

focus on leadership:

What 'Eyes' Ahead— DMEI's Physicians Share Their Predictions on the Future of Eye Care



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A PUBLICATION OF THE DEAN MCGEE EYE INSTITUTE

patient care education vision research leadership service

DMEI clinical directory

Oklahoma Health Center

DMEI Acers and Parke Pavilions 608 Stanton L. Young Blvd. ■ Oklahoma City, OK 73104 405.271.6060

Comprehensive Ophthalmology/ Cataract and Ophthalmic Surgery/ Premium Cataract Surgery

405.271.1090 = 800.787.9012

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Victoria A. Bugg, MD*
Layne E. Goetzinger, MD*
Carolyn E. Kloek, MD
Andrew T. Melson, MD*
Deana S. Watts, MD

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405.271.6084 = 800.787.9012Rachel M. Caywood, OD, FAAO
Scott Samples, FCLSA, NCLE-M, CPOT

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Laurie A. Hahn-Parrott, CO, COT, MBA (Orthoptist)

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McGee Eye Surgery Center

Harold Hamm Diabetes Center 1000 N. Lincoln Blvd., Suite 150, Oklahoma City, OK 73104 405.271.3363

Medical Director: Robert J. Christensen, MD

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NORTHWEST OKC

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Aman Mittal, MD*

Ophthalmic Plastic and Reconstructive Surgery

Thai Do, MD

Refractive Surgery

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Dean McGee Eye Institute

Home to the Department of Ophthalmology of the University of Oklahoma College of Medicine

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The Dean McGee Eye Institute is dedicated to serving all Oklahomans and the global community through excellence and leadership in patient care, education, and vision research.





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PICTURED ON FRONT COVER:

Ronald M. Kingsley, MD (left); top (left to right): Ralph B. Hester III, MD, Maria E. Lim, MD, and Mahmoud A. Khaimi, MD; bottom (left to right): Kamran M. Riaz, MD, and PGY-4 residents: Austin L. LaGrow, MD, Elise E. Steinberger, MD, MS, Elizabeth A. Fairless, MD, Jessica Hsueh, MD, and Kyle J. Royalty, MD.



the Future of Eye Care

"The future always arrives too fast... and often in the wrong order."

—Alvin Toffler, futurist



R. Michael Siatkowski, MD, MBA

DEAR FRIENDS OF DMEI,

WHO OF US HAS NEVER WISHED TO PREDICT THE FUTURE? WE LIVE IN A VERY RAPIDLY CHANGING AND UNPREDICTABLE WORLD. In the blink of an eye, a geopolitical conflict, an economic boom or collapse, a global pandemic, or a reckless driver can change our lives forever. People have always pursued knowing the future, sometimes with pretty impressive results.

It's well known that in 1865 Jules Verne predicted people landing on the moon. Edward Bellamy's 1888 novel *Looking Backward* predicted the use of credit cards. In 1909 Nikola Tesla gave an interview to *The New York Times* in which he discussed the ability to have a personal

telephone to carry in one's pocket. The novel and movie *2001: A Space Odyssey* clearly described a device that is almost identical to an iPad.

Of course, not everyone is so prescient — remember the airplanes that would fall out of the sky and the global famine that was supposed to happen in the Y2K crisis? And here are some other great predictions that certainly did not come true:

"The idea is idiotic on the face of it...Why would anyone want to use this ungainly and impractical device?" William Orton, president of Western Union, describing Alexander Graham Bell's telephone, and who turned down the offer to buy the patent for less than \$100,000 in 1876.

"Stock prices have reached what looks like a permanently high plateau." Economist Irving Fisher, October 16, 1929.

"There's no chance that the iPhone is going to get any significant market share. No chance." Steve Ballmer, CEO of Microsoft, 2007.

It's particularly hard to predict the future in medicine. The vast majority of new drugs never come to

market. We don't know what new infections will surface, so we can't be prepared with vaccines or antibiotics. Treatments that seem to be marvelous end up having significant adverse side effects years later. But yet there have been so many successes. MRI scans have resulted in early diagnosis of many conditions at a treatable stage, and have spared millions of patients unnecessary exploratory surgery. People can have cataract surgery and don't need glasses at all afterwards. And recently we have seen several amazing drugs that have the potential to help millions of people lose weight and avoid the many complications that could decrease their quality of life and shorten their life expectancy.

In our feature article of this issue, DMEI experts will give their best predictions of the future in ophthalmology. They will discuss not only potential new medical and surgical treatments, but will also talk about how we will train future generations of doctors differently

and incorporate artificial intelligence into our specialty.

Ophthalmology will continue to be a leader in health care technology.

We may not get everything right in our predictions, but there are a few things we do know for sure. Ophthalmology will continue to be a leader in health care technology. We will find ways to bring care to more people more efficiently and cost-effectively. And all of us at DMEI — doctors,

scientists, educators, learners, and our amazing support staff — will be totally committed to our mission: excellence and leadership in patient care, medical education, and vision research, for the benefit of all Oklahomans and the global community.

Your support and encouragement are critical to our success. We cannot thank you enough for being part of our journey!

R. Michael Siatkowski, MD, MBA

Chief Executive Officer

Mile

Dean McGee Eye Institute

Edward L. Gaylord Professor and Chair

David Ross Boyd Professor

Department of Ophthalmology

University of Oklahoma College of Medicine

Inaugural DMEI Alumni Profess

IN MID-DECEMBER, RONALD M.
KINGSLEY, MD, CLINICAL PROFESSOR OF
OPHTHALMOLOGY AT THE DEAN MCGEE
EYE INSTITUTE/UNIVERSITY OF OKLAHOMA
(DMEI/OU), was awarded the inaugural DMEI
Alumni Professorship. Dr. Kingsley is the longest
serving member of the DMEI/OU ophthalmology
faculty and celebrated his 40th anniversary with the
Institute in 2023 (please see page 14).

The campaign to endow the DMEI Alumni Professorship was announced in June 2021 and, at the end of calendar year 2023, has raised almost \$450,000. It is awarded for a two-year term with earnings from the endowment providing financial support for the recipient as he or she pursues educational, academic, scholarly, and service activities. Recipients will retain the title of DMEI Alumni Professor permanently.

The Selection Committee for the inaugural DMEI Alumni Professorship was chaired by Matthew P. Traynor, MD (Resident Alumnus 2008; Glaucoma Fellowship Alumnus 2009), who shared a video greeting at the 2023 DMEI Holiday Celebration and Employee Recognition Ceremony on December 15. The announcement of Dr. Kingsley's selection was made by Helga Fuenfhausen Pizio, MD (Resident Alumna 1996), another member of the committee, which also included Denise R. Chamblee, MD (Resident Alumna 1992), Christina M. Lippe, MD (Resident Alumna 2018), John A. Robinson, MD (Resident Alumnus 1979), Paul S. Tlucek, MD (Resident Alumnus 2011), and Elizabeth R. Waller, MD (Resident Alumna 2006).

Born in New York City, Dr. Kingsley completed his education and training at Brandeis University (A.B., *cum laude*), Georgetown University (M.D.), Johns Hopkins University (research fellowship), Yale University (ophthalmology residency), and London's Moorfields Eye Hospital (medical retina fellowship) before joining the DMEI/OU faculty in 1983. As a medical retina specialist in Oklahoma City, he has served thousands of patients with age-related macular degeneration, diabetic retinopathy, and other retinal conditions and has devoted countless hours to the education of future ophthalmologists.

In 1988, Dr. Kingsley was the first recipient of the Edward and Thelma Gaylord Faculty Honor Award for "best teacher at DMEI." In 2000, 2003, and 2013, he received the Excellence in Attending at VA Award, which reflects not only his devotion to education but also to the care of our nation's veterans at Oklahoma City's Veterans Affairs (VA) Medical Center. In addition, beginning in 2000, Dr. Kingsley was recognized among *Best Doctors in America* along with other similar "top doctor" accolades (e.g., *America's Top Ophthalmologists* and *Top Doctors of the 405*). In 2023, he also was recognized among *55 Over 55 Inspiring Oklahomans* (please see page 8).



Dr. Ronald Kingsley (center) is pictured with his DMEI Alumni Professorship trophy, nine DMEI residents, a retina fellow (back left), and Dr. Helga Fuenfhausen Pizio (front right), DMEI/OU resident class of 1996 and DMEI Alumni Professorship Selection Committee member.

orship Awarded to Dr. Kingsley

Dr. Kingsley continues to serve patients on a near full-time basis, which includes monthly clinical activity at an Indian Health Service facility in Ardmore and as a volunteer at Skyline Ministries and Crossings Community Clinic in Oklahoma City, as well as weekly teaching/staffing with DMEI/OU residents at the VA Medical Center.

In concert with his remarkable and longstanding commitment to resident education and our veterans, Dr. Kingsley remains active in DMEI/OU's didactic lecture series and conferences. He also has served on DMEI's Executive Committee (2009-2011), as an advisory member on the DMEI Board of Directors (2019-2020), and as an active member of the Residency Selection Committee.

As a clinical researcher, Dr. Kingsley has remained engaged with the National Eye Institute's Diabetic Retinopathy Clinical Research Network and in numerous important clinical trials investigating the treatment of diabetic retinopathy and age-related macular degeneration. His more than 40 publications have appeared in such prestigious journals as Archives of Ophthalmology, Ophthalmology, Ophthalmology, Ophthalmology, Ophthalmology, Ophthalmology, Ophthalmology, American Journal of Ophthalmology, and Eye (London), as well as others.

"The Dean McGee Eye Institute is dedicated to serving all Oklahomans and the global community through excellence and leadership in patient care, education, and vision research," said Dr. R. Michael Siatkowski, DMEI's chief executive officer and Edward L. Gaylord professor and chair of the OU Department of Ophthalmology. "Dr. Kingsley fulfills this mission on a daily basis and has done so for over 40 years. He is truly an inspiring physician, educator, and clinical researcher, as well as a devoted husband, father, and grandfather."

Donors to DMEI Alumni Professorship

Rebecca K. Morgan, MD / NFG Foundation, Inc.

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Robert B. Taylor III, MD, FACS Ann Acers-Warn, MD, MBA Hemang C. Patel, MD Laura S. Miles, MD Kyle A. Rogers, MD Christina M. Lippe, MD David E. Zuech, MD Bradley K. Farris, MD Mark E. Robinson, MD James C. O'Brien, MD Cynthia A. Bradford, MD Andrew K. Bailey, MD Bradley D. Fouraker, MD, FACS Finny T. John, MD John Russell Burks, MD Cynthia A. Davis Lily Wong, PhD Wanda L. Rimmer



We would like to raise an additional \$50,000 to meet our \$500,000 goal. Please consider making a gift today by clicking on the QR code on this page or by using the envelope included with the magazine.

New Optometrist Joins the Institute

ON SEPTEMBER 1, LAURA A. KAHN, OD, joined the Dean McGee Eye Institute optometry staff. A native of Ohio, Dr. Kahn received her bachelor of science degree in chemistry from Elon University (Elon, North Carolina) and her doctorate in optometry from The Ohio State University (Columbus, Ohio). She has worked in various practices in Ohio, Indiana, and Georgia in comprehensive optometry, with experience in low vison, scleral lens fitting, ocular surface disease, and postoperative cataract care.



Laura A. Kahn, OD

Her husband, Jay Kahn, is senior assistant vice president for advancement at the University of Oklahoma Foundation. They have a one-year-old son, Jack.

Dr. Kahn sees patients at the Oklahoma Health Center location and the northwest Oklahoma City satellite office. ■

New Contact Lens Scanning Device Demonstration



Pictured (left to right) are Dr. Rachel Caywood, Dr. Lynette Johns, Scott Samples, Jon Hudson, and Belinda Priest.

IN AUGUST, Visionary Optics visited the Dean McGee Eye Institute (DMEI) for a two-day contact lens clinic demonstration of their S-map scleral profilometry (scleral mapping) scanning device. This technology allows patients who were previously not able to be fit successfully to have a healthy scleral lens fit, which will aid in ocular health and better vision. Thirteen DMEI patients with an irregular cornea and/or sclera benefited from this scleral mapping technology and received a specialty fitting.

A team of two contact lens fitters, Jon Hudson and Belinda Priest; Dr. Lynette Johns, an expert scleral lens fitter with over 20 years of experience; and David Bland, marketing specialist, all traveled to Oklahoma City to assist with DMEI patients. The Visionary Optics team will continue to assist the DMEI contact lens department (Rachel M. Caywood, OD, FAAO, and Scott Samples, FCLSA, NCLE-M, CPOT) every three to four months on an as needed basis.

DR. KAMRAN M. RIAZ APPOINTED CHAIR OF EDITORIAL COMMITTEE

KAMRAN M. RIAZ, MD, HAS BEEN APPOINTED AS CHAIR OF THE EDITORIAL COMMITTEE FOR SECTION 3, CLINICAL OPTICS, OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY'S BASIC AND CLINICAL SCIENCE COURSE™ (BCSC®). This clinical optics textbook provides a comprehensive overview of clinical optics, including current applications of optical principles such as lasers, spectacles, intraocular lenses, and refractive surgery. A chapter on vision rehabilitation addresses the wide range of vision rehabilitation interventions: smartphone accessibility features and apps, electronic magnification devices, audio devices, and a variety of optical devices.

Nine videos help increase readers' understanding of the optics of the human eye and basic concepts in geometric optics, ophthalmic instruments, and contact lenses. Both print and eBook users have access to the videos and various educational activities.

Dr. Riaz is an award-winning educator and also is regarded as an international expert in clinical optics. He has served on the Section 3 Editorial Committee since 2019. In 2022, Dr. Riaz was the primary editor of *Optics for the New Millennium: An Absolute Review Textbook*, published by Springer Nature Switzerland AG.

Since joining DMEI in March 2019, Dr. Riaz's practice has focused on complex and premium cataract surgery, corneal transplantation, refractive surgery, and the management of difficult and challenging surgical cases. In 2021, he was awarded "40 Under 40" and "Achievers Under 40" recognitions by *Oklahoma Magazine* and *The Journal Record*, respectively. In April 2022, Dr. Riaz received a Faculty Aesculapian Award from the OU College of Medicine's senior class, the first ophthalmologist to ever receive this prestigious award.

