



Eyesight



Advancing the Future of Eye Research

For more than 20 years, the North Texas Eye Research Institute in the School of Biomedical Sciences at The University of North Texas Health Science Center at Fort Worth has advanced the frontiers of visual sciences through basic and clinical research.

Our scientists have received national and international recognitions for their contributions to the field.

Our mission: NTERI advances research, education, and clinical care by understanding the visual system and preventing, treating, and finding cures for eye disorders.

NTERI is committed to leading the scientific community as a world-renowned educational authority seeking to eliminate racial and ethnic healthcare disparities and develop effective interventions to eradicate eye diseases and disorders.

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EXECUTIVE DIRECTOR'S MESSAGE



“Changing vision health starts at NTERI” - What I mean is that growth, transformation, and innovation starts with our students, trainees, staff, and faculty members and radiates out to make a difference in the world. When we are inspired, we inspire others! Every day NTERI opens its doors to young scientists, colleagues, and the community with respect. We are committed to scientific and educational excellence, open-minded learning, and constant improvement and evolution as individuals and as an organization. As a team, we live by a set of values that unite us. I invite everyone to please come take a tour, get involved, and be a part of our team!

Dimitrios Karamichos, BEng, MSc, Ph.D.

NTERI INTERDISCIPLINARY SEMINAR SERIES (ISS)

	September 2022 Dr. Katalin Prokai “Retina-targeted Estrogen Therapy for Ocular Neuroprotection”
	October 2022 Dr. Michael Coble “An Overview of the Center for Human Identification”
	December 2022 Dr. Peter Lwigale “Uncovering the Cellular and Molecular Mechanisms Involved in Corneal Development and Wound Healing”
	January 2023 Dr. Usha Sambamoorthy “Artificial Intelligence and Machine Learning in Health Outcomes Research”
	February 2023 Dr. Emily Spence “Engaging Communities to Promote Health Equity”
	March 2023 Dr. Dorota Skowronska-Krawczyk “Repetitive Stress Accelerates Aging of the Eye”
	April 2023 Dr. Timothy Corson “Therapeutic Targeting of Heme Synthesis for Neovascular Eye Disease”
	May 2023 Dr. Johnathan Tune “Control of Coronary Blood Flow in Health and Disease”

NTERI ISS 2024

Upcoming speakers:

- **Dr. Cintia De Paiva**
September 28th, 2023
- **Dr. Sterling Ortega**
October 26th, 2023
- **Dr. Steven Fliesler**
November 16th, 2023



For more information check our website:

<https://www.unthsc.edu/north-texas-eye-research-institute/nteri-seminar-series/>



STUDENT SPOTLIGHT

Charles Amankwa, Ph.D. candidate in Dr. Suchismita Acharya's Lab

Awarded the Sigma Xi Grant in Aid of Research for his project titled "Understanding the Mitochondrial Metabolic Activity of Compound SA-2 in Primary Human Trabecular Meshwork Cells."



Pawan Shrestha, Ph.D. student in Dr. Dimitrios Karamichos's Lab

Awarded the Levine Presidential SBS Endowed Scholarship and The Elena & Thomas Yorio Endowed Scholarship

Nina Donkor, Ph.D. student in Dr. Denise Inman's Lab

Awarded the Levine Presidential SBS Endowed Scholarship, the Dr. Edward E. Elko Student Affairs Quasi-Endowed Scholarship and the UNTHSC School of Biomedical Sciences Annual Scholarship



Gretchen Johnson, a Ph.D. student in Dr. Stankowska's Lab

1. Awarded T32 training grant (2022-2023)
2. Student Association of Biomedical Sciences (SABS) Travel Grant for ARVO, New Orleans
3. SACNAS Travel Grant for NDiSTEM, Portland

STUDENT SPOTLIGHT



R. Max Petty, a Ph.D. student in Drs. Stankowska and Krishnamoorthy's Lab

1. Awarded second place poster award for NTERI at RAD 2023
2. T32 training grant (2023-2024)
3. UNTHSC SBS annual scholarship (2023-2024)
4. SACNAS Travel Grant for NDiSTEM, Portlan

