

BIOGRAPHICAL SKETCH

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NAME: Tran, Jessica H.

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Heed Fellowship

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Tulane University, New Orleans, LA	BS	08/2013	05/2017	Public Health, Cell & Molecular Biology minor
Icahn School of Medicine at Mount Sinai, New York, NY	MD	08/2018	05/2023	Medicine
Icahn School of Medicine at Mount Sinai, New York, NY	MS	08/2019	05/2023	Clinical Research
Olive View-UCLA Medical Center, Sylmar, CA	Internship	06/2023	06/2024	Internal Medicine
UCLA Jules Stein Eye Institute, Los Angeles, CA	Residency	07/2024	Expected 6/2027	Ophthalmology

A. Personal Statement

I have a strong background in health services research and medical education that will prepare me well for a career as a future academic glaucoma specialist. My research experiences have provided a strong foundation in epidemiology. In medical school, I was selected as part of a five-person cohort for the competitive dual-degree program, where I earned a tuition-free master’s degree in clinical research and underwent a tailored physician-scientist curriculum. During this time, I worked with mentors from different disciplines, an intentional decision rooted in my desire to understand how to conduct methodologically sound studies. I gained expertise in analyzing large health databases including SEER-Medicare and state administrative claims data. Most notably, my Master’s thesis was recognized as Editor’s Choice in JAMA Cardiology. Under the mentorship of Dr. Louis Pasquale, I integrated health services research with genetics, where we investigated genetic risk factors for glaucoma, resulting in my paper presentation at ARVO and multiple co-author publications. These cumulative experiences have helped me become a highly independent and intellectually curious researcher with 13 peer-reviewed articles. In residency, I have continued to improve upon my research skillset, now investigating risk factors in macular degeneration using the NIH All of US Research Program. Looking ahead, I desire to continue my interest in using national datasets to better understand the pathogenesis and risk factors for glaucoma. In addition to research, my passion for medical education is reflected through my leadership and innovation in curricular initiatives. Before medical school, I was a Fulbright Scholar, where I taught medical students in Vietnam. At Mount Sinai, I integrated and improved ophthalmic education in the medical curriculum, creating an online case-based learning tool that was integrated into the clerkship curriculum and developed a pre-clerkship ophthalmology elective. These initiatives were published in peer-reviewed journals and was a paper presentation at the AUPO meeting. As a resident, my curricular efforts have continued, where I was selected to serve on faculty-resident committees to help improve ophthalmic education for other clinical departments and streamline ophthalmic care delivery at UCLA Health. I believe these formative educational experiences will be prepare me for a successful career as a champion for medical education in ophthalmology.

B. Positions, Scientific Appointments and Honors
Professional Memberships

American Academy of Ophthalmology – Trainee Member
Association for Research in Vision and Ophthalmology — Trainee Member

Honors and Awards

2025	Advocacy Ambassador, American Academy of Ophthalmology
2024	Editor's Choice, JAMA Cardiology for Tran JH, et. al. Surgical or transcatheter replacement for failed bioprosthetic valves. JAMA Cardiol. 2024 Jul 1;9(7):631-639. doi:10.1001/jamacardio.2024.1049.
2023	Patient-Oriented Research Training and Leadership (PORTAL) Thesis Award in Clinical Research for "Surgical or transcatheter replacement for failed bioprosthetic valves," Icahn School of Medicine at Mount Sinai
2023	Distinction in Medical Education, Icahn School of Medicine at Mount Sinai
2023	Distinction in Research, Icahn School of Medicine at Mount Sinai
2018–2023	Patient-Oriented Research Training and Leadership (PORTAL) Merit Scholarship, Icahn School of Medicine at Mount Sinai
2018–2023	FlexMed Merit Scholarship, Icahn School of Medicine at Mount Sinai
2017	Fulbright U.S. Student Scholar, U.S. Department of State, Danang, Vietnam
2017	Phi Beta Kappa, Tulane University
2017	Departmental Honors for Best Undergraduate Senior Thesis in Public Health: "Inclusion of limited English proficient individuals in clinical research," Tulane University
2013–2017	Posse Foundation Scholar with full-tuition merit scholarship to Tulane University, Posse Foundation

