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### **PERSONAL DATA**

Birth Place: Lackawanna, NY  
Citizenship: United States  
Languages: English

### **MENTORING AND OUTREACH**

I have mentored over 30 women and clinician-scientists at all levels of training formally through Women in Retina, American Academy of Ophthalmology, Women in Ophthalmology, and the leadership development program at Association for Research in Vision and Ophthalmology (ARVO). I've had my mentees succeed in leadership roles as chair of departments or leaders of services and many have successfully received NIH grants. I am also an inaugural member of the Women Professors of Ophthalmology (WPO) of the AUPO and am leading a segment mentor clinician-scientists. I have mentored faculty in my departments (and other departments including UCLA pediatrics) who are applying for K or R grants and several have successfully competed for grants. I seek diversity in my lab and have included undergraduate students through the Native American Research Initiative (NARI), STEM students in high school, as well as graduate students and post-doctoral students in my lab or department. In 2022, I will have two post-doctoral students from Ghana, one studying disparities in diabetic retinopathy based on her graduate degree in Toronto, and the other in my angiogenesis laboratory once he completes his PhD. I also served as a co-Chair for the Presidential Commission on the Status of Women at the University of Utah. We initiated methods to achieve pay equity at the School of Medicine and throughout the University. This organization is also part of One U Thriving, which is the Equity, Diversity and Inclusion initiative for the entire university. We work closely with the anti-Racism committee. I also helped with childcare initiatives at the School of Medicine as the Chair of the SOM College Council. For our Utah departmental EDI committee, I initiated a named lecture for women to deliver keynote talks. I also have developed a fellowship program for pediatric retina. A recent student was from Colombia, South America. At Stanford, I have been involved in national and international leadership committees as well as mentorship for faculty, residents, fellows, and clinician scientists.

### **CURRENT ACADEMIC POSITIONS**

5/10 - Present	Professor of Ophthalmology with tenure, University of Utah, Salt Lake City, Utah Adjunct Professor in Pediatrics, John A. Moran Eye Center, Salt Lake City, Utah
5/10 - Present	Adjunct Professor in Pediatrics, John A. Moran Eye Center, Salt Lake City, Utah
3/12 - Present	Adjunct Professor in Neurobiology and Anatomy, University of Utah, Salt Lake City, Utah
2/23- Present	Professor of Ophthalmology, Stanford University, Palo Alto, CA, UML

**EDUCATION**

<u>Years</u>	<u>Degree</u>	<u>Institution (Area of Study)</u>
9/77 - 5/82	B.S.	Rensselaer Polytechnic Institute (Biology (Combined BS/MD program)) Troy, NY
8/79 - 5/83	M.D	Albany Medical College (Medicine (Combined BS/MD program)) Albany, NY
6/83 - 6/84	Intern	University Hospitals of Cleveland Cleveland, OH
7/84 - 6/87	Resident	University Hospitals of Cleveland, VA Medical Center (Ophthalmology) Cleveland, OH
7/87 - 6/89	Research Fellow	Schepens Eye Research Institute, Harvard Medical School Boston, MA
7/87 - 6/89	Vitreoretinal Fellow	Massachusetts Eye and Ear Infirmary, Harvard Medical School, Schepens Retina Associates (Vitreoretinal Medical/Surgical Training in Adult Retina) Boston, MA
7/88 - 6/89	Chief Fellow	Schepens Retina Associates Boston, MA
7/89 - 6/90	Pediatric Vitreoretinal Fellow	Schepens Retina Associates, Massachusetts Eye and Ear Infirmary, Harvard Medical School (Vitreoretinal Medical/Surgical Training in Pediatric Retina) Boston, MA
7/89 - 6/90	Research Fellow	Harvard University (Senior Research Ophthalmology Fellow) Boston, MA
3/95 - 10/00	Postgraduate Studies	Children's Hospital and Schepens Eye Research Institute, Harvard University (Molecular and Cell Biology) Boston, MA
7/03 - 2/10	Postgraduate Studies	University of North Carolina, Cell and Developmental Biology

**BOARD CERTIFICATIONS**

01/01/1989 American Board of Ophthalmology, Diplomate, grandfathered for recertification

**LICENSES/CERTIFICATIONS**

1983 - Inactive	State License (OH) - Physician (MD)
1987 - Present	State License (MA) - Physician (MD)
1990 - Inactive	State License (NY) - Physician (MD)
2000 - Inactive	State License (LA) - Physician (MD)
2003 - Inactive	State License (NC) - Physician (MD)
2010 - Present	State License (UT) – Physician (MD)
2011 - 2015	Basic Life Support Certification
2022	Basic Life Support Certification

2023 – Present State License (CA) – Physician (MD)

**PROFESSIONAL EXPERIENCE**

**Full Time Positions (all require at least 40 hours/week; normally were 60 -70 hr/week)**

**Non-government positions as a practicing vitreoretinal specialist and surgeon, MD**

- 8/90 - 6/94 Attending Retina Specialist, Medical and Surgical, Children's Hospital of Buffalo, Buffalo, NY
- 8/90 - 6/94 Attending Retina Specialist, Medical and Surgical, Millard Fillmore Gates Hospital, Buffalo, NY
- 8/90 - 6/93 Director, Retina Service, Erie County Medical Center, Buffalo, NY
- 8/90 - 6/93 Consultant, VA Medical Center, Buffalo, NY
- 8/90 - 6/93 Attending on Clinical Service, SUNY at Buffalo, Department of Ophthalmology, Buffalo, NY
- 8/90 - 3/93 Assistant Professor, Retina Service, State University of New York, Buffalo, NY
- 7/93 - 6/00 Retina Consultant, Spaulding Rehabilitation Hospital, Boston, MA
- 7/93 - 6/94 Assistant Clinical Ophthalmologist, Massachusetts Eye and Ear Infirmary, Boston, MA
- 7/93 - 6/00 Attending on Clinical Service, Schepens Retina Associates, Retina Service, Peabody, MA
- 12/93 - 9/99 Clinical Instructor, Harvard University, Cambridge, MA
- 7/94 - 10/00 Associate in Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA
- 7/95 - 10/00 Associate Pediatrician, Department of Newborn Medicine, Brigham and Women's Hospital, Boston, MA
- 7/95 - 10/00 Assistant Clinical Scientist, Schepens Eye Research Institute, Boston, MA
- 7/96 - 10/00 Clinical Associate in Surgery, Massachusetts General Hospital, Boston, MA
- 10/99 - 7/00 Assistant Clinical Professor of Ophthalmology, Harvard University, Cambridge, MA
- 11/00 - 2/03 Attending on Clinical Service, LSU Retina Service, Department of Ophthalmology, Baton Rouge, LA
- 11/00 - 2/03 Associate Professor of Ophthalmology, Director of Retina Service, LSU Eye Center, Louisiana State University Health Sciences Center, New Orleans, LA
- 3/03 - 4/10 Attending on Clinical Service, UNC Retina Service, Department of Ophthalmology, Chapel Hill, NC
- 3/03 - 5/08 Associate Professor of Ophthalmology with tenure, University of North Carolina, Chapel Hill, NC
- 5/08 - 4/10 Professor of Ophthalmology with tenure, University of North Carolina, Chapel Hill, NC
- 5/10 - Present Professor of Ophthalmology with tenure, University of Utah, Salt Lake City, Utah
- 5/10 - Present Adjunct Professor in Pediatrics, John A. Moran Eye Center, Salt Lake City, Utah
- 5/10 - Present Director of Pediatric Retina, John A. Moran Eye Center, University of Utah, Salt Lake City, Utah
- 1/12 - 12/22 Director of Teleophthalmology, University of Utah, Salt Lake City, Utah
- 3/12 - Present Adjunct Professor in Neurobiology and Anatomy, University of Utah, Salt Lake City, Utah
- 5/15 - 7/15 Co-Director of MD-PhD program, University of Utah
- 2017 - Present Director, Co-Director Advances in Pediatric Retina Meeting. Duke University and University of Utah.
- 2023 – Present Michael F. Marmor, M.D. Professor of Retina Science and Disease and Professor of Ophthalmology, Stanford University, Palo Alto, CA

**Editorial Experience**

2009 - Present	Editorial Board for Clinical Ophthalmology
2009 - Present	Editorial Board Member for Eye and Brain
2011 - Present	Editor for Molecular Vision, Scientific Review
2012	Editorial Board Member for the Scientific World Journal
2012 - Present	Editorial Board Member for PlosOne
2012 - 2020	Editor for American Academy of Pediatric Ophthalmology and Strabismus
2019 - Present	Editorial Board American Journal of Ophthalmology
2020 - Present	Editorial Board EyeNet magazine
2020 - Present	Editor Retina Section EyeWiki
2022 - Present	Co-Editor for Frontiers in Medicine Journal, “Frontier in Genetics” Ophthalmology issue
2022 - Present	Co-Editor for Frontiers in Pediatrics Journal, “New Biomarkers for ROP” issue
2022 - Present	Senior Editor of Adler’s Physiology of the Eye, 12 <sup>th</sup> Edition

**Reviewer Experience**

1999 - Present	Reviewer for American Journal of Ophthalmology
1999 - Present	Ad hoc reviewer for Experimental Eye Research
2001 - Present	Ad hoc reviewer for Current Eye Research
2001 - Present	Ad hoc reviewer for Ophthalmic Epidemiology
2001 - Present	Ad hoc reviewer for Trends in Cardiovascular Medicine
2003 - Present	Ad hoc reviewer for Archives of Ophthalmology
2003 - Present	Ad hoc reviewer for Retina
2004 - Present	Ad hoc reviewer for Journal of Cellular Physiology
2004 - Present	Ad hoc reviewer for Journal of Ocular Pharmacology & Therapeutics
2004 - Present	Ad hoc reviewer for Molecular Vision
2004 - Present	Ad hoc reviewer for Ophthalmology
2005 - Present	Ad hoc reviewer for Acta Ophthalmologica Scandinavica
2005 - Present	Ad hoc reviewer for Investigative Ophthalmology & Visual Sciences
2005 - Present	Ad hoc reviewer for Survey of Ophthalmology
2006 - Present	Ad hoc reviewer for Developmental Dynamics
2006 - Present	Ad hoc reviewer for Graefe’s Archive Clin Exp Ophthalmol
2006 - Present	Ad hoc reviewer for Journal of American Academy of Pediatric Ophthalmology and Strabismus
2006 - Present	Reviewer for Developmental Dynamics
2007 - Present	Ad hoc reviewer for British Journal of Ophthalmology
2007 - Present	Ad hoc reviewer for Journal of Anatomy
2009 - Present	Ad hoc reviewer for Journal of Molecular and Cellular Cardiology
2015 - Present	Reviewer for Pediatric Research
2012 - Present	Reviewer for American Journal of Pathology
2018 - Present	Reviewer for Ophthalmology Retina
2019 - Present	Reviewer for Journal of Vitreoretinal Diseases
2019 - Present	Reviewer for Ophthalmic Surgery, Lasers and Imaging Retina

**SCHOLASTIC HONORS, AWARDS & ENDOWED LECTURES**

1981	Perrin Oncology Fellowship in Research, University of Pittsburgh, Pittsburgh, PA
1982 - 1983	Alpha Omega Alpha Honor Society, Albany Medical College, Albany, NY
1982	Graduated summa cum laude, Rensselaer Polytechnic Institute
1983	Arthur W. Wright Award, Albany Medical College, Albany, NY

1988 - 1989 Charles de Gunzburg Fellowship in Clinical Retina Research, Schepens Eye Research Institute, Boston, MA

1998 Honor Award, American Academy of Ophthalmology, San Francisco, CA

2000 - 2003 Prince Abdul Aziz Bin Ahmed Bin Abdul Aziz Al Saud Endowed Chair of Retinal Disease, Louisiana State University

2002 - 2003 American College of Surgeons, Louisiana Chapter, Young Surgeon Representative

2005 Research to Prevent Blindness Physician-Scientist Merit Award

2005 - 2011 "Best Doctors in America"

2006 Finalist for the Burroughs Wellcome Fund Clinical Scientist Awards in Translational Research

2007 New Thoughts Regarding Treatment for Neovascular Age-related Macular Degeneration". Bausch and Lomb Visiting Professor, University of Rochester, Rochester, NY.

2010 Accepted to the American Ophthalmology Society

2010 Loris and David Rich Lecture Series. "Pathologic angiogenesis in Retinal Diseases: Focus on ROP." University of Alabama, Birmingham, Alabama.

2011 Appointed as Permanent Member of Biology and Disease of the Posterior Eye (BDPE)

2011 Retinopathy of Prematurity: Clinical Management. University of Kentucky. Lexington, Kentucky

2012 Appointed as Permanent Member of Disease and Pathophysiology of the Visual System (DPVS)

2012 Mechanisms involved in Neovascular Age-related Macular Degeneration. Vision Discovery Institute Distinguished Seminar Series. Augusta, Georgia.

2014 Retinopathy of Prematurity: The Effects of VEGF in Health and Pathology. Clinical Translational Lectureship, Keynote Speaker. Kresge Eye Institute, Wayne State University, Michigan.

2014 Mechanisms of Retinopathy of Prematurity. Vision Science Distinguished Lecture Series. Medical College of Wisconsin.

2015 Distinguished Visiting Lecturer, ROSS Eye Institute Department of Ophthalmology, University at Buffalo, State University of NY.

2015 Distinguished speaker for 2015 Research lecture series at SUNY Downstate.

2016 Paul Henkind Memorial Lecture at the Macula Society 39<sup>th</sup> Annual 2016 Meeting in Miami Beach, FL.

2017 Distinguished Visiting Lecturer, Department of Ophthalmology and Visual Sciences, Clinical Conference Lecture series 2017-2018, University of Iowa, Iowa City Iowa.

2017 Distinguished Visitor Lecture Series Program, Cole Eye Institute. Regulation of Angiogenesis in Retinal Diseases. Cleveland, OH.

2017 "Regulating Signaling Pathways to Promote Physiologic Angiogenesis". Diabetic Eye Disease Center of Excellence Distinguished Lecture. Massachusetts Eye and Ear Infirmary.

2017 Grand Rounds Nationwide Children's Hospital Columbus. "Retinopathy of Prematurity", and open discussion with Residents, The Ohio State University. Columbus, Ohio.

2017 Brown Memorial Lectureship from Columbus Ophthalmological Society.

2017 - 2022 Castle Connolly Top Doctors – 5 Years

2018 Awarded the Mildred Weisenfeld Award from the Association for Research in Vision and Ophthalmology (ARVO)

- 2019 “Understanding and Managing Retinopathy of Prematurity”. The Emory Eye Center and the Atlantic VA Center of Excellence for Visual and Neurocognitive Rehabilitation. Grand Rounds Emory University, Atlanta, Georgia.
- 2020 Distinguished Professor, University of Utah
- 2020 “Understanding Pathophysiology of Retinopathy of Prematurity to Identify Safe and Effective Treatment” University of British Columbia’s Annual Department of Ophthalmology & Visual Sciences “Research Day”. Virtual Talk.
- 2021 Women in Ophthalmology Suzanne Veronneau Troutman Award
- 2022 “Seeking Effective and Safe Therapies in Age-related Macular Degeneration.” Gerhard Cless Lecturer at the 15<sup>th</sup> Annual Retina Symposium, University of Illinois at Chicago. Chicago, IL.
- 2022 “Regulating Signaling Pathways to Facilitate Appropriate Angiogenesis.” Alexander R. Irvine Resident’s Day and TransAmerica Professorship at University of California, San Francisco. San Francisco, CA.
- 2022 Distinguished Research Award from the University of Utah
- 2022 Gertrude D. Pyron Award for vision scientist in vitreoretinal disease, American Society of Retina Specialists.
- 2022 “Targeting Pathologic Signaling to Restore Homeostasis in Retinal Diseases.” Retina Research Foundation Pyron Award Recipient. American Society of Retina Specialists 2022 Annual Meeting. New York, New York.
- 2022 “Update on Retinopathy of Prematurity: 2022” at the William E. Cappaert, MD Endowed Lectureship at Metrohealth Medical Center. Cleveland, OH. September 17, 2022. Virtual Meeting.
- 2023 “Paradigm Shifts in the Management of ROP: Proof of Concept, Clinical Trials, Classification.” At the Constance E. West Lectureship at The University of Cincinnati College of Medicine. Cincinnati, OH. April 13, 2023
- 2023 Bradley R. Straatsma Lecturer UCLA “Supporting Physiologic and Inhibiting Pathologic Vascularization in Retinopathy of Prematurity.” June 2, 2023. Los Angeles, CA.
- 2023 Michael F. Marmor, M.D. Professor of Retina Science and Disease and Professor of Ophthalmology, Stanford University
- 2024 Lecturer Neonatal Brain Society, “Current Diagnosis and Management of ROP: Knowledge from Research and Future Studies, January 11, 2024

## **ADMINISTRATIVE EXPERIENCE**

### **Administrative Duties**

I served as Director of Retina at the State University of NY and at Louisiana State University overseeing the education of 9 residents each year. I developed the curriculum for resident education and surgical teaching in retina. I currently serve as Director of Pediatric Retina at University of Utah, John A. Moran Eye Center, where I develop the curriculum and oversee education in pediatric retina of 12 residents/year, 3 vitreoretinal fellows. I also directed and hosted the second Advances in Pediatric Retina international meeting to increase education in pediatric retina.

