

Nicholas A. Householder

MD Candidate - TTUHSC
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Profile:

MD Candidate at Texas Tech University Health Science Center (TTUHSC) School of Medicine
Medical Student Research Fellow, Department of Ophthalmology, University of Southern California
Bachelor of Science (BS), Neuroscience, University of Southern California
International Baccalaureate (IB) Degree, Escola Graduada, São Paulo, Brazil

Education:

Texas Tech University Health Sciences Center School of Medicine (2021-2026)
Doctor of Medicine (MD) Candidate

University of Southern California (2016-2020)
Bachelor of Science (BS) Neuroscience

Rancho Solano Preparatory School, Phoenix, AZ (2015-2016)
International Baccalaureate (IB) Degree

Escola Graduada de São Paulo, Brazil (2012-2015)
International Baccalaureate (IB) Degree

Leadership Experiences:

TTUHSC SOM Clerkship Student Focus Group (2023-2025)
Student representative

- Represented the student body to advocate for improvements in clinical clerkship experiences and policies.
- Collaborated with faculty and administration to advise actionable solutions.

TTUHSC SOM Admissions Interview Committee (2023-2025)
Interviewer

- Conducted in-depth interviews over two admission cycles to evaluate applicants' academic and interpersonal strengths for admission to medical school.
- Conducted specialty interviews for the Undergraduate to Medical School Initiative (UMSI) program.
- Provided detailed feedback to the admissions committee to ensure holistic applicant review.

Introduction to Research Elective (2022-2023)
President

- Lead an elective course designed to enhance student involvement with and production of medical research at the TTUHSC SOM.
- Developed a new comprehensive curriculum for first-year medical students, consisting of ten lectures to teach the research process.
- Organized workshops on research methodology, data analysis, and manuscript preparation.

- Partnered with faculty to mentor students and connect them with ongoing research opportunities.

Orthopedic Surgery Interest Group (2022-2023)

President

- Coordinated hands-on workshops, including suturing and splinting, for over twenty medical students.
- Arranged guest speakers to discuss advances in orthopedic surgery and career development.
- Increased the number of supplemental faculty lectures offered by recruiting additional local and regional physicians to present,

Radiology Interest Group (2022-2023)

President

- Planned imaging workshops on X-ray, CT, and MRI interpretation with radiology faculty.
- Facilitated shadowing opportunities for students to gain early exposure to radiology.
- Recruited additional faculty members to provide supplemental lectures.

Interventional Radiology Interest Group (2022-2023)

Vice President

- Organized important guest speakers to lecture interested students
- Assisted in organizing and managing a shadowing spreadsheet to connect students with physicians

Dermatology Interest Group (2022-2023)

Vice President

- Assisted in organizing workshops to teach skin lesion identification and biopsy techniques.
- Supported initiatives to connect students with dermatology research mentors.

Student Wellness Committee (2022-2023)

Vice President

- Implemented wellness programs, including stress management and mindfulness workshops, for medical students.
- Partnered with student services to address burnout and promote mental health resources.

Benjamin Rush Institute Texas Tech Chapter (2022-2023)

Treasurer

- Managed an annual budget of \$20,000, allocating funds to support group activities, medical student financial aid, and guest speakers.
- Identified medical students in need of scholarship funding to attend medical conferences and further pursue their education.

Office of Interprofessional Education (2022)

Facilitator

- Led interdisciplinary discussions among students from various healthcare fields to enhance collaborative problem-solving.
- Promoted mutual understanding of professional roles within healthcare teams.

Relevant Medical Experiences:

University of Southern California Health Science Center Ophthalmology Clinic (2024-2025)

Shadowing

- Shadowed Dr. Kimberly Gokoffski, neuro-ophthalmologist at USC Keck / LA General.

- Shadowed Dr. Kristina Voss, corneal specialist at USC Keck / LA General Hospital.
- Observed diagnostic and treatment techniques for complex ophthalmologic conditions of the anterior segment and optic nerve.
- Participated in morning resident rounds and pre-round lectures.

TTUHSC Ophthalmology Clinic (2024-2025)

Shadowing

- Shadowed several clinicians to gain experience with comprehensive eye exams and procedural techniques.
- Engaged with patients and participated in clinical discussions on case presentations and treatment plans with attending physicians.

