CURRICULUM VITAE

NAME: Jonathan Lin Date: 05/05/2026

PRESENT POSITION AND ADDRESS:

MD-PhD Candidate
University of Texas Medical Branch at Galveston
Department of Ophthalmology and Visual Sciences
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Galveston, TX 77555-1156
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BIOGRAPHICAL:

Citizenship:	US
Current status:	US Citizen
Languages:	English, Chinese

EDUCATION:

06/2018 to present **MD-PhD Candidate**
MD-PhD Program
Department of Pharmacology and Toxicology
The University of Texas Medical Branch, Galveston, TX
Anticipated Graduation Date: July 10th, 2026

08/2013-05/2017 **Bachelor of Science in Bioengineering**
University of Maryland, College Park, MD

PROFESSIONAL AND TEACHING EXPERIENCE:

Professional Experience:

06/2020-04/2024 **Predoctoral Research Fellow**, Department of Ophthalmology and Visual Sciences, University of Texas Medical Branch, Galveston, TX
Mentor: Massoud Motamedi
Project: Noninvasive imaging for the assessment of the ocular toxicity of aerosolized agents and identification of potential therapeutics

06/2017-06/2018 **ORISE Research Fellow**, Department of Biomedical Physics, U.S. Food and Drug Administration, Silver Spring, MD
Mentor: T. Joshua Pfefer
Project: Quantitative mobile phone-based hyperspectral imaging for point-of-care tissue oximetry.

06/2015-05/2017 **Undergraduate Research Assistant**, Department of Bioengineering, University of Maryland, College Park, MD
Mentor: Yu Chen
Project: Real-time monitoring of tumor micro-environment during photoimmunotherapy

06/2014-08/2014 **Study Coordinator**, Department of Psychology, University of Maryland, College Park, MD
Mentor: Edward Lemay
Project: Affective and behavioral forecasting in romantic relationships

08/2013-05/2014 **Undergraduate Research Assistant**, Department of Psychology, University of Maryland, College Park, MD
Mentor: Edward Lemay
Project: Personal characteristics and personality traits affecting interpersonal interactions

Technical Skills and Experience:

Imaging: White light microscopy, Two-photon microscopy (TPM), Fluorescence lifetime imaging (FLIM), Fluorescence laminar optical tomography (FLOT), Optical coherence tomography (OCT), In vivo confocal microscopy (IVCM), Hyperspectral imaging, Photoimmunotherapy

Animal Work: Mouse surgical procedures/anesthesia

Computer Skills: Microsoft Office, ImageJ, CAD (Autodesk Inventor, Creo Parametric, Fusion), Python, C++, Java, MATLAB, Javascript, HTML/CSS, R, Adobe Photoshop, and Adobe Illustrator

LICENSING AND CERTIFICATION:

USMLE STEP 1 – Pass (237)

USMLE STEP 2 CK – Pass (274)

GRANT SUPPORT:

09/2020-08/2023 T32ES007254-28S1**,** NIEHS T32 Training Grant

HONORS AND AWARDS

09/2025 Alpha Omega Alpha (AOA)

06/2025 Harry B and Marie S Kelso Endowed Blocker Scholarship, University of Texas Medical Branch

06/2025	Minnie and Ward Savage Endowed Award Scholarship, University of Texas Medical Branch
12/2023	The George Palmer Saunders II Memorial Graduate Student Scholarship, University of Texas Medical Branch
12/2023	Edith and Robert Zinn Presidential Scholarship, University of Texas Medical Branch
12/2023	Travel Award in Memory of Christina Fleischmann, University of Texas Medical Branch
08/2023	Pharmacology and Toxicology Summer Research Symposium: Excellence Among Senior-Level Students
03/2023	I2 (Innovation and Impact) Award Sponsored by Biomere, Society of Toxicology (SOT) Ocular Toxicology Specialty Section (OTSS)
03/2023	Covance-OSOD Graduate Student/Postdoctoral Fellow Research Award, SOT OTSS
01/2023	Edith and Robert Zinn Presidential Scholarship, University of Texas Medical Branch
08/2022	Pharmacology and Toxicology Summer Research Symposium: Excellence in Rationale and Approach Award
03/2022	SOT Graduate Student Travel Award
01/2022	Society of Photo-Optical Instrumentation Engineers (SPIE) Graduate Student Travel Award
12/2021	Blackstone Launchpad IDEA Competition Finalist – Consumer Products & Services
03/2021	Poster of the Year Award, Society of Toxicology: Ocular Toxicology Specialty Section
12/2020	Travel Award in Memory of Christina Fleischmann, University of Texas Medical Branch
08/2013-05/2017	President's Scholarship, University of Maryland
08/2013-05/2017	Dean's List, University of Maryland
08/2013-05/2017	Integrated Life Sciences Honors Program Scholar
01/2017	ASPIRE Research Award

