

Paras Vora

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Education & Training

Washington University in St. Louis <i>BS, Biomedical Engineering and Computer Science</i>	St. Louis, MO Aug. 2011–May 2015
University of Kentucky College of Medicine <i>MD</i>	Lexington, KY Jul. 2015–May 2020
University of Kentucky Department of Internal Medicine <i>Internship</i>	Lexington, KY Exp. Jul. 2020–Jul. 2021
University of Kentucky Department of Ophthalmology and Visual Sciences <i>Residency</i>	Lexington, KY Jul. 2021–Exp. Jul. 2024

Honors & Awards

Travel Grant <i>ARVO 2020 Dr. Eric Higgins</i>	Baltimore, MD April 2020
Development and Innovation Award "Real-Time Stereoscopic Slit Lamp Videography" <i>University of Kentucky Global Ophthalmology Dr. Eric Higgins</i>	Lexington, KY April 2019
Best Poster Award "Using Artificial Intelligence to Facilitate Eye Disease Detection" <i>Markey Cancer Center Research Day Dr. Romulo Albuquerque</i> <i>Clinical and Translational Science - Graduate Students Section</i>	Lexington, KY May 2018
Outstanding Leadership & Community Service Award University of Kentucky <i>Salvation Army Clinic</i>	Lexington, KY Apr. 2017

Research & Intellectual Contributions

Research Projects.....	
Student Researcher <i>Advisor: Eric Higgins, MD, University of Kentucky</i> <i>Department of Ophthalmology and Visual Sciences</i> Project: Semantic Vessel and Lesion Segmentation in Diabetic Retinopathy	Lexington, KY Dec. 2019–Present
Student Researcher <i>Advisor: Eric Higgins, MD, University of Kentucky</i> <i>Department of Ophthalmology and Visual Sciences</i> Project: Teaching Ophthalmology in 3D/VR	Lexington, KY Apr. 2019–Present
Student Researcher <i>Advisor: Eric Higgins, MD, University of Kentucky</i> <i>Department of Ophthalmology and Visual Sciences</i> Project: Real-Time Stereoscopic Slit Lamp Videography	Lexington, KY Apr. 2019–Present
NIH TL1 Research Trainee <i>Advisor: Romulo Albuquerque, DDS, MD/PhD, University of Kentucky</i> <i>Department of Ophthalmology and Visual Sciences</i> 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] **P. Vora** and E. Higgins. "Inexpensive Deep Learning for Semantic Vessel and Lesion Segmentation in Diabetic Retinopathy". In: *Association for Research in Vision and Ophthalmology Annual Meeting*. Baltimore, MD, June 2020.
- [2] 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.
- [3] **P. Vora** and R. J. Albuquerque. "Using Artificial Intelligence to Facilitate Eye Disease Detection". In: *Markey Cancer Center Research Day*. Lexington, Kentucky, May 2018.

- [4] **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.
- [5] 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.
- [6] **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.
- [7] 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.
- [8] **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.
- [9] **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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Professional Activities, Public Service & Professional Development

Memberships.....	
Association for Research in Vision and Ophthalmology: Member	2017–Present
American Medical Association: Member and Former Delegate	2015–Present
Lexington Medical Society: Member	2015–Present
Leadership & Service.....	
Ophthalmology Interest Group Executive Board	Lexington, KY
<i>Volunteer Coordinator</i>	May 2019– May 2020
Managed medical student volunteers, attendings, and residents at the Salvation Army Ophthalmology Clinic.	
Ophthalmology Interest Group Executive Board	Lexington, KY
<i>President</i>	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
<i>Vice President</i>	May 2016–May 2017
Organized informational career and specialty meetings with various ophthalmologists	
Salvation Army Student Run Clinic	Lexington, KY
<i>Volunteer</i>	Jan. 2016–Present
Helping provide free medical care for Lexington’s indigent populations	
Salvation Army Student Run Clinic	Lexington, KY
<i>Technology Officer</i>	Jun. 2016–Jun. 2017
Maintained and improved the clinic website, upgraded computers and software to improve patient documentation	
Relay For Life Executive Steering Committee	St. Louis, MO
2013-2014: <i>Co-Chair</i> ; 2014-2015: <i>Communications Chair</i>	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
<i>University of Kentucky College of Medicine</i>	Feb. 2017–May 2017
Held weekly one-on-one meetings in the Neuroscience course attended by all first year medical students	

Other Creative Activity

Machine Learning Final Project	2017–2018
<i>University of Kentucky Department of Computer Science</i>	
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	
Orijinz Words & Phrases	2018–Present
<i>Entspire, LLC</i>	
Developed an iOS and Android game based on the original card game. Read the origin and try to guess the matching word or phrase. View the game here: https://apps.apple.com/us/app/orijinz/id1481023099	

Interests

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

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