Texas Tech Free Clinic Eye Clinic (2023-2025)

Medical Student Volunteer

- Performed visual acuity testing, history taking, basic screenings, and slit lamp examinations, under physician supervision and independently.
- Educated and counseled patients on eye health and proper use of corrective lenses, eye drops, blood sugar control, etc.
- Independently operated an OCT machine, performed dilated eye exams, and taught younger students how to perform dilated fundus exams.

Practices of Drs. Cynthia Boxrud and Scott E. Powell, MD (2020-2021)

Student Medical Intern

- Helped oversee patient care: clinically interviewed patients, presented clinical cases to the attending physicians.
- Assisted in preoperative and postoperative care for oculofacial plastic surgery and sports medicine surgical cases.
- Scrubbed into surgeries, gaining exposure to surgical techniques and patient outcomes in two surgical subspecialties.
- Wrote patient notes and managed the clinical log for both practices.
- Performed administrative tasks, including patient scheduling, coordinating insurance authorizations, managing inventory, and ordering supplies.

IVology Rapid COVID-19 Testing (2020-2021)

Assistant

- Delivered electronic COVID-19 test results to several hundred individuals during high-demand periods.
- Ensured accurate data entry and maintained strict compliance with safety protocols.

EMT Medical Mission Trip Belize (2020)

Emergency Medical Technician

- Functioned as an Emergency Medical Technician working in the primary care clinics alongside nurses and physicians to provide healthcare to local populations of small, isolated villages in Northwest Belize.

Co-Curricular Experiences:

TTUHSC Distinction in Leadership and Professional Development Elective (2023-2025)

Longitudinal elective

- Completed a curriculum focused on leadership principles, interprofessional collaboration, and personal development.
- Served as a peer mentor in a structured year-long coaching program with medical school peers.
- Presented a capstone project to peers and faculty outlining my professional development and leadership projects.

TTUHSC Cross Cultural Exchange Program (2025)

Elective

- Participated in a longitudinal virtual exchange program with a PhD student from Nigeria
- Participated in cultural competency workshops and lecture series
- Completed a final writing project demonstrating cultural competency in medicine

Research Positions:

University of Southern California Ophthalmology Department Gokoffski Lab Fellowship, Research to Prevent Blindness (2024-2025)

Medical Student Research Fellow

- Led a project involving in vivo two-photon microscopy transpupillary retinal imaging of transgenic rats to investigate electrical activation of retinal ganglion cells.
- Developed custom microscopy-electrode arrays to provide three-dimensional mapping of the rodent superior follicular and binocular visual cortex; project still ongoing (2025).
- Led a project involving monocular deprivation modeling of amblyopia, followed by electromagnetic stimulation of the visual pathway to restore visual function; the project is still ongoing (2025).
- Presented research findings and progress reports at weekly lab meetings.
- Led writing and editing of manuscripts for submission to journals; published full-scale systematic review.
- Organized findings in clinical posters and presented at various conferences.

TTUHSC Orthopedic Surgery Clinic (2021-2022)

Medical Student Research Assistant

- Part of the third generation of medical students selected to continue constructing and upkeeping a multi-year longitudinal study of total knee, hip, and shoulder arthroplasty outcomes to analyze the performance of new joint prostheses.
- Performed clinical knee, hip, and shoulder exams and documented findings in a clinical scoring conversion algorithm, then entered findings in the shared registry database.
- Spent 5-10 hours weekly in the orthopedic clinic during MS1 year, seeing patients post-operatively at various time points, and 10-20 hours during the summer.
- Cross-referenced findings with patient mental wellness surveys and presented findings at our medical school's annual research conference.

Practices of Drs. Cynthia Boxrud and Scott E. Powell, MD (2020-2021)

Pre-med Student Research Assistant

- Lead IRB-approved research projects in ophthalmology and orthopedic surgery using patient data from two private medical practices.
- Published findings from a study on mask wearing and inferior altitudinal vision loss.
- Published a case report on a rare post-operative knee infection following meniscectomy.
- Assisted in a published study assessing the thrombodynamic properties of cosmetic hyaluronic acid filler injections.

- Led a longitudinal study on intra-ocular pressure variations following ptosis surgery, which is nearing completion (2025).