08/2015	ASPIRE Research Award
06/2014	Maryland Summer Scholars Award

PROFESSIONAL MEMBERSHIPS:

2021-2026	*Society of Toxicology (SOT)* Student Member
2021-2026	*Society of Photo-Optical Instrumentation Engineers (SPIE)* Student Member
2021-2026	*Association for Research in Vision and Ophthalmology (ARVO)* Member-in-Training

COMMITTEE RESPONSIBILITIES:

2023-2026	ARVO Members-in-Training Committee Member
2023-2026	ARVO ADVANCE Conference Program Committee Member
2023-2026	SOT Graduate Student Leadership Committee (GSLC) Executive Board Member
2025-2026	SOT GSLC Secretary
2024-2025	SOT GSLC Professional Development Subcommittee Chair
2021-2025	UTMB Innovation and Entrepreneurship Studio: Student Advisory Council Member
2023-2024	SOT GSLC Professional Development Subcommittee Secretary
2023-2024	UTMB Graduate Student Organization (GSO) Board of Ambassadors – MD-PhD Program Representative
2022-2024	SOT Ocular Toxicology Specialty Section (OTSS) Graduate Student Representative
2022-2023	SOT Education and Career Development Committee (ECDC) Graduate Student Representative
2022-2023	UTMB MD-PhD Student Organization Treasurer

BIBLIOGRAPHY:

h-index: 11 **i10-index:** 11

Publications:

[#]Equally contributing authors

1. (In preparation) **Lin JL**, Lu Z, Luisi J, Chan A, Chea M, Ameredes BT, Gupta PK, Zhang W, Liu H, Motamedi M. Longitudinal multimodal imaging of the corneal response to topical acrolein exposure. *Experimental Eye Research.*

2. (In preparation) **Lin JL**, Luisi J, Ameredes BT, Gupta PK, Liu H, Zhang W, Motamedi M. Ocular toxicity of acrolein: mechanisms, assessment, and clinical implications. *Cutaneous and Ocular Toxicology.*

3. Buscho SE, Xia F, Shi S, **Lin JL**, Szczesny B, Zhang W, Motamedi M, Liu H. Non-invasive evaluation of retinal vascular alterations in a mouse model of optic neuritis using laser speckle flowgraphy and optical coherence tomography angiography. *Cells*. 2023 Nov 22;12(23):2685.

4. Luisi JD, **Lin JL**, Ochoa LF, McAuley RJ, Tanner MG, Alfarawati O, Wright CW, Vargas G, Motamedi M, Ameredes BT. Semi-automated micro-computed tomography lung segmentation and analysis in mouse models. *MethodsX*. 2023 Apr 20;10:102198.

5. Xia F[#], **Lin JL**[#], Zhang DL[#], Shi S, Buscho SE, Motamedi M. Quantification of leukocyte trafficking in a mouse model of multiple sclerosis through in vivo imaging. *EC Ophthalmology*. 2022 Oct 6;13(11):02-10.

6. Luisi JD[#], **Lin JL**[#], Karediya N, Kraft ER, Sharifi A, Schmitz-Brown ME, Zhang W, Motamedi M, Ameredes BT, Merkley KH, Gupta PK. Concentration-associated pathology of alkali burn in a mouse model using anterior segment optical coherence tomography with angiography. *Experimental Eye Research*. 2022 Aug 17;223:109210.