Dr. Riaz and his wife, Sanaa A. Hameed, MD, have three children.



Kamran M. Riaz, MD Clinical Associate Professor Director of Medical Student Research

2023 American Academy of Ophthalmology Annual Meeting Highlights

Secretariat Award

- Bradley D. Fouraker, MD (Tampa, FL)
 DMEI Cornea and External Disease Fellowship Alumnus (1989)
- Kevin E. Lai, MD (Carmel, IN) DMEI Neuro-Ophthalmology Fellowship Alumnus (2014)
- Jacquelyn A. O'Banion, MD, MSc (Atlanta, GA) - DMEI Resident Alumna (2013), DMEI Global Eye Care Fellowship Alumna (2014)

Life Achievement Honor Award

 William S. Clifford, MD, MBA (Garden City, KS) – DMEI Resident Alumnus (1993), DMEI Cornea/Glaucoma Fellowship Alumnus (1994)

Achievement Award

- Scott M. Guess, MD (Missoula, MT) DMEI Resident Alumnus (2008)
- Ben J. Harvey, MD (Oklahoma City, OK)
 DMEI Resident Alumnus (2011), DMEI Glaucoma Physician
- Kamran M. Riaz, MD (Oklahoma City, OK) – DMEI Cornea and External Disease Physician

DR. RONALD M. KINGSLEY NAMED ONE OF 55 Over 55 Inspiring Oklahomans

RONALD M. KINGSLEY, MD, WAS HONORED IN OCTOBER AS ONE OF 2023'S 55 OVER 55 INSPIRING OKLAHOMANS. Dr. Kingsley, who is a clinical professor at the Dean McGee Eye Institute/ University of Oklahoma (DMEI/OU), has been an outstanding physician, educator, and clinical researcher in his four decades of service



Pictured (left to right): Whitney G. Rollings, retinal technician; Regina G. Riley, patient appointment coordinator; Dr. Kumar Sambhav, PGY-6 retinal fellow; Dr. Ronald M. Kingsley, retinal physician and 55 Over 55 honoree; Dr. Vinay A. Shah, retinal physician; Dr. Razek G. Coussa, retinal physician; Dr. Gregory L. Skuta, glaucoma physician and DMEI/OU vice chair for faculty development and external relations; and Dr. Luca Rosignoli, PGY-5 retinal fellow.

at DMEI/OU. The other 2023 honorees included such state luminaries as Chickasaw Nation Governor Bill Anoatubby, Choctaw Nation Chief Gary Batton, sportscaster Dean Blevins, former Oklahoma City Mayor Mick Cornett, former Oklahoma Governor Mary Fallin, Continental Resources Executive Chairman Harold Hamm, Cherokee Principal Chief Chuck Hoskin Jr., former Oklahoma Speaker of the House Glen Johnson Jr., former Oklahoma First Lady Cathy Keating, former Heisman Trophy winner Steve Owens, and Dr. Valerie Williams, Vice Provost for Academic Affairs and Faculty Development at the OU Health Sciences Center.

Dr. Kingsley and his fellow inductees were honored at an event in the State Capitol Rotunda in Oklahoma City on October 26.

Congratulations, Dr. Kingsley, and many thanks for exemplifying--day in and day out—the highest standards of professionalism, excellence, and kindness!

To learn more about Dr. Kingsley, please see pages 4, 5, and 18. ■



Ann Acers-Warn, MD, MBA, has been elected to serve as vice chair of the American Board of Ophthalmology (ABO) in 2024 and will serve as chair in 2025. She is pictured (center) at the February ABO retreat with Drs. Steven J. Gedde (left), current chair of the ABO, and George B. Bartley, ABO chief executive officer (right). Although a number of current or former Dean McGee Eye Institute/ University of Oklahoma (DMEI/OU) faculty have served as ABO directors over the last 25 years, Dr. Acers-Warn is the first to become chair while an active member of the DMEI/OU faculty. More to come in the next issue of DMEI *InVision*.

Dr. Gregory L. Skuta Receives 2023 Oklahoma Academy of Ophthalmology Distinguished Service Award

GREGORY L. SKUTA, MD, CURRENTLY THE VICE CHAIR FOR FACULTY DEVELOPMENT **AND EXTERNAL RELATIONS** and David W. Parke II, MD and Regents' professor at the Dean McGee Eye Institute (DMEI) and in the University of Oklahoma (OU) Department of Ophthalmology, received the 2023 Oklahoma Academy of Ophthalmology (OAO) Distinguished Service Award during the 2023 DMEI Holiday Celebration and Employee Recognition Ceremony held at the Embassy Suites Hotel by Hilton Oklahoma City Downtown Medical Center on December 15. The Distinguished Service Award is the OAO's highest honor and is a peer recognition award given to ophthalmologists who have exhibited a lifelong dedication to the OAO and/ or to the profession of ophthalmology.

A native of Illinois, Dr. Skuta earned his undergraduate (Phi Beta Kappa) and medical (Alpha Omega Alpha Honor Medical Society) degrees from the University of Illinois. He completed his ophthalmology residency at the University of Wisconsin-Madison and served as a glaucoma fellow at the Bascom Palmer Eye Institute in Miami, Florida. After five years on the faculty at the University of Michigan, Dr. Skuta joined DMEI/OU in mid-1992.

Dr. Skuta has been very active in the state and national ophthalmologic communities. He served on the OAO's Board of Directors from 1993 to 1999 and from 2009 to 2021. He also assisted in planning regional scientific meetings involving the OAO in Ridgedale, Missouri, in the late 1990s and has been a speaker for some of the meeting programs.

Dr. Skuta has served as president of the American Glaucoma Society (AGS, 2005-2006) and American

Academy of Ophthalmology (AAO, 2014); as president, chief executive officer, and department chair at DMEI/OU (2009-2021); as a director of the American Board of Ophthalmology (2001-2008); and as a member of the Board of Governors of the World Glaucoma Association (2004-2007). Currently, his national responsibilities include service as chair of the AAO's Foundation Advisory Board (2019-2024); executive vice president of the AGS (2023-); vice president of the National Alliance for Eye and Vision Research/Alliance for Eye and Vision Research (2024-); and member of the Board of Directors of the Ophthalmic Mutual Insurance Company (2017-2026).

Dr. Skuta and his wife, Anne, a retired nurse and administrator at INTEGRIS Baptist Medical Center, have three children, two children-in-law, and one granddaughter.



Pictured (left to right): R. Michael Siatkowski, MD, MBA, DMEI/OU chief executive officer and department chair; Gregory L. Skuta, MD, glaucoma physician and DMEI/OU vice chair for faculty development and external relations; and Ben J. Harvey, MD, glaucoma physician and recent OAO president. Both Drs. Siatkowski and Harvey are prior recipients (2020 and 2022, respectively) of the OAO Distinguished Service Award.

THREE DECADES OF SERVICE:

Stephen R. Fransen, MD, Retires,

Leaving a Transformative Legacy of Accessible Patient Care, Medical Technology, and Education

BY STACI ELDER HENSLEY



Stephen R. Fransen, MD Clinical Professor

THIS PAST
DECEMBER
31ST, THE DEAN
MCGEE EYE
INSTITUTE (DMEI)
BID FAREWELL
TO ONE OF THE
MOST IMPACTFUL
CLINICIANS AND
EDUCATORS IN ITS
HISTORY — Stephen
R. Fransen, MD, clinical
professor at DMEI and
in the University of
Oklahoma (OU) College

of Medicine's Department of Ophthalmology. In his 33 years as a medical retina specialist at DMEI/OU, he has profoundly affected people's lives in Oklahoma and around the world.

It would take a book, rather than an article, to outline all of Dr. Fransen's many career accomplishments. Among the most notable is the creation of lasting partnership programs between DMEI and several of Oklahoma's Native American tribes to provide state-of-the-art diabetic retinopathy and other retinal and eye care.

With a father who was a general surgeon and a mother who was a nurse, it's no surprise that Dr. Fransen became interested in a medical career early on. He elected to specialize in ophthalmology and from there to focus on treating diseases of the retina – most notably diabetic retinopathy and age-related macular degeneration.

"One of the things that appealed to me most about ophthalmology, and especially the retina, is that we do a lot of things that work – we can definitively prevent blindness," Dr. Fransen said. "As a clinician, I also find it a fascinating blend of physics and optics that has such a huge impact on quality of life."

Despite the high degree of treatability, however, epidemiological studies have shown that diabetic retinopathy and macular degeneration continue to be among the top causes of blindness and severe vision loss in America, a fact that Fransen views as unacceptable.

"This disconnect between a high level of treatability for these conditions, and yet at the same time, being two top causes of vision loss for decades, is something that I've always found incredibly frustrating," he said. "I consider it almost a moral failure to be able to treat people with these diseases at a population level and not do so."

Rather than wring his hands about this issue, as a young physician Dr. Fransen instead got to work transforming his frustration into action.

In 1991, with the full support of former DMEI President Dr. Thomas E. Acers, Dr. Fransen began working with the Chickasaw Nation, which was then establishing an independent tribal healthcare system. Since Oklahoma's Native American population experiences very high levels of diabetic retinopathy and other

vision problems, this partnership was a natural first step.

The snag came in that while tribal patients around the state were subsequently being referred to DMEI for diabetic retinopathy treatment, many were not showing up for appointments.

"That was when we realized that often and for a variety of reasons, Native American patients weren't able to travel from their location to Oklahoma City for treatment, so the access issue became huge," Dr. Fransen said. "I said to myself well, lasers are portable, so it makes more sense for me to go to them."

So that's what he did. Beginning in the 1990s, Dr. Fransen started traveling around the state,

lasers on board, performing procedures and coordinating care with tribal optometrists. Ten years ago, he discontinued treating patients at DMEI's main facility in order to travel around the state full time. Due to his success with the Chickasaws, over the years enduring partnerships also were developed with the Choctaw Nation, Muscogee (Creek) Nation, and Pawnee Nation.

It's medically rewarding to be able to do something with your hands and help people, but equally rewarding are the personal relationships. While he put a lot of miles on his vehicle traveling around the state, Dr. Fransen said the most rewarding part of working with the tribes has been the personal relationships with patients.

"I used to be 'the city doctor,' but very soon I became their doctor,"

Dr. Fransen said. "That's the best part. It's medically rewarding to be able to do something with your hands and help people, but equally rewarding are the personal relationships."

He's also loved seeing the tribes create their own healthcare systems, moving away from the federal Indian Health Service, and helping to educate tribal optometrists and others.

"Over the last decades, the quality of facilities and staff the tribes have created is very impressive," he said. "I was a small part of it, but I look back to the first clinics we started together and see what they have now, and it has been very exciting to see it grow and play a part in helping."

...continued on next page...

invisions: news

Dr. Fransen's philanthropic spirit went beyond the U.S. borders in 2009, when as part of a church mission trip, he traveled to Nicaragua, where he met practicing ophthalmologist Dr. Carlos Nunez. The two soon began working together, with Dr. Fransen teaching procedures to Dr. Nunez and educating his staff, plus conducting telehealth sessions and helping raise funds and obtain lasers and other equipment.

In addition to his work with Dean McGee, Dr. Fransen also became an entrepreneur when he started the for-profit company Retinal Care (now Lumata Health). The business provides ophthalmologists with a variety of services that improve efficiency on the non-clinical side of their practice, while also improving patient adherence and satisfaction. It has branches in 32 states, and Dr. Fransen plans to continue in his chief medical officer role with Lumata Health indefinitely.

As if all the above weren't enough, Dr. Fransen has mentored, trained, and practiced alongside three generations of top-tier ophthalmologists through his work with DMEI and OU.

After graduating from the University of Manitoba's College of Medicine in Winnipeg, Manitoba,



Dr. Fransen and granddaughter Ruby working on a chemistry project.

Canada, Dr. Fransen spent his residency years at DMEI, where he graduated in 1989. He then completed a one-year fellowship in retinal vascular and macular disorders at the Bascom Palmer Eye Institute in Miami, Florida, returning to Dean McGee to officially join the team in 1990. In 1993, he received the Edward and Thelma Gaylord Faculty Honor Award, which is voted on by DMEI residents and presented annually to outstanding teachers among the faculty.

What's Next?

Having spent the better portion of his life in Oklahoma, Dr. Fransen said he and wife Cindy, a retired nurse, plan to move to a North Carolina farm early this year, in order to be closer to one of their two daughters (they also have a son), her husband, and two of their five grandchildren. Even though he will continue in his role with Lumata, he said most of his time will be spent doing fun science projects—like making "slime"—with his grandchildren, along with some woodworking and building "contraptions."

Dr. Fransen will take with him 30-plus years of self-described "wonderful" memories of his decades as a DMEI clinician, teacher, mentor, and the point person for its Native American outreach initiatives. He also has the satisfaction of knowing that he has played a key role in ensuring that thousands of Oklahomans – Native American and others – have access to treatment for diabetic retinopathy, macular degeneration, and other vision issues.

"Being a physician is a humbling experience," he said. "Patients don't always know a lot about you. Often they just met you, but they are willing to trust you that deeply, with something as important as their vision. It means a lot."

EMPLOYEE OF THE MONTH PROGRAM



Allison L. Garber, COA Ophthalmic Technician Oklahoma Health Center September 2023



Nathan D. Menifee, COA Ophthalmic Technician Supervisor Oklahoma Health Center October 2023



Katelyn R. Jensen
Patient Appointment Coordinator
Pediatric Ophthalmology
Oklahoma Health Center
November 2023



Carmen Olivas Patient Services Representative Lawton Satellite Office December 2023



Sima B. Patel Clinical Trials Coordinator Oklahoma Health Center January 2024



Jacob F. Boyanton Information Technology Support Analyst Oklahoma Health Center February 2024

doximity

YOUR VOTE MATTERS!

If you are an ophthalmologist with a *Doximity* profile, please plan to submit responses to this spring's surveys for 2024 - 2025 *US News & World Report's* "Best Hospitals" and *Doximity's* "Residency Navigator." Please consider selecting the Dean McGee Eye Institute/University of Oklahoma Health Sciences Center as one of your choices for each survey!



