BIOGRAPHICAL SKETCH

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NAME: Henderson, Matthew N.

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

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 *(if applicable)*	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
University of Pennsylvania, Philadelphia, PA	BA	07/2013	05/2017	Biological Basis of Behavior
Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ	MD	07/2019	05/2023	Medicine
Cole Eye Institute, Cleveland Clinic, Cleveland, OH	-	07/2023	06/2027	Ophthalmology

A. Personal Statement

My academic career in ophthalmology has been shaped by two parallel motivations: advancing patient care through clinical research and improving outcomes through surgical innovation. Early in my career, I worked as a clinical research coordinator at the Scheie Eye Institute, where I coordinated clinical trials evaluating novel therapeutics for age-related macular degeneration, diabetic retinopathy, and dry eye disease. This experience provided foundational training in clinical trial operations, patient recruitment, regulatory compliance, data integrity, and multidisciplinary collaboration, while showing me how translational science and well-executed clinical trials can bring meaningful new treatments to patients with vision-threatening disease.

During medical school, I expanded this interest by leading a prospective randomized clinical trial evaluating perioperative intravenous dexamethasone for postoperative analgesia in scleral buckle surgery. Guiding a project from study design through publication strengthened my skills in hypothesis generation, IRB navigation, patient enrollment, data analysis, and scientific writing. Since entering residency, I have continued to pursue scholarship across ophthalmology, including publications in clinical outcomes research, bibliometric analysis, and novel surgical techniques. My work describing techniques for dislocated capsular tension ring explantation and tube erosion management reflects a continued interest in practical surgical innovation that improves real-world patient outcomes.

These experiences have shaped my long-term goal of becoming an academic oculoplastic surgeon-scientist. I hope to build a career that combines high-volume clinical practice, surgical innovation, and collaborative clinical trials. In particular, I am interested in serving as a clinical trialist helping to evaluate emerging targeted therapies for thyroid eye disease while also developing refined surgical techniques that improve safety, efficiency, and functional outcomes for patients with orbital, eyelid, and lacrimal disease.

The Heed Ophthalmic Foundation Resident Retreat would provide a unique opportunity to learn from leaders in academic ophthalmology, gain mentorship in building a successful investigative career, and connect with peers who share similar aspirations. I believe my background in clinical trials, translational research, and surgical innovation would allow me to contribute meaningfully to this community while continuing to grow as a future clinician-investigator.

B. Positions, Scientific Appointments and Honors

Positions, Scientific Appointments

2025 – Present Peer Reviewer, AJO Case Reports
2025 – Present Peer Reviewer, JCRS Online Case Reports
2025 – Present Peer Reviewer, JAMA Network Open
2024 – Present Member, Vit-Buckle Society
2023 – Present Investigator, Cole Eye Institute, Cleveland Clinic
2023 – Present Member, Alpha Omega Alpha Honor Medical Society
2022 – 2024 Member, American Society of Retina Specialists
2020 – 2021 President, RWJMS Ophthalmology Interest Group
2019 – 2023 Co-investigator, NJ Retina/RWJMS Department of Ophthalmology
2019 – 2021 Peer Tutor, RWJMS/Rutgers School of Health Professions
2019 – Present Member, Association for Research in Vision and Ophthalmology
2017 – 2019 Clinical Research Coordinator, Scheie Eye Institute, University of Pennsylvania
2010 – 2011 Research Assistant, Center for Autism Research, Children's Hospital of Philadelphia

Honors

2025 Vit-Buckle Society Annual Meeting Academic Travel Grant
2023 Rutgers Biomedical & Health Sciences Rising Star Award
2023 RWJMS Academic Excellence in Ophthalmology Award
2023 RWJMS Department of PM&R Scholarship
2021 RWJMS Gala Scholarship
2020 RWJMS Gala Scholarship
2020 Lester Lages Endowed Scholarship
2017 Dean's List – Academic Year 2016 – 2017
2016 Ivy League Football Champion
2015 Ivy League Football Champion

C. Contributions to Science

1. **Early Research** – During the COVID-19 pandemic, I contributed to multicenter outcomes-based research examining how major disruptions in healthcare delivery affected ophthalmic care. These projects evaluated the frequency of urgent vitreoretinal surgical procedures in the United States during the pandemic and the effect of universal face mask use on endophthalmitis risk after intravitreal anti-VEGF injections. Participating in these collaborative studies highlighted the importance of large-scale clinical data in guiding evidence-based practice during periods of rapid change and uncertainty. They also reinforced my interest in clinically meaningful research that can rapidly inform practice patterns and improve patient outcomes.

