

Eyesight

UNT Health
FORT WORTH
NORTH TEXAS EYE
RESEARCH INSTITUTE



A New Year, A New Season of Growth

The North Texas Eye Research Institute (NTERI) is embarking on a new year filled with growth, opportunity, and transformation. With a dedicated team, consisting of scientists, PhD students, postdoctoral fellows, and staff members, NTERI is engaged in pioneering research, ranging from innovative testing methods to the development of therapeutics poised for clinical trials. Faculty members regularly publish their findings in leading ophthalmology journals, affirming NTERI's leadership in the field.

Education remains a priority, with NTERI committed to training the next generation of scientists and clinicians through specialized programs, including a PhD program with an emphasis in Visual Sciences. As we expand and innovate, NTERI remains devoted to addressing disparities in eye health and contributing to global advancements in eye research.

In this newsletter, you will find our latest achievements and publications, providing insights into our ongoing dedication to advancing the frontiers of visual sciences.

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EXECUTIVE DIRECTOR'S MESSAGE



As we step into 2026, I want to take a moment to reflect on the incredible year we had in 2025 and share my excitement for what lies ahead. Last year was marked by resilience and excellence—especially from our students, whose dedication and achievements continue to inspire us. We also welcomed two highly talented research faculty members, further strengthening our capacity for innovation and discovery.

Looking forward, the energy around connecting with our community is palpable. Through social events and collaborative activities, we continue to foster even deeper engagement. A highlight of this month will be hosting Dr. Michael Chiang, Director of the National Eye Institute (NEI), an opportunity that underscores our growing national presence and commitment to advancing science together. Here's to another year of breakthroughs, partnerships, and shared success!

Sincerely,

Dimitrios Karamichos, BEng, MSc, Ph.D.

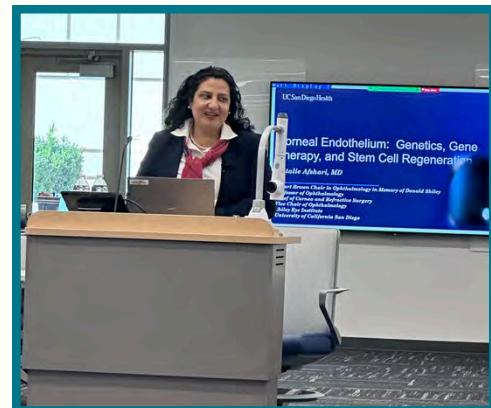
Whole Health Eye Symposium

On October 10, 2025, NTERI hosted its annual Whole Health Eye Symposium. This was the first time we offered continuing education (CE) credits to attendees. Thank you to Maritza Morales and UNT Health's Division of Academic Innovation (DAI), who have worked to make this possible. We want to extend a heartfelt thank you to all who have participated and made this event a success.



We were fortunate to have **Dr. Jamboor Vishwanatha**, UNT Health Regents Professor and Vice President of the Institute for Health Disparities, as our guest speaker. Dr. Vishwanatha presented on “AI/ML in advancing health: The AIM-AHEAD program.” His presentation centered on the usage of AI/ML in healthcare.

We would also like to extend our appreciation to our distinguished keynote speaker, **Dr. Natalie Afshari**, Stuart I. Brown MD Chair in Ophthalmology, at the University of California, San Diego. Dr. Afshari presented on “Corneal Endothelium: Genetics, Gene Therapy, and Stem Cell Regeneration.”



Thank you once again to everyone who joined us at our second annual Whole Health Eye Symposium. We look forward to seeing everyone next year.

Here's to continued collaboration and innovation in the field of eye care!

NTERI INTERDISCIPLINARY SEMINAR SERIES (ISS)

January 2026



Join us for a special Interdisciplinary Seminar Series on **January 30, 2026**, in **IREB 250** from **12:30-2 p.m.** This event is open to all UNT Health Faculty, Staff, and Students, with an online option available for those off-campus.

We are pleased to welcome **Dr. Michael Chiang**, Director of the National Eye Institute (NEI) at the National Institutes of Health (NIH) in Bethesda, Md.

Dr. Chiang will be presenting on “North Texas Eye Research Institute (NTERI) over 20 years of advancing glaucoma research & the future of vision research.”

Registration is open. Please register today, and we look forward to seeing you on January 30, 2026 at our next Interdisciplinary Seminar Series.

