassett@salud.unm.edu

The Cycle of Life in Critical Care Medicine

By Jonathan Marinaro, MD

Life and death. Death and life. For many patients in UNM's intensive care units, the difference will be decided within hours, minutes or even seconds following a sudden event.

These are the brief moments for which the faculty from the UNM Center for Adult Critical Care, the advanced practice professionals, the ICU nurses and others have trained, and for which we continually plan.

Unfortunately, there are some patients whose condition is unalterable. In these cases we may not be able to save the patient, but the critical care practitioner can be there for the other victims in the room – the family.

On Feb. 11, 2013, one such patient arrived in the Neurosciences ICU. He was unique as a person, father and husband, but not as a patient with a devastating and untreatable problem. Michael Hansen was brain dead from a catastrophic intracranial hemorrhage.

Nancy Hansen, Michael's wife, was utterly devastated, yet determined to see his organs donated, as long as that could occur before Valentine's Day. Nancy didn't want the love of her life to die on the day that symbolized love.

But the organ donation process is complex. It involves lab testing, locating recipients nationally and arranging personnel to perform the procedure. With each of these steps, the precious hours until Valentine's Day dwindled.

Reluctantly, we concluded we would not be able to gift Michael's organs prior to this special day, so Nancy requested that I allow Michael to pass prior to midnight. I came in to the hospital at 9 p.m. and fulfilled her last wish for her husband, thereby preserving this holiday as a day of love, not a day of devastation.

In dealing with her husband's death, Nancy reached out for a way to honor his memory. Michael was a great believer in graduate education, so she asked me as a CU Boulder alumnus to arrange a donation to the University of Colorado system in Michael's honor.

I persuaded her to start a critical care education fund in Michael's honor at UNM instead. Together, we arranged the annual Michael W. Hansen Conference. Now in its third year, this conference has brought to UNM the Cardiac Surgery Advanced Life Support Course (2013), the Emergency Neurologic Life Support Course (2015) and the Critical Care Obstetrics Course (2016).

Nancy wanted to ensure that Michael's love of education – and her own appreciation of the effect of critical care both in saving lives and in saving families – benefited as many critical care practitioners in the state as possible. Through her generous donation, her continued fundraising for this conference and a recurring donation to Critical Care Student Organization, Nancy is realizing her dream of never letting Michael's memory be anything but positive.

Within weeks of our first Cardiac Surgery Advanced Life Support course the techniques presented had saved a life. Now, each of these courses is part of an ongoing curriculum to train critical care doctors at UNM and around the region.

Our latest Hansen Conference in Critical Care Obstetrics has been picked up nationally as a course, and UNM physicians have been given a front seat on the national planning committee. Michael and Nancy are truly making a difference in critical care at UNM and in the Southwest.

The greatest gift an intensivist can give a family is to save their loved one. The next greatest gift I can give is to make sure their loved one can pass with peace and dignity.

Life and death. Death and life. That struggle will end one way or another, but critical care practitioners never stop caring.

Jonathan Marinaro, MD, is an associate professor in the Department of Emergency Medicine and co-chief of the UNM Center for Adult Critical Care.

PRIDE OF PURPOSE

At the UNM School of Medicine we have ample reason to be proud . . .

- We educate doctors, physician assistants, physical and occupational therapists, paramedic-EMTs, dental hygienists, laboratory and radiological technologists and other health care professionals.
- We discover the causes and cures for disease.
- We care for New Mexicans with acute and complex conditions.

Learn more about what we do — and how your support adds to the value of your UNM degree.



For more information on donating to scholarships or endowing a named scholarship, please contact Amanda Bassett at 505.272.5700.



Office of the Dean
Advancement and Alumni Relations
MSC08 4720 • Fitz Hall 182B
1 UNIVERSITY OF NEW MEXICO
ALBUQUERQUE, NM 87131-0001

Nonprofit Org
U.S. Postage
PAID
Albuquerque, NM
Permit No. 39

We're in this together . . .



Sara Mota

Your tax-deductible contribution to support scholarships, white coats and stethoscopes or The Nook coffee and snack corner helps our students meet their educational goals. Please give to the Alumni Association today.

We simply can't do it without you.