2023 EMPLOYEE SERVICE AWARDS

40 YEARS

Sheri Greenwood Ronald Kingsley, MD



Pictured (left to right): Garyl Geist (DMEI's executive vice president and chief operating officer), Rumble the Bison (OKC Thunder's mascot), Sheri Greenwood, Ronald Kingsley, MD, and R. Michael Siatkowski, MD, MBA (DMEI's chief executive officer and department chair).

35 YEARS

Melody Marcum



Pictured (left to right): Garyl Geist, Rumble, Melody Marcum, and R. Michael Siatkowski, MD, MBA.

25 YEARS

Layne Goetzinger, MD Nancy Lambert, BCO Kimberly Howard Mark McClellan Melissa Killman



Pictured (left to right): Garyl Geist, Rumble, Kimberly Howard, Melissa Killman, Nancy Lambert, BCO, and R. Michael Siatkowski, MD, MBA. Not pictured are Layne Goetzinger, MD, and Mark McClellan.

15 YEARS

Melissa Burleson Tara Hall Sylvia McGhee Donna Lancaster Angela Plant, OD, FAAO



Pictured (left to right): Garyl Geist, Rumble, Melissa Burleson, Sylvia McGhee, Angela Plant, OD, FAAO, and R. Michael Siatkowski, MD, MBA. Not pictured are Tara Hall and Donna Lancaster.

10 YEARS

Karina Edrington Charonna Hill Mark Wyckoff



Pictured (left to right): Garyl Geist, Rumble, Mark Wyckoff, Charonna Hill, Karina Edrington, and R. Michael Siatkowski, MD, MBA. At the 2023 Dean McGee Eye Institute (DMEI) Holiday Celebration and Employee Recognition Ceremony held at the Embassy Suites Hotel by Hilton Oklahoma City Downtown Medical Center on December 15, 31 employees were recognized for their 465 collective years of service to the Institute and University of Oklahoma Department of Ophthalmology. Congratulations to all!

20 YEARS

Martin-Paul Agbaga, PhD Keri Luna Shelley Robertson



Pictured (left to right): Garyl Geist, Rumble, Shelley Robertson, and R. Michael Siatkowski, MD, MBA. Not pictured are Martin-Paul Agbaga, PhD, and Keri Luna.

5 YEARS

Mary Fitzpatrick Kevin Fuller, PhD Adrianna Garcia Laurie Hahn-Parrott Kellie Hamon Cortnea Locke Kelly Parsons Kimberly Powers

Ronald Plunkett Dawnalee Stacy Jeremy Tan, MD Christina Voigt



Pictured (back row, left to right): Garyl Geist, Ronald Plunkett, Kimberly Powers, Cortnea Locke, Dawnalee Stacy, Kevin Fuller, PhD, Christina Voigt, and R. Michael Siatkowski, MD, MBA. Pictured (front row, left to right): Rumble, Kelly Parsons, Mary Fitzpatrick, and Mistie Winters. Not pictured are Adrianna Garcia, Laurie Hahn-Parrott, Kellie Hamon, and Jeremy Tan, MD.

TWENTY-SIX DMEI OPHTHALMOLOGISTS RECOGNIZED AS TOP DOCTORS OF THE 405 AND/OR CASTLE CONNOLLY TOP DOCTORS

- + Ann Acers-Warn, MD, MBA
- *+ Andrew K. Bailey, MD
- *+ John M. Bell, MD
- *+ Cynthia A. Bradford, MD
- *+ Reagan H. Bradford Jr., MD
- *+ Brian K. Firestone, MD
- + Layne E. Goetzinger, MD
- *+ Ben J. Harvey, MD
- *+ Ralph B. Hester III, MD
- *+ Mahmoud A. Khaimi, MD
- * Ronald M. Kingsley, MD
- *+ Carolyn E. Kloek, MD
- *+ Maria E. Lim, MD
- *+ Andrew T. Melson, MD
- *+ Aman Mittal, MD
- * Annie Moreau, MD, FACS
- + Rebecca K. Morgan, MD
- *+ Anil D. Patel, MD, FRCSC, FACS
- *+ Kamran M. Riaz, MD
- *+ Vinay A. Shah, MD
- *+ R. Michael Siatkowski, MD, MBA
- *+ Rhea L. Siatkowski, MD
- *+ Gregory L. Skuta, MD
- *+ Jeremy F. Tan, MD
- *+ Deana S. Watts, MD
- *+ Tammy L. Yanovitch, MD, MHSc
 - * *Top Doctors of the 405 (2024)*
 - + Castle Connolly Top Doctors (2024)
- *+ Both

Winter 2024 DMEI InVision

After Years of Intense Pain, This Texas Patient Found Relief at DMEI

BY STACI ELDER HENSLEY

ON DECEMBER 9, 2012, TEXAS BUSINESSWOMAN CHRISTINA SHULLCALDARA WAS IN A CAR WRECK. The

impact turned her head to the side and slammed her face hard into the car's headrest. In the aftermath, she developed trigeminal neuralgia, a painful condition stemming from damage to the trigeminal nerve. The nerve starts near the top of the ear and splits into three segments, toward the eye, cheek, and jaw.

Damage to this nerve often causes excruciating pain that worsens over time. It typically feels like electric shocks or stabbing pains and can be triggered from something as benign as talking, brushing your teeth, shaving or putting on makeup. Diagnosis can be tricky, since there are many causes of facial pain.

Shull-Caldara's wreck and its resulting damage would lead her on a long, painful journey to find the right medical help.

"I am a very faith-driven person, and my grandmother taught me to pray about things, to really listen to my body and to question what doctors say," she said. As her pain continued to worsen, "I went to a lot of doctors who either couldn't diagnose me or wanted to try surgery to see if it would work."

Fortunately, Shull-Caldara had a close friend who was undergoing successful treatment at the Dean McGee Eye Institute (DMEI), and he insisted that she make an appointment. It

was a long drive from her Farmer's Branch, Texas, home, but in search of relief she and her husband made the trip up Interstate 35, where she became a patient of Dr. Bradley K. Farris.

Once at Dean McGee, Shull-Caldara knew she had found the help she needed.

"Dr. Farris finally diagnosed me correctly, and his treatment made a huge difference, without the need for surgery," she said. Today her condition has improved to the point where she only needs reading glasses. She continues to make follow-up visits at DMEI and, after Dr. Farris' retirement, is now being cared for by Dr. Andrew T. Melson.

"Neuro-ophthalmology is a field that often deals with sight- or life-threatening conditions. While navigating these conditions has high visibility and value, the majority of our patients have more common conditions that can be similarly debilitating, such as double vision, unsteady eye movements, or facial pain associated with neurologic conditions," Dr. Melson said. "Ms. Shull-Caldara is a great example of a patient who suffered from a combination of less threatening, but very frustrating conditions that decreased her visual quality of life. By evaluating her history, reviewing her imaging and examining her thoroughly, our neuroophthalmology team was able to diagnose and address each component of her complex situation. A multifactorial approach with specialized glasses, medical management,



Christina Shull-Caldara

and ocular surface treatment has helped her achieve greater satisfaction with her vision."

Though not all neuro-ophthalmic issues have curative treatment options, "We can often empower our patients with an improved understanding of their diagnoses and work with a multidisciplinary team of medical providers to optimize their visual function," he added.

"I take a holistic approach to my health, and I pray a great deal, and I believe I was divinely guided to go to Dean McGee," Shull-Caldara said. "Dr. Farris and now Dr. Melson are willing to work with me, and they genuinely care about me and their other patients. Dr. Melson and the rest of the Dean McGee team are different, and I know I can trust them. That's why I make that three-hour drive for my follow up visits. I would not go anywhere else."

2023 Employee Appreciation Week

THE DEAN MCGEE EYE INSTITUTE (DMEI) CELEBRATED EMPLOYEE APPRECIATION WEEK September 11–15, 2023, with a special Tuesday breakfast and Friday lunch prepared and served by the DMEI executive team and managers/supervisors.

Employee Appreciation Week afforded a special opportunity to celebrate the work and mutual achievements of everyone at the Institute, to recognize DMEI's 48 years of service to patients, and to acknowledge the fulfillment of its multiple missions. Together we are making a difference, and having fun along the way!



DMEI employees enjoyed pancakes and bacon on Tuesday morning.



Friday afternoon featured hamburgers and other lunchtime options and accompaniments.

FACULTY & STAFF AWARDS AND ACTIVITIES

Ann Acers-Warn, MD, MBA

• Elected vice chair of the American Board of Ophthalmology for 2024 and chair for 2025 (please see page 8).



Rachel M. Caywood, OD, FAAO

 Oral presentation: "Let's Talk Triage," Oklahoma Chapter of the American Academy of Optometry, Oklahoma City, OK, August 2023.



Kevin K. Fuller, PhD

• Invited lecturer: "Fungal Metabolism in the Infected Cornea: From Pathogenesis to Novel Therapeutics," Department of Ophthalmology, University of Pittsburgh, Pittsburgh, PA, Aug. 2023.



 Published: Kamath M.M., Lightfoot J.D., Adams E.M., Kiser R.M., Wells B.L., Fuller K.K. "The Aspergillus fumigatus UPR is Variably Activated Across Nutrient and Host Environments and Is Critical for the Establishment of Corneal Infection," PLOS Pathogens, Oct. 2023.

Ronald M. Kingsley, MD

• Recipient of the inaugural DMEI Alumni Professorship, Dec. 2023 (please see pages 4-5), and recognition as one of 55 Over 55 Inspiring Oklahomans, Oct. 2023 (please see page 8).



 Published: Jamshidi F., Jin H.D., Bruce A., Kitten M., King K., Riaz K.M., Kingsley R.M., Shah V.A.
 "The Effect of Ocular Rinse Volume on Surface Irritation After Povidone-Iodine Preparation for Intravitreal Injections: A Randomized Controlled Trial," *International Journal of Retina and Vitreous*, Sept. 2023.

Andrew T. Melson, MD

 Oral presentation: Melson A.T., Shah V.A. "Artificial Intelligence in Ophthalmology," American Academy of Ophthalmology Annual Meeting, San Francisco, CA, Nov. 2023.



Aman Mittal, MD

 Course instructor: Smartphone and Mobile Technology Update, American Academy of Ophthalmology Annual Meeting, San Francisco, CA, Nov. 2023.



Invited lecturer: "Ocular Surface Reconstruction,"
 Continuing Medical Education Accredited Education
 Series, Mitchel and Shannon Wong Eye Institute and
 Department of Ophthalmology, Dell Medical School,
 University of Texas at Austin, Austin, TX, Nov. 2023.

Raju V.S. Rajala, PhD

• Received R01 grant funding (\$1,730,338) from the National Institutes of Health/National Eye Institute, "Regulators of Photoreceptor Aerobic Glycolysis in Retinal Health and Disease," Sept. 2023 – June 2027 (please see page 33).



- Editorial board member: *Nature Cell and Science*, Oct. 2023 Dec. 2024.
- Grant reviewer: Israeli Ministry of Science and Technology, Sept. 2023.
- Oral presentation: "Regulating the Enzymes of Aerobic Glycolysis Promotes Photoreceptor Survival," XXth International Symposium on Retinal Degeneration, Torremolinos, Andalusia, Spain, Oct. 2023.
- Poster presentation: Rajala A., Rajala R., Bhat M., Rajala R.V.S. "Identifying Shp2 as a Novel Regulator for Retinal Health and Survival," XXth International

- Symposium on Retinal Degeneration, Torremolinos, Andalusia, Spain, Oct. 2023.
- Published: Rajala. A., Rajala. R.V.S. "Unlocking the Role of Lactate: Metabolic Pathways, Signaling, and Gene Regulation in Postmitotic Retinal Cells," Frontiers in Ophthalmology, Nov. 2023.

Kamran M. Riaz, MD

 Received the American Academy of Ophthalmology (AAO) Achievement Award, July 2023 (please see page 7).



- Oral Board Examiner, American Board of Ophthalmology, Oct. 2023.
- Visiting professor (virtual): "Introduction to Refractive Surgery," Nazareth Hospital and Temple University, Philadelphia, PA, Oct. 2023.
- Invited lecturer: "Toric IOLS in Keratoconus Patients" and "MICE (Mitomycin Intravascular Chemo-Embolization) for Corneal Neovascularization," American-European Congress of Ophthalmic Surgery Summer Symposium, Deer Valley, UT, July 2023.
- Invited lecturer: "The Bumpy Cornea Patient,"
 "Yamane Technique: Step by Step," and "Level
 Up: Biometry," American Society of Cataract and
 Refractive Surgery (ASCRS) Summer Meeting,
 Nashville, TN, Aug. 2023.
- Invited lecturer (virtual): "Mitomycin Intravascular Chemo-Embolization (MICE) as a Primary and Precursor Procedure to Treat Corneal Neovascularization," PanOphthalmologica Meeting, New Delhi, India, Oct. 2023.
- Course director and instructor: "Exploring Limits of Biometry Devices," AAO Annual Meeting, San Francisco, CA, Nov. 2023.
- Course instructor: "Corneal Topography What Do I Need to Know as a Cataract Surgeon?," AAO Annual Meeting, San Francisco, CA, Nov. 2023.