For more information, check our website:

<https://unthealth.edu/eye>

NTERI INTERDISCIPLINARY SEMINAR SERIES (ISS)

Upcoming 2026 Seminars



Dr. Kyle Emmitt
February 26, 2026



Dr. Sid O'Bryant
March 26, 2026

For more information, check our website:

<https://bit.ly/nteri-iss>

Farewell Dr. Dorota Stankowska

On November 21, 2025, we held a farewell party for Dr. Dorota Stankowska, who served as our Associate Director of Strategic Partnerships and Development at NTERI.

Dr. Stankowska has been a valued member of our team, leading in the development of strategic partnerships and communications. Dr. Stankowska's research in developing strategies for neuroprotection in glaucoma has been recognized nationally. Her contributions to our team have been integral to our success and growth. We wish her the best in her future endeavors.



A Look Back at 2025

NTERI's Impact

NTERI has made quite an impact in 2025. We would like to invite you to learn more about what we have accomplished.

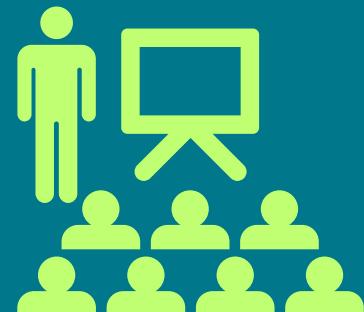


14

NTERI PhD and Master's students in our current cohort at various stages of progression through their degrees.

7
Interdisciplinary Seminar Series lectures

4
Community Engagement Events



306
Eyeglasses Donated through our Eyeglass Donation Program

492

People attended our events



TRAINEE SPOTLIGHT



Peter Nsiah

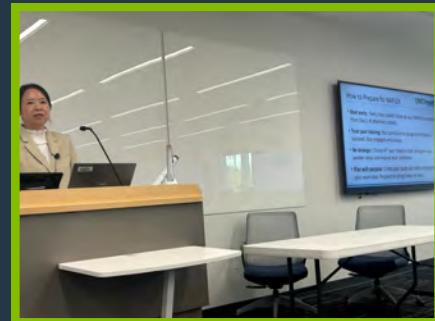
Ph.D. student in Dr. Dimitrios Karamichos' Lab

- Peter defended his PhD research proposal on Oct. 6.

Ying Qin

Ph.D. student in Dr. Hongli Wu's Lab

- Received the first prize research award at the College of Pharmacy Showcase Event.



Sam Yacoub

Ph.D. candidate in Dr. Abe Clark's Lab

- Sam successfully defended his PhD dissertation on Oct. 28. Sam's dissertation was titled "Genome Editing to Treat MYOC Glaucoma."

TRAINEE SPOTLIGHT



Pinkal Patel
Postdoctoral Research Associate
in Dr. Abe Clark's Lab

- Presented at the annual Trabecular Meshwork Society meeting in Fort Lauderdale, Fla. in December on "Effects of glucocorticoid receptor isoform B (GRb) over expression in trabecular meshwork cells independent of exogenous glucocorticoid treatment."
- Publication:
 - Patel, P. D., Patel, G. C., Millar, J. C., Feris, S., Curry, S., Geisert, E. E., & Clark, A. F. (2025). Mechanistic insights into glucocorticoid-induced ocular hypertension using differences in mouse strain responsiveness. *The American Journal of Pathology*. <https://doi.org/10.1016/j.ajpath.2025.11.009>

Megan George
M.S. candidate in
Dr. Abe Clark's Lab

- Megan successfully defended her MS Research Proposal.



FACULTY SPOTLIGHT & LAB HAPPENINGS

SUCHISMITA ACHARYA, PH.D.



- Mir Ali, a traditional MS student, has joined the Acharya lab as a volunteer.
- Publication:
 - PMID: 41365370

DENISE INMAN, PH.D.

- Autumn Morgan's manuscript was accepted in *Frontiers in Neuroscience*, "Tank Binding Kinase 1 Regulates Inflammation and Autophagy in Glaucoma." It is not yet available online, but it was accepted on Dec. 4, 2025.
- Maryam Nabavi, a student in the Master's in Drug Discovery and Development program, completed her Capstone project in the Inman lab. She completed a study entitled, "Investigation of the Neuroprotective Effects of Nabilone on Retinal Ganglion Cell Survival in an Ex Vivo Model."