- 1990 - 1993 Medical Director of Photography & Fluorescein Angiography Service, State University of New York, Buffalo, NY
- 1994 - 1995 Quality Assurance Committee, Specialty Care Associates, Boston, MA

- 2000 Co-Director, Macular Degeneration Research Center, Schepens Eye Research Institute, Boston, MA
- 2001 - 2003 Co-Founder, Pediatric Retina Clinic, Children's Hospital, New Orleans, LA

### **Professional Organization & Scientific Activities**

- 1999 Chair, National Institutes of Health, NIH special R01 section for Research Project Grants, Washington, DC
- 2001 - Present Member, Association of Pediatric Retinal Surgeons, Pediatric Retina Surgery Study Group
- 2002 - 2003 Representative, American College of Surgeons: Louisiana Chapter, Young Surgeon Representative, Chicago, IL
- 2002 - 2003 Representative, American College of Surgeons, Louisiana Chapter, Young Surgeons Advisory Board Member, Chromosome 18 Registry & Research Society, World Congress on Chromosomal Abnormalities; San Antonio, TX, (International Congress)
- 2004 Advisory Committee Member, Chromosome 18 Registry & Research Society, 2004 Inaugural World Congress on Chromosome Abnormalities, San Antonio, TX
- 2006 Moderator, Association for Research in Vision and Ophthalmology, ARVO Summer Eye Research Conference 2006, "Toward the Prevention of Age-Related Macular Degeneration", Sanibel, FL. Session VI, Inflammation and Other Potential Approaches for Prevention of AMD (International Meeting)
- 2007 Founding Member, American Society of Retina Specialists, Women in Retina (WinR)
- 2007 Co-Moderator, Association for Research in Vision and Ophthalmology, ARVO Annual Meeting: Inflammation and Immunity in AMD, paper session for Retinal Cell Biology
- 2008 Member, Association for Research in Vision and Ophthalmology, Ethics and Regulations in Human Research Committee
- 2008 Co-Moderator, Association for Research in Vision and Ophthalmology, ARVO Annual Meeting: Pediatric Retina Section, paper session for session for Retina
- 2008 Moderator, American Academy of Ophthalmology, Breakfast Roundtable, Developing Both Research and Clinical Careers as a Clinician Scientist
- 2009 Appointed Member, American Diabetes Association, Research Policy Board
- 2010 Co-Moderator for Ethics Committee. Conflict of Interest and Full Disclosure: An Ongoing Issue for Practitioners, Companies, and Government. Association for Research in Vision and Ophthalmology (ARVO). Ft. Lauderdale, Florida
- 2010 AFER host-a-researcher. Association for Research in Vision and Ophthalmology (ARVO). Ft. Lauderdale, Florida
- 2011 Moderator, Macula Society, Scientific Session on Basic Science
- 2012 - Present Representatives Nominated by Retina Society for Practicing Ophthalmologists Curriculum
- 2012 - Present Member, Telehealth, Steering Committee, University of Utah
- 2012 - Present Program Committee Member, Association for Research in Vision and Ophthalmology, Retinal Cell Biology
- 2012 - Present Women in Ophthalmology, Audit Committee
- 2012 - Present Member, Women in Eye and Vision Research, Networking Committee
- 2013 - 2015 Chair, National Institutes of Health Center for Scientific Review, Study Section on Diseases and Pathophysiology of the Visual System
- 2013 Chair, Prevent Blindness America Grant Review, ARVO

2013	Reorganizer of the ADA Grant Submission & Review Process
2014	Affiliate Member, American Association for Pediatric Ophthalmology and Strabismus (AAPOS)
2015	Chair, Association for Research in Vision and Ophthalmology, Ethics and Regulations in Human Research Committee
2015 - Present	Member of the Education Committee Utah Ophthalmology Society (UOS) Moderator Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting. Novel therapies and imaging techniques for retinal disorders- Minisymposium. Baltimore, MD.
2017	Moderator Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting. ROP: Basic mechanisms. Poster Session. Baltimore, MD.
2018 - 2021	Chair Elect to Chair Publications Committee of ARVO.
2019 - 2023	Council Member NEI's National Advisory Eye Council (NAEC).
2020 - 2022	Member International Classification of ROP (ICROP) committee.
2020 - Present	Member Dermatologic and Ophthalmic Drugs Advisory Committee (DODAC).
2020 - Present	Member of the Global Burden of Disease (GBD) Collaborator Network.
2020 - 2024	Chair of Research Council of Macula Society.
2021	Trustee International Ocular Circulation Society.
2021	Awarded title of Fellow to the American Society of Retina Specialists
2022	Moderator Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting. Retinopathy of Prematurity (ROP) Paper Session. Denver, CO.
2022	Moderator Association for research in Vision and Ophthalmology (ARVO) Annual Meeting. Subretinal fibrosis – clinical challenges, mechanism, and diagnostic tools Paper Session. Denver, CO.
2022	Council Member, American Ophthalmological Society (AOS)
2023	Moderator, Women Professors of Ophthalmology (WPO). Annual Research Session. Virtual Meeting.
2024	Protecting Against Vision Loss in Age-related Macular Degeneration, research talk, Stanford University, Eye Opening Event, April 1, 2024
2024	“Scientific (Systematic) Approaches in Academic Medicine”, speaker and moderator for Research Session, WPO, April 18, 2024

**Government positions (most ad hoc; OGE status in 2018)**

**Grant Review Committee/Study Section**

1997	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
1998	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
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2000	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
2001	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
2002	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
2003	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
2004	NIH/NEI FO1 Fellowship Study Section



2004	NEI Special Emphasis Panel, Clinical Vision Research Applications. National Eye Institute (April 13, 2004, December 8, 2004)
2004 - 2005	American Diabetes Association, Lions' Sight First Review Panel. (May 7, 2004, October 17, 2004, March 29, 2005)
2004	Action Medical Research in the UK
2004 - 2012	American Diabetes Association Research Grants. (October 17, 2004, April 16, 2005, October 22, 2005, April 22, 2006, October 7, 2006, March 12, 2008, 2009, November 2010)
2004	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
2005	Thrasher Research Fund
2005	NIH/CSR Special emphasis panel for Retinal Diseases
2006	Special Emphasis Panel, NIH/CSR
2006	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
2006	Dutch Diabetes Research Foundation
2007	International Retinal Research Foundation, grant review
2007	DRCR.net, January meeting
2007 - 2010	Ad Hoc member of BDPE/DPVS Study Section, R01 Grant Review for NIH.
2008	March of Dimes grant review
2008	DRCR.net, January meeting
2008	National Institute of Health, review of K grants
2009	Biology and Disease of Posterior Eye
2009	American Diabetes Association, spring grant review
2009	Challenge grant review, NEI
2009	NIH study section for Small Business Innovation Research (SBIR) Grants. National Institutes of Health, Washington, DC. Participated in 3 meetings.
2009	R24 NEI grant review
2009	Fight For Sight Eye Research grant review (UK)
2010 - 2015	Permanent Member of BDPE/DPVS Study Section, R01 Grant Review for NIH
2010 - 2015	NIH/DPVS Grant Review ( <b>Chair</b> 2013-2015)
2011 - 2014	Prevent Blindness America grants review - ARVO 2011
2012	Thrasher Research Fund
2012 - Present	Grant Reviewer, Women in Ophthalmology
2013 - Present	Knights Templar Eye Foundation Grant Review
2016	NIH Review Committee for NEI T32/T35/K12, ZEY1 VSN (03), Washington DC
2017	NIH Clinical Review, Washington DC.

## **PROFESSIONAL SERVICE**

### **National / International Organizations**

2002	Member, Schepens Eye Research Institute, National Advisory Board, Task Force
2005 - 2008	Member, Diabetic Retinopathy Clinical Research Network, Protocol Steering Committee for anti-VEGF agents
2009	Representative, Women's Eye Health.org, Gender and Blindness Press Conference, April 30, 2009, National Press Club, Washington, DC
2009 - Present	Committee Member, VISION 2020, International Consortium
2009	Representative, Women's Eye Health.org, Inaugural meeting of NGOs on Gender and Blindness, April 30, 2009, Stone Center, NIH campus, Bethesda, MD

2009	Executive Board Member, Women's Eye Health.org
2009 - 2010	Director, Women's Eye Health.org
2009	Interviewee, VISION 2020, World Sight Day, Women Urged to Take Charge of their Eye Health, video. Published on UNC ( <a href="https://www.med.unc.edu/empnews/archives/vital-signs-oct-9-2009/video-women-urged-to-take-charge-of-their-eye-health/">https://www.med.unc.edu/empnews/archives/vital-signs-oct-9-2009/video-women-urged-to-take-charge-of-their-eye-health/</a> ) and YouTube
2012	Host and organizer of the Association of Pediatric Retina Surgeons (APRS) annual meeting, Park City, Utah.
2012 – 2015	Member, Macula Society Credentials Committee.
2013	Research in Retinopathy of Prematurity. Interviewee, American Association of Ophthalmology (AAO) Annual Meeting. New Orleans, LA.
2014	Affiliate Member, American Association for Pediatric Ophthalmology and Strabismus (AAPOS)
2014 - 2018	Member, AOS Credentials Committee
2016 - 2020	Member, Retina Society Credentials Committee
2018 - Present	Medical Director Women’s Eye Health (WEH)
2020	Council Member International Society for Eye Research (ISER). Vice President Americas.
2020 - Present	Member Jack McGovern Coats' Disease Foundation Board of Directors
2021 - 2024	Member ARVO Foundation Board of Governors.
2021 - 2022	President-elect International Society for Eye Research ISER.
2021 – Present	Women Professors in Ophthalmology (WPO), Inaugural member
2024 - Present	Honorary Member, The American Society for Clinical Investigation (ASCI)

**PROFESSIONAL COMMUNITY ACTIVITIES**

1993	Physician, Perkins School for the Blind, Retinopathy of Prematurity, Patient Education, Watertown, MA
1994 - 1995	Member, Specialty Care Associates, Quality Assurance Committee, Boston, MA
1994	Physician, Beverly Hospital, Diabetic Retinopathy, Diabetes Mellitus Support Group, Beverly, MA
2000	Medical Director, Lions Club, LA Lions Club Sight Program
2000	Interviewee, Louisiana State University Medical Center, Healthcall, Local Public Service Television Program (questions and answers from callers), Medical Center of Louisiana New Orleans and WLAE-TV-32, New Orleans, LA
2005	Interviewee, University of North Carolina, UNC TV session on AMD
2008	Interviewee, WRAL News, WRAL/TV NC interview on DRCR.net clinical trial
2008	Interviewee, ReachMD, Radio interview on Diabetic Macular Edema and DRCR.net clinical trial

**UNIVERSITY COMMUNITY ACTIVITIES**

**University Level**

2012 - 2015	Member, Academic Senate
2011 - 2013	Member of Academic Retention Promotion and Tenure Committee School of Medicine, University of Utah
2013 - 2014	Chair of Academic Retention Promotion and Tenure Committee School of Medicine, University of Utah
2014 - Present	Member, MD/PhD Applicant Review Committee, University of Utah

2014 - Present	Member, University Promotion and Tenure Committee (UPTAC) School of Medicine Representative, University of Utah
2015 - 2016	Co-Director of MD-PhD program for University of Utah
2017 - 2019	University of Utah Subcommittee For Undergraduate Input Into UPTAC
2020 - Present	Co-Chair of Presidential Commission on the Status of Women (PCSW) University of Utah.
2020 - Present	Chair-Elect for the School of Medicine College Council.
2020 - Present	Co-Chair One U Thriving Steering Committee, University of Utah.
2020 - Present	Distinguished Professor Advisory Committee, University of Utah.
2021	University of Utah Presidential Search Committee.

### **University Hospitals & Clinics**

2012 - Present	Member, Telehealth Steering Committee
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### **College Level**

2010 - 2014	Member, Resident and Fellowship Applicant Committee, School of Medicine
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### **SERVICE AT PREVIOUS INSTITUTIONS**

1982 - 1988	Member, Albany Medical College, Biomedical Program Admissions Committee
1992	Physician, University at Buffalo, State University of New York, Age-Related Macular Degeneration Support Group, Buffalo, NY
1995 - 2000	Member, Schepens Eye Research Institute, Human Studies Committee
1995 - 2000	Member, Schepens Eye Research Institute, Committee for Responsible Conduct in Research
1995 - 1999	Member, Schepens Eye Research Institute, Fellowship Training Committee
1997 - 2000	Member, Schepens Eye Research Institute/Massachusetts Eye and Ear Infirmary, Joint Governing Committee for a Joint Clinical Research Center
1997 - 1998	Director of Fellowship, Schepens Eye Research Institute.
1998 - 2000	Member, Schepens Eye Research Institute, Strategic Planning Committee
1998 - 2000	Member, Schepens Eye Research Institute, Research Planning and Review Committee
1999 - 2000	Member, Schepens Eye Research Institute, Internal Communications Committee
2002 - 2003	Ad Hoc Reviewer, Louisiana State University, LSUHSC Institutional Review Board, Health Sciences Center
2002	Director, Louisiana State University, Diabetic Retinopathy, Retinopathy of Prematurity, Macular Degeneration. LSU Retina Clinic, New Orleans, LA
2002	Director, Louisiana State University, Retinal Service Patient Education Pamphlets, Development and Publication, LSU Retina Clinic, New Orleans, LA
2003	Member, University of North Carolina, Department of Ophthalmology Research Committee, Hosted visiting Professor from the UK: Alan Stitt, PhD (8/27/04)
2004 - 2010	Member, University of North Carolina, Carolina Cardiovascular Biology Center
2004 - 2010	Associate Member, University of North Carolina, UNC Lineberger Comprehensive Cancer Center
2005 - 2010	Board Member, University of North Carolina, Association of Professional Women in Medical School

2007 - 2010 Member, University of North Carolina, Surgical Operating Room Technical Committee (representing Ophthalmology)  
 2007 - 2010 Member, University of North Carolina, Surgical Operating Room Task Force (representing Ophthalmology)  
 2008 Member, University of North Carolina, Search committee for Assistant Dean for Core Facilities  
 2008 Member, University of North Carolina, Search committee for Anesthesia Chair  
 2008 - 2010 Elected Member, University of North Carolina, Faculty Council

**MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

1983 - Present Member, American Medical Association  
 1987 - 1991 Member, American Academy of Ophthalmology  
 1991 - Present Fellow, American Academy of Ophthalmology  
 1992 - 1993 Member, Medical Society of the County of Erie  
 1993 - Present Fellow, American College of Surgeons  
 1993 - 2000 Member, American College of Surgeons: Massachusetts Chapter  
 1993 - 2000 Member, Massachusetts Medical Society  
 1993 - 2000 Member, Massachusetts Society of Eye Physicians and Surgeons  
 1993 - Present Member, Schepens International Society  
 1993 - 2003 Member, Vitreous Society  
 1999 - Present Member, Macula Society  
 2001 - 2003 Member, American College of Surgeons: Louisiana Chapter+  
 2001 - 2005 Member, American Society for Laser Medicine and Surgery  
 2001 - 2003 Member, Orleans Parish Medical Society  
 2004 - 2006 Member, North Carolina Society of Eye Physicians and Surgeons  
 2004 - Present Member, Retina Society  
 2006 - Present Member, American Association of Pediatric Retinal Surgeons  
 2010 - Present Member Vision 2020 USA  
 2011 - Present Board Member, Women's Eye Health  
 2011 - Present Member, American Society of Retina Specialists  
 2011 - Present Member, International Society for Eye Research  
 2011 - Present Member, Pan American Association of Ophthalmology  
 2011 - Present Member, The American Ophthalmological Society  
 2011 - Present Member, Utah Ophthalmology Society  
 2012 - Present Member, Prevent Blindness America, Grant Review Committee  
 2013 - Present Member, WEAVR  
 2013 - Present Member, Women in Ophthalmology  
 2014 - Present Member, American Association for Pediatric Ophthalmology & Strabismus (AAPOS)  
 2016 - Present Member of the Food and Drug Administration FDA's Dermatologic and Ophthalmic Drugs (DODAC)

**FUNDING**

**Active Grants**

12/02/2004 – 2R01 EY015130 (NEI/NIH) Hartnett, ME (PI)

- 08/31/2024                      Mechanisms of Angiogenesis in Retinopathy of Prematurity  
 Major Goals: The objectives of the grant are to determine mechanisms of intravitreal neovascularization and those of vascularization of previously avascular retina with focus on signaling of VEGF isoforms.  
 Role: Principal Investigator
- 04/01/2007 –                      R01 EY017011 (NEI/NIH)                      Hartnett, ME (PI)  
 03/21/2026                      Endothelial Transmigration in Neovascular Age-related Macular Degeneration  
 Major Goals: To study mechanisms involved in choroidal endothelial cell transmigration into the neurosensory retina as it relates to age-related macular degeneration.  
 Role: Principal Investigator
- 04/01/2023-                      R01EY034975 (NEI/NIH)                      Hartnett, ME; Zhu, Wendy (co-PIs)  
 04/01/2028                      Inhibiting neovascularization and subretinal fibrosis in neovascular age-related macular degeneration  
 Major goals: To assess the role of ARF6 activation in endothelial mesenchymal transition and to test different therapies.  
 Role: co-Principal Investigator
- 04/01/2023-                      R34EY034969 (NEI/NIH)                      Dammann, Olaf (PI)  
 Planning the VICTORY (Visual Complications of Prematurity) Study  
 Major Goals: The goal of this project is to plan a large, multicenter cohort study designed to gather comprehensive social, clinical, and biomarker data needed to further elucidate the etiology and pathogenesis of ROP and adverse visual outcomes (AVO) in extremely low gestational age newborns (ELGANs, <28weeks gestation).  
 Role: Investigator
- 09/30/2021 –                      F30 EY032311                      Ramshekar, Aniket (PI)  
 09/29/2025                      Investigating the role of active Rap1a binding IQGAP1 in choroidal neovascularization  
 Major Goals: To study the role of interactions between the GTPase Rap1a and the multidomain protein, IQGAP1, in reducing choroidal neovascularization.  
 Role: Mentor to graduate student in MD-PhD program
- 05/01/2022 –                      R21 EY033579                      Bernstein P, Hartnett ME (co-PIs)  
 04/30/2024                      A Phase 2 study of the value of pre-symptomatic genetic risk assessment for age-related macular degeneration  
 Major Goals: to assess immediate vs. deferred disclosure of AMD risk on carotenoid skin measurements and macular pigment in the eye.  
 Role: co-Principal Investigator
- 07/11/2011 –                      R01 EY019474                      Campbell, J. Peter (PI)  
 5/31/2024                      Oregon Health and Science University | NEI/NIH  
 Clinical and Genetic Analysis of Retinopathy of Prematurity  
 Major Goals: to develop quantitative models relating the clinical, imaging, and genetic features of retinopathy of prematurity, and to examine genotype-phenotype correlations.  
 Role: PI subaward

04/01/2023 – 3353 Hartnett ME (PI)  
 3/31/2028  
 Jaeb Center for Health Research | NIH  
 Laboratory Analysis Agreement for PEDIG ROP3 and ROP4 studies  
 Major Goals: to perform laboratory ELISA testing for human infants enrolled in ROP 3 and ROP 4.  
 Role: Principal Investigator

07/11/2011 – R13EY035179 (NIH) Hartnett ME (PI)  
 5/31/2024  
 Fourth Advances in Pediatric Retina International Meeting  
 Major Goals: to provide funding support students presenting research at the 4<sup>th</sup> International Advances in Pediatric Retina meeting and course.  
 Role: Principal Investigator

**Pending**

12/01/2023 – Feasibility Studies for the Future Mediterranean Glucose Lowering Diet for  
 11/30/2025 Vision Extension in AMD (M-GLOVE-AMD)  
 NIH  
 Role: Principal Investigator

09/01/2024 – Mechanisms of Angiogenesis in ROP  
 08/31/2029 NIH  
 Role: Principal Investigator

**Past Grants/Contracts**

01/01/91 - 01/01/92 Light: Retinopathy of Prematurity Pilot Study  
 Women & Children's Hospital of Buffalo Foundation  
 Role: Co-Investigator

07/01/92 - 12/31/94 Correlation of Clinical Retinal Vascular Findings, Lipid Peroxide, and  
 Antioxidant Enzymes in Diabetes Mellitus  
 Principal Investigator: Mary Elizabeth Hartnett  
 American Heart Association  
 Role: Principal Investigator

01/01/93 - 01/01/94 STOP-ROP (Supplemental Therapeutic Oxygen to Prevent Retinopathy of  
 Prematurity) Multicenter grant, Boston, MA  
 National Institutes of Health  
 Role: Investigator

06/30/94 - 06/30/95 Free Radical Induced Injury and Neovascularization in the Rabbit Retina  
 American Heart Association  
 Role: Co-Investigator

01/01/95 - 01/01/96 Multiply Scattered Light Tomography for Glaucoma Management, Phase I,  
 SBIR  
 United States Small Business Administration  
 Role: Consultant

05/01/95 - 04/30/98 Spatial Extent of Retinal Damage  
 National Eye Institute  
 Role: Co-Investigator

01/01/97 - 12/31/97 Stabilized Imaging for the Scanning Laser Ophthalmoscope, SBIR with PSI,  
 Phase I

National Eye Institute  
 Role: Consultant  
 01/01/98 - 12/31/98 Regulation of RPE Blood-retinal Barrier: Impact in Choroidal Neovascularization  
 Principal Investigator: Mary Elizabeth Hartnett  
 Schepens Eye Research Institute

01/01/99 - 12/31/99 Role: Principal Investigator  
 Cytokines in Retinopathy of Prematurity  
 Beverly Hospital, funding from Children's Hospital  
 Lions Clubs International Foundation (LCIF)

01/01/99 - 12/31/99 Role: Co-Investigator  
 A Novel Approach Targeting Ocular Neovascularization Based on Combinatorial Chemistry  
 Scientific Partnership Fund between MIT and Harvard University  
 Principal Investigator(s): Ram Sasisekharan; Peter Seeberger  
 Massachusetts Institute of Technology

07/01/99 - 06/30/04 Role: Co-Investigator  
 Spatial Extent of Retinal Damage  
 National Eye Institute

01/01/00 - 01/01/02 Role: Consultant  
 Studies into the Mechanisms of Development of Choroidal Neovascularization in Age-related Macular Degeneration: The Effects of Cell-Cell Interactions and Growth Factors on the Barrier Properties of the Retinal Pigment Epithelium  
 LSU Eye Center, Louisiana State University Health Sciences Center, New Orleans  
 Principal Investigator: Mary Elizabeth Hartnett  
 Evelyn Lilly Lutz Foundation

01/01/01 - 01/01/04 Role: Principal Investigator  
 Louisiana Biomedical Research Network (BRIN)  
 Louisiana State University, Baton Rouge, LA, Mentor to students, postdoctoral researchers, and faculty  
 National Institutes of Health

01/01/01 - 01/01/03 Role: Mentor  
 Systems Development of a Template for Diabetic Eye Care Targeted for Maximum Patient Care and Applied Research in Existing Care Delivery  
 Louisiana State University Biomedical Research Fund. LSU Eye Center, Louisiana State University, New Orleans  
 Principal Investigator: Mary Elizabeth Hartnett  
 Pfizer, Inc.