Publications:

Journal Publications:

1. **Householder N** and Simonyan A, Park W, Khachikyan N, Lazzi G, Lee D.J., Gokoffski K.K. Electromagnetic Stimulation for Amblyopia: A Systematic Review of Emerging Techniques and Their Efficacy. 2025. 234: 108639. DOI: 10.1016/j.visres. 2025.108639
2. **Householder N**, Ray C. Teprotumumab's Impact on Proptosis in Long-duration Thyroid Eye Disease: A Systematic Review and Meta-analysis. *TouchREVIEWS in Endocrinology*. 2024. 20(2):100–109. DOI: <https://doi.org/10.17925/EE.2024.20.2.13>.
3. **Householder N**, Vaclaw S, Ruppert M, Chavali S, Tonk V, Abikoye T. Ocular and systemic anomalies in an infant with 4q deletion and 3q duplication: case report and review of literature. *Journal of Pediatric Ophthalmology and Strabismus (JPOS)*. 2024 Nov-Dec;61(6):e66-e74. DOI: 10.3928/01913913-20240911-02.
4. **Householder N**, Ray C. Cyanoacrylate adhesive versus fast-absorbing gut suture for cutaneous closure in upper blepharoplasty: a systematic review. *Aesthetic Medicine*. 2025.
5. Boxrud CA, **Householder N**, Lester J, Gonzalez L, Harris C, Kugler K. Inferior Altitudinal Visual Loss and Mask-Wearing Practices. *Indian Journal of Ophthalmology*. 2023. Feb 2;71(2):657-660. DOI: 10.4103/ijo.IJO_934_22.
6. **Householder N**, Raghuram A, Agyare K, Thipaphay S, Zumwalt, M. A review of recent innovations in cartilage regeneration strategies for the treatment of primary osteoarthritis of the knee: intra-articular injections. *Orthopedic Journal of Science & Medicine (OJSM)*, 2022. Apr 27;11(4):23259671231155950. DOI: 10.1177/23259671231155950.
7. **Householder N**, Raghuram A, Thipaphay S, Agyare K, Tuazon C, Cobbs L. (2022) Analysis of Gender Differences in Sexual Dysfunction Perception, Prevalence, and Help-Seeking Behavior among Medical Students and Faculty at Texas Tech University Health Science Center (TTUHSC). *Med J Obstet Gynecol* 10(2): 1163.
8. **Householder N**, Harris C, Kugler K, Oakes D, Powell S. Monomicrobial joint infection by *Leclercia adecarboxylata* in an immunocompetent patient after knee arthroscopy: a case report. *Journal of Bone and Joint Surgery*. 2022. Jul 13;12(3), DOI: 10.2106/JBJS.CC.22.00016.
9. Kim JS, Gonzales L, Lester J, **Householder N**, Boxrud C, Goldberg R, Ugradar S. Thrombogenicity of hyaluronic acid fillers: A quantitative thrombodynamics study. *Ophthalmic Plastic and Reconstructive Surgery*. 2021. Jan-Feb;38(1):68-72. DOI: 10.1097/IOP.0000000000001990.

Published Abstract:

1. **Householder N**, Raghuram A, Agyare K., Thipaphay S, Tuazon C, Cobbs L. Analysis of Gender Differences in Sexual Dysfunction Perception, Prevalence, and Help-Seeking Behavior Among Medical Students and Faculty at Texas Tech University Health Science Center (TTUHSC). *International Journal of Academic Medicine (IJAM)*, 2022. 8(4):p 221-320. DOI: 10.4103/2455-5568.365559

Podium Presentations:

1. **Householder N**, Ray C. *Teprotumumab's Impact on Proptosis in Long-Duration Thyroid Eye Disease: A Systematic Review and Meta-Analysis*. Quickshot Podium Presentation, 2025 Academic Surgical Congress, Las Vegas, NV.
2. **Householder N**, Ray C. *Teprotumumab's Impact on Proptosis in Long-Duration Thyroid Eye Disease: A Systematic Review and Meta-Analysis*. 2024 North Texas ACS Conference, Tyler, TX.
3. **Householder N**, Raghuram A, Thipaphay S, Agyare K, Tuazon C, Cobbs L. *Analysis of gender differences in perceptions of sexual dysfunction and medical-help-seeking behavior among medically-educated individuals at TTUHSC*. Gender-Specific Medicine & Women's Health Symposium 2022, Lubbock, TX. Recipient of Meritorious Acknowledgement Community Award.
4. **Householder N**, Raghuram A, Agyare K, Thipaphay S, Zumwalt, M. *A comprehensive review of recent innovations in cartilage regeneration strategies for the treatment of primary osteoarthritis of the knee: intra-articular injections*. 110th Annual Clinical Orthopedic Society Conference, September 2022, San Antonio, TX.
5. Raghuram A, **Householder N**, Pang A, Jang W, Bruccoliere A, Bharadia D, Griswold J. *A Retrospective Study Evaluating the Outcomes of Co-located Orthopedic and Thermal Injuries*. 35th Annual Southern Region Burn Conference 2022, Baton Rouge, LA.