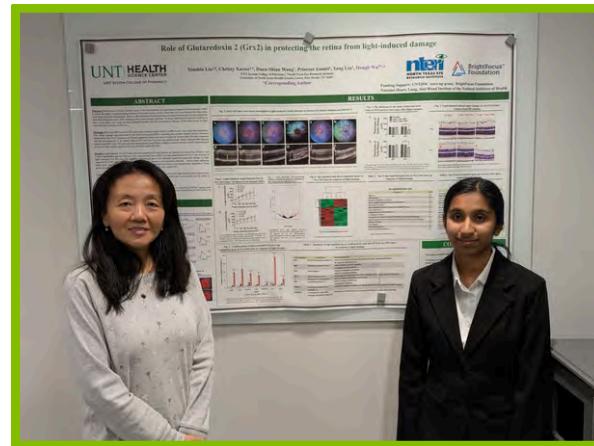
DIMITRIOS KARAMICHOS, PH.D.

- Peter Nsiah defended his PhD research proposal in October.
- Publications:
 - PMID 40762539



HONGLI WU, PH.D.

- Dr. Wu was nominated for the Cataract Research Award from the National Foundation for Eye Research, recognizing her contributions to lens biology and oxidative stress research; results will be announced in late December.
- Following the positive collaboration through Dr. Wu's role on the Topical Advisory Panel and two successful special issues, Dr. Wu formally joined the Editorial Board of *Pharmaceuticals*.
- Dr. Wu was interviewed by a student ambassador, Shruthi Varadarajan, from Frisco ISD's Independent Study & Mentorship (ISM) Program; the student highlighted Dr. Wu's work on oxidative stress and age-related macular degeneration (AMD) for her project.
- Chelsea Cushingberry successfully completed her Advanced Pharmacy Practice Experience (APPE) rotation in Dr. Wu's lab—an important achievement because APPE training is typically conducted in clinical practice sites, and this experience demonstrates the lab's ability to provide a high-quality, research-based experiential learning environment that broadens student pharmacists' training beyond traditional clinical settings while reinforcing Dr. Wu's commitment to mentoring future healthcare professionals through research.



ABE CLARK, PH.D.

- Presented at the annual Trabecular Meshwork Society meeting in Fort Lauderdale, Fla., in December on "Mapping and identifying the gene(s) responsible for glucocorticoid-induced ocular hypertension in mice." Dr. Pinkal Patel also presented on "Effects of glucocorticoid receptor isoform B (GRb) over expression in trabecular meshwork cells independent of exogenous glucocorticoid treatment."
- Sam Yacoub successfully defended his Ph.D. dissertation in October.



HIGHLIGHTS

NTERI WELCOMES DIRECTOR OF RESEARCH AND NEW FACULTY

In November and December, we welcomed three new members of the NTERI team.



Dr. David Vumbaco joined NTERI in November as our new Director of Research. Dr. Vumbaco joins our dynamic team of researchers at a pivotal time of growth—not only in research excellence but also in expanding student opportunities and strengthening community partnerships. His expertise and leadership will advance our mission and help ensure our legacy for years to come.

Dr. Vumbaco said, "I'm honored to join NTERI as Director of Research at a pivotal moment in the institute's evolution. NTERI's mission deeply aligns with my personal

commitment to advancing research and creating lasting impact at the intersection of science and community. I'm excited to collaborate with the institute's exceptional teams to drive transformative discoveries, forge strategic partnerships, and expand our reach.

The next generation of scientists, clinicians, and innovators isn't drawn to stagnancy; they seek environments where ideas are nurtured, tested, and scaled. I believe NTERI's culture can be that magnet for bold thinking and purposeful innovation, and I'm eager to help shape that future."

Dr. Ankita Jaykumar joined NTERI in November as an Assistant Professor. Dr. Jaykumar joins our faculty at a pivotal point, as we seek to draw the connections between eye health and brain health.

Dr. Jaykumar said, "As an investigator pursuing Dementia research, the eye's unique position as an externally facing and largely transparent diagnostic tool that could serve as an extrapolation of metabolic changes in the brain in dementia.



I am looking to build collaborations with leading experts within the institute and within the DFW area at large, interested in applying the eye as an extension of the central nervous system to understand metabolic and microvascular changes linked to cognitive decline."

HIGHLIGHTS



Dr. Xinyue Liu, joined NTERI in December as an Assistant Professor. Dr. Liu's research on cell death in Keratoconus stromal cells will strengthen the institute's corneal research portfolio.