01/01/01 - 01/01/03 Role: Principal Investigator  
 Building Research Infrastructure and Capacity (BRIC) Program  
 Louisiana State University Health Services Research Program. Louisiana State University Health Sciences Center, New Orleans  
 National Institutes of Health (NIH)  
 Agency for Healthcare Research and Quality

01/01/01 - 01/01/04 Role: Co-Investigator  
 The ROP Photographic Screening Trial (PHOTO-ROP)  
 The Louisiana Computation and Visualization Network. Children's Hospital  
 LSU Health Sciences Center, New Orleans

- Louisiana State University  
 Role: Site Principal Investigator  
 01/01/01 - 01/01/05 A Multicenter, Randomized, Masked, Controlled Study to Evaluate Reinsert, an Intravitreal Fluocinolone Acetonide Implant, in the Treatment of Patients with Diabetic Macular Edema  
 Louisiana State University Health Sciences Center, New Orleans, LA  
 Reimbursed \$533 per subject  
 Principal Investigator: Mary Elizabeth Hartnett  
 Control Delivery Systems Inc.  
 Role: Site Principal Investigator  
 01/01/01 - 01/01/04 Protein Kinase C  $\beta$  Inhibitor-Diabetic Retinopathy Study 2 (PKC-DRS2)  
 LSU Eye Center, Louisiana State University Health Sciences Center, New Orleans  
 Reimbursed \$11,046 per subject  
 Principal Investigator: Mary Elizabeth Hartnett  
 Eli Lilly and Company  
 Role: Principal Investigator  
 01/01/02 - 01/01/04 Leukostasis and Retinal Avascularity in Retinopathy of Prematurity  
 Research Institute for Children and the Department of Pediatrics at LSU Health Sciences Center  
 Principal Investigator: Mary Elizabeth Hartnett  
 Louisiana State University  
 Role: Principal Investigator  
 01/01/02 - 01/01/03 General Diabetic Research, Grand Aerie, Grove City, OH  
 Principal Investigator: Mary Elizabeth Hartnett  
 Fraternal Order of Eagles  
 Role: Principal Investigator  
 01/01/03 - 02/28/10 Diabetic Retinopathy Clinical Research Network (DRCR.net)  
 University of North Carolina, Chapel Hill, NC  
 Chapel Hill, N.C.  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Site Principal Investigator  
 01/01/03 - 01/01/07 Studies on Endothelial Transmigration Across the RPE Barrier. Funding provided by NEI Small Grants for Pilot Research (RO3)  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Principal Investigator  
 01/01/04 - 12/30/10 The Longitudinal Study of Ocular Complication of AID (LSOCA)  
 University of North Carolina, Chapel Hill, NC  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Principal Investigator  
 01/01/04 - 01/01/07 Physician-Scientist Merit Award. Unrestricted funds for laboratory research  
 Principal Investigator: Mary Elizabeth Hartnett  
 Research to Prevent Blindness, Inc.  
 Role: Principal Investigator  
 01/01/04 - 12/31/04 An Evaluation of Efficacy and Safety of Posterior Juxtasclear Administrations of Anecortave Acetate for Depot Suspension (15 mg or 30 mg) versus Sham Administration in Patients (Enrolled in Study "A" or Study "B") at Risk for



- Developing Sight-Threatening Choroidal Neovascularization (CNV) Due to Exudative Age-Related Macular Degeneration (AMD)  
Alcon Laboratories  
Role: Investigator
- 01/01/04 - 02/28/10 Action to Control Cardiovascular Risk in Diabetes (ACCORD) Eye Study  
University of North Carolina, Chapel Hill, NC  
Principal Investigator: Mary Elizabeth Hartnett  
National Eye Institute  
Role: Site Principal Investigator
- 01/01/04 - 12/31/04 UNC Medical Alumni Endowment Fund. VEGF and ICAM-1 as clinical indicators to predict diabetic post-operative macular thickening and ischemia  
Principal Investigator: Mary Elizabeth Hartnett  
University of North Carolina at Chapel Hill  
Role: Principal Investigator
- 01/01/04 - 01/01/08 Mechanisms of Angiogenesis in Retinopathy of Prematurity  
Principal Investigator: Mary Elizabeth Hartnett  
National Eye Institute  
Role: Principal Investigator
- 01/01/04 - 01/01/06 The Role of Leukemia Inhibitory Factor (LIF) and oxidative stress in retinal avascularity and retinopathy of prematurity  
Principal Investigator: Mary Elizabeth Hartnett  
University of North Carolina Research Council  
Role: Principal Investigator
- 01/01/04 - 12/30/10 A Pilot Study of Laser Photocoagulation for Diabetic Macular Edema (DRCR.net)  
University of North Carolina, Chapel Hill, NC  
Principal Investigator: Mary Elizabeth Hartnett  
National Eye Institute  
Role: Principal Investigator
- 01/01/04 - 12/31/04 Diabetes Retinopathy Clinical Research Network Protocol #1A, A Pilot Study of Laser Photocoagulation for Diabetic Macular Edema  
Principal Investigator: Mary Elizabeth Hartnett  
National Eye Institute  
Role: Principal Investigator
- 01/01/04 - 01/01/05 The Role of Cell-Associated VEGF Isoforms in Endothelial Cell Transmigration Across the Retinal Pigment Epithelium  
Principal Investigator: Mary Elizabeth Hartnett  
Macula Society  
Role: Principal Investigator
- 01/01/04 - 12/31/04 Assessment of Steroid Treatment of Diabetic Retinopathy through Analysis of Pro-inflammatory VEGF164 Levels  
Carolina Cardiovascular Biology Center Mentor Program  
University of North Carolina  
Role: Mentor to medical student
- 01/01/04 - 12/31/05 Posurdex Study. A Six-Month Phase 3, Multicenter, Masked, Randomized, Sham-Controlled Trial (with Six-Month Open-Label Extension) to Assess the Safety and Efficacy of 700 microgram and 350 microgram Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS Applicator System) in the Treatment of Patients with Macular Edema Following Central Retinal Vein Occlusion of Branch Retinal Vein Occlusion

Allergan, Inc.  
 Role: Site Principal Investigator  
 01/01/04 - 12/31/05 FV3192g-A Phase IIIb, Multicenter, Randomized, Double-Masked, Sham Injection-Controlled Study of the Efficacy and Safety of Ranibizumab in Subfoveal Choroidal Neovascularization (CNV) with or without Classic CNV Secondary to Age-Related Macular Degeneration  
 Genentech, Inc.  
 Role: Investigator  
 2004 - 2010 EY14231 (NIH/NEI)  
 Diabetes Retinopathy Clinical Research Network Protocols  
 Major Goals: Use network to pool resources and run multicenter clinical trials to address diabetic retinopathy  
 National Eye Institute  
 Role: University of Utah's PI through 2013, now a co-investigator  
 01/01/05 - 12/30/10 The Standard Care vs. Corticosteroid for Retinal Vein Occlusion (SCORE) Study  
 Intravitreal Triamcinolone for Branch and Central Retinal Vein Occlusion  
 University of North Carolina, Chapel Hill, NC  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Site Principal Investigator  
 01/01/05 - 12/30/10 A Randomized Trial Comparing Intravitreal Triamcinolone Acetonide and Laser Photocoagulation for Diabetic Macular Edema  
 University of North Carolina - Chapel Hill, NC  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Site Principal Investigator  
 01/01/05 - 01/01/08 An Investigation of Retinal Nonperfusion and its Inhibition: A Strategy to Prevent Proliferative Diabetic Retinopathy  
 Principal Investigator: Mary Elizabeth Hartnett  
 American Diabetes Association  
 Role: Principal Investigator  
 12/01/05 - 04/30/10 Endothelial Transmigration un Neovascular Age-related Macular Degeneration  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Institutes of Health  
 Role: Principal Investigator  
 01/01/06 - 12/31/06 RPB Departmental internal award to Abhineet Uppal for medical student project on supplemental oxygen's effect on HIF-1 $\alpha$  expression in a model of ROP  
 Research to Prevent Blindness, Inc.  
 Role: Mentor  
 01/01/06 - 12/30/10 A Pilot Study of Peribulbar Triamcinolone Acetonide for Diabetic Macular Edema 'DRCR.net  
 University of North Carolina, Chapel Hill, NC  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Principal Investigator  
 01/01/06 - 12/31/06 UNC Medical Alumni Endowment Fund. Measurement of complement function in Age-related Macular Degeneration  
 Principal Investigator: Mary Elizabeth Hartnett

- University of North Carolina at Chapel Hill  
 Role: Principal Investigator  
 01/01/06 - 02/28/10 An Observational Study of the Development of Diabetic Edema Following Scatter Laser Photocoagulation  
 DRCR.net  
 University of North Carolina, Chapel Hill, NC  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Site Principal Investigator  
 01/01/07 - 02/29/12 Endothelial Transmigration in Neovascular Age-related Macular Degeneration  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Principal Investigator  
 01/01/07 - 02/28/10 Intravitreal Ranibizumab or Triamcinolone Acetonide as Adjunctive Treatment to Panretinal Photocoagulation for Proliferative Diabetic Retinopathy.  
 DRCR.net  
 University of North Carolina, Chapel Hill, NC  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Site Principal Investigator  
 12/30/07 - 06/01/12 Intravitreal Ranibizumab or Triamcinolone Acetonide as Adjunctive Treatment to Panretinal Photocoagulation for Proliferative Diabetic Retinopathy.  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Institutes of Health  
 Role: Site Principal Investigator  
 01/01/08 - 12/31/08 RPB Departmental internal award to Justin Miller to optimize silencing of VEGF164 in Mueller cells  
 Research to Prevent Blindness, Inc.  
 Role: Mentor  
 01/01/08 - 01/01/09 Shaw University M-RISP Minority Elderly Research (SUMMER\*) Center  
 National Institutes of Health (NIH)  
 Agency for Healthcare Research and Quality  
 Role: Mentor  
 01/01/08 - 01/01/11 To determine a non-destructive neuroprotective treatment for severe retinopathy of prematurity  
 Principal Investigator: Mary Elizabeth Hartnett  
 March of Dimes  
 Role: Principal Investigator  
 01/01/08 - 12/31/08 Faisal Ahmad, UNC grant through NIDDK STRT, "Effects of Extracellular Matrix on Choroidal Endothelial Phenotype"  
 National Institute of Diabetes and Digestive and Kidney Diseases  
 Role: Mentor  
 01/01/08 - 12/31/08 RFA: Projects to identify and validate targets against diabetic complications. Complications Translation [Invitees Only]: "Blocking the interaction between IAP and SHPS-1 will impede the development of diabetic retinopathy"  
 Principal Investigator: David Clemmons  
 Juvenile Diabetes Research Foundation  
 Role: Key Collaborator  
 01/01/09 - 12/31/09 John Hartmann, UNC 4th year medical student and Holderness Fellowship awarded, Pigment Epithelium-Derived Factor (PEDF) Signaling in Retinopathy

of Prematurity  
 Holderness Fellowship  
 University of North Carolina  
 Role: Mentor  
 01/01/09 - 11/01/12 3R01 EY017011 03S1- Endothelial Transmigration in Neovascular Age-related  
 Macular Degeneration, instrument supplement  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Institutes of Health  
 Role: Principal Investigator  
 01/01/09 - 12/31/09 Phosphorylations of liver x receptor-A as a regulatory mechanism to promote its  
 function as transcriptional repressor  
 Principal Investigator: Haibo Wang (post-doctoral student)  
 American Heart Association  
 Role: Co-sponsor  
 06/25/09 - 06/30/10 Bridge Funding  
 Principal Investigator: Mary Elizabeth Hartnett  
 National Eye Institute  
 Role: Principal Investigator  
 07/01/09 - 06/30/11 Fellowship For Haibo Wang - Phosphorylation of LiverX Receptor-2  
 Principal Investigator(s): Mary Elizabeth Hartnett; Gregory M. Jones; Haibo  
 Wang  
 American Heart Association  
 Role: Principal Investigator  
 2009 - 2014 EY018400-01A1  
 Communication about glaucoma and patient outcomes  
 Major Goals: Qualitative analyses of patient-doctor communication on  
 adherence  
 to glaucoma therapy  
 Role: Sleath, B (PI), Collaborator (MEH)  
 05/01/10 - 02/29/12 Endothelial Transmigration  
 Principal Investigator(s): Mary Elizabeth Hartnett; Gregory M. Jones  
 National Institutes of Health  
 Role: Principal Investigator  
 05/01/10 - 05/31/11 To determine a non-destructive neuroprotective treatment for severe retinopathy  
 of prematurity. (Transferred from UNC to the Univ. of Utah)  
 Principal Investigator: Mary Elizabeth Hartnett  
 March Of Dimes Utah Chapter  
 Role: Principal Investigator  
 05/01/10 - 06/30/10 Mechanisms (Bridge Funds)  
 Principal Investigator(s): Mary Elizabeth Hartnett; Gregory M. Jones  
 National Institutes of Health  
 Role: Principal Investigator  
 05/01/10 - 05/31/11 Treatment of Neovascular AMD  
 University of Utah, Salt Lake City, Utah  
 Principal Investigator: Mary Elizabeth Hartnett  
 Axikin Pharmaceuticals  
 Role: Principal Investigator  
 05/10/10 - 06/30/10 Mechanisms of Angiogenesis in ROP  
 Principal Investigator: Mary Elizabeth Hartnett

06/01/10 - 06/30/10	<p>National Eye Institute                  Role: <u>Principal Investigator</u>                  Mechanisms Grant of Angiogenesis in ROP                  2R01EYO15130-06</p>	<p>Principal Investigator(s): Mary Elizabeth Hartnett; Gregory M. Jones                  National Institute of Health</p>
12/01/10 - 11/30/11	<p>Role: <u>Principal Investigator</u>                  Ccr3 In Neovascularization                  Principal Investigator: Mary Elizabeth Hartnett                  Axikin Pharmaceuticals</p>	
06/01/13 - 05/31/16	<p>Role: <u>Principal Investigator</u>                  March of Dimes 6-FY13-75 Hartnett, ME (PI)                  Studies on Angiogenic Mechanisms and Safety regarding Erythropoietin in Retinopathy of Prematurity: Seeking a Safe Treatment                  Major Goals: To understand crosstalk between VEGFR2 and EPOR with in vitro techniques. To use a model of intrauterine growth restriction in fluctuating oxygen and determine the effect of systemic EPO on brain and retinal health and intravitreal neovascularization.</p>	
03/01/16 - 02/28/18	<p>Role: <u>Principal Investigator</u>                  R21 EY025813-01A1 Hartnett, ME                  Quantitative regional analysis of vitreoretinal adhesion with age                  Major Goals: To quantify vitreoretinal adhesive forces and the effects from different compounds within the vitreous structure.                  Role: <u>Co-Investigator</u></p>	
05/13/19 - 05/15/19	<p>R13 EY029900-01 (NEI/NIH) Hartnett, ME                  Second Advances in Pediatric Retina Meeting.                  Major Goals: bring together leading expert clinician/surgeons and pediatric ophthalmologists to discuss timely management of pediatric retina problems and optimize vision development in developing infants and children.</p>	
08/01/18 - 05/31/20	<p>Role: <u>Course Director</u>                  1R21EY029384 (NEI/NIH) Toth, Cynthia MD (PI)                  Bedside Optical Coherence Tomography of Hypoxic Ischemic Encephalopathy (HIE) in Infants.                  Major Goals: The major goal of this study is to develop a novel noninvasive bedside optical coherence tomography (OCT) imaging technique in newborn infants with Hypoxic Ischemic Encephalopathy (HIE) that improves the ability to assess the spectrum of retinal effects from HIE and to diagnose and monitor treatments of HIE.                  Role: <u>Key Personnel</u></p>	
<p>04/01/2016 -                  04/30/2021                  Awarded and                  transferred to Utah</p>	<p>T35 EY026511 (NEI/NIH) Hartnett, ME (PI)                  Medical Student Research Program in Eye Health and Disease                  Major Goals: The major goal of this project is ignite in medical students a life-long interest in conducting or collaborating in research related to the eye, while also building their skills in creative and critical thinking.</p>	
2019 – 2021	<p>U10EY011751 Hartnett, ME (site PI)</p>	

Phase 1 Trial of Bevacizumab Treatment for Severe Retinopathy of Prematurity  
Major Goals: dose de-escalation study for severe ROP – enroll infants and site to analyze blood samples for VEGF

2021 Subaward 1016626\_UUTAH (PEDIG) Hartnett, ME (PI)  
ROP3 and ROP4  
Major Goals: to analyze blood samples for clinical trials ROP3 and ROP4  
Role: Principal Investigator

05/01/2019 – R21EY029857-02 Bernstein, Paul (PI)  
04/30/2022 Carotenoid supplementation during pregnancy: ocular and systemic effects  
Major Goals: to assess the role of lutein supplementation during pregnancy on preeclampsia, premature birth and carotenoid and macular pigment in mother and infant. To assess macular structure of infant by OCT  
Role: Co-investigator

### **PATENTS**

WO2015123561A2  
WO2021062169A1

### **TEACHING RESPONSIBILITIES/ASSIGNMENTS**

#### **Courses Directed**

1990 - 1993 Course Director for Residency Education in Retina, Director of Retina Services, State University of New York, Buffalo, NY  
1995 - 1999 Course Director for Fellowship Education in Retina, Schepens Retina Associates, Boston, MA  
2000 - 2003 Course Director for Residency Education in Retina, Director of Retina Services, Louisiana State University, New Orleans, LA

#### **Course Lectures**

Sept 6-16, 1994 Instructor, Ophthalmology Elective, 6 students, Harvard Medical School. 3 hour sessions; 8 sessions/year  
Aug 31-Sept 30, 1999 Instructor, Ophthalmology Elective, 6 students, Harvard Medical School. 3 hour sessions; 5 sessions/year  
2003 Lecturer, Basic Science Course, University of North Carolina. Complex Retinal Detachments  
2004 Lecturer, Basic Science Course, University of North Carolina. CRVO/Branch Retinal Vein Occlusion  
2004 Lecturer, Basic Science Course, University of North Carolina. Proliferative Retinopathies: ROP and Sickle Cell  
2005 Lecturer, Basic Science Course, University of North Carolina. Mechanisms of Angiogenesis  
2005 Lecturer, Basic Science Course, University of North Carolina. Retinal Drawing  
2005 Lecturer, Basic Science Course, University of North Carolina. Posterior Vitreous Detachment and Retinal Detachment #1  
2005 Lecturer, Basic Science Course, University of North Carolina. Posterior Vitreous Detachment and Retinal Detachment #2

- 2006 Lecturer, Basic Science Course, University of North Carolina. Cystoid Macular Edema and other Complications with Anterior Segment Surgery
- 2006 Lecturer, Basic Science Course, University of North Carolina. Lecture and Quiz. Management of Retinal Breaks and Retinal Detachment
- 2007 Lecturer, Basic Science Course, University of North Carolina. Lecture and Quiz. Retinovascular Diseases and Retinopathy of Prematurity update
- 2007 Lecturer, Basic Science Course, University of North Carolina. Lecture and Quiz. PVD and Complex Retinal Detachments
- 2008 Lecturer, Basic Science Course, University of North Carolina. Retinal Landmarks
- 2008 Lecturer, Basic Science Course, University of North Carolina. Diseases associated with Aberrant Retinal Angiogenesis: ROP, Vein occlusions, Ocular Ischemia, and Sickle Cell Retinopathy
- 2009 Lecturer, Basic Science Course, University of North Carolina. PVD and Retinal Detachments/Complex Retinal Detachments
- 2009 Lecturer, Basic Science Course, University of North Carolina. Introduction to Retinal Landmarks
- 2011 Instructor, Basic Science Course. Age-related Macular Degeneration., University of Utah, Ophthalmology/Visual Sciences
- 2011 Instructor, Basic Science Course, Pediatric Retina., University of Utah, Ophthalmology/Visual Sciences
- 2012 Instructor, Basic Science Course, Diabetic Retinopathy, University of Utah, Ophthalmology/Visual Sciences
- 2012 Instructor, Retinal and Choroidal Vascular Diseases, University of Utah, Ophthalmology/Visual Sciences
- 2015 Visual Neuroscience Course, University of Utah. Retinal Vascular Development and Disease.
- 2023 Myopia: Pathologic, Degenerative and Hereditary. Bay Area Ophthalmology Course. Stanford University. Palo Alto, CA.
- 2023 Instructor, Diagnosis and Management of Pediatric Retina Dilemmas. American Academy of Ophthalmology Conference. San Francisco, CA.