- Lead instructor, Skills Transfer Wetlabs: "DSAEK and DMEK," ASCRS Summer Meeting, Nashville, TN, Aug. 2023.
- Instructor, Skills Transfer Lab: "No Capsule, No Problem: Intrascleral Haptic Fixation of IOLs," AAO Annual Meeting, San Francisco, CA, Nov. 2023.
- Poster presentation: Barclay K.S., Hussain Z., Chaudhry I.M., Riaz K.M., Lee A.G., Yoganathan P. "Regional Productivity Variation in Gender Differences Among Retina Specialists," AAO Annual Meeting, San Francisco, CA, Nov. 2023.
- Poster presentation: Coleman M.J., Koo E., Mathews P.M., Ray V.L., Riaz K.M., De Rojas J., Wang A., Watson S.H., Eghrari A. "Quality and Agreement With Scientific Consensus of ChatGPT Information Regarding Cornea Transplantation and Fuchs Dystrophy," AAO Annual Meeting, San Francisco, CA, Nov. 2023.
- Published: Khan A., Rangu N., Thanitcul C., Riaz K.M., Woreta F.A. "Ophthalmic Education: The Top 100 Cited Articles in Ophthalmology Journals," Journal of Academic Ophthalmology (2017), July 2023.
- Published: Hakim F.E., Riaz K.M., Farooq A.
 "Pediatric Herpes Zoster Ophthalmicus: A
 Systematic Review," *Graefe's Archive for Clinical and Experimental Ophthalmology*, Aug. 2023.
- Published: Jamshidi F., Jin H.D., Bruce A., Kutteh M., Ding K., Riaz K.M., Kingsley R.M., Shah V.A.
 "The Effect of Ocular Rinse Volume on Surface Irritation After Povidone-Iodine Preparation for Intravitreal Injections: A Randomized Controlled Trial," *International Journal of Retina and Vitreous*, Sept. 2023.
- Published: Wendelstein J., Casazza M., Riaz K.M., Fischinger I., Fuchs B., Bolz M., Seiler T.G., Kohnen T., Langenbucher A. "Characteristics of Surgically Induced Astigmatism After Standardized Microincisional Cataract Surgery With a Superior Limbal Incision," *Journal of Cataract and Refractive* Surgery, Oct. 2023.

FACULTY & STAFF AWARDS AND ACTIVITIES

- Published: Heath M., Riaz K.M., Davis A. "Successful Medical and Surgical Management of Recalcitrant *Acanthamoeba* Keratitis, Scleritis, and Culture-Positive Scleral Abscess," *Cornea*, Oct. 2023, Epub ahead of print.
- Published: Awidi A.A., Chang D.F., Riaz K.M., Li X., LaBorwit S., Zebardast N., Srikumaran D., Prescott C.R., Daoud Y.J., Woreta F.A. "Anti-Inflammatory Medication Use After Cataract Surgery: An Online Survey of Practice Patterns," *Journal of Cataract and Refractive Surgery*, Oct. 2023.
- Published: Rangu N., Seiler T.G., Riaz K.M., Cooke D.L., Langenbucher A., Fischinger I.R., Kohnen T., Wendelstein J. "Considerations on the Calculation of Multifocal Duet Implantation in a Monovision Scenario for the Correction of Presbyopia A Case Example," Klinische Monatsblätter der Augenheilkunde, Nov. 2023.
- Published: Mian O., Asif H., Sandhu U., Multani K., Farooq A.V., Ding K., Riaz K.M. "Non-Infectious Outcomes of Intravitreal Antibiotic-Steroid Injection and Topical NSAID Versus Triple Drop Therapy Post Cataract Surgery," *American Journal of Ophthalmology*, Nov. 2023, Epub ahead of print.
- Published: Barclay K.S., You J.Y, Coleman M.J., Mathews P.M., Ray V.L., Riaz K.M., De Rojas J.O., Wang A.S., Watson S.H., Koo E.H., Eghrari A.O. "Quality and Agreement With Scientific Consensus of ChatGPT Information Regarding Cornea Transplantation and Fuchs Dystrophy," *Cornea*, Nov. 2023, Epub ahead of print.
- Published: Hussain Z., Loya A., Riaz K.M., Lee A.G. "Optic Nerve Sheath Meningiomas: A National Surveillance, Epidemiology, and End Results (SEER) Database Analysis," *Journal of Neuro-Ophthalmology*, Dec. 2023, Epub ahead of print.
- Published: Wendelstein J.A., Casazza M.,
 Reifeltshammer S., Riaz K., Pantanelli S., Mariacher
 S., Seiler T.G., Kohnen T., Bolz M. "Unilateral
 Intraindividual Comparison and Bilateral
 Performance of a Monofocal Spherical and

- Diffractive Extended Depth of Field Intraocular Lens Mix-And-Match Approach," *Clinical and Experimental Ophthalmology*, Dec. 2023, Epub ahead of print.
- Published: Wendelstein J.A., Hoffman P.C., Hoffer K.J., Langenbucher A., Findl O., Ruiss M., Bolz M., Riaz K.M., Pantanelli S.M., Debellemanière G., Gatinel D., Cooke D.L., Galzignato A., Yeo T.K., Seiler T.G., Zinkernagel M., Savini G. "Differences Between Keratometry and Total Keratometry Measurements in a Large Dataset Obtained With a Modern Swept Source OCT Biometer," *American Journal of Ophthalmology*, Dec. 2023, Epub ahead of print.
- Published: Hussain Z.S., Wu. G, Loya A., Ding K., Sambhav K., Riaz K.M., Shah V.A. "Diagnostic Patterns of Age-Related Macular Degeneration," *Retina*, Jan. 2024.

Scott Samples, FCLSA, NCLE-M, CPOT

• Became a fellow of the Contact Lens Society of America, Oct. 2023.



Vinay A. Shah, MD

• Invited section editor: Part V: Vitreoretinal Surgery, *Basic Techniques* of Ophthalmic Surgery, 4th edition, American Academy of Ophthalmology (AAO), 2025.



- Speaker and moderator, Technology Showcase Theater: Smartphone and Mobile Technology Update, AAO Annual Meeting, San Francisco, CA, Nov. 2023.
- Course director and instructor, Skills Transfer Lab: "Smartphones in Ophthalmology: #TheFutureIsAI," AAO Annual Meeting, San Francisco, CA, Nov. 2023.
- Video presentation: Sambhav K., Shah V.A. "Limbal Sparing Scleral Buckle," AAO Annual Meeting, San Francisco, CA, Nov. 2023.

 Published: Hussain Z.S., Wu G., Loya A., Ding K., Sambhav K., Riaz K.M., Shah V.A. "Diagnostic Patterns of Age-Related Macular Degeneration," *Retina*, Jan. 2024.

R. Michael Siatkowski, MD, MBA

• Oral presentation: Siatkowski R.M. "Overcorrection After Surgery for Sixth Nerve Palsy," Association for Research in Strabismus (Squint Club), Rotterdam, Netherlands, Sept. 2023.



- Author/Contributor: O'Brien J., Siatkowski R.M.
 "Opsoclonus Myoclonus Syndrome: A Child with Jumping Vision," *Fundamentals of Pediatric Neuro-Ophthalmology*, Heidary G., Phillips P.H., editors, Springer, 2023.
- Published: Johnson B., Makkar A., Sessler R., DeShea L., Siatkowski R.M., Bhatti F.N. "Validation and Feasibility of the Postnatal Growth and Retinopathy of Prematurity Retinal Screening Criteria at a Level IV Tertiary Care Neonatal Intensive Care Unit," American Journal of Perinatology, July 2023.
- Published: Hussain Z.S., Heath M.T., Ding K., Siatkowski R.M. "Characteristics Associated with Blindness or Visual Impairment Within the Adolescent Demographic: A National Retrospective Cohort Analysis," *Journal of American Association for Pediatric Ophthalmology and Strabismus*, Nov. 2023, Epub ahead of print.

Gregory L. Skuta, MD

• Became vice president of National Alliance for Eye and Vision Research/ Alliance for Eye and Vision Research, Jan. 2024.



• Recipient of 2023 Distinguished Service Award from Oklahoma Academy of Ophthalmology, Dec. 2023 (please see page 9).

Jeremy F. Tan, MD

• Invited lecturer: "Lacrimal Anatomy and Intervention," Mabuda Farms, Siteki, Eswatini, Sept. 2023.



- Invited lecturer: "Ptosis General Overview and Work-up," Department of Oral and Maxillofacial Surgery, College of Dentistry, University of Oklahoma Health Sciences Center (OUHSC), Oklahoma City, OK, Nov. 2023.
- Oral presentation: Steinberger E., Parikh R., Yanovitch T., Rensing A., Tan J. "From One Head to Another - Foreskin Use to Reconstruct the Upper Eyelid," American Society of Ophthalmic Plastic and Reconstructive Surgery 2023 Fall Scientific Symposium, San Francisco, CA, Nov. 2023.

Tammy L. Yanovitch, MD, MHSc

- Received a 2023 University of Oklahoma Academy of Teaching Scholars Grant, Yanovitch T., Sharieff J., Multani K. "The Diagnostic Abilities of Medical Students With and Without Exposure to Vision Screening in a Community-Based Clinic."
- Chair, American Board of Ophthalmology (ABO)
 Pediatric Ophthalmology Item Development
 Committee, Portland, Maine, Aug. 2023.
- ABO Oral Board Examiner, Oct. 2023.
- Volunteer Member, Exam Development Committee, ABO, Jan. 2024.
- Course lecturer: Gearinger M.D., Williams Z.R., Yanovitch T.L. "Avoiding Diplopia Disasters in Your Cataract, Glaucoma and Retina Cases," American Academy of Ophthalmology (AAO) Annual Meeting, San Francisco, CA, Nov. 2023.
- Course lecturer: Handler S.M., Heinmiller L.J. Gise R., Yanovitch T.L. "Demystifying Dyslexia: Hints for the Ophthalmologist," AAO Annual Meeting, San Francisco, CA, Nov. 2023.

FACULTY & STAFF AWARDS AND ACTIVITIES

- Poster presentation: Cottom S., Garrett S., Huang D., and Yanovitch T. "Is There 'Alignment' in Strabismus Care Among Racial Groups?," Women in Ophthalmology 2023 Annual Meeting, Marco Island, FL, Aug. 2023.
- Poster presentation: Multinari K., Sharieff J., Yanovitch T. "The Diagnostic Abilities of Medical Students With and Without Exposure to a Vision Screening Program in a Community-Based Clinic," Health Professions Education Research Poster Session, Oklahoma City, OK, Oct. 2023.
- Published: Demla S., Kohli A., Douglas A., Khattab M., Yanovitch T., Hartwell M., Vassar M. "Evaluation of Quality of Systematic Reviews and Meta-Analyses Abstracts for Pediatric Strabismus Therapies," *American Journal of Ophthalmology*, July 2023, Epub ahead of print.
- Published: Yen K.G., Repka M.X., Sutherland D.R., Haider K.M., Hatt S.R., Kraker R.T., Galvin J.A., Li Z., Cotter S.A., Holmes J.M.; Pediatric Eye Disease Investigator Group. "Complications Occurring Through 5 Years Following Primary Intraocular Lens Implantation for Pediatric Cataract," *Journal of the American Medical Association Ophthalmology*, Aug. 2023.

Castle Connolly Top Doctors Accolades



Hospitals ranked #1 and #2 nationally are Wills Eye Hospital and Bascom Palmer Eye Institute.

DMEI FACULTY AT NATIONAL AND INTERNATIONAL MEETINGS



American Academy of Ophthalmology Annual Meeting

San Francisco, California November 2023

- Andrew T. Melson, MD (virtual)
- · Aman Mittal, MD
- Kamran M. Riaz, MD
- · Vinay A. Shah, MD
- Tammy L. Yanovitch, MD, MHSc



International Ocular Inflammation Society

Berlin, Germany September 2023

· Jila Noori, MD



American Society of Ophthalmic Plastic and Reconstructive Surgery Annual Fall Scientific Symposium San Francisco, California

November 2023

- Elise E. Steinberger, MD (Resident)
- Jeremy F. Tan, MD



International Symposium on Retinal Degenerations

Torremolinos, Spain

October 2023

- Robert E. Anderson, MD, PhD
- Raju V.S. Rajala, PhD



International Congress of the International Society for the Study of Fatty Acids and Lipids

Nantes, France July 2023

• Robert E. Anderson, MD, PhD



Women in Ophthalmology Summer Symposium

Marco Island, Florida

August 2023

· Annah P. Baykal, MD (Resident)

PHILANTHROPY UPDATE

Dean McGee Eye Institute Receives Grant from Knights TO ESTABLISH \$4 MILLION ENDOWMENT FOR PEDIA

THE KNIGHTS TEMPLAR EYE FOUNDATION (KTEF) HAS AWARDED THE DEAN MCGEE EYE INSTITUTE (DMEI) A \$2 MILLION GRANT to establish an

endowment for pediatric vision research. This amount is being matched with \$2 million from the DMEI Foundation to create a \$4 million endowment. The Children's Health Foundation of Oklahoma subsequently awarded \$1 million to be applied to the \$2 million from the DMEI

ENDOWMENTS

MAYO
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BCM
Baylor
Collège of
Medicine

Children's
Hospital
Los Angeles

CENTER

Photo of wall at the Knights Templar Eye Foundation (KTEF) headquarters in Flower Mound, Texas, recognizing six academic centers that hold major endowments from the KTEF. The DMEI and Children's Hospital of Los Angeles endowments represent the only two research endowments.

Foundation (please see page 32). Proceeds from the endowment will be used exclusively to support research into pediatric eye disease.

"We are greatly honored and humbled by the trust KTEF has placed in us," stated R. Michael Siatkowski, MD, MBA, DMEI's chief executive officer and the Edward L. Gaylord professor and chair of the University of Oklahoma (OU) Department of Ophthalmology. "DMEI is only the second organization to receive this type of grant from KTEF, and it is transformational in terms of our ability to push the boundaries of research into eye diseases that afflict our pediatric patients. Distributions from the endowment will be used to support postdoctoral fellows and research assistants, perform biostatistical analysis and genetic testing, underwrite clinical trials of new procedures or treatments, and purchase necessary equipment. With this type of support, pediatric vision research will accelerate at DMEI."

Noted KTEF President David J. Kussman, "Since our inception, the KTEF has always given special attention and emphasis to pediatrics,



Templar Eye Foundation TRIC VISION RESEARCH

with the goal of producing the greatest good for humanity. We are excited to have a research endowment with DMEI. Through the research that DMEI is doing, they are making a tremendous difference in the lives of children and helping KTEF fulfill its mission to improve vision through research, education, and supporting access to care. Through their research, they are helping to prevent blindness or restore vision to a child, thereby enhancing the child's quality of life and allowing that person to become a more productive member of society."