7. Luisi JD, **Lin JL**, Ameredes BT, Motamedi M. Spatial-temporal speckle variance in the en-face view as a contrast for optical coherence tomography angiography (OCTA). *Sensors (Basel)*. 2022 Mar 22;22(7):2447.

8. Afshari A, Ghassemi P, **Lin J**, Halprin M, Wang J, Mendoza G, Weininger S, Pfefer TJ. Cerebral oximetry performance testing with a 3D-printed vascular array phantom. *Biomedical Optics Express*. 2019 Jul 2;10(8):3731-3746.

9. Wang J, **Lin JL**, Chen Y, Welle C, Pfefer TJ. Phantom-based evaluation of near-infrared intracerebral hematoma detector performance. *Journal of Biomedical Optics*. 2019 Apr 15;24(4):045001.

10. Liu Y, Ghassemi P, Depkon A, Iacono MI, **Lin J**, Mendoza G, Wang J, Tang Q, Chen Y, Pfefer TJ. Biomimetic 3D-printed neurovascular phantoms for near-infrared fluorescence imaging. *Biomedical Optics Express*. 2018 May 29;9(6):2810-2824.

11. Tang Q, Nagaya T, Liu Y, Horng H, **Lin J**, Sato K, Kobayashi H, Chen Y. 3D mesoscopic fluorescence tomography for imaging micro-distribution of antibody-photon absorber conjugates during near infrared photoimmunotherapy in vivo. *Journal of Controlled Release*. 2018 Apr 16;279:171-180.

12. Tang Q, Piard C, **Lin J**, Nan K, Guo T, Caccamese J, Fisher J, Chen Y. Imaging stem cell distribution, growth, migration, and differentiation in 3-D scaffolds for bone tissue engineering using mesoscopic fluorescence tomography. *Biotechnology and Bioengineering*. 2017 Sep 16;115(1):E-pub.

13. Tang Q, Nagaya T, Liu Y, **Lin J**, Sato K, Kobayashi H, Chen Y. Real-time monitoring of microdistribution of antibody-photon absorber conjugates during photoimmunotherapy in vivo. *Journal of Controlled Release*. 2017 Aug 28;260:154-163.

14. Tang Q, Liu Y, Tsytsarev V, **Lin J**, Wang B, Kanniyappan U, Li Z, Chen Y. High-dynamic-range fluorescence laminar optical tomography (HDR-FLOT). *Biomedical Optics Express*. 2017 Mar 9;8(4):2124-2137.

15. Tang Q, Wang J, Frank A, **Lin JL**, Li Z, Chen C, Jin L, Wu T, Greenwald BD, Mashimo H, Chen Y. Depth-resolved imaging of colon tumor using optical coherence tomography and fluorescence laminar optical tomography. *Biomedical Optics Express*. 2016 Nov 21;7(12):5218-5232.

16. Tang Q, **Lin JL**, Tsytsarev V, Erzurumlu R, Liu Y, Chen Y. Review of mesoscopic optical tomography for depth-resolved imaging hemodynamic changes and neural activities. *Neurophotonics*. 2016 Nov 14;4(1):011009.

17. Lemay EP, **Lin JL**, Muir HJ. Daily affective and behavioral forecasts in romantic relationships: seeing tomorrow through the prism of today. *Personality and Social Psychology Bulletin*. 2015 May 28;41(7):1005-1019.

Abstracts:

1. **Lin J**, Lu Z, Chan A, Chea M, Shi S, Xia F, Luisi J, Szczesny B, Merkley KH, Ameredes BT, Gupta P, Zhang W, Liu H, Motamedi M. Multimodal imaging and biochemical analysis of long-term corneal response to topical acrolein exposure. In: *Investigative Ophthalmology & Visual Science*, ARVO, 2025. Abstract no. B0160.

2. **Lin J**, Lu Z, Chan A, Chea M, Shi S, Xia F, Luisi J, Szczesny B, Merkley KH, Ameredes BT, Gupta P, Zhang W, Liu H, Motamedi M. Multimodal imaging of the biphasic corneal wound healing response to topical acrolein exposure. In: *Investigative Ophthalmology & Visual Science*, ARVO, 2024. Abstract no. B0459.