### **Clinical Teaching**

- 1993 - 1999 Surgeon teaching vitreoretinal surgery to fellows at Schepens Eye Research Institute, Boston, MA
- 1995 - 1999 Surgeon teaching surgical skills, medical retina; indications, treatment, follow-up for patients requiring surgery or laser; and diagnostic skills to surgical fellows at Schepens Eye Research Institute, Boston, MA. Two Surgical Fellows/year; 1-5 Fellows from other retina fellowships
- 1995 - 1999 Children's Hospital, Boston, MA; Consultant; Pediatric retina such as trauma, retinopathy of prematurity, etc.; 1 Fellow and 3-4 Residents/ year; 1-2 hours/week
- 1996 Retinal Disease (Emergency Room, Operating Room); Harvard Medical School, Boston, MA; 3-5 ophthalmology residents/year; 50 hours/year
- 1996 - 2000 Teaching Vitreoretinal Fellows, Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA
- August-Oct. 1998 Ophthalmology Clinic, Schepens Retina Associates, Boston, MA; 1 postgraduate medical student; 3 hours/week
- 2000 - 2003 Clinician and Course Director in clinic teaching Ophthalmology LSU Residents and Fellows at LSU Eye Clinic, New Orleans, LA. Twenty-eight residents; each one on six week rotation; three fellows

2000 - 2003	Clinician on rounds and Course Director teaching Pediatric Residents and Fellows at Children's Hospital NICU and clinic, New Orleans, LA. Two new residents every month; two fellows always
2000 - 2003	Clinician in clinic teaching Ophthalmology Residents at Charity Hospital, New Orleans, LA. Three new residents every six weeks
2000 - 2003	Surgeon teaching Ophthalmology Residents at University Hospital, New Orleans, LA. Twenty-eight residents; each one on six week rotation
2000 - 2003	Instructor teaching Fluorescein and indocyanine green angiography in clinic setting. One fellow
2003 - 2010	Retinal clinician and surgical teaching for Ophthalmology residents at UNC. Eight residents, one/3 month rotation
2005 - 2010	Vitreoretinal surgical fellowship training at UNC
2010 - Present	Vitreoretinal surgical fellowship training at University of Utah.
2017	Hartnett, ME. Coats Disease. Moran CORE. Available at <a href="http://morancore.utah.edu/section-12-retina-and-vitreous/coats-disease/">http://morancore.utah.edu/section-12-retina-and-vitreous/coats-disease/</a> Accessed August 23, 2017.
2017	Hartnett, ME. Retinopathy of Prematurity (ROP). Moran CORE. Available at <a href="http://morancore.utah.edu/section-12-retina-and-vitreous/retinopathy-of-prematurity-rop/">http://morancore.utah.edu/section-12-retina-and-vitreous/retinopathy-of-prematurity-rop/</a> . Accessed August 23, 2017.
2017	Hartnett, ME. Familial Exudative Vitreoretinopathy (FEVR). Moran CORE. Available at <a href="http://morancore.utah.edu/section-12-retina-and-vitreous/familial-exudative-vitreoretinopathyfevr/">http://morancore.utah.edu/section-12-retina-and-vitreous/familial-exudative-vitreoretinopathyfevr/</a> . Accessed August 25, 2017.
2017	Hartnett, ME. Incontinentia Pigmenti. Moran CORE. Available at <a href="http://morancore.utah.edu/section-12-retina-and-vitreous/incontinentia-pigmenti/">http://morancore.utah.edu/section-12-retina-and-vitreous/incontinentia-pigmenti/</a> . Accessed August 25, 2017.
2018	Hartnett, ME. Stickler Syndrome. Moran CORE. Available at <a href="http://morancore.utah.edu/section-12-retina-and-vitreous/stickler-syndrome/">http://morancore.utah.edu/section-12-retina-and-vitreous/stickler-syndrome/</a> . Accessed June 26, 2018.
2018	Hartnett, ME. Choroideremia. Moran CORE. Available at <a href="http://morancore.utah.edu/section-12-retina-and-vitreous/choroideremia-2/">http://morancore.utah.edu/section-12-retina-and-vitreous/choroideremia-2/</a> . Accessed September 3, 2018.
2021	Hartnett, ME. Albinism. Moran CORE. Available at <a href="http://morancore.utah.edu/section-12-retina-and-vitreous/ocular-and-oculocutaneous-albinism/">http://morancore.utah.edu/section-12-retina-and-vitreous/ocular-and-oculocutaneous-albinism/</a> . Accessed September 8, 2021.

### **Laboratory Teaching**

2002 - 2003	Hartnett Lab Meetings, LSU Eye Center, New Orleans, LA
2002 - 2003	Angiogenesis Research Group periodic meetings, LSU Eye Center, New Orleans, LA
2003 - 2010	Hartnett Lab Meetings, held weekly, Chapel Hill, NC
2005	Age-related Macular Degeneration. Presentation to Burrige and Hartnett labs
2010 - 2023	Hartnett Lab Meetings, held weekly, Salt Lake City, Utah
2023- Present	Hartnett Lab Meetings, held weekly, Stanford University

### **Small Group Teaching**

2002 - 2003	Ophthalmology Journal Club, Residents, Fellows, and Medical Students. Louisiana State University
2003 - 2010	Ophthalmology Journal Club, Residents, Fellows, and Medical Students.



2010 - Present University of North Carolina.  
Ophthalmology Journal Club, Residents, Fellows, and Medical Students. University of Utah.

### **Trainee Supervision**

#### **Fellow**

1993 - 2000 Supervisor, Harvard Medical School, Schepens Eye Research Institute. Trained fellows in vitreoretinal surgery; Fluorescein angiography conferences; Reviewed cases

2002 - 2003 Advisor/Mentor, Armand Daccache, MD, Louisiana State University. LSU Eye Center, surgical approaches in stage 4 retinopathy of prematurity, New Orleans, LA

2005 - 2007 Advisor/Mentor, Pinchas Rosenberg, MD, University of North Carolina. 1st year vitreoretinal surgical fellow, observer agreement study between diabetic fundus examinations and reading of digital fundus photographs; correlation of serum and aqueous factors with macular thickening post cataract surgery

2007 - 2008 Advisor/Mentor, Usha Pinninti, MD, 1st year retina fellow, study on herpes simplex retinitis in newborn preterm infant

2008 - 2010 Advisor/Mentor, Jan Niklas Ulrich, MD. University of North Carolina. vitreoretinal surgical fellow, phenotypic presentations of Norrie disease mutations

2010 - 2011 Advisor/Mentor, Karyn Bourke, MD. University of Utah. V Retinal Surgical Fellow

2010 - 2012 Advisor/Mentor, Julia Shulman, MD. University of Utah. V. Retinal Surgical fellow, research on preeclampsia and retinopathy of prematurity association

2011 - 2013 Advisor/Mentor, Akbar Shakoor, MD. University of Utah. V. Retinal Surgical Fellow

2012 - 2014 Advisor/Mentor, Ron Hobbs, MD. University of Utah. Retinal Surgical Fellow  
*Trainee's Current Career Activities:* Research on Development of the Hyaloid Vasculature

2013 - 2015 Advisor/Mentor, Nikhil Batra, MD. University of Utah. Retinal Surgical Fellow

2014 - 2016 Advisor/Mentor, Jim Bell, MD. University of Utah. Retinal Surgical Fellow

2015 - 2017 Advisor/Mentor, James Zimmerman, MD University of Utah. Retinal Surgical Fellow

2016 - 2018 Advisor/Mentor, Daniel Churgin, MD University of Utah. Retinal Surgical Fellow

2017 - 2019 Advisor/Mentor, Charles Calvo, MD University of Utah. Retinal Surgical Fellow

2018 - 2020 Advisor/Mentor, Eric Hansen, MD University of Utah. Retinal Surgical Fellow

2018 - 2019 Advisor/Mentor, Christopher Komanski, MD University of Utah. Retinal Surgical Fellow

2019 - 2020 Advisor/Mentor, Nikko Ronquillo, MD University of Utah. Retinal Surgical Fellow

2020 - 2021 Advisor/Mentor, Hong-Gam Le, MD University of Utah. Retinal Surgical Fellow

2020 - 2021 Advisor/Mentor, Joseph Simonet, MD University of Utah. Retinal Surgical Fellow

2020 - 2021 Advisor/Mentor, Wen Hu, MD University of Utah. Retinal Surgical Fellow

2019 - 2020 Advisor/Mentor, Eileen Hwang, MD PhD, University of Utah Pediatric Retina Fellow

2021 - Present Advisor/Mentor, Maria Margarita Parra, MD, Colombia, South America, Pediatric Retina Fellow

2023 - Present Advisor/Mentor, Melanie Daulton, MD Stanford University. Pediatric Ophthalmology Fellow

2023 - Present Advisor/Mentor, Lucie Guo, MD Stanford University. Retina Fellow

2023 - Present Advisor/Mentor, Austen Knapp, MD Stanford University. Retina Fellow

2023 - Present Advisor/Mentor, Jared Sokol, MD Stanford University. Retina Fellow

2023 - Present Advisor/Mentor, Karen Wai, MD Stanford University. Retina Fellow

**Resident**

2000 - 2003	Advisor/Mentor, Sri Maguluri, MD, Louisiana State University. 1st Year Resident, mechanisms to improve eye care delivery to diabetic patients at the Medical Center of Louisiana, New Orleans; LSU Eye Center Retina Service, New Orleans, LA.
2000 - 2003	Supervisor, Louisiana State University. Ophthalmology Residency Training; Interact daily with retina residents and residents at Charity Hospital, teaching one-on-one in clinical and operative settings
2005 - 2008	Advisor/Mentor, Yulia Radiochenko MD, University of North Carolina. 1st year ophthalmology resident, UNC; correlation of serum and aqueous factors with macular thickening post cataract surgery
2005 - 2007	Advisor/Mentor, Miriah Teeter, Ophthalmology resident, designing a study to assess outcome of treatment for CMV retinitis based on PCR measurement of vitreous humor
2005 - 2008	Advisor/Mentor, Michael Wells, MD, University of North Carolina. 1st year ophthalmology resident, effects of fetal hemoglobin in severity of retinopathy of prematurity
2005 - 2007	Advisor/Mentor, George Escaravage, Ophthalmology resident, quantifying hyperfluorescence from fluorescein angiograms in diabetic patients after cataract surgery as part of a study to compare with visual acuity outcomes and quality of life indicators
2006 - 2007	Advisor/Mentor, Lourdes Garcia, MD PhD, University of North Carolina. 2nd year ophthalmology resident, vessel tortuosity and dilation in rat OIR model as an indicator of severity of OIR disease
2012	Advisor/Mentor, Leah Owen, MD, University of Utah. Trainee's Current Career Activities: Aqueous cytokine levels as a predictor of outcomes in diabetic macular edema
2012	Advisor/Mentor, Dan Bettis, MD, University of Utah
2013	Advisor/Mentor, Jim Bell, MD. University of Utah. Psychiatric medication use associated with central serous retinopathy.
2014	Mentor through Women in Ophthalmology, Hema Ramkumar
2015	Advisor/Mentor, Reese Feist MD. University of Utah, OCT features of familial exudative vitreoretinopathy.
2016	Advisor/Mentor Hema Ramkumar. Stanford University. Omega-3 Fatty Acids to Reduce ROP.
2016	Advisor/Mentor Christopher Conrady. University of Utah. Anti-VEGF in Clinical ROP.
2020	Advisor/Mentor Theresa Long. University of Utah. Disparities in Women's Eye Health in the US
2021	Advisor/Mentor Lydia Sauer. University of Utah. FLIO in X-Linked Retinoschisis
2021	Advisor/Mentor Brian Soetikno, Stanford University, FEVR

**MD, PhD (Post-Doctoral Fellowships)**

2005 - 2007	Advisor/Mentor, Yuta Saito, MD, University of North Carolina. Effect of reactive oxygen species on intravitreal neovascularization in oxygen-induced retinopathy, Chapel Hill, NC
2005 - 2007	Advisor/Mentor, Lynda Peterson, PhD, University of North Carolina. Post-doctoral fellow, effect of neutralizing VEGF bioactivity in oxygen induced retinopathy, Chapel Hill, NC
2007 - 2008	

2007 - 2009	Advisor/Mentor, William D. Culp, PhD. University of North Carolina. 1st year post-doctoral student, Rap1 isoforms in barrier properties of retinal pigment epithelium and the effects of VEGF isoforms in AMD
2008 - 2009	Advisor/Mentor, Grace Byfield, PhD. University of North Carolina. 2nd year post-doctoral student, gp130 transducing protein signaling in oxygen-induced retinopathy
2009 - 2010	Advisor/Mentor, Mohamed Zayed, MD, PhD, University of North Carolina. PhD student, 3rd year, correlations in maternal and fetal risks with HELLP and eclampsia
2010 - 2013	Advisor/Mentor, Haibo Wang, MD, PhD. University of North Carolina. post-doctoral student, effect of VEGF189 knockdown on endothelial transmigration across the retinal pigment epithelium
2010 - 2012	Advisor/Mentor Haibo Wang, MD. PhD, University of Utah. VEGF-mediated STAT3 activation inhibits retinal vascularization by downregulating erythropoietin expression.
2010 - 2012	Advisor/Mentor, Tyler Smith, PhD. University of Utah. Post-doctoral student, role of VEGFR2 signaling on disordered developmental angiogenesis.
2010	Advisor/Mentor, Eiichi Nishimura, MD, PhD. University of Utah. Post-doc from Showa University. The role of Rap1 on Choroidal Neovascularization.
2011 - 2012	Advisor/Mentor, James Tucker, MD, PhD. University of Utah. Thesis advisory committee for PhD
2012 - 2013	Advisor/Mentor, Zhiyong Yang, PhD. University of Utah. Post-doctoral student, role of IGF-1 regulation in ROP
2013 - 2015	Advisor/Mentor, Deeksha Gambhir, PhD. University of Utah. Post-doctoral student, Role of constitutively active Rap1 isoforms in restricting choroidal neovascularization.
2015 - 2020	Advisor/mentor, Colin Bretz, PhD University of Utah, Post-doctoral student, Role of STAT3 in aberrant angiogenesis
2015 - 2017	Advisor/mentor, Silke Becker, PhD University of Utah, Post-doctoral student, Inhibition of VEGF splice variants on retinal safety and aberrant angiogenesis
2016 - 2019	Advisor/Mentor, Ahmad Saleem, PhD University of Utah, Post-doctoral student. (Gaming) technology to detect amblyopia. Imagine Cup US Finals, Best Innovation Prize 2016, San Francisco California.
2017 - 2020	Advisor/Mentor, Aaron B. Simmons, PhD University of Utah, Post-doctoral student. The effects of interactions between VEGF and EPO signaling on pathological retinal angiogenesis.
2020 - 2021	Advisor/Mentor, Sravani Ramisetty, PhD University of Utah, Post-doctoral student. Role of EPO-Signaling in UPI/Preterm OIR Model.
2023 – present	Advisor/Mentor, Bright Asare-Bediako, PhD University of Alabama, Post-doctoral scholar. Mechanisms of Angiogenesis in ROP.
2023 – present	Advisor/Mentor, Chun Zhao, PhD
2023 – present	Advisor/Mentor, Shuai Yang, PhD Tongji University, Post-doctoral scholar. Effect of 7-Ketocholesterol in endothelium-mesenchymal transition of choroidal endothelial cells in pathological choroidal neovascularization.
2023 - present	Advisor/Mentor, Justin Jacobs, PhD Post Graduate Institute of Medical Education and Research (PGIMER), Post-doctoral scholar. " Effect of senotherapeutics in combating the cellular senescence of chondrogenic progenitor cells in knee osteoarthritis.
<b><u>Medical Student</u></b>	
2003 - 2004	Advisor/Mentor, Eric Eason, 1st Year Medical Student, NYCOM, worked in laboratory studying VEGF isoforms in developing rat retina (6 week rotation)

- 2004 - 2005 Advisor/Mentor, Jay Simhan, University of North Carolina. 1st Year Medical Student, received Holderness award to study steroid injections on VEGF164 regulation in newborn rats under fluctuating oxygen, summer 2004, presented at Annual Medical Student Research Day UNC, January, 2005
- 2006 - 2008 Advisor/Mentor, Abhineet Uppal, University of North Carolina. first year medical student, effect of supplementation of oxygen on HIF 1 alpha signaling in oxygen-induced retinopathy; presented at Annual Medical Student Research Day UNC, January 2008
- 2006 - 2010 Advisor/Mentor, David Sutton, MD, University of North Carolina. Research fellow, effect of complement factors on choroidal EC transmigration
- 2007 - 2009 Advisor/Mentor, Jessica Watson, 1st year medical student (co-mentoring with Seema Garg, MD PhD), the effects of Avastin on neovascular age-related macular degeneration
- 2008 - 2009 Advisor/Mentor, Faisal Ahmad, University of North Carolina. 2nd year medical student, Effects of Extracellular Matrix on Choroidal Endothelial Phenotype, presented at Annual Medical Student Research Day UNC, January 2009
- 2008 - 2009 Advisor/Mentor, Nicholas Tinkham, Aqueous VEGF as a predictor of pseudophakic macular edema in diabetic patients
- 2008 - 2009 Advisor/Mentor, Christopher Moser, University of North Carolina. Effects of pre-eclampsia on Retinopathy of Prematurity
- 2008 - 2009 Advisor/Mentor, Augustus Parker, University of North Carolina. Effects of VEGF on NADPH oxidase activation in Choroidal Endothelial Cells
- 2009 - 2010 Advisor/Mentor, John Hartmann, University of North Carolina. Holderness Fellowship awardee, Pigment Epithelium-Derived Factor (PEDF) Signaling in Retinopathy of Prematurity
- 2012 Advisor/Mentor, Logan Beebe, University of Utah. Preeclampsia association with retinopathy of prematurity
- 2014 Advisor/Mentor, Sam Beckstead, University of Utah. Preeclampsia association with retinopathy of prematurity
- 2015 Advisor/Mentor Jacob Basilius. University of Utah. Structural Abnormalities of the Inner Macula in Incontinentia
- 2016 - 2017 Advisor/Mentor Taylor Webster, University of Utah. Sports Related Ocular Injuries.
- 2016 - 2017 Advisor/Mentor, Jason Nguyen, University of Utah. X-Linked Retinoschisis.
- 2016 - 2017 Advisor/Mentor Nathan Lambert, University of Utah. A Case of Coats Disease and Concurrent Anisometropic Amblyopia.
- 2021 - Present Advisor/Mentor, ISER Mentoring Program. Maryam Zekavat, Yale University. Career Trajectories as a Clinician Scientist.
- 2021 – 2022 International Observer Pediatric Retina, Maria Margarita Parra. University of Utah, Moran Eye Center
- 2022 - 2024 Advisor/Mentor, Aniket Ramshekar, University of Utah. Advisor/Mentor, Aniket Ramshekar, University of Utah. Familial exudative vitreoretinopathy.

### Masters

- 2005 - 2008 Advisor/Mentor, Bradley King, post-baccalaureate student, working on retinal pigment epithelium (RPE) and choroidal endothelial cell (CEC) isolation in newborn and embryonic mice; siRNA methods in ARPE-19, a cell line of human RPE.
- 2007 - 2010 Advisor/Mentor Steven Budd. University of North Carolina. The Role of VEGF in Pathologic Angiogenesis.