Jennifer H. Pham, Ph.D. student in Dr. Stankowska's Lab

1. Awarded Dr. Robert and Rev. Barbara Wordinger Endowed Scholarship in Visual Sciences, 2023
2. Received UNTHSC For Life Endowed Scholarship, 2023
3. Received a Travel Fellowship to attend Association for Ocular Pharmacology and Therapeutics 16th Biennial Meeting in Indiana
4. Awarded Rachel Dauphin Memorial Scholarship, 2023
5. Recipient of the Student Association of Biomedical Sciences (SABS) Travel Grant
6. Delivered Oral presentations at ARVO 2023



Kim-Tuyen Le, M.S. student in Dr. Stankowska's Lab

1. Awarded first place poster award for NTERI at RAD 2023
2. Defended her Master's Thesis



STUDENT SPOTLIGHT



Rajiv Rangan, a Ph.D. student in Dr. Clark's Lab

Awarded Outstanding Student in the Discipline of Visual Sciences, 2023

Katelyn Sepke, M.S. student in Dr. Denise Inman's Lab

Awarded Brian Molles Scholarship, 2023



Jinmin Zhang, Ph.D. student in Dr. Wu's Lab

Awarded second place in Pharmaceutical Science Research Award at HSC College of Pharmacy at Research Appreciation Day (RAD) 2023.

Olivia Young, a Ph.D. student in Drs. Acharya and Inman's Lab

Awarded T32 training grant (2023-2024)



Kudakwashe Murinda, a Ph.D. student in Drs. Acharya and Inman's Lab

Awarded third place in Pharmaceutical Science Research Award at HSC College of Pharmacy at Research Appreciation Day (RAD) 2023.

DIMITRIOS KARAMICHOS, PH.D. <<<

- Awarded NEI/R21 grant for 2 years: EVs.in KC pathogenesis 🌟.
- Awarded a 2-year HSC Team Science grant in collaboration with Dr. Kim (Dept. Pharm. Sci) 🌟.
- Dr. Dimitrios Karamichos has been appointed chair of the National Institutes of Health Pathophysiology of Eye Disease 2 (PED2) Study Section of the Center for Scientific Review 🏆.



>>> RAGHU KRISHNAMOORTHY, PH.D.

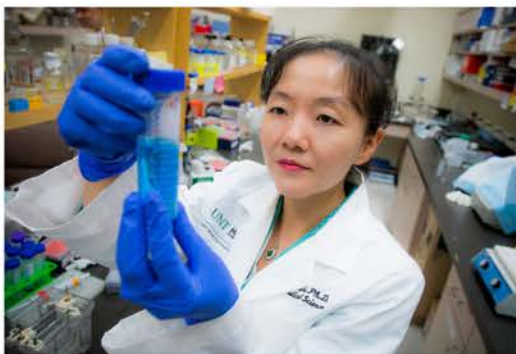
Presentation in the ARVO meeting held in New Orleans in April 2023

1. Brooks C, Kodati B, Inman DM, Stankowska D, and Krishnamoorthy RR (2023) Intravitreal Endothelin-1 (ET-1) Administration Reduces Mitophagy in Retinal Ganglion Cells in MitoQC mice. (Poster presentation)
2. Kodati B, Chaphalkar RM, Maddineni P, Stankowska DL, Zede G, and Krishnamoorthy RR (2023) Endothelin-1 Mediated Decrease in Mitochondrial Bioenergetics is Involved in Neurodegeneration of Retinal Ganglion Cells in a Rodent Model of Glaucoma. (Poster presentation)
3. Krishnamoorthy R, Kodati B, Chaphalkar R, Brooks C and Stankowska DL (2023) Endothelin-1 (ET-1) treatment produces mitochondrial damage in rat retinal ganglion cells. (Paper presentation)

