

Paras Vora

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Education & Training

Washington University in St. Louis

BS, Biomedical Engineering and Computer Science

St. Louis, MO

Aug. 2011–May 2015

University of Kentucky College of Medicine

MD

Lexington, KY

Jul. 2015–Exp. May 2020

University of Kentucky Department of Internal Medicine

Internship

Lexington, KY

Exp. Jul. 2020–Jul. 2021

University of Kentucky Department of Ophthalmology and Visual Sciences

Residency

Lexington, KY

Jul. 2021–Exp. Jul. 2024

Honors & Awards

Development and Innovation Award | "Real-Time Stereoscopic Slit Lamp Videography"

University of Kentucky Global Ophthalmology | Dr. Eric Higgins

Lexington, KY

April 2019

Best Poster Award | "Using Artificial Intelligence to Facilitate Eye Disease Detection"

Markey Cancer Center Research Day | Dr. Romulo Albuquerque

Lexington, KY

May 2018

Clinical and Translational Science - Graduate Students Section

Outstanding Leadership & Community Service Award | University of Kentucky

Salvation Army Clinic

Lexington, KY

Apr. 2017

Medical Student Travel Scholarship | Society of Interventional Radiology

Annual Scientific Meeting

Washington, DC

Mar. 2017

Research & Intellectual Contributions

Research Projects.....

Student Researcher

Advisor: Eric Higgins, MD, University of Kentucky

Department of Ophthalmology and Visual Sciences

Project: Semantic Vessel and Lesion Segmentation in Diabetic Retinopathy

Lexington, KY

Dec. 2019–Present

Student Researcher

Advisor: Eric Higgins, MD, University of Kentucky

Department of Ophthalmology and Visual Sciences

Project: Low-Cost Nonmydriatic Fundus Camera - A 2019 Update

Lexington, KY

Jul. 2019–Present

Student Researcher

Advisor: Eric Higgins, MD, University of Kentucky

Department of Ophthalmology and Visual Sciences

Project: Teaching Ophthalmology in 3D/VR

Lexington, KY

Apr. 2019–Present

Student Researcher

Advisor: Eric Higgins, MD, University of Kentucky

Department of Ophthalmology and Visual Sciences

Project: Real-Time Stereoscopic Slit Lamp Videography

Lexington, KY

Apr. 2019–Present

NIH TL1 Research Trainee Advisor: Romulo Albuquerque, DDS, MD/PhD, University of Kentucky Department of Ophthalmology and Visual Sciences Project: 3D-Printed Transilluminating Scleral Depressor for Vitrectomy Surgery	Lexington, KY Jun. 2018
NIH TL1 Research Trainee Advisor: Romulo Albuquerque, DDS, MD/PhD, University of Kentucky Department of Ophthalmology and Visual Sciences Project: Non-Contrast Retinal Video Processing to Assess Retinal and Choroidal Perfusion	Lexington, KY Jun. 2017–Jun. 2019
NIH TL1 Research Trainee Advisor: Romulo Albuquerque, DDS, MD/PhD, University of Kentucky Department of Ophthalmology and Visual Sciences Project: Development of Dry Eye Syndrome and Corneal Sensitivity after Vitreoretinal Surgery	Lexington, KY Aug. 2017–Jun. 2018
Researcher Advisors: Jennifer Silva, MD and Jonathan Silva, PhD Washington University School of Medicine, Department of Pediatric Cardiology Washington University in St. Louis, Department of Biomedical Engineering Project: Augmented Reality Applications for Cardiac Catheterization Procedures	St. Louis, MO May 2016–Aug. 2016
Student Researcher, Research in Surgery Elective Advisor: Romulo Albuquerque, DDS, MD/PhD, University of Kentucky Department of Ophthalmology and Visual Sciences Project: Conditional Genetic Knock-out in Trigeminal Ganglia Following Corneal Nerve Injury	Lexington, KY Jan. 2016–Jun. 2016
Student Researcher Advisor: Deborah Veis (Novack), MD/PhD, Washington University School of Medicine Division of Bone and Mineral Diseases Project: Effect of Low Dose Hydrogen Peroxide on Bone Turnover	St. Louis, MO August 2013–May 2014
Summer Undergraduate Research Fellow Advisor: Deborah Veis (Novack), MD/PhD, Washington University School of Medicine Division of Bone and Mineral Diseases Project: The Role of TGF-Beta in RANKL-Induced Osteoclastogenesis	St. Louis, MO May 2013–August 2013
Student Researcher Advisor: Deborah Veis (Novack), MD/PhD, Washington University School of Medicine Division of Bone and Mineral Diseases Project: Effect of IAP Antagonists on Bone Turnover	St. Louis, MO Aug. 2012–May 2013
Summer Research Fellow Advisor: Uma Sankar, PhD, University of Louisville Project: Lentiviral Cloning of GFER in Cancer Cell Lines	Owensboro, KY May 2012–Aug. 2012

Peer-Reviewed Publications.....