**Undergraduate**

2005 - 2008	Advisor/Mentor, David Martiniuk, Pre-baccalaureate student; studying the effect of triamcinolone or dexamethasone on retinal vascular growth in newborn rats exposed to fluctuating oxygen
2008 - 2009	Advisor/Mentor, Justin Miller, University of North Carolina. Developing shRNA using microRNA techniques to silence VEGF164 in Mueller cells
2009	Advisor/Mentor, Srikar Bongu, University of North Carolina. effects of oxygen stresses on HIF1alpha regulation in model of Retinopathy of Prematurity
2014	Advisor/Mentor, Native American Research Intern, Cheryl Cook. "Effect of Intrauterine growth restriction on retinopathy of prematurity."
2015	Advisor/Mentor, Native American Research Intern, Romine Brooke. "Rap1GTPase and its potential role to curb the development of abnormal blood vessels in neovascular age-related macular degeneration, a leading cause of blindness worldwide."
2016	Advisor/Mentor, Aniket Ramshekar, University of Utah, MD-PhD student, Role of VEGF in endothelial cell permeability
2016	Advisor/Mentor, Kevin Rodriguez University of Utah, Medical student, Role of erythropoietin receptor signaling on choroidal neovascularization
2016	Advisor/Mentor, Randy Brown University of Utah, Medical student, Role of Wnt signaling in intrauterine growth restriction and in aberrant angiogenesis
2016	Advisor/Mentor, Christopher Hamilton, University of Utah, Medical student, Role of hypoxia and VEGF inhibition on Mueller cell health
2016	Advisor/Mentor, Mariam Alam, University of Utah, Biology Student, Genotype – Phenotype relationship in choroidal neovascularization
2016 - Present	Advisor/Mentor Alex Cheng. Automated Computer Analysis of Vascular patterns in OIR. First Place in the Engineering Electrical & Computer Science Senior Division, Salt Lake City Valley Science and Engineering Fair in The University of Utah. Salt Lake Valley Science and Engineering Fair SLVSEF "Using Machine Learning and Image Segmentation to Analyze Retinal Blood Vessel Densities.
2018	Advisor/Mentor Alexandra Montoya University of Utah Medical Student. Peripheral retinal findings in eyes of patients with Coats' disease.
2020	Advisor/Mentor John Mark Albrecht. University of Utah Medical Student. Classification and analysis of distinct IVNV characteristics using generic Unet machine learning architecture.
2021	Advisor/Mentor Sarah Lee. Using Machine Learning in characterizing angiogenesis.

**Faculty**

2001 - 2003	Advisor/Mentor, Janet McColm, PhD, Louisiana State University. Senior Research Associate, LSU Eye Center, New Orleans, LA
2003 - 2006	Advisor/Mentor, Janet McColm, PhD, University of North Carolina. Effect of leukemia inhibitory factor in retinal development, Senior Research Associate, Chapel Hill, NC
2009 - 2010	Advisor/Mentor, Erika Wittchen, University of North Carolina. Assistant professor in molecular and cell biology, effects of Rap1a and ap1b on RPE barrier function and models of AMD
2011 - Present	Advisor/Mentor, Marielle Young, MD. University of Utah. Retinopathy of Prematurity

2012 - Present	Advisor/Mentor, Julia Shulman, MD. University of Utah. Preeclampsia risk in ROP
2013 - Present	Advisor/Mentor, Haibo Wang MD-PhD, University of Utah. Activation of RAP1 Inhibits NADPH oxidase-dependent ROS generation in retinal pigment epithelium and reduces choroidal neovascularization.
2016 - Present	Advisor/Mentor, Stela Vujosevic, MD. Contract Professor at The School of Ophthalmology University of Padova Italy. The Leadership Development Program for Women at ARVO.
2020	Advisor/Mentor, Irina De la Huerta MD PhD. Assistant Professor of Ophthalmology, Vanderbilt University School of Medicine. Effects of glucose in photoreceptor expression of inflammatory cytokines in diabetic retinopathy.
2020	Eileen Hwang, MD PhD, Assistant Professor of Ophthalmology, University of Utah, Vitreous in Stickler disease and familial exudative vitreoretinopathy
2020	Brian Stagg, MD PhD, Assistant Professor of Ophthalmology, University of Utah, Improving Glaucoma Care Using a Scalable Decision Support System

### **Graduate Students**

2007 - 2008	Advisor/Mentor, Pete Geisen, first year graduate student, the role of VEGF189 in choroidal endothelial migration and neovascular AMD
2012	Advisor/Mentor, Sai Karthik Vemuri, University of Utah. Quantification of retinal plexuses in animal models of VEGF regulations.
2013	Advisor/Mentor, Jeff Yarch. University of Utah. Neurobiology & Anatomy student.
2018 - Present	Advisor/Mentor, Eric Kunz. University of Utah. Machine Learning to characterize pathologic from physiologic angiogenesis in OIR models.
2018 - 2024	Advisor/Mentor, Aniket Ramshekar, University of Utah. Rap1/IQGAP1 interactions in Macular Degeneration.

### **Mentorship** **(Outside of** **University)**

- Stela Vujosevic, MD PhD
- Xi Chen, MD PhD
- Irina de la Huerta, MD PhD
- Ann Marie Lobo Chan, MD
- Jesse Berry, MD
- Shilpa Kodati, MD
- Sally Ong, MD
- Helene Leger, MD PhD
- Emily Cole, MD PhD
- Eileen Hwang. MD PhD
- Eugenia Greig, MD
- Tammy Hsu, MD
- Ollya Fromal, MD
- Alison Chu, MD

### **Educational Lectures**

#### **Didactic Lectures**

1990 - 1993	Ophthalmic Photography Teaching Lectures, SUNY Buffalo, Buffalo, NY; Director of Ophthalmic Photography Services; 8-10 Ophthalmic photography students, COMTs and COTs/year; 100 hours/year
1990 - 1993	Didactic Lectures on Retinal Disease, SUNY Buffalo, Buffalo NY; Chief of the Retina Service; 9-12 Residents and 3 medical students/year; Twelve 1 hour courses/year

- 1993 Management of Retinal Tears Without Detachment; New England Medical Center, Boston MA; 9-12 Ophthalmology Residents; 1 hour lecture
- 1995 Retinopathy of Prematurity; New England Medical Center, Boston, MA; 9-12 Ophthalmology Residents; 1 hour lecture
- 1997 Features in AMD Support Ischemia in Pathogenesis; Macular Disease Research Center; Schepens Eye Research Institute, Harvard University; 1 hour lecture
- 1997 Retinal Disease Cell Biology; Schepens Eye Research Institute, Harvard University; 1 hour lecture
- 1997 Retinopathy of Prematurity: Current Thinking and Management; Retina Conference, New England Eye Center, Tufts University School of Medicine, Boston, MA, 8-12 Ophthalmology Residents; 1 hour lecture
- 1999 Current Management in Retinopathy of Prematurity; Retina Conference, New England Eye Center, Tufts Residents; 1 hour session University School of Medicine, Boston, MA; 9-12 Ophthalmology Residents
- 2000 Current Management in Retinopathy of Prematurity; New England Medical Center, Boston, MA; 10-12 residents; 1 hour talk, New England Medical Center, Tufts University School of Medicine
- 2000 Current Treatment in ARMD; Macular Disease Research Center, Harvard University; 1 hour lecture
- 2000 Clinical Diseases Associated with Angiogenesis; Massachusetts Institute of Technology, Boston, MA; 15 graduate students; 3 hour talk
- 2001 Non-Diabetic Retinal Vascular Disease, Inherited Macular Disease, and Acquired Macular Disease, Ophthalmology Residency Training, Louisiana State University
- 2001 Vitreous Surgery, Retinal Detachment Repair, and Retinal Laser Surgery, Ophthalmology Residency Training, Louisiana State University
- 2001 Laser: Retinal Implications, Ophthalmology Residency Training Louisiana State University
- 2002 - 2003 Founded REST: Retinal Educational Sessions on Tuesdays. Weekly one and one-half hour educational session with two fellows, residents, and technicians. Includes didactic lessons where residents and fellows present fluorescein angiography sessions open to residents, fellows, and researchers with invited PhDs and clinician scientists (Initiated September 2002) Louisiana State University.
- 2002 Residency Lecture Session, Ophthalmology Residency Training, Louisiana State University
- 2002 Diabetic Retinopathy and the Eye Exam; LSU Medical Student Lecture, 2 ½ hour case discussions with 160 freshman students
- 2006 Orientation for New Residents, Retinal Drawing and Basic Anatomy, University of North Carolina
- 2009 Residents' Day, Gender and Eye Health: World Sight Day, University of North Carolina, Chapel Hill, NC
- 2010 Resident's talk at the University of North Carolina on "Proliferative Retinopathies Sickle Cell, ROP, Vein Occlusion." Chapel Hill, North Carolina
- 2010 Resident's Talk at the University of North Carolina on "Immune Responses and Inflammation in Ophthalmic Diseases.", Chapel Hill, North Carolina
- 2010 Resident's talk at the John A. Moran Eye Center on "Age-Related Macular Degeneration."
- 2011 Resident's talk at the John A. Moran Eye Center, "Pediatric Retina."
- 2012 Resident's talk at the John A. Moran Eye Center, "AMD."
- 2012 Resident's talk at the John A. Moran Eye Center, "Pediatric Retina."
- 2013 Resident's talk at the John A. Moran Eye Center, "Diabetic Retinopathy."

- 2013 Medical Research Interest Group, monthly lecture “Medical Research Interest Group”. University of Utah.
- 2014 Retinal Vascular Development and Disease. Visual Neuroscience Course Lecture Series. University of Utah, School of Medicine.
- 2014 Residents talk. John A. Moran Eye Center, "AMD"
- 2014 Residents talk. John A. Moran Eye Center, "Pediatric Retina"
- 2014 Residents talk. John A. Moran Eye Center, "Hypothesis Generation"
- 2015 Utah Ophthalmology Society, “Women’s Eye Health”
- 2015 Residents talk John A. Moran Eye Center “Generating a Hypothesis”
- 2016 Residents talk John A. Moran Eye Center “Generating a Hypothesis”
- 2017 Residents talk John A. Moran Eye Center “Diabetic Retinopathy Part 1”Roles
- 2018 Interdepartmental Program in Neuroscience Student Retreat Talk, “Angiogenesis in Ocular Diseases”. University of Utah.
- 2018 Residents talk John A. Moran Eye Center “Generating a Hypothesis”
- 2018 Residents talk John A. Moran Eye Center AMD1
- 2019 Invited Speaker for the Loris and David Rich Lecture Series in Visual Science at University of Alabama. “Regulation of Angiogenesis in AMD”. January 2019. Invited Speaker Vision Research Seminar University of Colorado. ”Inhibiting Pathologic Angiogenesis and Extending Physiologic Angiogenesis in ROP”. April 2019.
- 2019 Residents talk John A. Moran Eye Center “Generating a Hypothesis”
- 2019 “Regulation of Angiogenesis in Retinal Disease”. Basic Science Seminar Talk. Emory University.
- 2020 “Science as a Clinician” Creative and Critical Thinking Talk MSRP University of Utah May 27, 2020.
- 2021 MSRP Introduction to Clinician Scientist and Summer Program. University of Utah. June 9, 2021.
- 2021 Translational Research Day at the John A. Moran Eye Center “Erythropoietin after vascular occlusion: implication in ROP and diabetic retinopathy”. September 2021. MSRP Introduction to NEUSC 6100 class: "Vasculogenesis & Retinal Disorders" talk for the University of Utah. November 4, 2021.

**Department/Division Conferences**

- 1990 - 1993 Fluorescein Angiogram Conferences, SUNY Buffalo, Buffalo NY; Chief of the Retina Service; 9-12 Residents/20-30 medical students/year; Weekly, 1-1½ hours
- 1997 - 1999 Fluorescein Angiography Conferences; Director of Retina Fellowship at Schepens Retina Associates; 2 Surgical Fellows/year and 1-7 Fellows from other local & international retina fellowships; 1 hour sessions; 2 years
- 2010 - Present Fluorescein Angiography and Surgical Conferences; 20/year, one hour, residents and uveitis and retina fellows

**Continuing Education**

**CE Courses Developed**

- 2011 Overview of utilization of Bevacizumab (Avastin) for ROP - AAO. Orange County Convention Center. Orlando, Florida

**CE Courses Taught**



1991 - 1993	Early Treatment Diabetic Retinopathy Study; American Academy of Ophthalmology annual national meeting, Anaheim, CA; Atlanta, GA; Chicago, IL; 3 hour course
1991 - 1993	Combined Clinical/Ophthalmic Photography Fluorescein Angiography Conferences; SUNY Buffalo, Rochester Institute of Technology; 3 hour course
1991	Age-Related Macular Degeneration CME course; Buffalo Optometric Society, Buffalo, NY (Regional Meeting)
1994	Examination of Macula; New England College of Optometry; 1 hour course
1994	Clinical Features of Age-related Macular Degeneration; New England College of Optometry; 1 hour course
1997	Recent Work on Angiogenesis in Retinal Diseases; Schepens Eye Research Institute Clinical Faculty Meeting, Boston, MA, November 11, 1997; 20-30 SERI Scientists and Clinicians; 1 hour lecture
2001	Retinopathy of Prematurity; invited lecture to area pediatricians; Louisiana State University; Baton Rouge, LA
2002	Retinopathy of Prematurity; article for Pediatric Review, Children's Hospital; New Orleans, LA
2003	Dietary Supplements in ARMD; invited lecture for NC Society of Eye Physicians and Surgeons and UNC Ophthalmology department, Grandover Resort and Conference Center; Greensboro, NC
2008	UNC Eye Symposium: Insights and Updates. New Treatments for ROP: Data from Lab and Clinical Research.
2009	UNC Eye Symposium: What's New in ROP? Chapel Hill, NC
2011 - 2012	Overview of utilization of Bevacizumab (Avastin) for ROP. American Association of Ophthalmology. Orange County Convention Center. Orlando, FL
2014	Women's Eye Health. Live PowerPoint webinar presentation and quiz. Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO).

## **BIBLIOGRAPHY**

### **PEER-REVIEWED JOURNAL ARTICLES (note discrepancies in NCBI and NEI are due to some articles having Hartnett E instead of Hartnett ME)**

1. Krohel GB, Tobin DR, **Hartnett ME**, Barrows NA. (1982). Divergence paralysis. *Am J Ophthalmol*, 94(4), 506-10.
2. Mangan KF, **Hartnett ME**, Matis SA, Winkelstein A, Abo T. (1984). Natural killer cells suppress human erythroid stem cell proliferation in vitro. *Blood*, 63(2), 260-9.
3. Lazarus HM, **Hartnett ME**, Reed MD, Murphy BF, Lass JH. (1987). Comparison of the prophylactic effects of 2-deoxycytidine and prednisolone for high-dose intravenous cytarabine- induced keratitis. *Am J Ophthalmol*, 104(5), 476-80.
4. **Hartnett ME**, Gilbert MM, Richardson TM, Krug JH Jr, Hirose T. (1990). Anterior segment evaluation of infants with retinopathy of prematurity. *Ophthalmology*, 97(1), 122-30.
5. **Hartnett ME**, Weiter JJ, Garsd A, Jalkh AE. (1992). Classification of retinal pigment epithelial detachments associated with drusen. *Graefes Arch Clin Exp Ophthalmol*, 230(1), 11-9.
6. **Hartnett ME**, Hirose T, Richardson TM, Garsd A, Gilbert MM, Krug J Jr. (1992). Intraocular pressure determination in infants with severe retinopathy of prematurity. *Graefes Arch Clin Ex Ophthalmol*, 230(5), 406-10.

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  43. Escaravage GK, Cohen KL, **Hartnett ME**, Patel SB, Armstrong BB, Janowski CM. (2004). Diabetic Retinopathy, Visual Acuity, and Quality of Life after Phacoemulsification in Patients with Diabetes Mellitus [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 303, 12.
  44. **Hartnett ME**, Geisen P, McColm JR. (2004). Effects of Leukemia Inhibitory Factor on Rat Retinal Vascular Development [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 1907, 78.
  45. McColm JR, Geisen P, **Hartnett ME**. (2004). Exogenous LIF Attenuates Retinal Vascularization in Rat [Abstract]. Symposium on Retinal and Choroidal Angiogenesis Meeting. Nashville, TN.
  46. McColm JR, Geisen P, Schaeffer A, Eason E, **Hartnett ME**. (2004). Expression of VEGF and PEDF in a rat model of ROP: VEGF increases more after multiple oxygen fluctuations compared to a single hypoxic episode [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
  47. Geisen P, Simhan J, McColm JR, **Hartnett ME**. (2004). Intravitreal Injection of Triamcinolone Reduces Extent of Retinal Neovascularization in a Rat Model of OIR [Abstract]. Symposium on Retinal and Choroidal Angiogenesis Meeting. Nashville, TN.
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  49. Geisen P, McColm JR, **Hartnett ME**. (2004). Retinal Cell Injury in a Rat Model of Retinopathy of Prematurity [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 737, 29.
  50. **Hartnett ME**. (2004). Testing of Visual Acuity and Maximizing Visual Function in Subjects with Chromosomal Abnormalities [Abstract]. World Congress on Chromosome Abnormalities, San Antonio, TX, 12.
  51. McColm JR, Geisen P, **Hartnett ME**. (2005). Exogenous Leukemia Inhibitory Factor Attenuates Retinal Vascularization [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
  52. **Hartnett ME**, Geisen P, McColm JR, Wittchen ES, Burrige K. (2005). PI 3-kinase mediates Choroidal Endothelial Cell Transmigration of the Retinal Pigment Epithelium and Involves Active Rac [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
  53. Escaravage GK, Cohen KL, Patel SB, **Hartnett ME**, Armstrong BB, Janowski CM. (2005). Quantitation of Perifoveal and Optic Disc Hyperfluorescence After Phaco and pCIOL in Patients With Diabetes Mellitus [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
  54. Geisen P, McColm JR, **Hartnett ME**. (2005). Soluble Vascular Endothelial Growth Factor Promotes Endothelial Cell Transmigration Across the Retinal Pigment Epithelium [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
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57. Peterson LJ, Geisen P, McColm JR, Wittchen E, Burrige K, **Hartnett ME.** (2006). The role of RPE matrix and RPE contact in choroidal endothelial cell migration [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
58. Martiniuk DJ, McColm JR, Geisen P, Peterson LJ, Saito Y, Smith W, **Hartnett ME.** (2006). Triamcinolone acetonide reduces intravitreal neovascularization and central capillary density in a rat model of oxygen induced retinopathy in neonatal rats [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
59. King B, Geisen P, McColm JR, Peterson L, **Hartnett ME.** (2006). VEGF isoform expression in RPE in transmigration of primary human choroidal endothelial cells across ARPE-19 [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL.
60. **Hartnett ME.** (2006) The Role of Cell-Associated VEGF in Choroidal Endothelial Cell Transmigration. Macula Society (International Society), San Diego, CA.
61. Uppal A, Saito Y, Sutton DK, Geisen P, Cui G, Peterson LJ, **Hartnett ME.** (2007). Effects of Supplemental Oxygen Treatment on Oxygen-Induced Retinopathy in Neonatal Rats [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 3410/B557.
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63. Sutton DK, Martiniuk D, Geisen P, Peterson L, Saito Y, **Hartnett M.** (2007). Intravitreal Triamcinolone Injection Significantly Increases Retinal Arterial Tortuosity in the Rat Oxygen-Induced Retinopathy Model [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 3406/B553.
64. Peterson LJ, Geisen P, Saito Y, Lu X, Martiniuk D, Cui G, **Hartnett ME.** (2007). Neutralizing Antibody to VEGF164 Reduces IVNV and Capillary Density in a Rat Model of Oxygen-Induced Retinopathy [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 3411/B558.
65. Rosenberg P, Radionchenko Y, Geisen P, N Dure F, Cohen K, Thompson H, **Hartnett M.** (2007). Predictors of Postoperative Macular Edema in Diabetic and Nondiabetic Patients Undergoing Phacoemulsification-6 Month Results [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 1393/B449.
66. Geisen P, Zayed M, Parise LV, **Hartnett ME.** (2007). Vegf 189 Isoform Plays an Important Role in Retinal Pigment Epithelium/Choroidal Endothelial Cell Transmigration [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 2526/B473.
67. Watson J, Garg S, **Hartnett ME.** (2008). Clinical Outcomes From Intravitreal Bevacizumab Injection [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 318/D639.
68. Budd SJ, Cheney RE, **Hartnett ME.** (2008). Intravitreal Injections of a VEGF Receptor 2 Inhibitor Reduces Filopodia Length in Endothelial Tip Cells in the Rat Model of Oxygen Induced Retinopathy [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 516/A442.
69. Zayed MA, Wells MB, Rodriguez D, **Hartnett ME.** (2008). Maternal Pre - Eclampsia Contributes to the Severity of Infant Retinopathy of Prematurity [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 1392/A562.