Raghu Krishnamoorthy chaired a paper session entitled, "Retina/RPE: Physiology, Pharmacology and Metabolism" at the ARVO meeting held in New Orleans in April 2023 🏆

DOROTA STANKOWSKA, PH.D. <<<

- Awarded an Outstanding Traditional Faculty Member at SBS, 2023 🏆.
- Appointed Director for the Master in Biotechnology Program.
- Chair of the Physiology/Pharmacology (PH) section of the Annual Meeting Program Committee (AMPC) for the Association for Research in Vision and Ophthalmology (ARVO) 🏆
- Chaired a paper session at ARVO 2023 entitled "Neuroprotection and blood flow" on April 25, 2023
- Speaker at the John R. Lynn, MD Lectureship in Ophthalmology, UT Southwestern, Dallas, TX, 04/05/23



>>> HONGLI WU, PH.D.

- Served as a study section member for the Auckland Medical Research Foundation, New Zealand.
- Hongli Wu served as the Biotechnology session chair for IEEE MetroCon 🏆.
- Served as a Special Issue Editor for Pharmaceuticals (IF=5.2) titled "Novel Therapeutic Targets and Drug Candidates for the Treatment of Eye Diseases."
- Dr. Wu's abstract was selected for an oral presentation at the Vision Injury Research Forum (VIRF). Title: "Estrogen prodrug protected the retina from light-induced damage."



EYESIGHT PUBLICATIONS, 2022 - 2023



1. Kodati B, Zhang W, He S, Pham JH, Beall KJ, Swanger ZE, Krishnamoorthy VR, Harris PE, Hall T, Tran AV, Chaphalkar, RM, Chavala SH, Stankowska, DL and Krishnamoorthy RR *Frontiers in Ophthalmol* 2023. DOI: <https://doi.org/10.3389/fopht.2023.1185755>
2. Escandon P, Nicholas SE, Vasini B, Cunningham RL, Murphy DA, Riaz KM, Karamichos D. *Am J Pathol.* 2023. DOI: <http://10.1016/j.ajpath.2023.02.002>
3. Van L, Bennett S, Nicholas SE, Hjortdal J, McKay TB, Karamichos D.. *Ophthalmology Science* 2023 DOI: <https://doi.org/10.1016/j.xops.2023.100364>
4. Millar JC, Sundaresan Y, Zode GS, Clark, AF. Springer Nature; accepted for publication
5. Pham, J. H., & Stankowska, D. L. (2023). Mitochondria-associated endoplasmic reticulum membranes (MAMS) and their role in glaucomatous retinal ganglion cell degeneration—a mini-review. *Frontiers in Neuroscience*, 17. <https://doi.org/10.3389/fnins.2023.1198343>
6. Pham, J. H., Johnson, G. A., Rangan, R. S., Amankwa, C. E., Acharya, S., & Stankowska, D. L. (2022). Neuroprotection of Rodent and Human Retinal Ganglion Cells In Vitro/Ex Vivo by the Hybrid Small Molecule SA-2. *Cells*, 11(23), 3741. <https://doi.org/10.3390/cells1123374>
7. Amankwa CE, Young O, DebNath B, Gondi SR, Rangan R, Ellis DZ, Zode G, Stankowska DL*, Acharya S*. Modulation of Mitochondrial Metabolic Parameters and Antioxidant Enzymes in Healthy and Glaucomatous Trabecular Meshwork Cells with Hybrid Small Molecule SA-2. *International Journal of Molecular Sciences*. 2023; 24(14):11557. <https://doi.org/10.3390/ijms241411557>
8. Zhang J, Yu Y, Dang T, Lal K, Wu H. The impact of glutaredoxin 1 and glutaredoxin 2 double knockout on lens epithelial cell function. *Exp Eye Res.* 2023 Jun 3;233:109521. doi: 10.1016/j.exer.2023.109521. Epub ahead of print. PMID: 37277068. <https://pubmed.ncbi.nlm.nih.gov/37277068/>



ENTERI SNAPSHOTS: CAPTURING MOMENTS AND MEMORIES