Poster Presentations:

1. Gokoffski K, **Householder N** and Yang J, Simonyan A. *Comprehensive Stereotaxic Mapping to Guide Custom High-Density Electrode Array Design for Neural Recording in the Rat Superior Colliculus and Visual Cortex*. North American Neuro-Ophthalmology Society (NANOS) Conference 2026, Boston, MA.
2. **Householder N**, Sharafi O, Simonyan A, Silliman T, Walston S, Bienkowski M, Lazzi G, Gokoffski K. *In Vivo Two-Photon Imaging in Transgenic Rats Demonstrates Electric Fields Directly Activate Retinal Ganglion Cells*. Association for Research in Vision and Ophthalmology (ARVO) Annual Conference 2025, Salt Lake City, UT.
3. **Householder N**, Sharafi O, Simonyan A, Siliman T, Walston S, Bienkowski M, Lazzi G, Gokoffski K. *In Vivo Two-Photon Microscopy Demonstrates Electric Field Stimulation Directly Activates Retinal Ganglion Cells*. North American Neuro-Ophthalmology Society (NANOS) Annual Conference 2025, Tucson, AZ.
4. **Householder N**, Sharafi O, Simonyan A, Siliman T, Walston S, Bienkowski M, Lazzi G, Gokoffski K. *In Vivo Two-Photon Microscopy Demonstrates Electric Field Stimulation Modulates Retinal Ganglion Cells*. Engineered Vision Conference 2025, Torrance, CA.
5. **Householder N** and Simonyan A, Park W, Khachiyani N, Lazzi G, Lee D, Gokoffski K. *Electromagnetic Stimulation for Amblyopia: A Systematic Review of Emerging Techniques and Their Efficacy*. Envision Summit Ophthalmology and Optometry 2025, San Juan, Puerto Rico.
6. **Householder N**, Vaclaw S, Ruppert M, Chavali S, Tonk V, Abikoye T. *Ocular and systemic anomalies in an infant with 4q deletion and 3q duplication: case report and review of literature*. Envision Summit Ophthalmology and Optometry 2025, San Juan, Puerto Rico.
7. **Householder N**, Ray C. *Cyanoacrylate adhesive versus fast-absorbing gut suture for cutaneous closure in upper blepharoplasty: a systematic review*. 2024 National ACS Quality and Safety Conference, Denver, CO.
8. **Householder N**, Ray C. *Cyanoacrylate adhesive versus fast-absorbing gut suture for cutaneous closure in upper blepharoplasty: a systematic review*. 2024 TTUHSC Student Research Week, Lubbock, TX.

9. **Householder N**, Psaromatis K, Raghuram A, Parker M, Brindley G. *The effect of preoperative mental health and wellbeing scores on knee pain and function six weeks status post total knee arthroplasty*. TTUHSC Student Research Week 2023, Lubbock, TX.
10. Raghuram A, Pang A, Zeitouni J, **Householder N**, Jang W, Griswold J, Ronaghan C. *Biodegradable temporizing matrix and autologous skin cell suspension in necrotizing soft tissue infection: a case report*. North Texas American College of Surgeons (NTACS) 2022 Meeting, Fort Worth, TX.
11. Raghuram A, Pang A, Zeitouni J, **Householder N**, Jang W, Griswold J, Ronaghan C. *Biodegradable temporizing matrix and autologous skin cell suspension in necrotizing soft tissue infection: a case report*. Boswick Burn and Wound Care Symposium, Maui HI.
12. **Householder N**, Raghuram A, Agyare K, Thipaphay S, Zumwalt, M. *A comprehensive review of recent innovations in cartilage regeneration strategies for the treatment of primary osteoarthritis of the knee: intra-articular injections*. Texas Surgical Society Conference Spring 2022, Lubbock, TX.
13. **Householder N**, Raghuram A, Agyare K, Thipaphay S, Zumwalt M. *A comprehensive review of recent innovations in cartilage regeneration strategies for the treatment of primary osteoarthritis of the knee: intra-articular injections*. TTUHSC Student Research Week 2022, Lubbock, TX.
14. **Householder N**, Raghuram A, Thipaphay S, Agyare K, Tuazon C, Cobbs L. *Analysis of gender differences in perceptions of sexual dysfunction and medical-help-seeking behavior among healthcare students and workers at TTUHSC*. Women in Medicine Conference September 2022, Chicago, IL.
15. **Householder N**, Raghuram A, Thipaphay S, Agyare K, Tuazon C, Cobbs L. *Analysis of gender differences in perceptions of sexual dysfunction and medical-help-seeking behavior among medically-educated individuals at TTUHSC*. Texas Tech University 7th Annual Obesity Conference, Lubbock, TX.