- [1] J. Cho, N. Bell, G. Botzet, **P. Vora**, B. J. Fowler, R. Donahue, H. Bush, B. K. Taylor, and R. J. C. Albuquerque. "Latent Sensitization in a Mouse Model of Ocular Neuropathic Pain". In: *Translational Vision Science & Technology* 8.2 (Mar. 2019), pp. 6–6. issn: 2164-2591.
- [2] C. Yang, J. L. Davis, R. Zeng, **P. Vora**, X. Su, L. I. Collins, S. Vangveravong, R. H. Mach, D. Piwnica-Worms, K. N. Weilbaecher, R. Faccio, and D. V. Novack. "Antagonism of Inhibitor of Apoptosis Proteins Increases Bone Metastasis via Unexpected Osteoclast Activation". In: *Cancer Discovery* (2012). issn: 2159-8274.

Abstract Presentations.....

- [1] N. Fowler, R. Albuquerque, J. Cho, N. Bell, **P. Vora**, and G. Botzet. "Naltrexone as a Diagnostic Tool in Ocular Neuropathic Pain". In: *Journal of Clinical and Translational Science* 3.s1 (Mar. 2019), pp. 16–17.
- [2] **P. Vora** and R. J. Albuquerque. "Using Artificial Intelligence to Facilitate Eye Disease Detection". In: *Markey Cancer Center Research Day*. Lexington, Kentucky, May 2018.

- [3] **P. Vora**, N. Bell, J. Cho, G. Botzet, and R. Albuquerque. "Visualizing Retinal and Choroidal Blood Flow Noninvasively". In: *Association for Research in Vision and Ophthalmology Annual Meeting*. Honolulu, Hawaii, May 2018.
- [4] R. Albuquerque, J. Cho, N. Bell, G. Botzet, **P. Vora**, and B. Taylor. "Peripheral Latent Sensitization Masks Chronic Ocular Pain". In: *Association for Research in Vision and Ophthalmology Annual Meeting*. Honolulu, Hawaii, May 2018.
- [5] **P. Vora**, N. Bell, J. Cho, G. Botzet, and R. Albuquerque. "Optimizing a technique for visualizing retinal and choroidal blood flow noninvasively". In: *Journal of Clinical and Translational Science* 2.S1 (Apr. 2018), pp. 22–23.
- [6] R. Patel, **P. Vora**, N. Bell, J. Cho, C. Williams, and R. Albuquerque. "Development of Dry Eye Symptoms and Corneal Sensitivity after Ocular Surgeries". In: *13th Annual Center for Clinical and Translational Science Spring Conference*. Lexington, Kentucky, Apr. 2018.
- [7] **P. Vora**, N. Bell, J. Cho, G. Botzet, and R. Albuquerque. "Non-Contrast Retinal Video Processing to Reveal Hidden Changes". In: *AOA Groves Memorial Student Research Symposium*. Lexington, Kentucky, Mar. 2018.
- [8] **P. Vora** and R. Albuquerque. "Eulerian Video Magnification: A Novel Approach to Assess Choroidal Blood Flow". In: *12th Annual Center for Clinical and Translational Science Spring Conference*. Lexington, Kentucky, Mar. 2017.

Oral Presentations.....

- [1] **P. Vora**. "Visualizing Retinal Blood Flow Noninvasively". 13th Annual Center for Clinical and Translational Science Spring Conference. Apr. 2018.

Research Certification.....