C. Contributions to Science

1. Utilizing genetic instruments to help identify individuals at risk for primary open-angle glaucoma

(OAG): For three years, I worked with Dr. Louis Pasquale to help identify genetic risk factors for OAG. Using multiple genetic analyses, we found inverse relationships between smoking initiation and lower IOP and OAG, suggesting a shared architecture between OAG and an individual's genetic susceptibility to smoking. This work is foundational for further work in understanding glaucoma pathogenesis and potential drug targets. Separately, I have made several contributions to the development and assessment of a population-wide polygenic risk score (PRS) screening tool for OAG. As part of Dr. Pasquale's R01 grant, I was responsible for conducting phenotypic quality control that would be used to generate a PRS for glaucoma. While this study is still ongoing, we have contributed these data to other multi-center studies and have found evidence that PRS improves OAG-risk prediction and markers for worse OAG. We have also found that use of ICD-identified vs. chart reviewed OAG and controls have similar accuracy and performance for generating a PRS, providing evidence that an ICD-identified cohort could be a sufficient pool for population risk prediction.

1. **Tran JH**, Stuart KV, de Vries V, Vergroesen JE, Cousins CC, Hysi PG, Do R, Rocheleau G, Kang JH, Wiggs JL, MacGregor S, Khawaja AP, Mackey DA, Klaver CCW, Ramdas W, Pasquale LR, for the UK Biobank Eye and Vision Consortium; International Glaucoma Genetics Consortium. Genetic associations between smoking- and glaucoma-related traits. *Transl Vis Sci Technol.* 2023. doi:10.1167/tvst.0.0.5174. PMID: 36786746; PMCID: PMC9932549.
2. **Tran JH**, Kang J, Han E, Gupta U, Seresirikachorn K, Vy HMT, Zhao Y, Rocheleau G, Luo Y, Lee R, Do R, Friedman DS, Kang JH, Wiggs JL, Pasquale LR, Segre AV, Zebardast N. Use of Diagnostic Codes for Primary Open-Angle Glaucoma Polygenic Risk Score Construction in Electronic Health Record-linked Biobanks. *Am J Ophthalmol.* 2024 Jun 19:S0002-9394(24)00249-6. doi:10.1016/j.ajo.2024.06.007. PMID: 38906208.
3. de Vries VA, Hanyuda A, Vergroesen JE, Do R, Friedman DS, Kraft P, Turman C, Luo YL, **Tran JH**, Liefers B, Wong SH, Lee RH, Zebardast N, Klaver CCW, Segre AV, Pasquale LR, Wiggs JL, Kang JH, Ramdas WD. The Clinical Usefulness of a Glaucoma Polygenic Risk Score in 4 Population-Based European Ancestry Cohorts. *Ophthalmology.* 2025 Feb;132(2):228-237. doi:10.1016/j.ophtha.2024.08.005. PMID: 39128550.

4. **Under review:** Aziz K, Zhao Y, **Tran JH**, Vy HMT, Eslami M, Zhao H, Do R, Rocheleau G, Kang JH, Elze T, Segre AV, Friedman DS, Pasquale LR, Wiggs JL, Zebardast N. Association of a Genome-wide Polygenic Risk Score with Glaucoma-related Traits in Two Hospital-based Biobanks. *American Journal of Ophthalmology*. Submitted April 2026.