Volunteer Experiences:

Lubbock Impact Clinic (2025)

- Helped establish a new non-profit medical clinic adjacent to the student-run free clinic; set up an electronic medical record system, registered patients, and performed other administrative tasks etc.

Lubbock Free Eye Clinic (2023-2025)

- Performed basic vision exams, slit lamp external eye exams, and dilated fundus exams; administered OCT imaging, counseled patients on diabetic eye disease, glaucoma, and cataracts; identified patients at need and referred to TTUHSC pro bono ophthalmology programs.

High School Lab Mentorship (2025)

- Longitudinal mentorship of two senior high school students volunteering in our lab; guided them in presenting my project data at their school competition, resulting in a 2nd place award.

Los Angeles Brain Bee (2025)

- Mentorship and leadership panel; lead Q&A sessions to inspire high schoolers to become future doctors and researchers in the field of neuroscience.

Toy Drive Children's Hospital Los Angeles (2024)

- Organized, coordinated, and led a toy drive benefiting pediatric patients, collecting over thirty toys and donations.

NICU Cuddlers Program (2023)

- Multiple shifts per week assisting NICU nurses in caring for newborn babies.

TTUHSC Free Clinic (2022-2024)

- Saw patients after hours in the student-run "free clinic" and assisted in documentation, clinical reasoning, differential diagnosis, and treatment planning.

Alcoholics Anonymous- Lubbock Chapter (2022-2023)

- Assisted with the preparation, organization, and leadership of weekly meetings.

Lubbock Animal Shelter (2022)

- Assisted with animal care of stray dogs and cats.

West Texas Special Olympics (2022)

- Assisted with the care of sports injuries and helped with organizational and administrative tasks.

Lubbock Food Bank (2021)

- Packed food donations into donation kits to be transported across West Texas.

Grants, Awards, and Scholarships

Research to Prevent Blindness (RPB) Medical Student Research Fellowship Award (2024)

Bernard T. Mittenmeyer Presidential Merit Scholarship (2022, 2025)

Robert A. Flygare Memorial Scholarship (2023)

Endowed Phonathon Scholarship (2023)

Laura Bush Institute Meritorious Acknowledgment for Research in Gender-Specific Medicine (2022)

HSC Viney Endowed Scholarship (2021)

Honors and Relevant Statistics

Step 2 Score: 268

MCAT Score: 520

Undergraduate Neuroscience (core) GPA: 3.81

Dean's List honors every year of undergraduate (2016-2020)

NREMT Certified (2020)

ACLS Certified (2025)

International Baccalaureate (IB) Score: 38

Professional Memberships

Association for Research in Vision and Ophthalmology (ARVO)

North American Neuro-Ophthalmology Society (NANOS)

American College of Surgeons (ACS)

Association of Academic Surgery (AAS)

Interests and Activities

Muay Thai ("Thai Kickboxing")

- Nak Muay Nation (2023)
- Pro Edge MMA Gym (2024)
- Northeast Los Angeles Combat Fitness (2024-2025)

Outdoors Activities

- Hiking, playing sports, jogging, biking, swimming, snowboarding

Physical Fitness

- Yoga, weight-lifting, calisthenics

Sports Advanced Analytics

- Built a custom, multi-year statistical algorithm for basketball in Excel
- Developed predictive computer models for baseball and mixed martial arts (MMA) using Python

Books

- Favorite genre: self-development, personal growth, life skills development
- Favorite series: A Song of Ice and Fire (Game of Thrones)
- Favorite book: Blood Meridian

Sports Fandom

- Dallas Cowboys (NFL), Phoenix Suns (NBA), Arizona Diamondbacks (MLB), UFC, Boxing