The types of pediatric eye diseases to be studied include retinopathy of prematurity, inherited retinal diseases, amblyopia, strabismus, and ocular infections. Research will be conducted at DMEI in conjunction with the OU Department of Ophthalmology by both clinicians and PhD researchers. Findings from the research supported by this endowment will be published in peer-reviewed journals and presented at national and international conferences.

DMEI Provides Vision Screening for Longfellow Eighth Graders

On November 28, a Dean McGee Eye Institute (DMEI) technician (Adrianna Garcia), University of Oklahoma (OU) Ophthalmology Interest Group members (Osamah Mian, fourth-year medical student, Umar Sandhu, third-year medical student, and Mary Erdmann, first-year medical student), and OU Delta Gamma members (Lilianna Gavula and Sara Ulrich) conducted vision screenings for eighth graders at Longfellow Middle School in Norman, Oklahoma.

A total of 144 students were screened, and 36 students were referred for follow-up care



Pictured during the vision screening outreach are (left to right) Sara Ulrich, Lilianna Gavula, Osamah Mian, Umar Sandhu, and Mary Erdmann.

TWO WITH DMEI TIES HONORED AT 2023 VISIONS



DMEI Board of Directors member Tricia Everest (right center), with the Shirley Shanker Volunteer Award, is pictured with Marnie Taylor (left), president and chief executive officer of the Oklahoma Center for Nonprofits, Jay Shanker, son of Shirley Shanker, and Ginny Bass Carl (right), Visions 2023 Committee chair and chief financial officer/in-house counsel, Oklahoma Heritage Association/Gaylord-Pickens Museum.



Photo credit: Tabor Warren Photography

Former DMEI Board of Directors member Governor Bill Anoatubby (center), with the Lifetime Achievement Award, is pictured with Marnie Taylor (left) and Ginny Bass Carl (right).

ON NOVEMBER 28, NONPROFITS AND DONORS FROM ACROSS THE STATE JOINED TOGETHER for

a special evening to celebrate six remarkable honorees and acknowledge the inspiring nonprofit leadership within our state. Dean McGee Eye Institute (DMEI) representatives attended the Oklahoma Center for Nonprofits 2023 Visions event held at the National Cowboy and Western Heritage Museum to honor two friends of the Institute, Tricia L. Everest, DMEI Board of Directors member since 2013, and Chickasaw Nation Governor Bill Anoatubby, DMEI Board of Directors member from 2012 to 2020. Everest received the Shirley Shanker Volunteer Award, and Governor Anoatubby was recognized with the Lifetime Achievement Award.

The Visions Awards honor those who act as agents of change in the community, providing leadership to enrich and enliven those whom they serve. These individuals are thoughtful, passionate, tenacious, and creative in seeking solutions to problems that affect change. They inspire others with their conviction and drive, give a voice to those without, and act with the highest integrity to provide Oklahomans with resources otherwise not available. Visions recognizes these exceptional individuals as passionate champions of service to Oklahoma.

The four other 2023 honorees were J. Chris Bernard, The Rodney Bivens Innovation Award; Jacqueline Young, Inasmuch Special Recognition Award; Edie Roodman, President's Award; and Gail Lapidus, Pat Potts Visionary Award.



Delta Gamma Hosts *Anchorsplash*Fundraiser Benefiting Service for Sight

THE LADIES OF THE ALPHA IOTA CHAPTER OF DELTA GAMMA held their annual

Anchorsplash event on Tuesday, September 19, 2023, at the Murray Case Sells Swim Complex in Norman, Oklahoma. The philanthropic competition, in which fraternities on the University of Oklahoma (OU)-Norman campus compete, consists of three events: synchronized swimming, a 200-meter relay race, and the belly flop. This is one of the most popular and well-attended student-based events at OU, and the Dean McGee Eye Institute (DMEI) was the recent recipient of half of the funds raised from Anchorsplash. With the \$6,636 raised in 2023, Delta Gamma has now successfully raised over \$80,000 for the DMEI Foundation!



Anchorsplash 2023 Bests

Best Overall - Beta Upsilon Chi
Best Synchronized Swimming - Kappa Sigma
Fastest Relay Race – Pi Kappa Phi
Best Belly Flop - Kappa Sigma
Best Coach – Sarah Kraus, Delta Gamma



The following names reflect gifts received by the Dean McGee Eye Institute and/or Dean McGee Eye Institute Foundation from January 1 through December 31, 2023. They include gifts and pledges as well as payments on previous pledges.

\$2,000,000+

Farzaneh Family Foundation Knights Templar Eye Foundation

\$1,000,000+

Children's Health Foundation

\$250,000 - \$999,999

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Oklahoma

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DR. JOHN R. BOZALIS RETIRES FROM DMEI BOARD OF DIRECTORS

IN DECEMBER 2023, JOHN R. BOZALIS, MD, ANNOUNCED HIS RETIREMENT from

the Dean McGee Eye Institute (DMEI) Board of Directors after 31 years of service spanning from 1992 to 2023. He was recognized at the DMEI Board of Directors meeting on Wednesday, December 13.

The Board and Dr. R. Michael Siatkowski, DMEI's chief executive officer and chair of the University of Oklahoma (OU) Department of Ophthalmology, commended Dr. Bozalis for his dedication to the Institute and for his active role in the community and with a number of organizations in Oklahoma City and around the state.

From 1973 to 2012, Dr. Bozalis practiced as a physician at the Oklahoma Allergy and Asthma Clinic, for which his father was one of the founders. He served as a clinical professor of medicine at the OU Health Sciences Center. Dr. Bozalis earned his undergraduate degree from OU-Norman and his medical degree from the OU College of Medicine. He completed residency training in internal medicine at Henry Ford Hospital in Detroit, Michigan, followed by subspecialty training in allergy and clinical immunology at the University of Michigan in Ann Arbor. He is a fellow of the American Academy of Allergy, Asthma, and Immunology, and also of the American College of Allergy, Asthma, and Immunology, American College of Chest Physicians, and American College of Physicians. Dr. Bozalis is board

certified in internal medicine and in allergy and immunology.

Dr. Bozalis was responsible for the creation of Schools for Healthy Lifestyles in 1997 with an overall goal to combat Oklahoma's declining health status. He served as the first president of the nonprofit organization and now serves as chairman emeritus of the advisory board. The original program began with eight elementary schools in the Oklahoma City Public School District. Schools for Healthy Lifestyles, now known as Healthy Schools OK, is impacting 64 elementary schools with engagement of more

than 35,000 students, family members, and faculty. The organization has been consistent in its mission to promote and maintain healthy lifestyle choices in Oklahoma through preventive, community-based, school health education programs.

Dr. Bozalis and Sharon, his wife of 60 years, have three children and



Dr. John R. Bozalis, center, is pictured with Dr. R. Michael Siatkowski (left), DMEI's chief executive officer and department chair, and David E. Rainbolt (right), chair of DMEI's Board of Directors.

nine grandchildren. They remain active in the Oklahoma City community. ■

Children's Health Foundation of Oklahoma Approves Grant of \$1 Million Toward Pediatric Vision Research Endowment at DMEI



IN NOVEMBER 2023, THE CHILDREN'S HEALTH FOUNDATION (CHF) OF OKLAHOMA

informed the Dean McGee Eye Institute

(DMEI) that the CHF's Executive Board had approved a grant of \$1 million. This grant will be applied to the \$2 million that the DMEI Foundation approved to match a \$2 million gift from the Knights Templar Eye Foundation (KTEF) for the establishment of an endowment for pediatric vision research (please see pages 24-25).

"We are very grateful to the CHF for partnering with us on this project," stated R. Michael Siatkowski, MD, MBA, DMEI's chief executive officer and the Edward L. Gaylord professor and chair of the University of Oklahoma (OU) Department of Ophthalmology. "Together we will improve the lives of children in Oklahoma who suffer from pediatric eye disease – an initiative at the heart of both our organizational missions. As only the second organization to receive this type of grant from KTEF, this support from the CHF helps to elevate DMEI's pediatric vision research on the national stage while benefiting pediatric patients in our state."

The CHF, based in Oklahoma City, Oklahoma, is a nonprofit organization dedicated to enhancing the medical services available for children in the state. Founded in 1983, the foundation supports pediatric healthcare through fundraising, community engagement, and advocacy efforts. Its primary focus lies in funding research, education, and care to improve the health outcomes of children facing various medical challenges. The foundation channels its resources into areas such as pediatric cancer, heart conditions, organ transplants, and other critical pediatric health needs.

The CHF works closely with healthcare providers, families, and the community to advance medical treatments, support families affected by medical difficulties, and ensure that children receive the best possible care. Through partnerships, grants, and philanthropy, they aim to create a meaningful impact on the lives of children in Oklahoma by providing them with access to high-quality healthcare services.

Regarding the DMEI grant, CHF Executive Director Kathy McCraken said, "Pediatric eye research isn't just about vision; it's about illuminating the path to a brighter future for every child. Understanding their unique eye health needs today ensures a clearer vision for their tomorrows, fostering a world where every child can see their limitless potential. We are excited to partner with the Dean McGee Eye Institute and the Knights Templar Eye Foundation to establish this endowment. Together we believe the vision for pediatric health shines brighter."





NEW GRANTS AWARDED



Raju V.S. Rajala, PhD, Receives R01 Grant from the National Institutes of Health/National Eye Institute

- Total Support: \$1,730,338
- Title: Regulators of Photoreceptor Aerobic Glycolysis in Retinal Health and Disease
- Date: September 2023 June 2027



Michael H. Elliott, PhD, FARVO, Receives R01 Grant from the National Institutes of Health/National Eye Institute

- Total Support: \$2,430,303
- Title: Caveolae-Based Mechanosensors for Conventional Outflow Regulation
- Date: March 2024 February 2028
- Co-principal Investigator with W. Daniel Stamer, PhD, FARVO, Duke University



Michelle C. Callegan, PhD, FARVO, Receives R21 Grant from the National Institutes of Health/National Eye Institute

- Total Support: \$378,500
- Title: Targeting Innate Inflammation Pathways to Treat Ocular Infections
- Date: January 2024 December 2025

SAVE THE DATE



8th Annual Robert E. Anderson, MD, PhD Lecture *Thursday, September 12, 2024*

17th Annual OU Vision Workshop Thursday/Friday, September 12 - 13, 2024

Tullos O. Coston, MD Lecture Hall, Dean McGee Eye Institute, Acers Pavilion, Fifth Floor

Reza Dana, MD, MSc, MPH
W. Clement Stone Clinical Research Scholar
Massachusetts Eye and Ear
Claes H. Dohlman Professor of Ophthalmology
Vice Chair, Academic Programs, Ophthalmology
Harvard Medical School
Boston, Massachusetts

Daniel J.J. Carr, PhD, FARVO, Ret



Daniel J.J. Carr, PhD, FARVO Stanton L. Young Professor of Ophthalmology George Lynn Cross Research Professor Presbyterian Health Foundation Presidential Professor Professor, Department of Microbiology and Immunology

DR. DANIEL J.J. CARR RETIRED FROM THE DEAN MCGEE EYE INSTITUTE (DMEI) AND

University of Oklahoma's (OU's) Departments of Ophthalmology and Microbiology/Immunology effective December 31, 2023, concluding an illustrious DMEI/OU career as a renowned vision scientist. Dr. Carr joined the faculty at DMEI and the OU College of Medicine in 1999, coming from Louisiana State University Medical Center in New Orleans, and rose to the rank of Professor in 2008. He was also the Stanton L. Young Professor of Ophthalmology, George Lynn Cross Research Professor, and

Professor of Microbiology and Immunology. He previously held a Presbyterian Health Foundation Presidential Professorship and served as Assistant Dean of Postdoctoral Affairs. In retirement, he will become a George Lynn Cross Research Professor Emeritus.

In the research arena, Dr. Carr is one of the world's leading authorities on herpes simplex virus type 1 (HSV-1) and the eye. He held prestigious R01 and R21 grants from the National Institutes of Health (NIH) during his career and served as the inaugural principal investigator for a coveted T32 training grant from the National Eye Institute (NEI). His many other accomplishments included a Jules and Doris Stein Professorship and Senior Investigator Award from Research to Prevent Blindness. Dr. Carr's published works number more than 150 peer-reviewed scientific publications and more than 55 book chapters and reviews.

Dr. Carr has served on numerous editorial boards and NIH study sections, and has chaired the Immunology/Microbiology Program Committee for the Association for Research in Vision and Ophthalmology (ARVO). For his outstanding service to the organization, he has been named a 2024 ARVO Gold Fellow. In addition, Dr. Carr was a devoted mentor and served on approximately 30 graduate student PhD committees and as an outside mentor for two Australian graduate students. He also has mentored six postdoctoral fellows and a

ires After 24 Years at DMEI/OU

staff scientist, and has graduated an MD/PhD student and six PhD students, all seven of whom assembled outstanding publication records while at the OU Health Sciences Center (OUHSC).

Born in Indiana, Dr. Carr completed his undergraduate degree at Southern Methodist University (Dallas, Texas), his PhD at the University of Texas Medical Branch (Galveston), and his postdoctoral fellowship at the University of Alabama (Birmingham).

He and his wife Amy have been married for 37 years. They have three children and one granddaughter.

"We are extremely proud of Dr. Carr and his extraordinary scientific achievements. We also are honored to count Dan as a DMEI/OU colleague and friend who has selflessly contributed to the success of the Institute and Department and has been instrumental in setting the high academic and scientific standards for which we are known. We congratulate him and wish him all the best as he transitions to retirement," stated Dr. R. Michael Siatkowski, DMEI's chief executive officer and Edward L. Gaylord professor and chair of the OU Department of Ophthalmology.



Jason R. Sanders, MD, MBA (left), former Provost of the OU Health Sciences Center (OUHSC), recognized Dr. Daniel J.J. Carr (right) with a George Lynn Cross Research Professorship in 2016. Named for OU's longest-serving president, this professorship is one of the highest honors that can be bestowed on OUHSC research faculty.



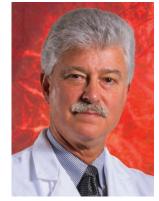
House Labor, Health, and Human Services Appropriations Subcommittee Chair Tom Cole (R-OK), center, with Robert E. (Gene) Anderson, MD, PhD (left), and Daniel J.J. Carr, PhD (right), both from OUHSC, after their Congressional testimonies in support of vision research funding in April 2015.