70. Martiniuk DJ, Zhao Z, Wallace DK, **Hartnett ME**. (2008). Reducing the Bioactivity of VEGF With a Neutralizing Antibody Significantly Reduces Arteriole Tortuosity in a Rat Model of Oxygen - Induced Retinopathy [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 1409/A579.
71. Byfield G, **Hartnett ME**. (2008). Signaling Through gp130 and the JAK/STAT Pathway Play a Role in Intravitreal Neovascularization and VEGF Expression in the OIR Rat Model [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 532/A458.
72. Culp W Jr., Budd S, Geisen P, Lu X, Saito Y, **Hartnett ME**. (2008). The Role of Vegf164 in Intravitreal Neovascularization Using a Rat Model of Oxygen Induced Retinopathy [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 2637/A362.
73. Geisen P, Wittchen E, **Hartnett ME**. (2008). Vegf 189 Isoform Is Preferentially Upregulated in Retinal Pigment Epithelium Upon Contact With Choroidal Endothelial Cells [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 862/D680.
74. Zayed MA, Uppal A, Wells MB, Rodriguez D, **Hartnett ME**. (2008). Effects of Maternal Pre-eclampsia on Severity of Infant Retinopathy of Prematurity [Abstract]. The Retina Society, Scottsdale, AZ.
75. Byfield G, Parker A, Budd S, **Hartnett ME**. (2009). In the Presence of VEGF, Choroidal Endothelial Cells Increase Production of Reactive Oxygen Species in a Dose and Time Dependent Manner [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 1187/D1149.
76. Budd S, Parker A, **Hartnett ME**. (2009). NAC Decreases Reactive Oxygen Species Production for in-vitro Choroidal Endothelial Cells Stimulated With VEGF [Abstract]. Association for Research in Vision and Ophthalmology International Meeting, Fort Lauderdale, FL, 3841/A134.
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78. Scott IU, VanVeldhuisen PC, Oden NL, Ip MS, Blodi BA, **Hartnett ME**. (2010). Baseline Factors Predictive of visual Acuity and Central Retinal thickness outcomes in Patients with Macular Edema Secondary to Retinal Vein Occlusions in the Standard are versus corticosteroid for Retinal Vein Occlusion (SCORE) Study [Abstract].
79. Ulrich JN, Moyer S, **Hartnett ME**. (2010). Characteristics and Treatment Outcomes of Pediatric Retinal Vascular Malformations [Abstract].
80. Hartmann J, Huang W, Budd S, Barton K, Richardson A, **Hartnett ME**. (2010). Modulation of Vascular Endothelial Growth factor and Pigment Epithelial Derived Factor by alternating periods of hyperoxia and hypoxia in a relevant model of retinopathy of prematurity [Abstract].
81. **Hartnett ME**. (2011). VEGF Mediated Stat3 Activation Contributes to Retinal Avascularity in Rat Model of ROP. Association for Research in Vision and Ophthalmology [Abstract]. Ft. Lauderdale, FL.
82. Wittchen ES, Burrige K, **Hartnett ME**. (2011). Rap1 GTPase Is Involved In RPE Cell Barrier Function [Abstract].
83. Nishimura E, McCloskey M, Jiang Y, Smith GW, Wang H, **Hartnett ME**. (2011). The Effect of Laser-Induced CNV in Rap1b-deficient Mice [Abstract].
84. Haibo W, Byfield G, **Hartnett ME**. (2011). Vegf Mediated Stat3 Activation Contributes To Retinal Avascularity In Rat Model Of Rop [Abstract].
85. **Hartnett ME**, Jiang Y, Hale M, Wang H, Smith GW. (2011). Intrauterine Growth Restriction Alters Retinal IGF-1 Levels in Newborn Rats [Abstract].

86. **Hartnett ME.** (2011). Success of early limited core Vitrectomy in double Penetrating Globe Injuries [Abstract]. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, FL.
87. Smith GW, Culp WD, Byfield G, Kafri T, Flannery J, **Hartnett ME.** (2011). Targeting Mueller Cell-derived VEGF With Short Hairpin RNA [Abstract].
88. **Hartnett ME.** (2011). Targeting Mueller cell-derived VEGF with short hairpin RNE [Abstract]. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, FL
89. **Hartnett ME.** (2011). Intrauterine Growth Restriction Alters Retinal IGF-1 Levels in Newborn Rats [Abstract]. Association for Research in Vision and Ophthalmology. Ft. Lauderdale, FL.
90. Shulman JP, Sider S, Moshirfar M, Harrie R, **Hartnett ME.** (2011). Success of Early Limited Core Vitrectomy in Double Penetrating Globe Injuries [Abstract].
91. Nishimura E, McCloskey M, Jiang Y, Smith GW, Wang H, Wittchen ES, Koide R. **Hartnett ME.** (2012). 8-CPT-2-O-Me-cAMP, a Rap1 activator, suppresses laser-induced CNV in Mice. Poster session presented at The Association for Research in Vision and Ophthalmology, Ft. Lauderdale, Florida.
92. Jiang Y, Numpang B, Yu Baifeng, Wang Haibo, Smith GW, McCloskey M, Patel S, DiGeroniimo R, **Hartnett ME,** Lane R. (2012). Decreased IGF1 Expression Associated with Avascular Retina in Model of Retinopathy of Prematurity. Poster session presented at The Association for Research in Vision and Ophthalmology, Ft. Lauderdale, Florida.
93. Wang H, Wittchen ES, Shi D, Li DY, **Hartnett ME.** (2012). The small GTPase Rap1 regulates intracellular ROS generation in RPE. Poster session presented at The Association for Research in Vision and Ophthalmology (ARVO). Ft. Lauderdale, Florida.
94. Wang H, Nishimura E, McCloskey M, Wittchen ES, **Hartnett ME.** (2012). Activation of Rap1 reduces Reactive Oxygen Species in Retinal Pigment Epithelium and Choroidal Neovascularization in an Animal Model. The American Ophthalmology Society (AOS). Charleston, SC
95. Yang Z, Wang H, Jiang Y, Mccloskey M, **Hartnett ME.** (2013) The combined effect with Erythropoietin and VEGF in retinal angiogenesis. The Association for Research in Vision and Ophthalmology (ARVO). Seattle, Washington.
96. **Hartnett ME,** Morrison M, Page G, Cotten M, Murray J, DeAngelis M. (2013). Candidate Gene Study of Retinopathy of Prematurity in Extremely Low Birthweight Infants from the Neonatal Research Network. The Association for Research in Vision and Ophthalmology (ARVO). Seattle, Washington.
97. Wang H, McCloskey M, Wittchen ES, **Hartnett ME.** (2013). Activation of Rap1 prevents tumor necrosis factor alpha-induced ROS generation in RPE. The Association for Research in Vision and Ophthalmology (ARVO). Seattle, Washington.
98. Jiang Y, McCloskey M, Wang H, Yang Z, Strange J, Kafir T, Flannery JG, Greenberg K, Hammond S, **Hartnett ME.** (2013). Knockdown of Müller cell specific VEGF reduces retinal neovascularization in a rat model of retinopathy of prematurity. The Association for Research in Vision and Ophthalmology (ARVO). Seattle, Washington.
99. **Hartnett ME.** (2014). Targets Knockdown of Muller Cell VEGF 164 Safely & Effectively Inhibits Intravitreal Neovascularization in Rat ROP Model. The Macula Society Annual Meeting. Key Largo, Florida.
100. **Hartnett ME.** (2014). VEGF Receptor Activates and Interacts With Erythropoietin Receptor to Cause Pathologic Angiogenesis. Retina Society Annual Meeting, Philadelphia, PA.
101. Wang H, Jiang Y, **Hartnett ME.** (2014). Thy-1 regulates VEGF-induced choroidal endothelial cell migration. The Association for Research in Vision and Ophthalmology (ARVO), Orlando, FL.
102. Jiang Y, Wang H, Culp D, Yang Z, Fotheringham L, Flannery J, Hammond S, Kafri T, **Hartnett ME.** (2014). Inhibition of endothelial growth factor splice variant inhibits pathologic neovascularization safely in model of retinopathy of prematurity. American Ophthalmological Society (AOS). New York City, NY.



103. Gambhir D, Jiang Y, Smith GW, Yang Z, Wang H, Fotheringham L, **Hartnett ME**. (2014). Müller cell derived VEGF164 knockdown reduces retinal neovascularisation in the rat model of retinopathy of prematurity. The Association for Research in Vision and Ophthalmology (ARVO), Orlando, FL.
104. Wang Haibo, Wittchen E. and **Hartnett ME**. (2014). The small GTPase Rap1 regulates intracellular ROS generation in RPE. The Association for Research in Vision and Ophthalmology (ARVO), Orlando, FL.
105. Wang Haibo, Yu Xing and **Hartnett ME**. (2016) IQGAP1 regulates the interaction of VEGFR2 and CCR3 in Rac1 mediated choroidal endothelial cell migration. (2015) ARVO, Denver, Colorado.
106. Wang Haibo, Han Xiaokun, Deane Sadiki, Bretz A. Colin, Becker Silke, Jingtong Liu, Kevin Yang and **Hartnett ME**. Inhibition of Choroidal Neovascularization in Rap1b<sup>-/-</sup> Mice by Self complimentary-AAV2-delivered Constitutively Active Rap1a in Retinal Pigment Epithelium. ARVO, Seattle, WA.
107. Bretz CA, Wang H, Becker S, Divoky V, Prchal J, and **Hartnett ME**. (2016). Erythropoietin receptor signaling contributes to the development of pathologic retinal angiogenesis. ARVO, Seattle, WA.
108. Han Xiaokun, Jingtong Liu Angelina, Kunz Eric, Bretz Colin A., Haibo Wang and **Hartnett ME**. (2016). Inhibition of Uncoupling Protein 2 Promotes Postnatal Growth and Physiologic Retinal Vascular Development in a Rat Model of Oxygen Induced Retinopathy. The Association for Research in Vision and Ophthalmology (ARVO), Seattle, Washington.
109. Becker Silke, Wang Haibo, Yu Baifeng, Lane Robert H., **Hartnett ME**, (2016). Neovascular changes and Angiogenic Factor Production During Combined Intrauterine Growth Restriction and Oxygen-Induced retinopathy. The Association for Research in Vision and Ophthalmology (ARVO).
110. **Hartnett ME**. (2016). Thy-1Induces Activation and Migration of Choroidal Endothelial Cells: Relevance to Neovascular Age-related Macular Degeneration. The Retina Society. San Diego, CA. Research in Vision and Ophthalmology (ARVO), Seattle, Washington.
111. Ramshekar Aniket, Bretz Colin, Prchal Josef and **Hartnett ME**. Erythropoietin Receptor Signaling and its Role in Retinal Angiogenesis. The University of Utah School of Medicine Research Trainee Symposium. Park City, UT. September 8, 2016.
112. **Hartnett ME**. (2017) Clinical Trials on Anti-VEGF and other therapies in diabetic retinopathy. The Association for Research in Vision and Ophthalmology (ARVO). Baltimore, Maryland.
113. Kunz Eric, Bretz Colin A., Divoky V. and **Hartnett ME**. (2017). Constitutive erythropoietin receptor signaling exacerbates pathologic choroidal neovascularization in an animal model. The Association for Research in Vision and Ophthalmology (ARVO). Baltimore, Maryland.
114. Han Xiaokun, Wang Haibo and **Hartnett ME**. (2017). Inhibition of Uncoupling Protein 2 Promotes Physiologic Retinal Vascularization via Activation of GLUT1 and S6K1. The Association for Research in Vision and Ophthalmology (ARVO). Baltimore, Maryland.
115. Becker Silke, Brown R., Brown A., Fung C. and **Hartnett ME**. (2017). Analysis of Wnt pathway components during combined intrauterine growth restriction and oxygen-induced retinopathy. The Association for Research in Vision and Ophthalmology (ARVO). Baltimore, Maryland.
116. Ramshekar Aniket, **Hartnett ME** and Coats Brittany. Quantifying Changes in Retinal Vessel Morphology as a Diagnostic Precursor to Aberrant Angiogenesis in Retinopathy of Prematurity. The 20th Annual University of Utah Frank Tyler Fall Medical Student Research Symposium. Park City, UT. September 7, 2017.
117. Vajzovic Lejla, Baumal Caroline R, Berrocal Audina M, **Hartnett ME** and Ells Anna L. (2017). Diagnosis and Management of Pediatric Retina Dilemmas. (AAO) Annual Meeting. New Orleans, LA.

118. Wang Haibo, Han Xiaokun, Sacks B. David and **Hartnett ME**. (2018) Serine phosphorylation of IQGAP1 regulates VEGF-mediated Rac1 activation and choroidal endothelial cell migration. ARVO, Honolulu, Hawaii.
119. **Hartnett ME**. (2018) Specific Knockdown of Muller Cell Vascular Endothelial Growth Factor (VEGF) thins Photoreceptors without reducing Retinal Function via Increased Expression of Retinal Neurotrophic Factors in a Model of Retinopathy of Prematurity (ROP). Macula Society Annual Meeting 2018. Beverly Hills, California.
120. Bretz CA, Kunz E, Suwanmanee T, Kafri T, and **Hartnett ME**. (2018). Endothelial Cell STAT3 Knockdown Inhibits Intravitreal Neovascularization in a Rat Model of Oxygen Induced Retinopathy. ARVO; Honolulu, HI.
121. Simmons A, Kunz E, Wang H, Bretz CA, Suwanmanee T, Kafri T, and **Hartnett ME**. (2018). Knockdown of endothelial cell VEGFR2 reduces intravitreal neovascularization in the rat model of Retinopathy of Prematurity. ARVO; Honolulu, HI.
122. Wang Haibo, Ramshekar Aniket, Kunz Eric, Hauswirth William A. and **Hartnett ME**. (2019). VMD2 Promoter-mediated Gene Therapy Optimizes Active Rap1a Expression in the Retinal Pigment Epithelium of Wild Type Mice. ARVO, Vancouver, Canada.
123. Simmons A, Kunz E, Bretz CA, Wang H, Suwanmanee T, Kafri T, and **Hartnett ME**. (2019). Knockdown of the erythropoietin receptor in endothelial cells extends physiological retinal vascular development in a model of retinopathy of prematurity. ARVO, Vancouver, Canada.
124. Kunz E, Cheng A, Bretz CA, Simmons A. and **Hartnett ME**. (2019). Generic UNet machine learning architecture can be trained to accurately and consistently identify retinal vascular features. ARVO, Vancouver, Canada.
125. **Hartnett ME**, Wang Haibo; Ramshekar Aniket, Kunz Eric. (February 2021). Oxysterols Transform Choroidal Endothelial Cells into Fibrosis: Implications in Poorly-responsive MNV in AMD. 44th Annual Macula Society Meeting; Virtual Meeting.
126. **Hartnett ME**, Haibo Wang, Aniket Ramshekar, Eric Kunz. (May 2021). Mechanism of Fibrosis in Experimental Model of Age-related Macular Degeneration. 157th Annual American Ophthalmological Society Meeting; Virtual Meeting.
127. Wang Haibo, Kunz Eric, Ramshekar Aniket and **Hartnett ME**. (2021). Serine Phosphorylation of IQGAP1 Regulates Choroidal Endothelial Activation and Neovascularization. ARVO Annual Meeting 2021. Virtual.
128. Ramshekar Aniket, **Hartnett ME**. (2021). Elucidating the role of EPOR signaling in an experimental model of neovascular age-related macular degeneration. ARVO Annual Meeting 2021. Virtual.
129. Ramshekar Aniket, **Hartnett ME**. (May 2021). Identifying sex as a biologic variable in tamoxifen-inducible Cre-LoxP knockout mice. University of Utah's Sex, Gender, Women's Health Across the Lifespan 2021 Symposium; Virtual.
130. Ramshekar Aniket, **Hartnett ME**. (May 2021). Investigating a Mechanism to Prevent Active Rac1-mediated Choroidal Neovascularization. Virtual talk at Annual Neuroscience Program Student Symposium; Salt Lake City, UT.
131. Ramshekar Aniket, **Hartnett ME**. (August 2021). Identifying sex as a biologic variable in tamoxifen-inducible Cre-LoxP knockout mice. Women in Ophthalmology 2021 Summer Symposium; Hybrid Meeting.
132. Ramshekar Aniket, Bretz Collin and **Hartnett ME**. (May 2022). Hierarchical Cluster Analysis of VEGF-induced STAT3-Mediated Genes in Human Retinal Microvascular Endothelial Cells. ARVO 2022 Annual Meeting; Denver, CO.
133. Kraker Jessica, Amer Mona, Schimmenti Lisa, **Hartnett ME** and Hwang Eileen. (May 2022). Incidence of Retinal Detachment in Type 1 and Type 2 Stickler Syndrome. ARVO 2022 Annual Meeting; Denver, CO.

134. Hwang Eileen, Morgan Denise, **Hartnett ME** and Coats Brittany. (May 2022). Comparison of segmentation methods for measuring collagen fiber density in confocal reflectance images of the vitreous. ARVO 2022 Annual Meeting; Denver, CO.
135. Cung Thaonhi, Kunz Eric, Ramshekar Aniket, Bretz Colin, Brown Ashley, Divoky Vladimar, Fung Camille and **Hartnett ME**. (May 2022). Maternal Uteroplacental Insufficiency Protects Offspring from Oxygen-Induced Vascular Loss Through Erythropoietin Receptor Mediated Signaling. ARVO 2022 Annual Meeting; Denver, CO.
136. Parra Maria, Arango Francisco, Granados Silvia, Rodriguez Harold and **Hartnett ME**. ARVO 2022 Annual Meeting. Prevalence of retinopathy of prematurity in Colombia. Denver, CO.
137. Leah Owen, Xiaohui Li, Kent Taylor, Susan Ostmo, Y.-D. Chen, Aaron Coyner, Kemal Sonmez, **Mary Elizabeth Hartnett**, Robison Chan, Margaret DeAngelis, Michael Chiang, J. Peter Campbell, Jerome Rotter. Elucidating the role of MEMO1 in VEGF-triggered signaling in retinal microvascular endothelial cells. ARVO 2023 Annual Meeting; New Orleans, LA.
138. Aniket Ramshekar, Chris Wallace-Carrete, Chandler J. Zaugg, Jasmine Nguyen, **M. Elizabeth Hartnett**. Prenatal Supplementation of Lutein and Zeaxanthin are Beneficial against Oxygen-Induced Retinopathy (OIR) in *Bco2*<sup>-/-</sup> Macular Pigment Mice. ARVO 2023 Annual Meeting; New Orleans, LA.
139. Arunkumar Ranganathan; Binxing Li; Emmanuel Kofi Addo; **Mary Elizabeth Hartnett**; Paul S Bernstein. Prenatal Carotenoid Supplementation With Lutein or Zeaxanthin Ameliorates Oxygen-Induced Retinopathy (OIR) in *Bco2*<sup>-/-</sup> Macular Pigment Mice. ARVO 2023 Annual Meeting; New Orleans, LA.
140. Aniket Ramshekar, Mary Elizabeth Hartnett. Poster session presented at Advances in Pediatric Retina (APR) Meeting. Elucidating the role of MEMO1 in VEGF-triggered signaling in retinal microvascular endothelial cells. Santa Clara, CA.
141. Lydia Sauer, Mary Elizabeth Hartnett. Poster session presented at Advances in Pediatric Retina (APR) Meeting. Vascularization into the peripheral avascular retina accelerated following single intravitreal bevacizumab (0.25mg) compared to age and birth weight matched ROP controls. Santa Clara, CA.

## ORAL PRESENTATIONS

### Meeting Presentations (without printed abstracts)

#### International

- 1997 International Symposium in Ocular and Orbital Echography Panel on Ultrasonography. Sao Paulo, Brazil.
- 1997 Importance of Ultrasonography in Management of Advanced Retinopathy of Prematurity; International Symposium in Ocular and Orbital Echography. Sao Paulo, Brazil.
- 1997 Directional Ultrasound for Treatment of Retinal Breaks Associated with Hemorrhage; International Symposium in Ocular and Orbital Echography. Sao Paulo, Brazil.
- 1999 Aging Retina and Early Degeneration; Boston, MA.
- 2004 The Senses; (in conjunction with Bronya Keats, PhD, Charles Berlin, PhD) at the World Congress on Chromosome Abnormalities San Antonio, TX.
- 2005 Features Predictive of Progressive Stage 4 Retinopathy of Prematurity. First International Pediatric Retina Meeting, Key West FL.
- 2009 Plus disease in Retinopathy of Prematurity, presented at the Association of Pediatric Retinal Surgeons International Meeting, Duck Key, FL.
- 2009 Current Thoughts on Retinopathy of Prematurity. Presented at the Pan American Ophthalmological Organization. San Francisco, CA.