University of Kentucky Collaborative Institutional Training Initiative

GCP for Clinical Trials Involving Medical Devices, Biomedical Investigators and Key Personnel Jun. 2017–Present

Funding

UK Global Ophthalmology Development & Innovation Grant "Real-Time Stereoscopic Slit Lamp Videography"	Apr. 2019–Present
NIH TL1 Predoctoral Clinical Research Training Fellowship "Novel Application of Eulerian Video Magnification for Assessment of Choroidal Perfusion"	Jun. 2017–Jun. 2018
UK Center for Clinical and Translational Science Small Grant "Retinal Video Processing for Non-Contrast Assessment of Retinal and Choroidal Perfusion"	Oct. 2017–Oct. 2018
Washington University Summer Undergraduate Research Fellowship Howard Hughes Medical Institute - "Role of TGF-Beta in RANKL-Induced Osteoclastogenesis"	May 2013–Aug. 2013

Patents

Application: [US20190159707A1](#) - "System and Method for Assessment of Retinal and Choroidal Blood Flow Noninvasively Using Color Amplification," Provisional filed November 30, 2017, Non-Provisional filed November 30, 2018

Consulting Activities

Igneous, LLC Co-Founder Providing technical expertise for patent-pending software algorithm to assess tissue perfusion	Lexington, KY Oct 2017–Present
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SentiAR, Inc*Consultant*

Developed and tested augmented reality applications for cardiac catheterization procedures at St. Louis Children's Hospital

St. Louis, MO*Aug. 2016–Jan. 2017***Professional Activities, Public Service & Professional Development**

Memberships.....

Association for Research in Vision and Ophthalmology: Member *2017–Present***American Medical Association:** Member and Delegate *2015–Present***Lexington Medical Society:** Member *2015–Present*

Leadership & Service.....

Ophthalmology Interest Group Executive Board **Lexington, KY***Volunteer Coordinator* *May 2019– Present*

Managed medical student volunteers, attendings, and residents at the Salvation Army Ophthalmology Clinic.

Ophthalmology Interest Group Executive Board **Lexington, KY***President* *May 2017– Jun. 2018*

Formed a free student-run ophthalmology clinic at the Lexington Salvation Army. Featured articles:

o UK Healthcare Blog: <https://1n.pm/Do7GF>**Ophthalmology Interest Group Executive Board** **Lexington, KY***Vice President* *May 2016–May 2017*

Organized informational career and specialty meetings with various ophthalmologists

Cardiology & CT Interest Group Executive Board **Lexington, KY***Secretary* *May 2016–May 2018*

Recorded meeting minutes and developed a research project database for medical students

Ultrasound Interest Group Executive Board **Lexington, KY***Technology Officer* *May 2016–May 2017*

Maintained the website, and assisted in writing the "Case of the Month"

Salvation Army Student Run Clinic **Lexington, KY***Volunteer* *Jan. 2016–Present*

Helping provide free medical care for Lexington's indigent populations

Salvation Army Student Run Clinic **Lexington, KY***Technology Officer* *Jun. 2016–Jun. 2017*

Maintained and improved the clinic website, upgraded computers and software to improve patient documentation

Castlefest Ultrasound Conference **Lexington, KY***Volunteer, Photographer* *Apr. 2017, Apr. 2018*

Photographer for the event. Also served as a live model for attendees to practice ultrasound skills

Relay For Life Executive Steering Committee **St. Louis, MO***2013-2014: Co-Chair; 2014-2015: Communications Chair* *May 2013–May 2015*

Planned and implemented the annual Relay For Life event on Washington University's campus, helping raise over \$600,000 to support cancer research, treatment, and awareness

Teaching Experience

Mentor, Neuroscience Course **Lexington, KY***University of Kentucky College of Medicine* *Feb. 2017–May 2017*

Held weekly one-on-one meetings in the Neuroscience course attended by all first year medical students

Teaching Assistant, Bioengineering Thermodynamics Course **St. Louis, MO***Washington University Department of Biomedical Engineering* *Aug. 2014–Dec. 2014*

Facilitated examination review sessions, graded problem sets and exams

Other Creative Activity

Machine Learning Final Project

2017–2018

University of Kentucky Department of Computer Science

For the Special Topics in Artificial Intelligence course. Implemented an active-learning based software tool in for training a machine learning model to grade diabetic retinopathy from fundus images

Senior Design Project

2014–2015

Washington University Department of Biomedical Engineering

Developed and presented software to evaluate reading patterns via eye-tracking hardware. View the final report: <http://goo.gl/1ll2Tm>

Relay For Life Event Check-In Page

2014–2015

Washington University in St. Louis

Final creative project for Rapid Prototyping course, using Javascript, jQuery, PHP, MySQL, and Bootstrap

o Project page: <http://parasvora.com/relay-checkin/>

o Currently being used to streamline registration and check-in at multiple large events

Interests

Travel Photography: View my photos at <https://goo.gl/photos/Xfr3W8DyZ1yfCSRSA>

Other Interests: Tennis, coffee, computers/current technology, microelectronics