16th Annual OU Vision Workshop an

THE 16TH ANNUAL UNIVERSITY OF OKLAHOMA (OU) VISION WORKSHOP was held September 7-8, 2023, in the Tullos O. Coston, MD Lecture Hall at the Dean

McGee Eye Institute

(DMEI). The keynote



Steven J. Fliesler, PhD, FARVO 2023 Anderson Lecturer

speaker and Seventh
Annual Robert E. Anderson, MD, PhD Lecturer was Steven J. Fliesler, PhD, FARVO, State
University of New York (SUNY) Distinguished
Professor, Meyer H. Riwchun Endowed Chair,
Professor of Ophthalmology, Vice Chair, and
Director of Research in the Department of
Ophthalmology, Jacobs School of Medicine and
Biomedical Sciences, University at Buffalo in
Buffalo, New York. His September 7 Anderson
Lecture was entitled, "The Long and Winding
Road: Impact of Mevalonate Pathway Defects on
Retinal Structure and Function."

Dr. Fliesler's delivery of the Anderson Lecture was particularly special since, after completion of his undergraduate degree at the University of California, Berkeley, and his PhD in biochemistry at Rice University (Houston, Texas), he completed his postdoctoral work with Dr. Anderson at the Cullen Eye Institute/Baylor College of Medicine in Houston. Dr. Fliesler then went on to hold faculty positions at the Bascom Palmer Eye Institute/University of Miami School of Medicine and Saint Louis University School of Medicine prior to joining the Ross Eye Institute in Buffalo in 2008. He also holds concurrent appointments as a professor in the Department

of Biochemistry and in the Neuroscience Graduate Program at the University at Buffalo, as well as being a Research Career Scientist at the Buffalo Veterans Affairs (VA) Medical Center (VA Western New York Healthcare System).

Dr. Fliesler's research focuses on hereditary retinal degenerations, particularly those related to metabolic defects in isoprenoid biosynthesis. His laboratory created the first successful animal model of Smith-Lemli-Opitz syndrome, a rare genetic disorder that affects the nervous system, including eyesight. With this model, Dr. Fliesler's lab discovered that a high-cholesterol diet slows the onset and severity of blindness. Cholesterol supplementation is currently a common therapy for Smith-Lemli-Opitz syndrome, and further work from Dr. Fliesler's group indicates that cotreating with antioxidants may further improve patient outcomes. Other areas of research in Dr. Fliesler's laboratory include the effects of acoustic blast overpressure on retinal structure and function with the hope of developing novel therapeutics for blast-induced retinal injuries.



Pictured (left to right): Gregory L. Skuta, MD, DMEI's vice chair for faculty development and external relations, Steven J. Fliesler, PhD, FARVO, 2023 Robert E. Anderson, MD, PhD Lecturer, and Robert E. Anderson, MD, PhD, DMEI/OU George Lynn Cross Research Professor Emeritus.

d 7th Annual Anderson Lectureship

Beyond the bench, Dr. Fliesler often lectures on the responsible conduct of research (RCR) and was instrumental in the development of the Collaborative Institutional Training Initiative (CITI) training module on RCR. He has published more than 150 peer-reviewed journal articles, book chapters and review articles, and is the editor-in-chief of *Experimental Eye Research* and the deputy editor-in-chief of *Eye and Vision*. Dr. Fliesler also serves as an associate editor for *Frontiers in Cell and Developmental Biology*, as well as on four other journal editorial boards, including *Molecular Vision* and the *Journal of Lipid Research*.

Dr. Fliesler is a member of the Foundation Fighting Blindness Scientific Advisory Board and has participated frequently in National Eye Institute/National Institutes of Health study sections. Over the years, Dr. Fliesler has served in many roles, including president, for the International Society for Eye Research (ISER). He has also served as the president of the Association for Research in Vision and Ophthalmology (ARVO), as well as chair of its Publications Committee, member of the Annual Meeting Program Committee, and on the Board of Trustees.

In addition to his consistent funding from federal and private extramural grants, Dr. Fliesler has been the recipient of numerous awards. In 2023, he received The Retina Research Foundation's Paul Kayser International Award in Retina Research at ISER'S XXV Biennial Meeting. He also has been recognized as a James S. Adams Scholar and Senior Scientist by Research to Prevent Blindness and is a Goldtier (2014) Fellow of ARVO (FARVO).



Dr. Fliesler presenting his career development lecture on September 8 during the 16th Annual OU Vision Workshop.

More on the OU Vision Workshop

Eighteen vision research trainees presented their work in oral presentations all day on September 8. After the trainee presentations, Dr. Fliesler delivered a career development lecture at the workshop entitled, "Advice for the Emerging Early-Stage Vision Scientists: Do THIS, Not THAT!."

To cap the two-day event, a celebratory awards dinner was held at The Lume in downtown Oklahoma City. Graduate student Katie Scholand from Dr. Cintia De Paiva's laboratory at Baylor College of Medicine won the Anderson Award for Best Presentation, while Yvonne Adu-Agyeiwaah, a graduate student from Dr. Maria Grant's laboratory at the University of Alabama-Birmingham, earned the Dr. Wei Cao Innovation Award. Becca Wells, a graduate student from Dr. Kevin Fuller's laboratory at the University of Oklahoma Health Sciences Center (OUHSC) won Honorable Mention. Scholand also won the abstract book cover photo competition, while Wells and Luis Longoria-Gonzalez, a graduate student from Dr. Callegan's OUHSC laboratory, received the Junior Vision Research Club Award.

OU Vision Club Seminar Series

THE OU VISION CLUB is proud to host visits and seminars by local, national, and international experts in vision research. The Vision Club Seminar Series is held at the Dean McGee Eye Institute (DMEI) and is sponsored by DMEI and the Department of Ophthalmology at the University of Oklahoma Health Sciences Center.

Recent Events:



NOVEMBER 16, 2023

Stephen H. Tsang, MD, PhD

Laszlo T. Bito Professor of Ophthalmology, and Pathology and Cell Biology Columbia University New York, New York

"Precision Genome Surgery for Imprecision Medicine"



JANUARY 12, 2024

Cintia S. De Paiva, MD, PhD

Caroline Elles Professor of Ophthalmology Baylor College of Medicine Houston, Texas

"Sjögren's-Syndrome-Like Immune Infiltrates in the Aged Lacrimal Gland"



DECEMBER 7, 2023

Amol S. Suryawanshi, DVM, MS, PhD

Assistant Professor of Immunology Auburn University College of Veterinary Medicine Auburn, Alabama

"Targeting Innate Anti-Viral and Inflammatory Responses After Corneal HSV-1 Infection to Suppress Herpetic Stromal Keratitis"



FEBRUARY 8, 2024

Alexander V. Ljubimov, PhD

Professor of Biomedical Sciences and Neurosurgery Cedars-Sinai Medical Center UCLA School of Medicine Los Angeles, California

"Epigenetic Modulation of Diabetic Corneal Wound Healing and Stem Cells"



DECEMBER 14, 2023

Captain Jorge Lightfoot, PhD

Postdoctoral T32 Vision Training Grant Fellow Department of Ophthalmology University of Oklahoma Health Sciences Center Oklahoma City, Oklahoma

"Corneal Hypoxia: A Potential Therapeutic for Fungal Keratitis"



FEBRUARY 15, 2024

Alecia K. Gross, PhD

Professor of Neurobiology Associate Dean of Faculty Affairs and Development Heersink School of Medicine University of Alabama at Birmingham

"Molecular Mechanisms of Retinal Degenerations"

RESEARCH FACULTY— DEPARTMENT OF OPHTHALMOLOGY

Martin-Paul Agbaga, PhD Robert E. Anderson, MD, PhD* Lea D. Bennett, PhD Michelle C. Callegan, PhD, FARVO Daniel J.J. Carr, PhD, FARVO* Yan Chen, PhD Phillip S. Coburn, PhD Michael H. Elliott, PhD, FARVO Kevin K. Fuller, PhD Jami M. Gurley, PhD Feng Li, MD, MPH, MS Raju V.S. Rajala, PhD

Vision Researcher Julia V. Busik, PhD, FARVO, Appointed as Chair of Department of Biochemistry and Physiology



ON AUGUST 31, JULIA V. BUSIK, PHD, FARVO, WAS APPOINTED PROFESSOR AND CHAIR of the newly combined Department of Biochemistry and Physiology in the University of Oklahoma (OU) College of Medicine. She

holds the Ed Miller Endowed Chair in Molecular Biology. Before joining the OU Health Sciences Center (OUHSC), Dr. Busik served as professor, with tenure, in the Department of Physiology at Michigan State University in East Lansing.

A graduate of Novosibirsk State University, Novosibirsk, Russia, Dr. Busik holds a combined bachelor of science and master of science degree in physiology and endocrinology. After completing these degrees, she received a prestigious scholarship from the Japan Society for the Promotion of Science and pursued her PhD in the Department of Physiology at the Graduate University for Advanced Studies in Yokohama, Japan. While in Japan, Dr. Busik also worked with Professor Tomio Kanno, an expert in Ca2+ signaling at the National Institute for Physiological Sciences in Okazaki. Dr. Busik began research in the area of diabetic complications after joining Michigan State University as a postdoctoral fellow in the Department of Physiology under the mentorship of the late Dr. Douglas Henry and renowned lipid biochemistry expert Dr. Donald B. Jump.

Dr. Busik has published over 80 scientific papers in high-profile journals, and is a well-recognized expert on the role of dyslipidemia in the development of diabetic complications. Her groundbreaking research is supported by the National Institutes of Health, National Eye Institute, Juvenile Diabetes Research Foundation, and American Diabetes Association. Dr. Busik's laboratory developed several research directions including the role of fatty acid remodeling;

sphingolipid metabolism; cholesterol metabolism and oxysterols; and the role of ceramide and cholesterol in membrane fluidity and mitochondrial function. She has been an invited lecturer in the fields of microvascular complications, molecular mechanisms in diabetic retinopathy, and dyslipidemia.

"All of us at DMEI and in the Department of Ophthalmology are thrilled to have a vision scientist of Dr. Busik's caliber join the College of Medicine. Our future collaborations will undoubtedly yield novel and groundbreaking discoveries in ocular disease," said Dr. R. Michael Siatkowski, DMEI's chief executive officer and Edward L. Gaylord professor and chair of the OU Department of Ophthalmology.

Dr. Busik is currently an associate editor for *Diabetologia*, *Experimental Eye Research*, and *Adler's Physiology of the Eye*, 12th edition. She is an active member of the Association for Research in Vision and Ophthalmology (ARVO), International Society for Eye Research, American Diabetes Association (ADA), and European Association to Study Diabetes. Dr. Busik is an ARVO Silver Fellow (2021), served on the ADA Program Committee from 2017 to 2019, and is now serving on ARVO's Annual Meeting Program Committee (2022-2025).

"I am honored to lead the Department of Biochemistry and Physiology at the University of Oklahoma College of Medicine," said Dr. Busik. "I look forward to collaborating with colleagues, students, and the broader scientific community to make meaningful strides in building on our strength to advance the understanding of biochemistry and molecular biology's underpinning of normal physiology and pathophysiological processes. Together, we aim to foster innovation and excellence in both education and research."

Ninth Annual Emerging Vision Scientists Program



Dr. Cammi Valdez at DMEI, analyzing optical coherence tomography data to help further her vision research.

CAMMI VALDEZ, PHD, AN
ASSISTANT PROFESSOR
OF RESEARCH IN THE
NORTHEASTERN STATE
UNIVERSITY DEPARTMENT
OF CHEMISTRY who conducts
experiments at the Dean
McGee Eye Institute (DMEI) as
part of her IDeA Networks of
Biomedical Research Excellence
(INBRE) project and the P30
vision core grant, was among the
participants at the Ninth Annual

Emerging Vision Scientists (EVS) Program in Washington, DC. The Alliance for Eye and Vision Research (AEVR), with support from Research to Prevent Blindness, held its annual program on September 20 – 21, 2023. The program engaged 30 early-stage scientific investigators nominated by their Departments of Ophthalmology or Schools/Colleges of Optometry from leading institutions across the United States.

The program, held on Capitol Hill, included AEVR's *Age-Related Macular Degeneration Awareness Week* Congressional Briefing on September 20 along with poster presentations by each of the 30 young scientists, in which they described their research and its potential promise for patients. The poster presentations were accompanied by a Congressional Reception in the Rayburn House Office Building Courtyard.

On September 21, and under the auspices of the National Alliance for Eye and Vision Research (NAEVR), the EVSs visited their Congressional delegation offices to request robust

appropriations to the National Institutes of Health (NIH) and National Eye Institute (NEI). After thanking Members for NIH/NEI funding increases in the FY2016-FY2023 timeframe, they urged them to finalize FY2024 appropriations expeditiously with NIH funding at slightly over \$50.1 billion and NEI funding at \$975 million.

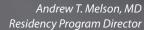
"Participating in the 2023 NAEVR/ **AEVR Emerging** Vision Scientists Program was a phenomenal experience! I really enjoyed learning about advocacy and getting the opportunity to meet with staff of Oklahoma Senators and Representatives to encourage support for funding



Dr. Cammi Valdez standing in front of the United States Capitol in September during the Emerging Vision Scientists Program.

the NIH, specifically the National Eye Institute. Getting to present my research at the Capitol in Washington, DC, was such a special chance to share my work with a wider audience. I was truly honored to get to represent the great state of Oklahoma," said Dr. Valdez.

The Alliances designed this program to be an important component of these early-career vision scientists' professional development and to train the next generation of vision research advocates. The 30 participating investigators came from 22 different institutions across the United States.





Two of the Dean
McGee Eye Institute's
five PGY-4 residents
will be continuing
with ophthalmology
subspecialty training as
fellows during the 20242025 academic years.
Congratulations to Drs.
Elizabeth Fairless and
Jessica Hsueh!