2. **Creating a curricular model for longitudinal ophthalmology learning in undergraduate medication education (UME):** In collaboration with Dr. Nisha Chadha and Mount Sinai administrative leadership, we developed a framework for enriching ophthalmology education for pre-clinical and clinical students. This framework was adopted into the medical curriculum at Mount Sinai and published in medical education research with the intent to help other medical schools with further adoption and integration of ophthalmology in a busy curriculum. We created an online ophthalmology case-based learning tool (www.20/20sim.com) incorporating conditions frequently encountered in primary care, pediatrics, emergency medicine and neurology. We piloted the tool to internal medicine residents as well as pediatric and neurology clerkship students. Our study demonstrated increased trainee comfort with ophthalmology topics after the facilitated workshop with high ratings of the learning tool. For pre-clinical students, we also developed an optional 8-week elective course that included subspecialty-focused didactic learning and in-person physical and microsurgery class sessions. In the 1-year follow-up study, we showed that the majority of participants had sustained interest in ophthalmology, demonstrating the potential impact of increased exposure to the field.

1. **Tran JH**, Loebel E, Edouard M, Quehl T, Walsh E, Ginsburg R, Frempong T, Fredrick D, Stein LK, Fara MG, Farouk SS, Chadha N. Creating ophthalmology experiences in undergraduate medical education: pilot of a case-based learning ophthalmology tool. *BMC Med Educ*. 2023 Aug 9;23(1):559. doi:10.1186/s12909-023-04514-8. PMID: 37559068; PMCID: PMC10410917.
2. Avril A, Jo J, **Tran J**, Ufongene C, Farouk S, Chadha N. Pilot and One-Year Follow-up of a Novel Hybrid Ophthalmology Elective Course for Preclinical Students. *Journal of Academic Ophthalmology*. 2025 Dec;17(3). doi:10.62199/2475-4757.1313

3. **Rethinking treatment strategies for failed bioprosthetic aortic valves:** Under the mentorship of Dr. Natalia Egorova and Dr. Shinobu Itagaki and in collaboration with leading experts in cardiothoracic surgery, we used state administrative claims databases to evaluate outcomes between valve-in-valve transcatheter aortic valve replacement (ViV-TAVR) and re-do surgical aortic valve replacements (SAVR) in failed prosthetic aortic valves. In this study, we showed that redo SAVR and ViV-TAVR had similar mortality rates up to two years, but ViV-TAVR was associated with higher rates of late mortality thereafter. This work is important because adoption of ViV-TAVR has been rapid despite limited comparative evidence between the two techniques. The result of this work has had important implications for the field of cardiothoracic and interventional cardiology, leading to a push for a randomized controlled trial to re-examine this question through the REPEAT Trial.

1. **Tran JH**, Itagaki S, Zeng Q, Leon MB, O'Gara PT, Mack MJ, Gillinov AM, El-Hamamsy I, Tang GHL, Mikami T, Bagiella E, Moskowitz AJ, Adams DH, Gelijns AC, Borger MA, Egorova NN. Surgical or transcatheter replacement for failed bioprosthetic valves. *JAMA Cardiol*. 2024 Jul 1;9(7):631-639. doi:10.1001/jamacardio.2024.1049. PMID: 38776106; PMCID: PMC11112500.
2. Raschpichler M, de Waha S, Blankenberg S, Diniz MA, Bagiella E, Gelijns AC, Calsavara VF, Gupta A, Schofer N, Kaneko T, Abdel-Wahab M, Thiele H, Makkari R, Borger MA. Rationale and Design of the REPEAT Trial: A Multicenter Randomized Trial Comparing Redo Surgical Aortic Valve Replacement to Valve-in-Valve Transcatheter Aortic Valve Replacement. *J Am Heart Assoc*. 2025 May 20;14(10):e040954. doi: 10.1161/JAHA.125.040954. Epub 2025 May 15. PMID: 40371620; PMCID: PMC12184579.