   I later led a prospective randomized clinical trial evaluating whether perioperative intravenous dexamethasone improved postoperative pain after scleral buckle surgery. This project required coordinating patient enrollment, protocol execution, data collection, statistical analysis, and manuscript preparation. Conducting a study from concept through publication, while building on my foundational experience as a clinical trial coordinator, solidified my commitment to generating high-quality evidence for practical surgical questions that directly affect patient recovery and outcomes. Together, these early experiences established the foundation for my long-term goal of becoming a clinician-investigator who leads and participates in trials with direct clinical relevance and measurable patient impact.

   Selected publications:

   a) **Henderson MN**, Mantopoulos D, Wheatley EI, Hassan OT, Prenner JL, Fine HF. Efficacy of Perioperative Intravenous Dexamethasone on Postoperative Analgesia in Scleral Buckle Surgery: A Randomized Clinical Trial. Ophthalmic Surg Lasers Imaging Retina. 2023;54(4):238-242. doi:10.3928/23258160-20230222-01
   b) Patel SN, Tang PH, [et al. including **Henderson MN**]. The Influence of Universal Face Mask Use on Endophthalmitis Risk after Intravitreal Anti-Vascular Endothelial Growth Factor Injections.

Ophthalmology. 2021 Nov;128(11):1620-1626. DOI: 10.1016/j.ophtha.2021.05.010. PMID: 34019955; PMCID: PMC8130590.

c) Breazzano MP, Nair AA, Arevalo JF, [et al. including **Henderson MN**]. Frequency of Urgent or Emergent Vitreoretinal Surgical Procedures in the United States During the COVID-19 Pandemic. *JAMA Ophthalmol.* 2021;139(4):456–463. DOI:10.1001/jamaophthalmol.2021.0036

2. **Research During Residency –** I am particularly motivated by technical challenges in the operating room where improvements in technique can improve surgical efficiency and patient outcomes. My work has included describing a novel method for explanting dislocated intraocular lens–capsular tension ring–capsule complexes using a capsular tension ring inserter, as well as work on using glaucoma tube capsule autografts for tube erosion repairs. These projects reflect my interest in translating surgical creativity into reproducible techniques.

   In parallel, I have pursued a broader line of academic scholarship focused on research productivity and scientific impact within ophthalmology. Using the NIH-sponsored Relative Citation Ratio, I have authored multiple bibliometric studies evaluating academic productivity across ophthalmic subspecialties, including vitreoretinal surgery, glaucoma, cornea, oculoplastics, pediatric ophthalmology, and neuro-ophthalmology. This work has provided objective insight into patterns of scholarly contribution and gender disparities within the field, while reflecting my broader interest in academic medicine and how scholarly productivity is measured and used to inform advancement within our profession.

   Together, these experiences inform my future aspiration to develop new reconstructive and orbital surgical approaches in oculoplastics while remaining an active academic contributor. I am particularly interested in applying this mindset to complex thyroid eye disease, socket and ocular surface reconstruction, and cicatricial diseases, where I hope to contribute to new treatment strategies and surgical techniques that improve outcomes for patients.

   Selected publications:

   a) **Henderson MN**, Guan LS, Guyer O, Hwang CJ, Perry JD. Evaluation of Research Productivity Among Academic Oculoplastic Surgeons Using the Relative Citation Ratio. Ophthalmic Plast Reconstr Surg. 2025 Nov-Dec 01;41(6):651-656. doi: 10.1097/IOP.0000000000002940. Epub 2025 Mar 25. PMID: 40131767.
   b) **Henderson MN**, Sojitra B, Burke O Jr, Prenner JL. Evaluation of Research Productivity among Academic Vitreoretinal Surgeons Using the Relative Citation Ratio. *Ophthalmol Retina*. 2023;7(6):509-515. doi:10.1016/j.oret.2023.01.002
   c) **Henderson MN**, Masia HA, Prenner JL, Fine HF. Using a Capsular Tension Ring (CTR) Inserter for CTR Explantation in Cases of Posteriorly Dislocated Intraocular Lens-CTR-Capsule Complex. *Retina*. 2023;43(12):2080-2083. doi:10.1097/IAE.0000000000003659
   d) **Henderson MN**, Qiu M, Eisengart EA. Capsule Autograft in the Management of Tube Erosions. *Glaucoma Grand Rounds.* In revision.

D. Scholastic Performance

YEAR	EXAMINATION	SCORE
2026	OKAP	616
2025	OKAP	619
2024	STEP 3	262
2022	STEP 2 CK	270
2021	STEP 1	259