Dr. Liu said, "I was drawn to the institute by the strong existing synergy with Dr. Karamichos, who served as a key advisor during my K99 application. Additionally, I look forward to contributing my specialized focus in high-throughput quantitative proteomics and chemoproteomics, providing an additional '-omics' dimension to our collaborative research efforts.

I am also eager to initiate internal collaborations within NTERI, integrating my methodology into the institute's broader research community."

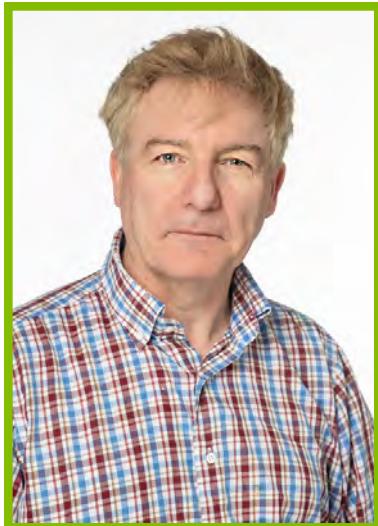
DR. DIMITRIOS KARAMICHOS AWARDED TWO PATENTS



On October 14, Dr. Dimitrios Karamichos was awarded two United States patents for his research in corneal biology. These achievements are a testament to the remarkable contributions that Dr. Karamichos has made to the UNT Health research community.

HIGHLIGHTS

DR. CAMERON MILLAR APPOINTED TO DIRECTOR OF GRADUATE STUDIES PROGRAM OPERATIONS



We would like to congratulate Dr. Cameron Millar, who served as a valued faculty member and liaison for NTERI, on his new role as Director of Graduate Studies Program Operations within UNT Health's Division of Research and Innovation.

NTERI would like to recognize and celebrate Dr. Millar's significant contributions to our university, the broader scientific community, and our research institute. His leadership and dedication have advanced our programs in countless ways.

DR. RAGHU KRISHNAMOORTHY NAMED AS VISUAL SCIENCES GRADUATE ADVISOR



We would like to congratulate Dr. Raghu Krishnamoorthy for being named the new graduate advisor for the Visual Sciences discipline with the College of Biomedical and Translational Sciences (CBTS) at UNT Health.

NTERI would like to recognize and celebrate Dr. Krishnamoorthy's contributions to graduate education and research, and his contributions to our research institute. His commitment to mentoring and leadership will help train future researchers in visual sciences.



EYESIGHT PUBLICATIONS, 2025

Amankwa CE, DebNath B, Abraham A, Young O, Gondi SR, Forster MJ, Shetty RA, Acharya S. Protective effects of SA-31 in a psychostimulant-induced neurotoxicity model using SH-SY5Y cells. *Eur J Pharm Sci.* 2025 Dec 7;217:107399. doi: 10.1016/j.ejps.2025.107399. Epub ahead of print. PMID: 41365370.

Liang W, Huang L, Clayton JM, Nicholas SE, Hefley BS, Ma JX, Karamichos D. Exploring the Therapeutic Potential of Salivary Exosomes in Corneal Epithelial Wound Healing. *Invest Ophthalmol Vis Sci.* 2025 Aug 1;66(11):8. doi: 10.1167/iovs.66.11.8. PMID: 40762539; PMCID: PMC12338374.

Millar JC, Zhang W. Research Protocols for Ophthalmic Disease Mechanisms (Najam A. Sharif, Sunny E. Ohia (eds)). Ch.34: Protocols for determining aqueous humor dynamics in the mouse in vivo. Bentham Science Publishers Pte. Ltd., Singapore, December 2025. Pp. 354-375. ISBN: 978-981-5324-33-4 (Online); 978-981-5324-34-1 (Print); 978-981-5324-35-8 (Paperback), 2025.

Patel, P. D., Patel, G. C., Millar, J. C., Feris, S., Curry, S., Geisert, E. E., & Clark, A. F. (2025). Mechanistic insights into glucocorticoid-induced ocular hypertension using differences in mouse strain responsiveness. *The American Journal of Pathology.* <https://doi.org/10.1016/j.ajpath.2025.11.009>

Yacoub, S., Amankwa, C. E., & Zode, G. (2025). Protocols for Performing CRISPR Gene Editing in Anterior Chamber Eye Cells. In *Research Protocols for Ophthalmic Disease Mechanisms and Therapeutics: Glaucoma - Ocular Hypertension* (pp. 550–564). essay, Bentham Science.