4. **Link to published works:** <https://orcid.org/0000-0002-8628-7115>

D. Scholastic Performance

YEAR	COURSE TITLE	GRADE
Tulane University		
2013	General Chemistry I	A
2013	Intro to Cell & Molecular Biology	A

YEAR	COURSE TITLE	GRADE
2013	Introductory Psychology	A
2013	Gender & Society	A
2013	Consolidated Calculus	A
2014	Cell, Individual and Community	A
2014	General Chemistry II	A
2014	Genetics	A
2014	Brain and Behavior	A
2014	Organic Chemistry I	A
2014	Elements of Spanish III	A
2014	Diversity of Life	A
2014	Intro to Public Health	A
2014	HER2 Splicing – Independent Study	A
2014	Ancient Societies	A
2014	Stats for Scientists	A
2015	Biostatistics in Public Health	A
2015	Organic Chemistry II	A
2015	Molecular Biology	A-
2015	Global-Local Environmental Health	A
2015	Local Solutions to Global Problems	A
2015	Elementary Czech Language	A
2015	The Arts in Bohemia	A
2015	Culturalism & Memory in Europe	A
2015	Europe: Shaping Modern Culture	A
2015	Prague as a Living History	A
2016	Foundations of Epidemiology	A
2016	Zoonotic Infections, Outbreaks	A
2016	General Physics I	
2016	Medical Ethics	A-
2016	Foundations of Health Care Systems	A
2016	Formulations in Public Health Policy	A
2016	Introduction to Statistical Packages	A
2016	Cell Biology	A-
2016	Honors Thesis	A
2017	Concepts of Health and Wellness	A-
2017	Cellular Biochemistry	A
2016	Honors Thesis	A

Icahn School of Medicine at Mount Sinai – MD Program

2018	Structures	P
2018	Molecular, Cellular & Genomic Foundations	P
2019	Physiology	P
2019	Immunology	P
2019	General Pathology	P
2019	Medical Microbiology	P
2020	Brain & Behavior	P
2020	Cardiovascular Pathophysiology	P
2020	Pulmonary Pathophysiology	P
2020	Gastrointestinal & Liver Pathophysiology	P
2020	Endocrine Pathophysiology	P

YEAR	COURSE TITLE	GRADE
2020	Hematology Pathophysiology	P
2020	Musculoskeletal Pathophysiology	P
2020	Renal Pathophysiology	P
2020	Sexual & Reproductive Health	P
2020	Online Radiology Course	P
2020	Inpatient Medicine	H
2020	Ambulatory Care-Geriatrics	H
2020	Surgery-Anesthesiology	H
2021	Neurology	H
2021	Integrated NYEE & Mount Sinai Ophthalmology Elective	H
2021	Gastroenterology	H
2021	Psychiatry	H
2021	Obstetrics & Gynecology	H
2021	Pediatrics	H
2022	Rheumatology Clinical Elective	H
2022	Integrated NYEE & Mount Sinai Ophthalmology Elective (Sub-Internship)	H
2022	Advanced Elective in Ophthalmology (Away Sub-Internship)	H
2022	Emergency Medicine	H
2022	Body Imaging Elective (P/F)	P
2023	Medicine Acting Internship	H

Icahn School of Medicine at Mount Sinai – Master’s in Clinical Research

GPA 3.98

2019	Spectrum of Methods in Clinical Research I	A
2019	Intro to Biostatistics	A
2020	Spectrum of Methods in Clinical Research II	A
2021	Introduction to R Programming	A
2021	Computer Systems – UNIX/Linux Fundamentals	A
2021	Computer Systems – Architectures & Applications in Scientific Computing	A
2021	Computer Systems – Introduction to Scientific Programming in Python 3	A
2021	Masters Thesis for Clinical Research	A
2021	Clinical & Translational Research Journal Club and Seminar - Fall	A
2021	Computational Tools & Information Sources for Clinical Research	A
2022	Masters Thesis for Clinical Research	A
2022	Clinical & Translational Research Journal Club and Seminar – Spring I	A
2022	Professionalism & Ethical Issues in Clinical Research	A-
2022	Applied Linear Models I	A
2022	Introduction to AI/Deep Learning in Biomedical Research and the Clinic	A
2022	Masters Thesis for Clinical Research	A
2022	Research Grant Writing Course	A
2022	Clinical & Translational Research Journal Club & Seminar- Spring II	A
2022	Applied Linear Models II	A