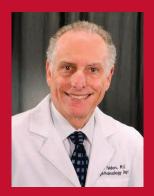


Elizabeth A. "Libby" Fairless, MD Medical Retina Fellowship John A. Moran Eye Center University of Utah Salt Lake City, Utah



Jessica Hsueh, MD

Cornea and Refractive Surgery Fellowship
Shiley Eye Institute
University of California, San Diego
La Jolla, California



SAVE THE DATE: Monday, October 7, 2024
THE 32ND ANNUAL WALTER J. STARK MEMORIAL LECTURESHIP
8:30 am-9:30 am • Tullos O. Coston, MD Lecture Hall

Steven E. Feldon, MD, MBA

Executive Vice President, Association of University Professors of Ophthalmology Past President, North American Neuro-Ophthalmology Society Professor and Former Director, Flaum Eye Institute University of Rochester School of Medicine and Dentistry Rochester, New York

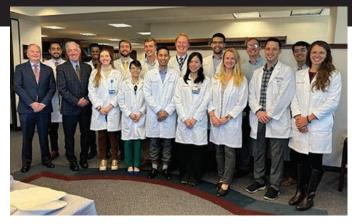
THE 31ST ANNUAL WALTER J. STARK MEMORIAL LECTURESHIP

THE 31ST ANNUAL WALTER J. STARK MEMORIAL LECTURE WAS DELIVERED

by Daniel J. Briceland, MD, in the Tullos O. Coston, MD Lecture Hall at the Dean McGee Eye Institute (DMEI) on October 16, 2023. His presentation was entitled "23 Years of Engagement: Importance of Leadership."

Dr. Briceland served as president of the American Academy of Ophthalmology (AAO) in 2023 and as president-elect in 2022. From 2015 through 2020, he was the Academy's Senior Secretary for Advocacy. Prior to this, he served as Secretary for State Affairs from 2009 through 2014 and as Associate Secretary for State Affairs from 2004 through 2008. After participating in the AAO's Leadership Development Program (LDP) II, Class of 2000, he served for six years as LDP's director, overseeing the development of future leaders of state, subspecialty, and specialized interest societies. Dr. Briceland continues to serve as LDP faculty and also has served on the Academy's Committee on Aging.

Dr. Briceland is in a private group practice in Sun City West, Arizona, with his wife, Susan Briceland, MD, a gynecologist. He specializes in geriatric ophthalmology and cataract surgery. In addition, Dr. Briceland is a clinical assistant



Dr. Daniel J. Briceland (third from left) pictured with DMEI residents, Dr. R. Michael Siatkowski (far left), DMEI's chief executive officer and department chair, and Dr. Andrew T. Melson (fourth from right), DMEI's residency program director, during the reception following the 31st Annual Walter J. Stark Memorial Lecture.

professor at the University of Arizona College of Medicine-Phoenix.

Dr. Briceland was the medical director of Spectra Eye Institute for nearly 20 years. He is also a past president of the Arizona Ophthalmological Society and was chair of the Ophthalmic Mutual Insurance Company (OMIC) from 2019 through 2022. Dr. Briceland also has served on the Board of Directors of the Arizona Medical Association and on its Legislative Committee and Political Action Committee.

It was an honor for the Dean McGee Eye Institute to welcome Dr. Daniel J. Briceland as the 31st Walter J. Stark Memorial Lecturer! ■



MASONIC CHARITY FOUNDATION OF OKLAHOMA DISTINGUISHED LECTURE SERIES

SEPTEMBER 18, 2023

Ore-Ofe O. Adesina, MD

Associate Professor
John P. McGovern Professorship in
Ophthalmology
Medical Director, Cizik Eye Clinic
Director, Neuro-Ophthalmology
McGovern Medical School
University of Texas-Houston



"My DEI Journey: Lessons Learned"



Dr. Adesina (center) with DMEI residents and faculty.

FEBRUARY 26, 2024

Michael Kazim, MD

Clinical Professor of Ophthalmology and Surgery Harkness Eye Institute Columbia University Medical Center New York, New York

PRESENTATION:

"Has the Age of Targeted Therapy for Thyroid Eye Disease Arrived?"



Dr. Kazim (center) with DMEI residents.

UPCOMING: APRIL 29, 2024 Drs. Zelia M. Correa and J. William Harbour

PRESENTATION:

"Ocular Oncology"



Zelia M. Correa, MD, PhD
Professor of Ophthalmology
Co-Director, Ocular Oncology Service
Bascom Palmer Eye Institute
University of Miami Miller School of Medicine
Miami, Florida



J. William Harbour, MD
Professor and Chair
David Burton, Jr. Endowed Chair
Department of Ophthalmology
University of Texas Southwestern Medical Center
Dallas, Texas

SECOND GENERATION SUCCESS— Father & Son Ophthalmologists Consider Residencies 'Among the Best of Years'

BY STACI ELDER HENSLEY

THE DEAN MCGEE EYE INSTITUTE'S (DMEI'S) SUCCESS AT GRADUATING TOP-TIER OPHTHALMOLOGISTS NOW STRETCHES ACROSS GENERATIONS,

and among the best of these stories are the achievements of father-and-son ophthalmologists Drs. Rick D. and Blake A. Isernhagen.

Both physicians are partners in the highly successful Retina Associates of Kentucky (RAK). After completing his vitreoretinal fellowship, DMEI resident alumnus and former chief resident Dr. Rick Isernhagen joined original

practice owner Dr.
William Wood in 1987,
becoming only the second
retinal specialist in the
state. Since that time, the
practice has expanded
exponentially and is now
the leading retina care
provider in Kentucky and
a major retinal/uveitis
research center. Its nine
attending physicians
also train three surgical

retina fellows through a two-year program, in collaboration with the University of Kentucky.

After his DMEI residency and subsequent fellowship training, Dr. Blake Isernhagen — who like his father had received the Dean McGee

Award in Ophthalmology from the University of Oklahoma (OU) College of Medicine as the graduating senior with the most outstanding performance in ophthalmology — returned to Kentucky and joined the practice in 2016, where he has further contributed to its success. Together the father and son would open and operate RAK satellite clinics across the state, increasing rural patients' access to care.

"My father and I shared several satellite clinics together, and were able to work as a team at these locations," Dr. Blake Isernhagen said. "It is quite special being able to discuss patient care with your

father or ask him for his advice on how to approach a complex surgical case."

"We can discuss mutual patients and surgical cases and learn from each other without criticism. We are a good sounding board for each other," Dr. Rick Isernhagen added.

Both doctors credit their professional achievements

to the exceptional training they received at DMEI.

Rick Isernhagen was the first physician in his family – motivated by a love of science, a desire to help people, and a college experience working

each other.



Drs. Rick D. Isernhagen (left) and Blake A. Isernhagen (right).

as an orderly at a public health center. After graduating at the top of his medical school class at OU in 1982, he said he chose Dean McGee after interviewing with 10 possible training facilities, because of the camaraderie of the staff and residents and its superior level of training.

"My chief year at DMEI was awesome; the best of years," he said. "I was blessed to be a resident under doctors who motivated me to reach high." He credits a lengthy list of DMEI physicians and residents for positively influencing him in every aspect of medicine. Among them are: Drs. Thomas Acers, Tullos Coston, Pat Wilkinson, Ronald Kingsley, Jim Richard, Bob Shaver, and Reagan Bradford, along with fellow residents Drs. Cynthia Bradford and Brad Farris.

Blake Isernhagen said that while at DMEI, he also was mentored by many outstanding faculty, including Drs. R. Michael Siatkowski (now DMEI's chief executive officer), Stephen Fransen, and Farris.

"They taught me and showed me things that apply to all aspects of medicine and being a compassionate caring physician," he said. "Their

mentorship has certainly helped me become who I am today, and I also credit them for my desire to continue to participate in local care for the underserved and uninsured in Kentucky."

Along with creating their satellite clinics, that desire to help others spurred both Isernhagens and the RAK team to participate in Surgery on Sunday, a charitable surgical program. Along with medical specialists in other areas, they donate their time once a month to provide free surgical care to dozens of patients in need.

For Blake, his interest in medicine was piqued early on, when as a child he would don scrubs and a mask and sit quietly in the operating room observing his father at work. He also grew up listening to his father's conversations with colleagues, but he didn't decide on medicine as a career until college.

"Much of my decision was indirectly related to knowing how much my father enjoyed his profession as an ophthalmologist and retina specialist and getting to see it firsthand from spending time in the clinic and operating room

...continued on next page...

with him," he said. When it came time for him to choose a specialty, Blake considered multiple options, but in the end chose ophthalmology, eventually subspecializing in retina.

"Being a medical student at the University of Oklahoma allowed me to have great exposure and the opportunity to spend time at DMEI for rotations and assisting in research projects with the current residents at that time," Blake Isernhagen said. "Drs. Cindy Bradford, Brad Farris,

It was very special to walk the same halls and work with some of the same attendings as my father did 30 years prior.

Lloyd Hildebrand, and so many other attendings I had the great fortune to rotate with had a tremendous influence on my desiring to train at DMEI. That combined again with seeing firsthand my father's joy as an ophthalmologist and retina specialist. It was very special to walk the same halls and work with some of the same attendings

Pictured (back, left to right) are the Isernhagens: Blake, Kallista, Mischelle, Rick, (front) Boston, and Brody.

as my father did 30 years prior. I frequently was reminded of that special opportunity as a resident and am immensely grateful still to this day. DMEI was truly the perfect fit for me as a resident."

When not seeing patients, both father and son get in some golfing together and enjoy building and flying remote-control airplanes. Rick Isernhagen and his wife, Mischelle, are parents to Blake and daughter Laura, a clinical social worker.

Blake Isernhagen and his wife, Kallista, meanwhile,

have two sons—Brody, age 9, and Boston, age 7. He spends time helping coach the boys' baseball and other sports teams, and he and Kallista also teach Sunday School to preschoolers at their church.

Today, Rick Isernhagen sees patients only one day a week, but he is still highly involved. "Blake and I share many patients in the clinic," he said. "Patients of Blake whom I see often compliment him on his care. I always tell them I will report the comments back to his mother, which will make her very happy! And Blake will tell me about patients I operated on 30 years ago who are still doing well."

"I look forward to going into work," Blake Isernhagen said. "I feel blessed to get to see patients and help improve their vision and many times their overall quality of life. So many advancements have arrived in ophthalmology as a whole, and retina/uveitis is certainly one of the specialties that has benefitted from modern technology and new treatments. It always brings joy knowing a patient is now seeing better and improving."

DMEI Hosts Optometry Symposium

ON FEBRUARY 10, IN THE TULLOS O. COSTON, MD LECTURE HALL, the Dean McGee Eye Institute (DMEI) along with the Oklahoma Chapter of the American Academy of Optometry hosted the 2024 Optometry Symposium. Attendees included the host optometrists from DMEI and colleagues from throughout the state. Lectures were provided by DMEI ophthalmologists Mahmoud A. Khaimi, MD; Thai Do, MD; Kamran M. Riaz, MD; Andrew T. Melson, MD; Victoria A. Bugg, MD; Aman Mittal, MD; Vinay A. Shah, MD; and Anil D. Patel, MD, FRCSC, FACS.

Sixty-one optometrists earned eight continuing education credits. The day also included lunch, time for networking with colleagues, and tours of the Eye Institute.

Of note, in August 2023, Rachel M. Caywood, OD, FAAO, and Aman Mittal, MD, both presented at the Oklahoma Chapter of the American Academy of Optometry Meeting. These two DMEI doctors presented 1.5 lecture hours to almost 100 optometrists.



Aman Mittal, MD, presented "Ocular Surface Reconstruction" during the 2024 Optometry Symposium at DMEI on February 10.

ALUMNI Achievements

American Board of Ophthalmology Certification

- J. Christian Berry, MD
- Andrew R. Osborn, MD
- Farzad Jamshidi, MD, PhD
- · Jacob D. Warmath, MD



SAVE THE DATE! DMEI Ophthalmology Symposium 2024 48th Annual OU Resident and Alumni Meeting Friday/Saturday, May 31 – June 1, 2024

44th Annual Tullos O. Coston, MD Lecture (June 1)
Jane C. Edmond, MD

President, American Academy of Ophthalmology
Past President, American Association for Pediatric Ophthalmology and Strabismus
Director, Mitchel and Shannon Wong Eye Institute
Wong Family Distinguished University Founding Chair and Professor
Department of Ophthalmology, Dell Medical School
University of Texas at Austin

What 'Eyes' Ahead DMEI'S PHYSICIANS SHARE THEIR PREDICTIONS ON THE FUTURE OF EYE CARE

BY STACI ELDER HENSLEY

As one of the nation's premier facilities for medical and surgical eye care, the Dean McGee Eye Institute (DMEI) is uniquely positioned to shape the future.

"Ophthalmology has always been a rapidly-changing field, and there are exciting developments in every area that will greatly benefit patients in the next decade and beyond," said Dr. R. Michael Siatkowski, DMEI's chief executive officer and Edward L. Gaylord professor and chair of the University of Oklahoma (OU) College of Medicine's Department of Ophthalmology.

"Ophthalmology is a field where the technology, procedures, and medications used are advancing at a swift pace, and we are always thinking about what we can do here to take our care to the next level," Dr. Siatkowski said. "With DMEI's

resources, not only can we continue providing leading-edge care, but it's exciting for medical students and residents as well. It keeps our work vibrant, effective, and alive, with tremendous benefits for our patients."

Every subspecialty is seeing significant changes, and for many that will include the incorporation of artificial intelligence (AI) in the diagnostic, risk-factor assessment, and monitoring stages of treatment, as well as verification of data, Dr. Siatkowski continued. "AI is going to be huge in our specialty in developing treatment protocols, diagnosing rare diseases, and improving our teaching of medical students."

What it won't do, Dr. Siatkowski stressed, is replace the human factor in treatment.

"AI can't judge the intangibles—the patient's overall life situation, how he or she reacts on an emotional level, and all the myriad of things that impact their quality of life," he said. "So while AI has a role to play that is certainly going to increase, it will never replace the human mind—and clearly not the human heart—of a doctor."