- 2010 Gene-environment Interactions and Retinal Disease. Association for Research in Vision and Ophthalmology (ARVO), Ft. Lauderdale, Florida.
- 2010 Retinopathy of Prematurity: Genetics and Environment. Association for Research in Vision and Ophthalmology (ARVO), Ft. Lauderdale, Florida.
- 2011 VEGF Induced Activation of Rac1 and NADPH Oxidase in Choroidal Endothelial Cells Leads to Choroidal Neovascularization In Vivo. International Symposium on Ocular Pharmaceuticals & Therapies (ISOPT). Vienna, Austria.
- 2013 The Role of Age-related CCR3 Activation in Choroidal ECS in AMD. Association for Research in Vision and Ophthalmology (ARVO). Seattle, Washington.
- 2014 Targeted Knockdown of VEGF164 Safely & Effectively Inhibits Intravitreal Neovascularization. Association of Pediatric Retina Surgeons (APRS) Annual Meeting 2014. Cabo San Lucas, Mexico.
- 2014 Studying Mechanisms in ROP. Symposium Presentation. Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting. Orlando, Florida.
- 2014 RPE Barriers in AMD. SIG Presentation. Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting. Orlando, Florida.
- 2015 Active Rap1 inhibits TNF-induced CEC Migration via NADPH oxidase and NFκB mediated Rac1 Activation. Retina Society Annual Meeting. Paris, France.
- 2015 Rationale, Evidence and Safety for Anti VEGF in Proliferative Angiogenesis. International Conference in Advanced Retinal Teaching (ART) 2015 of the Medical University Vienna. Vienna, Austria.
- 2016 Experimental Models of Retinopathy Based on Preterm Infant Stress. (APRS) Annual Meeting. Los Cabos, Mexico.
- 2016 Pediatric Retina: Pearls to Diagnose and Treat Retinopathy of Prematurity. (AAPOS) Annual Meeting. Vancouver, Canada.
- 2016 Studying Effects of Intrauterine Growth Restriction on Retinopathy of Prematurity with Rodent Models. International Society for Eye Research (ISER). Tokyo, Japan.
- 2017 Retinopathy of Prematurity Diagnosis and Management. XXXIII Congreso Panamericano de Oftalmología (PAAO) 2017. Lima, Perú.
- 2018 Activation of Neuroprotective Mechanisms after Inhibition of VEGF in Retinopathy models. Association of Pediatric Retinal Surgeons (APRS) Annual Meeting 2018. Cabo San Lucas, Mexico.
- 2018 Discovering mechanisms in the changing and Diverse pathology of ROP. Weisenfeld Award and Lecture. Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting. Honolulu, Hawaii.
- 2018 Neuro and Glial-Vascular Effects in the Pathogenesis of Diabetic Retinopathy. American Diabetes Association (ADA) Annual Meeting Orlando FL.
- 2018 IQGAP1 Regulates VEGF-induced Choroidal Endothelial Cell Migration through Rac1. International Society for Eye Research-Belfast, Northern Ireland, UK.
- 2018 IQGAP1 Regulates VEGF-induced Choroidal Endothelial Cell Migration through Rac1. 18<sup>th</sup> EURORETINA Congress. Vienna, Austria.
- 2019 Research in Academia. Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting 2019. Vancouver, Canada.
- 2019 Regulating VEGF Signaling to Reduce Stage 3 and Extend Normal Vascular Development. Advances in Pediatric Retina APR19. Salt Lake City, UT.
- 2019 ROP Panel on Management Including Surgery. Advances in Pediatric Retina APR19. Salt Lake City, UT.
- 2019 Moderator International Ocular Circulation Society Meeting 2019. Extending physiologic retinal vascularization by specific knockdown of retinal endothelial cell vascular endothelial growth factor receptor 2 (VEGFR2). Portland, OR.

- 2019 Moderator Retina Society Meeting 2019. Protective Effects of Erythropoietin in Oxygen-induced retinopathy. London, England.
- 2020 Co-moderator EVRS ROP Virtual Course 2020. Experimental Evidence Supporting Safe Strategies of anti-VEGF in ROP: Vaso and Neuro-Protective Aspects.
- 2021 Moderator Advances In Pediatric Retina APR21. Pediatric Retina Research Panel. Virtual meeting. Panelist Advances In Pediatric Retina APR21. International Classification of ROP Update (ICROP3). Virtual meeting.
- 2021 Keynote Discussion Panel Advances In Pediatric Retina APR21. Challenges in the Treatment for Severe Retinopathy of Prematurity. Virtual meeting.
- 2021 Panelist Advances In Pediatric Retina APR21. Management of Advanced Coats' Disease. Virtual Meeting.
- 2021 Panelist Advances In Pediatric Retina APR21. Discussion of the Formation of a Pediatric Retina Society. Virtual Meeting.
- 2021 Panelist Retina World Congress' 2022 E-Live Women in Retina. Definitely Not Child's Play: Pediatric Retinal Detachments. February 27, 2022. Virtual Meeting.
- 2022 Co-Moderator Women's Week 2022 at The University of Utah. Shift, Strive, and Thrive. Hybrid Meeting.
- 2022 "You Think You Fancy, Huh?" The Great Debate session, on the topic of Avastin vs Laser for ROP. Women in Ophthalmology Summer Symposium 2022. Virtual Meeting.
- 2022 "Preeclampsia Confers Protection through Erythropoietin Signaling in an Experimental Model of Retinopathy of Prematurity." At the 46<sup>th</sup> Annual Macula Society Meeting. Miami Beach, FL. February 17, 2023.
- 2023 Pathophysiology of ROP: Basic understanding, controversies and future. Advances in Pediatric Retina (APR) Meeting. September 7, 2023. Santa Clara, CA.
- 2023 Panelist Advances in Pediatric Retina (APR) Meeting, Coats' Disease. September 9, 2023. Santa Clara, CA.
- 2024 Current Diagnosis and Management of Retinopathy of Prematurity: Knowledge from Research and Future Studies. Newborn Brain Society Webinar. January 11, 2024. Virtual Meeting.
- 2024 Regulation of VEGF Extends Developmental Intraretinal Angiogenesis in Premature Infant. 47<sup>th</sup> Macula Society Meeting. La Quinta, Palm Springs, CA. February 9, 2024.

**National**

- 1994 Age-Related Macular Degeneration; The Celebration of Vision Research in Boston, Washburn Lecture Series, National Eye Institute, Boston Museum of Science, Boston, MA
- 1996 Moderator, University of Illinois, Chicago, International Surgical Forum on Retinopathy of Prematurity; October 1996 and 1997
- 2000 The Effects of Cell-Cell Interactions and Growth Factors on RPE Barrier Function; Scientific Advisory Committee; Schepens Eye Research Institute; Boston, MA
- 2000 Moderator: Prevention and Rehabilitation; Vision for the Future – A Scientific Symposium Celebrating 50 Years of Excellence in Vision Research; Boston, MA
- 2001 Retinal Surgery: The Team Approach; American Society for Operating Room Nurses ASORN annual meeting; New Orleans, LA
- 2002 Retinal Surgery: The Team Approach; American Society of Ophthalmic Registered Nurses Annual Meeting; Orlando, FL
- 2003 Dietary Supplements in Age-related Macular Degeneration, presented in Anaheim CA at the National Association of Technical Personnel in Ophthalmology Meeting
- 2004 Surgical Considerations in Pediatric Retina: Stage 4 ROP; Pediatric Ophthalmology and Strabismus Section. Women in Ophthalmology National Annual Meeting

- 2006 Presentation to Advisory Committee for the 2006 Burroughs Wellcome Fund Clinical Scientist Awards in Translational Research, Research Triangle Park, NC
- 2007 Anti-VEGF Agents to Inhibit IVNV and Avascular Retina in a Model of ROP, Association of Pediatric Retinal Surgeons, St. Thomas
- 2009 On Behalf of the Diabetic Retinopathy Clinical Research Network. A Randomized Trial Comparing Intravitreal Triamcinolone Acetonide to Focal/Grid Photocoagulation for Diabetic Macular Edema. The Retina Congress, New York City, NY
- 2011 The Association of Increased VEGF Expression with Avascular Retina in a Rat. American Ophthalmological Society Meeting. Dana Point, CA.
- 2012 Personal and Historical Insights into the Henrietta Lacks Story. The Association for Research in Vision and Ophthalmology (ARVO). Ft. Lauderdale, Florida.
- 2012 Rap1. American Ophthalmological Society (AOS) annual meeting. Charleston, SC.
- 2013 Targeted silencing of VEGF reduces aberrant intravitreal angiogenesis in model of retinopathy of prematurity. American Ophthalmological Society (AOS), Annual Meeting. La Jolla, California.
- 2014 Inhibition Of Vascular Endothelial Growth Factor Splice Variant Inhibits Pathologic Neovascularization Safely in Model of Retinopathy of Prematurity. American Ophthalmological Society (AOS) Annual Meeting. New York City, NY.
- 2014 Wang Haibo, Jiang Yanchao and Hartnett ME. Thy-1 regulates VEGF-induced choroidal endothelial cell migration. ARVO, Orlando, FL.
- 2014 Retinopathy of Prematurity: The Role of VEGF in Pathogenesis and Health. WIO Summer Symposium. Leesburg, VA.
- 2014 Pediatric Retina Disease. Retina Subspecialty Day. AAO Annual Meeting, Chicago, IL.
- 2014 Genetic Variants Associated with Severe Retinopathy of Prematurity in Extremely Low Birth Weight Infants. AAO Annual Meeting, Chicago IL.
- 2015 Wang Haibo, Yu Xing and Hartnett ME. IQGAP1 regulates the interaction of VEGFR2 and CCR3 in Rac1 mediated choroidal endothelial cell migration. ARVO, Denver, Colorado.
- 2015 Mechanisms of Aberrant Angiogenesis. Harvard Medical School, Annual Meeting & Alumni Reunion Weekend.
- 2015 Mechanisms of Anti-VEGF and Prospects for Future Treatments of ROP. Retina Subspecialty Day. AAO Annual Meeting, Las Vegas NV.
- 2016 Wang Haibo, Han Xiaokun, Deane Sadiki, Bretz A. Colin, Becker Silke, Angelina Jingtong Liu, Kevin Yang and ME Hartnett. Inhibition of Choroidal Neovascularization in Rap1b<sup>-/-</sup> Mice by Self complimentary-AAV2-delivered Constitutively Active Rap1a in Retinal Pigment Epithelium. ARVO, Seattle, WA.
- 2016 Han X, Liu A.J, Kunz E, Bretz CA, Hartnett ME and Wang H. Inhibition of Uncoupling Protein 2 Promotes Postnatal Growth and Physiologic Retinal Vascular Development in a Rat Model of Oxygen Induced Retinopathy. ARVO; Seattle, WA.
- 2016 Bretz CA, Wang H, Becker S, Divoky V, Prchal J, and Hartnett ME. Erythropoietin receptor signaling contributes to the development of pathologic retinal angiogenesis. ARVO, Seattle, WA.
- 2016 Thy-1 Activated Choroidal Endothelial Cell: Relevance to AMD. The Retina Society 49<sup>th</sup> Annual Scientific Meeting. San Diego, CA.
- 2016 Ramshekar Aniket, Bretz Colin, Prchal Josef and Hartnett ME. Erythropoietin Receptor Signaling and its Role in Retinal Angiogenesis. The University of Utah School of Medicine Research Trainee Symposium. Park City, UT. September 8, 2016.

- 2017 Kunz E, Bretz CA, Divoky V, Prchal J, and Hartnett M.E. Constitutive erythropoietin receptor signaling exacerbates pathologic choroidal neovascularization in an animal model. ARVO; Baltimore, MD.
- 2017 Moderator Pediatric Retina Disease, Retina Society Annual Meeting 2017. Boston Massachusetts.
- 2017 Panelist Section VIII Pediatric Retina, AAO Annual Meeting 2017. New Orleans, LA.
- 2018 Anti-VEGF Treatment for ROP: Clinical Trials and Phenotypic Differences Worldwide. AAO Annual Meeting 2018. Chicago, IL.
- 2018 Diagnosis and management of pediatric retina dilemmas. AAO Annual Meeting 2018. Chicago, IL.
- 2018 New Horizons and Next Steps. Retinopathy of Prematurity Conference 2018, Children's Hospital of Philadelphia. Philadelphia, PA.
- 2018 Wang Haibo, Han Xiaokun, Sacks B. David and Hartnett ME. Serine phosphorylation of IQGAP1 regulates VEGF-mediated Rac1 activation and choroidal endothelial cell migration. ARVO, Honolulu, Hawaii.
- 2018 Simmons A, Kunz E, Bretz CA, Wang H, Suwanmanee T, Kafri T, and Hartnett M.E. Knockdown of the erythropoietin receptor in endothelial cells extends physiological retinal vascular development in a model of retinopathy of prematurity. ARVO; Vancouver, Canada.
- 2018 Simmons A, Kunz E, Wang H, Bretz CA, Suwanmanee T, Kafri T, and Hartnett ME. Knockdown of endothelial cell VEGFR2 reduces intravitreal neovascularization in the rat model of Retinopathy of Prematurity. ARVO; Honolulu, HI.
- 2018 Bretz CA, Kunz E, Suwanmanee T, Kafri T, and Hartnett ME. Endothelial Cell STAT3 Knockdown Inhibits Intravitreal Neovascularization in a Rat Model of Oxygen Induced Retinopathy. ARVO, Honolulu, HI.
- 2019 Bretz CA, Kunz E, Suwanmanee T, Kafri T, and Hartnett ME. Endothelial Cell STAT3 Knockdown Inhibits Intravitreal Neovascularization in a Rat Model of Oxygen Induced Retinopathy. ARVO; Honolulu, HI
- 2019 VMD2 Promoter Shows Optimal Specificity and Expression of Protective Rap1a in Retinal Pigment Epithelium. The Macula Society Annual Meeting 2019. Bonita Springs, FL.
- 2019 Wang Haibo, Ramshekar Aniket, Kunz Eric, Hauswirth William A. and Hartnett ME. VMD2 Promoter-mediated Gene Therapy Optimizes Active Rap1a Expression in the Retinal Pigment Epithelium of Wild Type Mice. ARVO, Vancouver, Canada.
- 2019 Simmons A, Kunz E, Bretz CA, Wang H, Suwanmanee T, Kafri T, and Hartnett M.E. Knockdown of the erythropoietin receptor in endothelial cells extends physiological retinal vascular development in a model of retinopathy of prematurity. ARVO, Vancouver, Canada.
- 2019 Kunz E, Cheng A, Bretz CA, Simmons A, Hartnett ME. Generic UNet machine learning architecture can be trained to accurately and consistently identify retinal vascular features. ARVO, Vancouver, Canada.
- 2019 Pediatric Vitreoretinal Surgical Techniques. ASRS July 2019. Chicago, IL.
- 2019 Diagnosis and management of pediatric retina dilemmas. AAO Annual Meeting 2019. San Francisco, CA.
- 2020 Panelist Flame On, Not Flame Out. Fighting Burnout and Passing the Torch. The Macula Society Annual Meeting 2019. Bonita Springs, FL.
- 2020 Regulating VEGF signaling to Reduce Stage 3 and Extend Normal Vascular Development. Advances in Pediatric Retina 2019, Salt Lake City, UT. June 2019.

- 2020 Moderator Pediatric Retina, ROP Symposium 2. ASRS Virtual Meeting, July 25, 2020.
- 2020 Panelist Pediatric Retina Subspecialty Day. American Association of Ophthalmology (AAO) November 2020.
- 2020 Panelist AOS/ABO Symposium, Professionalism in Ophthalmology: Maintaining Resilience and Avoiding Burnout. American Association of Ophthalmology (AAO) November 2020.
- 2021 Course Pediatric Retina Conditions. American Association of Ophthalmology (AAO) November 2020.
- 2021 Osterols Transform Choroidal Endothelial Cells. The Macula Society Annual Virtual Meeting 2021.
- 2021 Mechanism of Fibrosis in Experimental Model of Age-related Macular Degeneration. American Ophthalmology Society (AOS). Virtual meeting May 21-23, 2021.
- 2021 OR Increased Disease Detection, yet Treatment Barriers Identified, with Point of Care Retinopathy Screening. Matthew Wahl. Julie Neuberger, Michelle L. Litchman, Gladys S. Adjei-Poku, Angela Fagerlin, **Mary Elizabeth Hartnett**, Simon Fisher. American Diabetes Association 81<sup>st</sup> Scientific Sessions. June 25-29, 2021.
- 2021 “Barriers to Follow-Up Specialized Eye Care Following Retinopathy Identification with Traditional vs. Autonomous Artificial Intelligence (AI) Camera.” Matthew Wahl MD, Rabia Kiani MBBS, Julie Neuberger BS, Bonnie Wilson BSN, Mary Elizabeth Hartnett, Simon Fisher.
- 2022 “One Clinician Scientist’s Journey”. American Ophthalmological Society Council Meeting. October 15, 2022. Chicago, IL.
- 2022 Panelist Future Vision Forum Meeting, Role of Computational Biology in Basic Science Research, October 31, 2022. Los Angeles, CA.
- 2023 “Familial Exudative Vitreoretinopathy (FEVR) - A Disease with Many Presentations.” Pacific Retina Club. San Francisco, CA. June 3, 2023
- 2023 “Incorporating Research into your Career Plans along with Timelines.” 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium. Chicago, IL. August 18, 2023.
- 2023 Co-Panelist 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium, Type of Practice – Pros and Cons of Academics, Private Practice, Hybrid Types of Practice. August 18, 2023. Chicago, IL.
- 2023 Co-Panelist 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium, Important Factors to Consider in Choosing a Practice: Contract Negotiations, Partners, Location, Changing Jobs, Marketing, Private Equity, Innovations, Social Media. August 18, 2023. Chicago, IL.
- 2023 Co-Panelist 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium, Ethics Round Table. August 18, 2023. Chicago, IL.
- 2023 Co-Moderator 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium, Discussion of OCT, Medical, and Surgical Cases. August 18, 2023. Chicago, IL.
- 2023 “Update of the Management of Retinopathy (ROP) – Classification, Neuro and Vasoprotection.” 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium. Chicago, IL. August 19, 2023.
- 2023 Moderator 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium, Diabetic Retinopathy, Retinal Vascular Diseases, and the Macula. August 19, 2023. Chicago, IL.
- 2023 “Causes and Potential Treatments of Advanced Forms of AM.” 24<sup>th</sup> Annual Advance Vitreoretinal Techniques and Technology Symposium. Chicago, IL. August 20, 2023



- 2023 “Challenges in Managing ROP in the Evolving Neonatal Landscape”. American Academy of Ophthalmology (AAO) Conference. San Francisco, CA. November 4, 2023.
- 2023 “Blindness and Vision Loss in the United States: Do Women Bear a Greater Burden?” American Academy of Ophthalmology (AAO) Conference. San Francisco, CA. November 4, 2023.
- 2023 “Oxygen Levels for Premature Infants Controversy (Patz).” American Academy of Ophthalmology (AAO) Conference. San Francisco, CA. November 5, 2023.