3. **Lin J**, Luisi J, Escudero J, Benavidez M, Salisbury R, Patel S, Enkhbaatar P, Rojas J,

Zahner C, Chacin A. Eurus: Emergency Use ResUscitator System. *Open Hardware Summit*, Open Source Hardware Association (OSHWA), 2024.

4. **Lin J**, Luisi J, Karediya N, Szczesny B, Merkley KH, Ameredes BT, Gupta P, Motamedi M. Non-invasive longitudinal assessment of acrolein-induced chemical eye injury. In: *Investigative Ophthalmology & Visual Science*, ARVO, 2023. Abstract no. B0334.

5. **Lin J**, Luisi J, Karediya N, Chea M, Merkley KH, Ameredes BT, Gupta P, Liu H, Zhang W, Motamedi M. Exposure assessment of acrolein-induced corneal injury through non-invasive monitoring of biomarkers. In: *2023 Annual Meeting Abstract Supplement*, Society of Toxicology, 2023. Abstract no. 3142.

6. **Lin J**, Luisi J, Karediya N, Merkley KH, Ameredes BT, Gupta P, Motamedi M. Detection and quantification of image-based biomarkers for monitoring acrolein-induced ocular injury using optical coherence tomography. *The 15th Annual CounterACT Research Network Symposium*, CounterACT, 2022.

7. **Lin J**, Luisi J, Karediya N, Kraft ER, Sharifi A, Schmitz-Brown ME, Merkley KH, Ameredes BT, Gupta P, Motamedi M. Monitoring the progression of chemical-induced ocular injury through anterior segment optical coherence tomography (AS-OCT). In: *Investigative Ophthalmology & Visual Science*, ARVO, 2022. Abstract no. A0189.

8. **Lin JL**, Luisi J, Karediya N, Kraft ER, Sharifi A, Schmitz-Brown ME, Merkley KH, Ameredes BT, Gupta PK, Motamedi M. Grading of alkali-induced ocular toxicity using image-based biomarkers provided by anterior segment optical coherence tomography. In: *2022 Annual Meeting Abstract Supplement*, Society of Toxicology, 2022. Abstract no. 3447.

9. **Lin J**, Luisi J, Karediya N, Kraft E, Sharifi A, Schmitz-Brown M, Merkley K, Gupta P, Motamedi M. Anterior segment optical coherence tomography (AS-OCT) for the visualization and quantification of dose-dependent ocular toxicity. In: *Proceedings of the SPIE 11941*, SPIE, 2022. Abstract no. BO109-28.

10. **Lin J**, Luisi J, Kraft ER, Giannos SA, Schmitz-Brown ME, Motamedi M, Gupta P. Anterior segment optical coherence tomography (AS-OCT) for the assessment of corneal alkali injury. In: *Investigative Ophthalmology & Visual Science June 2021, Vol.62*, ARVO, 2021. Abstract no. 3536987.

11. **Lin JL**, Luisi J, Kraft ER, Giannos SA, Schmitz-Brown ME, Motamedi M, Gupta P. Assessment of corneal alkali injury in a murine model with anterior segment optical coherence tomography (AS-OCT). In: *2021 Annual Meeting Abstract Supplement*, Society of Toxicology, 2021. Abstract no. 2268.

12. **Lin J**, Luisi J, Kraft E, Giannos S, Schmitz-Brown M, Gupta P, Motamedi M. Single-frame optical coherence tomography angiography for the quantification of corneal neovascularization in a mouse model. In: *Proceedings of the SPIE 11623*, SPIE, 2021. Abstract no. BO107-71.

13. **Lin JL**, Ghassemi P, Chen Y, Pfefer J. Hyperspectral imaging with near-infrared-enabled mobile phones for tissue oximetry. In: *Proceedings of the SPIE 10485*, SPIE, 2018. Abstract no. 10485-11.

REFERENCES: Available upon request.