For some patients, future AI-related care means they may require fewer invasive procedures, or receive care that's an expansion on the current standard of care, but with even better outcomes. Below, DMEI's physicians outline some of the expected advancements in their area of expertise:

"Our newest class of lenses includes extended depth-of-focus lenses, which have only been out a few years," Dr. Hester said. Three types of these lenses are on the market, with one type introduced in 2019 and two others made available in 2023. Currently used multi-focal lenses, which are true presbyopia-correcting lenses, became available in 2006, but they also are constantly improving and will continue to do so, he said.

Among the most exciting developments is a light-adjustable lens, which can be modified post-surgery using a special device to modify the strength of the lens and further perfect an individual's vision. Yet another type is placed on a "platform" that can be filled with a silicone-like fluid to help the lens work more smoothly with the focusing muscles inside a patient's eye.

Cataracts

"The current practice of treating advanced cataracts with surgical implantation of a new lens will continue, with better and better results. That's because the types of lenses available are constantly evolving and able to precisely correct vision with fewer after-effects," said Dr. Ralph B. Hester III, a cataract specialist at DMEI and clinical associate professor in the OU Department of Ophthalmology.



Ralph B. Hester III, MD, performing cataract surgery at the McGee Eye Surgery Center.

Now in their first generation of development, "these lenses should be very important down the road, as they become more standardized and affordable," Dr. Hester said. "Improving on what is available is where we are in cataract treatment. With the assistance of AI to help design lenses, in my mind I can see us really improving our ability to design lens implants customized for the individual patient."

Glaucoma

Glaucoma is another slow-developing disease that occurs when the eye is unable to drain properly, due to aging, disease, or injury. Fluid builds up in the eye, increasing intraocular pressure



Mahmoud A. Khaimi, MD, pictured with the iTrack™ Advance handheld device.

(IOP) which over time damages the optic nerve. It's a leading cause of blindness worldwide. Standard treatment has involved the use of topical medications, laser treatments, or, in more advanced cases, invasive surgical procedures such as trabeculectomy or glaucoma implant surgery, which drain eye fluid to an external "filtering bleb" or "drainage reservoir."

A huge breakthrough in glaucoma care was pioneered by DMEI's own Dr. Mahmoud A. Khaimi, a glaucoma specialist at DMEI and clinical professor and glaucoma fellowship director in the OU Department of Ophthalmology. He also holds the James. P. Luton MD endowed chair in ophthalmology. Starting in 2013, he developed a minimally invasive glaucoma surgery known as ab-interno canaloplasty (ABiC). The procedure uses a device designed by Dr. Khaimi—the *iTrack Advance*—to open up the natural outflow channels of the eye and restore normal flow to lower the IOP without damaging the tissues or leaving behind an implant.

DMEI's research studies show that the procedure is highly effective over the long term, with 56% of patients being able to eliminate medications and a 61% overall decrease in medication usage. (The most recent results were published in 2021 in the journal *Therapeutic Advances in Ophthalmology.*)

"This is a game-changer for glaucoma patients," Dr. Khaimi said. "Many of them cannot tolerate or are non-adherent with medications, and most don't want to have a more aggressive procedure as their first option. Our study validates that shifting the glaucoma treatment paradigm away from long-term use of topical medications toward a restoration of the eye's natural outflow is a

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viable option and achieves comparable outcomes."

"The revolution in the way we treat patients, through development of procedures like ABiC, is that we are putting the patient's quality of life at the forefront," Dr. Khaimi said. "People often resist treatment until their

vision has significantly deteriorated. When we can develop 'softer' cutting-edge procedures like this one, patients are willing to be treated at a much earlier stage, which helps us to save as much of their vision as possible."

Ronald M. Kingsley,

MD, supporting

clinical trials on

celebrated each

year on May 20.

Clinical Trials Day,

Going forward, he noted, in older patients the ABiC procedure can be combined with cataract surgery, improving efficiency and lowering recovery time. There are also great improvements in devices that deliver small doses of medication directly to the eye.

Utilizing AI, ophthalmologists also are developing instruments that not only view the structure of the eye, but can identify if a person is at risk for cardiovascular events. "On a global scale that's pretty huge, and will let us help out our colleagues in other specialties to treat their patients," Dr. Khaimi said.

Macular Degeneration

Age-related macular degeneration (AMD) – which comes in both "wet" and "dry" forms – remains one of the leading causes of blindness in the United States. It's an ongoing frustration for Dr. Ronald M. Kingsley, a medical retina specialist at DMEI, clinical professor in the OU

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Department of Ophthalmology, and inaugural recipient of the DMEI Alumni Professorship (please see pages 4-5), but new genetic and stem cell therapies may be on the horizon, which could

be a major treatment breakthrough, he said.

Injections to inhibit the progression of wet macular degeneration were approved by the Food and Drug Administration (FDA) 20 years ago and were the first treatment that could improve a patient's vision, not just stabilize it. New and better injections are constantly in development, with 30 to 40 percent of current patients seeing improvement and 50 percent remaining stable for several years.

Nutritional supplements high in antioxidants, zeaxanthin, and lutein (AREDS 2 formula) are prescribed in many cases of dry AMD. They retard the progression of dry AMD by approximately 25 percent. Unfortunately, AMD is still a progressive disease and causes loss of central or "detail" vision.

"The current treatments for AMD are helpful, but they are no panacea," Dr. Kingsley said. "The future will really be in gene therapy, which is now

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feature focus

being clinically performed in patients with specific types of retinitis pigmentosa (RP) and may one day be tested in patients with macular degeneration. They are finding a number of genetic markers in RP patients, and they are taking modified genetic material and injecting it under the retina. Once there, it starts manufacturing the missing proteins in that patient's eyes, improving their vision. Studies into this will be spreading beyond RP and into macular degeneration, so this is really the wave of the future."

"Research using stem cells and genetic therapy to replace degenerated retina is showing great promise," he added. "These two developments are only in the research stages and not yet practical, but once approved, they will be game-changers in macular degeneration treatment."

Refractive Surgery

Most people are familiar with corneal-based LASIK and other laser vision correction procedures, which fall under the refractive surgery umbrella, and Dean McGee has long been a leader in this area. "The good news here is that these vision-transforming surgical treatments can now be offered to an increasingly wide pool of patients," said Dr. Kamran M. Riaz, a corneal specialist at DMEI and clinical associate professor and director of medical student research in the OU Department of Ophthalmology.

Refractive surgery is performed either through direct treatment of the cornea via lasers or implantation of an intraocular lens (IOL). "Standard surgical treatments like LASIK and PRK (photorefractive keratectomy) reshape



Kamran M. Riaz, MD, pictured with DMEI's Stephenson Refractive Surgery Center banner.

the cornea permanently, but newer treatment options can expand the number of eligible surgery candidates," Dr. Riaz said.

Fortunately, surgical improvements and the ongoing development of specialized surgeries are making it increasingly easier to obtain outstanding results. With these procedures ophthalmologists are beginning to be able to improve the vision of patients who may not have qualified for refractive surgery in the past. "SMILE, which is a newer type of corneal surgery that treats astigmatism as well as nearsightedness and farsightedness, has emerged in recent years as an additional surgical choice," Dr. Riaz said. "Placement of a phakic IOL (implantable contact lens), in which a lens implant is inserted in front of the eye's natural lens, represents yet another option for patients."

Another cutting-edge field is bioptics, which is a combination of lens-based and corneal-based surgery that offers additional treatment options. In patients in their 50s and older, there are refractive lens exchange options emerging, which are similar to early cataract surgery.

"Where I think future treatments will focus is that we will be able to expand these procedures to people who weren't good candidates before, for example, people with scarred or thinner corneas," Dr. Riaz said. "The development of these new procedures will make a big difference for our patients over the coming years. It's a very interesting time in the refractive surgery field."

Amblyopia

Commonly known as "lazy eye," amblyopia occurs when the brain ignores one eye, due to the need for glasses, an eye misalignment, or other blockage of vision. It occurs in 1 to 5% of children worldwide, and if untreated, impairs vision into adulthood. "Historically, patients were required to wear a patch over the stronger eye full time, in order to strengthen the weaker eye," said DMEI's Dr. Maria Lim, a pediatric ophthalmology and strabismus specialist at DMEI and clinical associate professor in the OU Department of Ophthalmology.



Maria E. Lim, MD Pediatric Ophthalmologist

Patching as a first-line treatment for the condition may soon be modified or replaced. Patching is still a gold standard treatment; however, it poses challenges with adherence in a busy young child. "Studies have shown that for some young patients, using an eye drop to blur the vision acts as a chemical patch, and is effective in improving the vision in the amblyopic eye," Dr. Lim said. "Other studies have shown that part-time patching can be effective in some patients."

In addition, "Some exciting new binocular treatments are being developed for amblyopia," she said. "These treatments utilize either a virtual reality headset or eye-tracking based technology to stimulate the weaker amblyopic eye. A child engages in playing a game or watching a video during their treatment time. Studies have shown that these treatments are better than glasses alone. We do not know, however, whether they will be more effective than patching. If these treatments prove to be better than or equal to patching, then they will become an important part of treatment and may help with adherence to patching."

Dr. Lim also noted that DMEI is a study site for the Pediatric Eye Disease Investigator Group, which focuses on research into multiple pediatric eye conditions, including cataracts and amblyopia. "Because of my involvement, I am able to enroll patients in these studies and provide the most up-to-date care," she said.

Education

"Oklahoma's population as a whole does not have enough doctors, and that includes ophthalmologists," Dr. Siatkowski said. Since COVID-19 hit in 2020, about 10 to 12 percent of Oklahoma eye care providers have retired or moved out of state, so the need is escalating. That's particularly concerning in subspecialties such as neuro-ophthalmology and pediatric ophthalmology, where there are already widespread shortages.

"The trifecta of technology, procedures, and medications makes ophthalmology a very attractive specialty for medical students, precisely because it is constantly evolving," Dr. Siatkowski said. "This is exciting for students and for clinicians, and it keeps our work vibrant and on the cutting-edge."

The snag is that while there is a nationwide shortage of eye care providers and many medical students want to specialize in the field, there simply aren't enough teaching slots available.

"We graduate approximately 450 ophthalmology residents per year in the entire United States, which is definitely not enough to keep pace with our expanding and aging population," Dr. Siatkowski said. "This is really a big problem, and we need to find ways to assist and expand these teaching opportunities."

DMEI's PGY-4 residents (left to right), Drs. Austin L. LaGrow, Elise E. Steinberger, Elizabeth A. "Libby" Fairless, Jessica Hsueh, and Kyle J. Royalty.

"Dean McGee is doing its part to address the shortage through its top-tier residency program, as well as training medical students through its educational role as the OU College of Medicine's Department of Ophthalmology," said Dr. Andrew T. Melson, a neuro-ophthalmology specialist at DMEI and assistant professor and residency program director in the OU Department of Ophthalmology. Dr. Melson also sees comprehensive ophthalmology patients and performs adult cataract surgery.

"Residents come here from all over the country to train, and many end up staying in Oklahoma to serve the community," Dr. Melson said. "The large catchment area, strong connection with the university, and the busy mix of both routine and highly complex eye care makes this an excellent place to train, now and for the future."

"Medical student education itself has changed a great deal over the past several decades, with students obtaining much more hands-on experience with patients at a much earlier stage in their training," noted Dr. Tammy L. Yanovitch, a pediatric ophthalmology and strabismus specialist at DMEI and clinical professor and director of

medical student education in the OU Department of Ophthalmology.

Drs. Siatkowski, Melson, and Yanovitch all agree that AI will play a growing role in medical student education. "It is a good teaching tool, but first our students have to know enough to ensure that the AI information is accurate and appropriate," Dr. Yanovitch said. "They need to be able to assess and figure it out on their own."

"Ophthalmology was the very first field in medicine to use AI, and we already have approved devices that utilize this technology," Dr. Melson added. "I foresee the future of AI as a more efficient decision-making guide that allows us to make faster, more accurate, and more cost-effective medical decisions, allowing us to focus more on the humanistic side."

Dr. Yanovitch also noted additional changes to medical education teaching tools that are expected to evolve going forward. "One prime example is ophthalmoscopy—the examination of the back of the eye. We used to teach students to use a conventional ophthalmoscope, but now we also teach smartphone ophthalmoscopy," she said. "DMEI and OU recently published a study comparing students' diagnostic abilities between the two. The students performed dramatically better with the smartphone."

Another issue that has arisen in recent years is recognition of the importance of a more diverse population of physicians, including ophthalmologists. "Research has shown that most people want healthcare providers who mirror them in some way, who they can relate to," Dr. Yanovitch said. "A challenge for us is nurturing a diverse ophthalmological community that meets the complex eye care needs of a diverse patient population and our communities."

For Dr. Siatkowski, the issue involves action on both the front and back ends of the educational process. "It's good for the composition of ophthalmologists in America to look like a cross section of the people who live in America," Dr. Siatkowski said. "We do need to understand the types of challenges some have that others don't. On the front end, our responsibility is to try to assimilate all types of students and expose them to ophthalmology as a career option. For example, at DMEI we participate in a minority

ophthalmology mentoring program for students in college or early in medical school."

"But," he added, "on the back end, the people we train have to be excellent in all aspects of how they care for patients, including their social skills and interactions with people of all kinds, along with their professional expertise. Any students we train are held to equal standards of excellence, no matter what their background."

A common thread among all DMEI's physicians is their satisfaction of being part of an organization that has the expertise and resources to provide cutting-edge care to patients from every type of background and income level.

"It's been very rewarding to treat all types of patients, from the richest to the poorest, and to be in a place where I have so many colleagues to talk and consult with," Dr. Kingsley said. "Also, I love the fact that as a bigger institution, we can do things like donate equipment and help the public in many more ways, which is something that isn't possible with smaller practices."

"Since our beginning, the Dean McGee Eye Institute has been providing care and doing procedures that no one else in the state does," Dr. Siatkowski concluded. "Our team performs the most complex procedures, provides financial help to those less fortunate, trains future ophthalmologists, and performs cutting-edge vision research. What we do is vitally important to our state and will continue to be so going forward as those treatments and teaching methods evolve. I consider it a huge honor and a great responsibility to ensure that through our Institute, Oklahomans and others across the country will continue to have access to the highest level of care."







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