**Local/Regional**

- 1980 Inhibition of Erythroid Burst Forming Unit (BFU-E) Proliferation In Vitro by Sodium Aurothiomalate: Studies on its Mechanism of Action; Albany Medical College, Albany, NY
- 1990 Retinopathy of Prematurity; Erie Ophthalmology Club, Erie, PA
- 1991 Ocular Manifestations of AIDS; Western NY Fall Conference on AIDS, Buffalo, NY
- 1995 Maximizing Progress in the Premature Infant Through Timely Interdisciplinary Rehabilitation, Spaulding Rehabilitation Hospital, Boston, MA
- 1995 Current Thinking & Management in Retinopathy of Prematurity (ROP); AER, Eighth Annual Symposium on the Medical and Educational Issues Related to the Young Child with Vision Impairments, including Multiple Disabilities
- 1995 Retinopathy of Prematurity; Perkins School for the Blind, Watertown, MA
- 1996 Diabetic Retinopathy; Ocular Symposium; Boston, MA
- 1996 Current Thinking & Management in Retinopathy of Prematurity (ROP); American Association of Certified Orthoptists, Eastern Region Meeting, Boston, MA
- 1996 What’s New - Update and Perspectives; New England Ophthalmological Society, Boston, MA
- 1997 Retinopathy of Prematurity; Perkins School for the Blind, Watertown, MA
- 1997 Age-Related Macular Degeneration; Ocular Symposium; Boston, MA
- 1998 Improving Care and Understanding of Retinopathy of Prematurity: Current Directions in Treatment; Perkins School for the Blind, Watertown, MA
- 1999 Age-Related Macular Degeneration; talk and panel open to the public. Visual Rehabilitation Program, South Shore Hospital, South Weymouth, MA
- 1999 Treatment Strategies in AMD; Visual Rehabilitation Center at Massachusetts Eye and Ear Infirmary, Boston, MA
- 1999 Discussant for paper, “Wide Angle Viewing Systems for Vitreoretinal Surgery”; Interactive New England Retina Specialists Meeting, New England Ophthalmological Society, Boston, MA
- 2002 Uveitis and Retinitis; LSU/Ochsner Clinic Foundation Broadcast Lecture Series
- 2002 Retinal Laser: Techniques and Indications; LSU/Ochsner Clinic Foundation Broadcast Lecture Series
- 2002 Retinal Detachment and Repair; LSU/Ochsner Clinic Foundation Broadcast Lecture Series Vitreous Surgery
- 2002 Retinopathy of Prematurity; Louisiana Association of Technical Personnel in Ophthalmology; New Orleans, LA
- 2002 Age-Related Macular Degeneration; public lecture; Lighthouse for the Blind, New Orleans, LA
- 2005 Barriers to Diabetic Eye Screening: A Qualitative Approach, University of North Carolina

- 2005 Mechanisms of VEGF Related to AMD, University of North Carolina
- 2005 Diabetic Retinopathy. Frontiers in Medicine: Complications of Diabetes Mellitus. Clinical Challenges and Research Advances, University of North Carolina
- 2006 Whitehead Lecture Panel for Medical Students: Ophthalmology and Otolaryngology, Chapel Hill, UNC
- 2007 Retinopathy of Prematurity: Recent Progress and Future Challenges, invited speaker to Science of Disease, Duke University, Durham, NC
- 2007 Age-related Macular Degeneration: New Thoughts regarding Causes and Treatment, Case Department of Pharmacology
- 2007 Updates on Treatment and Pathophysiology on Retinopathy of Prematurity, Case Department of Ophthalmology
- 2008 Considerations of new treatments in ROP: Knowledge from animal models. New England Eye Center and Tufts Medical School
- 2008 Examination of the Relationship of Diabetes and Hypertension to the Onset of Eye Disease, specifically Cataracts and Glaucoma, among African Americans. The Institute for Health, Social, and Community Research at Shaw University M-RISP Minority Elderly Research Center Shaw University Project Export R24 Program on Racial Health Disparity Research
- 2008 Neovascular age-related macular degeneration: studies using retinal pigment epithelial and choroidal endothelial cocultures. Inflammation and Adhesion PPG, University of North Carolina
- 2009 Plus Disease in ROP: Determining Mechanism, presented to Wilmer Retina Service
- 2009 Retinopathy of prematurity: Research and clinical aspects, presented to Moran Eye Center, Salt Lake City, UT
- 2009 Aberrant Angiogenesis: Impact on Clinical Retinopathy of Prematurity, seminar to department of Cell and Molecular Physiology, University of North Carolina, Chapel Hill NC
- 2010 Retinal Detachment. John A. Moran Eye Center, Salt Lake City, Utah
- 2010 Understanding the Changing Role of Oxygen as a Causative Factor in Retinopathy of Prematurity. 61st Annual Post-Graduate Review. American Medical Association. Syracuse, New York
- 2011 RPE-Choroidal EC Interactions in EC Transmigration: Modeling Choroidal Neovascularization. John A. Moran Eye Center, Salt Lake City, Utah
- 2011 Pathologic Angiogenesis in Retinal Diseases: Focus on ROP. Utah North Star Optometry Seminar. John A. Moran Eye Center. Salt Lake City, Utah
- 2011 Retinopathy of Prematurity. Utah North Star Optometry Seminars. John A. Moran Eye Center, Salt Lake City, Utah
- 2011 Delayed Retinal Vascular Development: Relevance to ROP. Pediatric Vascular Development Meeting. Duck Key, Florida
- 2011 Impaired Retinal Vascular Development; Relevance to ROP. Pediatric Retinal Surgeons. Duck Key, Florida
- 2011 ROP - Update from Clinical and Lab. Grand Rounds, John A. Moran Eye Center. Salt Lake City, Utah
- 2011 Grand Rounds and Research Talk.
- 2011 Retinopathy of Prematurity: Clinical Management. Brown University. Providence, Rhode Island
- 2011 Pathologic Angiogenesis in Models of Retinopathy. Brown University. Providence, Rhode Island
- 2011 Research on age-related Macular Degeneration. University of Utah. Salt Lake City, Utah

- 2011 Animal Models in the study of Human Retin visual diseases. University of Utah. Salt Lake City, Utah
- 2011 Retinal Vascular Development and Disease. John A. Moran Eye Center, Salt Lake City, Utah
- 2012 Retina Lecture: Diabetic Retinopathy. John A. Moran Eye Center. Salt Lake City, Utah
- 2012 Mechanisms involved in Neovascular Age-related Macular Degeneration. Vision Discovery Institute Distinguished Seminar Series. Augusta, Georgia
- 2012 Considerations Regarding Anti-VEGF Treatments in Severe ROP. Faculty Alumni Day. John A. Moran Eye Center, University of Utah, Salt Lake City, Utah
- 2021 CTSI Talk: Clinical Observations Drive Scientific Hypotheses Scientific Inquiry Informs Clinical Care. University of Utah. Salt Lake City, Utah
- 2024 Moderator for Retina Session. Bay Area Young Investigators Conference. Palo Alto, CA.

### **International Invited/Visiting Professor Presentations**

- 2006 Prevention of Choroidal Endothelial Cell Transmigration: Toward Preventing Vision Loss in Neovascular AMD. Invited to ARVO Summer Eye Research Conference, Sanibel FL
- 2007 Considerations of anti-VEGF agents in Retinopathy of Prematurity. Portuguese Congress of Ophthalmology. Porto, Portugal.
- 2007 Progressive Stage 4 Retinopathy of Prematurity. Annual Portuguese Congress of Ophthalmology. Porto, Portugal
- 2008 Foundation Fighting Blindness Visions 2008 conference. Visiting expert speaking on Age-related macular degeneration and involved in 2 sessions of “Doctor is In” discussing gene therapy and new clinical trials for retinal degenerations. Crystal City, MD.
- 2009 Featured invited speaker at 115th annual French Congress of Ophthalmology: "Research Insights into Retinopathy of Prematurity", Paris, France.  
Gene-environment Interactions and Retinal Disease.” Retinopathy of Prematurity: Genetics and Environment.” Association for Research in Vision and Ophthalmology (ARVO), Ft. Lauderdale, Florida
- 2010 VEGF-Induced Activation of Rac1 and NADPH Oxidase in Choroidal Endothelial Cells Leads to Choroidal Neovascularization in vivo. ISOPT. Vienna, Austria
- 2011 Upregulated Chemokine Receptor - 3 by Age - Related Stresses Promotes Choroidal EC Migration via VEGF-Dependent and Independent Mechanisms. ISOPT. Vienna, Austria.
- 2011 Progressive Stage 4 Retinopathy of Prematurity. 54th Annual Portuguese Congress of Ophthalmology. Porto, Portugal.
- 2012 Delayed Retinal Angiogenesis by VEGF-mediated downregulation of Erythropoietin, Pediatric Retinal Vascular Meeting. San Francisco, California.
- 2013 Rap1 GTPase improves RPE barrier integrity and resists choroidal neovascularization. Macula Society Meeting. Dana Point, California.
- 2013 Moderator for Basic Science/AMD and Diabetic Retinopathy. Macula Society Meeting. Dana Point, California.
- 2014 Physiologic Retina Vascular Development and ROP: What Went Wrong? 11<sup>th</sup> Annual Dialogues in Neonatal-Perinatal Medicine Conference. Duke University. Raleigh, North Carolina.

- 2015 Rationale, Evidence and Safety for Anti-VEGF in Proliferative Angiogenesis, 12. International Conference in Advanced Retinal Teaching (ART) 2015 of the Medical University Vienna, Vienna, Austria.
- 2021 "Toward Safe and Effective Treatment in Retinopathy of Prematurity" and "Update on ICROP3 classification." on June 5, 2021.
- 2022 "From the bench to the bedside: Regulating VEGF signaling to reduce stage 3 and extend normal vascular development." The Child's Eye - 7th International Congress of The Italian study Group for ROP - 1st Congress of The working Group on the sensory Organs of the Italian Society of Neonatology. Virtual talk
- 2022 "Targeting pathologic signaling to restore homeostasis in age-related macular degeneration." 2<sup>nd</sup> International Symposium on Retinal and Choroidal Angiogenesis of the University of Montreal and the Quebec Vision Health Research Network (RRSV) on October 21, 2022

**National Invited Speaker/Visiting Professor/Named Lectureships**

- 2002 Retina Repair, Vitrectomy, and Laser; Visiting Professor at University of North Carolina Department
- 2006 Current Thinking of Angiogenesis in Retinal Disease. Invited Professor to Case University, Cleveland OH
- 2006 Chalk Talk: Angiogenesis in Retinal Diseases. Invited Professor to University of Rochester, Rochester, NY
- 2007 Anti-VEGF Agents in a Model of Retinopathy of Prematurity, invited speaker University of Rochester, Rochester NY
- 2007 Retina as a Model of Angiogenesis and to Study Retinal Diseases, invited speaker University of North Carolina, annual Vascular meeting.
- 2007 New Thoughts regarding Treatment for Neovascular Age-related Macular Degeneration, invited speaker to University of Chicago Department of Ophthalmology, Chicago IL
- 2008 Mayo Clinic Invited Professorship. Retinopathy of Prematurity: Clinical and Research Experience
- 2010 Science and Disease Lecture, "Retinopathy of Prematurity: Angiogenesis Inhibition to Reduce Avascular Retina." Duke University, Durham, North Carolina.
- 2010 Invited talk to Residents and Faculty, "Retinopathy of Prematurity." University of Alabama, Birmingham, Alabama.
- 2011 Pathologic Antiogenesis in Models of Retinopathy. Brown University, Providence, Rhode Island
- 2011 Endothelial Transmigration in Age-related Macular Degeneration. University of Kentucky Mini Symposium. Lexington, Kentucky
- 2014 Genetic Variants Associated with ROP in Extremely Low Birth Weight Infants. Duke University Department of Ophthalmology.
- 2018 "Regulating Angiogenesis in retinal Disease". Departmental Research Seminar Series Byers Eye Institute at Stanford.
- 2019 "Pathophysiology and Treatment of Retinopathy of Prematurity." University of Massachusetts Medical School, Worcester, MA. Virtual talk.
- 2021 "Update on retinopathy of prematurity (ROP)." CLESS Lecturer at the 15<sup>th</sup> Annual Retina Symposium, University of Illinois at Chicago. Chicago, IL
- 2022 "Seeking Effective and Safe Therapies in Age-related Macular Degeneration." Stanford University, Stanford, CA.

- 2022 "Chalk Talk: Update on Retinopathy of Prematurity." Stanford University, Stanford, CA.
- 2022 "Observations from a Clinician-Scientist." Alexander R. Irvine Resident's Day and Transamerica Professorship at University of California, San Francisco. San Francisco, CA.
- 2022 "What's New in the ICROP3 Classification of ROP?" American Academy of Ophthalmology 2022 Conference Instructor Course: "Diagnosis and Management of Pediatric Retina Dilemmas". Chicago, IL.
- 2022 "Laser vs. Intravitreal Anti-VEGF: Paradigm Shift". AAO-AAPOS combined symposium entitled, "Retinopathy of Prematurity". American Academy of Ophthalmology 2022 conference. Chicago, IL.
- 2023 "Paradigm Shifts in the Management of ROP: Proof of Concept, Clinical Trials, Classification." At the Constance E. West Lectureship at The University of Cincinnati College of Medicine. Cincinnati, OH. April 13, 2023.

**Local/Regional**

- 1976 The Effect of Normal and Inactivated Erythropoietin on Transformed Target Cells in Laboratory Mice; Roswell Park Memorial Institute, Buffalo, NY Invited Research Presentation
- 2001 Retinopathy of Prematurity; invited lecture to regional pediatricians; Louisiana State University; Baton Rouge, LA
- 2002 Retinopathy of Prematurity; invited lecture to the Respiratory Care PR actioners Association Fall Symposium, East Jefferson Hospital, Metairie, LA
- 2005 Angiogenesis in Retinovascular and Choroidal Vascular Diseases, Invited Professor, Momenta Pharmaceuticals, Cambridge, MA
- 2007 Anti-VEGF Agents: Effects in an ROP Model, invited speaker to the Chandler Ophthalmology Symposium, University of North Carolina, Chapel Hill.
- 2007 Retinopathy of Prematurity: Updates on Treatment and Pathophysiology, invited speaker, Duke University, Durham NC.
- 2023 "Cases in Pediatric Retina." West Coast Retina Group Residents. San Francisco, CA. April 3, 2023

**Grand Rounds Presentations**

- 1994 Retinopathy of Prematurity; Pediatrics Grand Rounds, Beverly Hospital, Beverly, MA
- 1994 Age-Related Macular Degeneration; Grand Rounds, Spaulding Rehabilitation Hospital, Boston, MA
- 1994 Medical Grand Rounds, Low-Vision Service, Spaulding Rehabilitation Hospital, Boston, MA
- 1995 Medical Grand Rounds, Low-Vision Service, Spaulding Rehabilitation Hospital, Boston, MA
- 1995 Age-Related Macular Degeneration; Grand Rounds, Spaulding Rehabilitation Hospital, Boston, MA
- 1995 Recognizing Visual Deficits in the Rehabilitation Patient; Grand Rounds, Spaulding Rehabilitation Hospital, Boston, MA
- 1998 Current Concepts in Retinopathy of Prematurity; Neonatology Grand Rounds, Massachusetts General Hospital

2000	Treatment of Retinopathy of Prematurity; Children’s Hospital of Boston, Grand Rounds; Harvard Medical School, Boston, MA
2002	Stages 4 and 5 ROP; Visiting Professor at University of North Carolina Department Ophthalmology Grand Rounds, Charlotte, NC
2005	Retinopathy of Prematurity. Neonatology Grand Rounds. University of North Carolina
2008	Neonatology Grand Rounds, “Retinopathy of Prematurity”, University of North Carolina
2011	Retinopathy of Prematurity Current Clinical Management. Grand Rounds, Brown University. Providence, Rhode Island
2011	ROP update from Clinical and Lab. Ophthalmology Grand Rounds. University of Utah, John Moran Eye Center. Salt Lake City, Utah
2012	Retinopathy of Prematurity. Neonatal – Perinatal Conference. University of Utah, Primary Children’s Medical Center, Salt Lake City, Utah
2013	Insights into Recurrent Neovascularization after Anti-VEGF Treatment in ROP. University of Utah, John Moran Eye Center, Salt Lake City, Utah.
2013	Retinopathy of Prematurity: Current Clinical Management. Ophthalmology Grand Rounds. University of Louisville, School of Medicine. Louisville, Kentucky.
2014	Ophthalmology Grand Rounds. “Update on VEGF and Neuroprotection in Retinopathy of Prematurity”, John A. Moran Eye Center, University of Utah
2015	Obstetrics and Gynecology Grand Rounds. “Eye Health in Women”, The University of Utah. Salt Lake City, Utah.
2017	Endocrine Grand Rounds. “What’s New in Diabetic Retinopathy: Updates for the Endocrinologist?” The University of Utah. Salt Lake City, Utah.
2018	“Update on Retinopathy of Prematurity”. Eugene and Marilyn Glick Eye Institute, Indiana University School of Medicine Grand Rounds.
2019	“Current Considerations in the Management of Retinopathy of Prematurity”. Grand Rounds University of Colorado, Aurora, Colorado.
2021	“Using Gene Therapy Techniques to Translate to Treatment in Complex Disease” Grand Rounds Columbia University, virtual talk.
2021	“ICROP3 Classification”. CWRU/UH Ophthalmology Residency Alumni Grand Rounds. University Hospitals Eye Institute, Cleveland, Ohio. Virtual talk.
2023	“Regulation of Angiogenesis in Pediatric Retina.” At The West Coast Retina Group Grand Rounds. Visiting Professor. San Francisco, CA. April 3, 2023.
2023	“Cases in Pediatric Retina: Intersection of Genetics, Vasculature and Vision.” Ophthalmology Grand Rounds. The University of Cincinnati. Cincinnati, OH. April 13, 2023.

#### **OTHER SCHOLARLY ACTIVITY**

2002 - 2003	Founded Louisiana State University Eye Center Lecture Series in Ophthalmologic Research. Monthly one-hour sessions of invited regional clinical and laboratory ophthalmologic research speakers open to all ophthalmologists. (Initiated September 2002).
2003 - 2010	Developed the clinical trial studies focusing on diabetic retinopathy through the Diabetic Retinopathy Clinical Research Network (DRCR.net) University of North Carolina. Chapel Hill, North Carolina National Eye Institute Role: Site Principal Investigator
2010 - Present	Organized national Retinopathy of prematurity/Genetics study

- 2012 Organized/hosted annual Association of Pediatric Retina Surgeons, APRS meeting. Park City, Utah.
- 2016 - 2017 Developed educational module through ARVO’s Research Training Planning Committee. ARVO’s guide to human subject’s research.
- 2018 Matt Byrne MS Thesis Committee Member, “Morphology and Mechanics of Retinal Vasculature in Abusive Head Trauma.” University of Utah.
- 2020 Christopher Creveling PhD Dissertation Committee Member, “Characterization and Modeling of Vitreoretinal Adhesion in the Eye”. University of Utah.
- 2020 Emmanuel Kofi Addo Ph.D. Committee Member, "Raman Genetics: The effect of immediate versus deferred disclosure of AMD genetic risk on biomarkers of ocular and systemic carotenoid status". University of Utah.
- 2020 Aniket Ramshekar PhD Thesis Committee Chair "Investigating Rap1/IQGAP1 interactions in Macular Degeneration". University of Utah.

**LEADERSHIP TRAINING**

- 2005 AAMC Mid-Career Women Faculty Professional Development Seminar.
- 2005 Southern Women in Academic Medicine Conference. Little Rock, Arkansas
- 2014 - Present Mentor for Women in Ophthalmology (WIO)
- 2014 - Present Mentor for Women in Retina (WinR)
- 2015 - Present SOM Benning Speaker Selection Committee
- 2016 Inaugural Mentor in the ARVO Women’s Leadership Program
- 2017 - 2018 Mentor in the ARVO Leadership Development Program for Women  
Chosen to be the Representative from + for the AAO Leadership Development Program. ARVO 2017 Annual Meeting. Baltimore, MD
- 2017 AAO 2017 Annual Meeting Leadership Development Program (LDP XX, Class of 2018)  
AAO Mid-Year Forum 2018. Washington DC.
- 2018 Faculty Mentor at The University of Utah Grant Writing Academy (GWA), May 18-20, 2018. Deer Valley UT.
- 2018 AAO 2018 Annual Meeting Leadership Development Program (LDP XX, Class of 2018)
- 2019 Members in Training Career Forum, “Research in Academia”. ARVO Annual Meeting 2019, Vancouver, Canada.
- 2024 Leadership Development Program ARVO, “Pathways to Leadership Development: leading across differences. Panelist; February 6, 2024

*Mary Elizabeth Hartnett*

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M. Elizabeth Hartnett, MD, FACS, FARVO

05/01/2024

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Date