

**Brad Fortune**

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**Education**

Cornell University, Ithaca, NY	B.S.	1987	Biology / Neurobiology
SUNY College of Optometry, New York, NY	O.D.	1991	Optometry
University of California, Berkeley, CA	Ph.D.	1998	Vision Sciences

**Post-doctoral Training**

July 1991 - June 1992	Resident in Optometry, V.A. Medical Center, San Francisco, CA
Feb 1999 - Jan 2001	Post-Doctoral Research Fellow, Discoveries in Sight, Portland, OR

**Employment / Faculty Positions**

Nov 2023 – present	Van Buskirk Chair of Ophthalmic Research, Devers Eye Institute, Legacy Health, Portland, OR
June 2020 – present	Senior Scientist, Legacy Health, Portland, OR
Jan 2002 – present	Director, Clinical Electrodiagnostics Service, Devers Eye Institute, Legacy Health, Portland, OR
Jan 2002 – present	Clinical Instructor, Dept. of Ophthalmology, School of Medicine, Oregon Health & Science University, Portland, OR
Oct 2014 – present	Adjunct Professor, Department of Integrative Physiology & Neuroscience, Washington State University, Pullman/Vancouver, WA
Oct 2004 – June 2020	Associate Scientist, Legacy Health, Portland, OR
Feb 2001 - Oct 2004	Assistant Scientist, Legacy Health System, Portland, OR
July 1996 - Dec 1998	Assistant Clinical Professor, School of Optometry, University of California, Berkeley, CA
Aug 1992 - July 1996	Clinical Instructor, School of Optometry, University of California, Berkeley, CA
July 1992 - Aug 1992	Staff Optometrist, V.A. Medical Center, San Francisco, CA

**Professional Licensure**

Oregon Optometry 2824AT (2001 to present)  
California Optometry 9833 (1991 to present)

### **Awards / Honors**

Research Excellence Award, Optometric Glaucoma Society (OGS), 2023  
Glaucoma Research Society, Elected, 2022  
Thomas R. Lee Award for Glaucoma Research, BrightFocus Foundation, 2017  
President's Lecture, Optometric Glaucoma Society (OGS), 2012  
Irvin and Beatrice Borish Award, American Academy of Optometry, 2004  
Founding Member, Optometric Glaucoma Society, 2002  
Junior Investigator Award, International Society for Clinical Electrophysiology of Vision, 2000  
William C. Ezell Fellowship, American Optometric Foundation, 1997 & 1998  
Beta Sigma Kappa Optometric Honor Society, 1990

### **Professional Affiliations**

Glaucoma Research Society (2022-present)  
Association for Research in Vision and Ophthalmology (ARVO, Silver Fellow 2016, Gold Fellow 2019)  
International Society for Clinical Electrophysiology of Vision (ISCEV, 2000-present)  
American Academy of Optometry (1991-present; Fellow, 1999-present)  
Optometric Glaucoma Society (OGS, Founding Member 2002-present)  
Glaucoma Progression Scholars (Invited Member, Steering Committee, 2008-present)  
Association of International Glaucoma Societies / World Glaucoma Association (2005-present)  
International Perimetric Society (IPS) & North American Perimetric Society (NAPS, 2001-present)  
International Society for Eye Research (2010-present)  
International Ocular Circulation Society (2019-present)

### **Editorial Boards**

2018 – present	Member, Editorial Board, <i>Investigative Ophthalmology &amp; Visual Science</i>
2016 – present	Member, Editorial Board, <i>Journal of Glaucoma</i>
2022 – 2023	Co-Editor, <i>Frontiers in Ophthalmology</i> Feature Issue on "Advanced Ophthalmic Imaging in Glaucoma"
2007 – 2008	Guest Editor, Feature Issue on Glaucoma, <i>Optometry and Vision Science</i>
2005 – 2010	Associate Editor, Optometric Glaucoma Society Quarterly E-Journal

### **Invited Referee for Peer-Reviewed Archival Journals**

Acta Ophthalmologica; American Journal of Ophthalmology; Archives of Ophthalmology;  
Biomedical Optics Express; British Journal of Ophthalmology; BMC Ophthalmology;  
Clinical and Experimental Ophthalmology; Current Eye Research; Disease Models & Mechanisms;  
Documenta Ophthalmologica; European Journal of Ophthalmology; Experimental Eye Research;  
Expert Review of Ophthalmology; BMC Eye and Vision; Graefe's Archive for Clinical and  
Experimental Ophthalmology; Investigative Ophthalmology and Visual Science; JAMA  
Ophthalmology; Journal of the American Heart Association; Journal of Biomedical Optics; Journal of  
Glaucoma; Journal of Vision; JoVE; Neurology; Neuroscience; Ophthalmic and Physiological Optics;  
Ophthalmic Surgery, Lasers and Imaging Retina; Ophthalmology; Ophthalmology–Glaucoma;  
Optometry and Vision Science; Physiological Measurement; PLoS One; Progress in Retinal and Eye  
Research; Retina; Scientific Reports; Stem Cells Translational Medicine,  
Translational Vision Science & Technology; Vision Research; Visual Neuroscience

**Grant Review Panels**

2019 – present	Member, Scientific Review Committee, National Glaucoma Research program, BrightFocus Foundation, Clarksburg, MD
2019 – present	Member, Shaffer Grant Advisory Committee, Glaucoma Research Foundation, San Francisco, CA
2024 March	Member (Ad-hoc), Study Section: “Brain Imaging, Vision, Bioengineering and Low Vision Technology Development (BIVT), ZRG1 NV-P 81”, Center for Scientific Review; NIH
2020 December	Moorfields Eye Charity Research Training Fellowship, London, UK
2020 July	Reviewer, Grant Applications for “AOA Investigator Initiated Research Award,” American Optometric Association Council on Research
2020 June	Member (Ad-hoc), Study Section: “NEI Secondary Data Analysis (R21) Applications; ZEY1 VSN (02)”; National Eye Institute, Center for Scientific Review; NIH
2019 November	Member (Ad-hoc), Study Section: “NEI Genetic Epidemiology and Secondary Data Analysis; 2020/01 ZEY1 VSN (02)”; National Eye Institute, Center for Scientific Review; NIH
2019 August	Reviewer (Ad-hoc), Allergan Foundation Research Grant Applications; American Academy of Optometry Foundation.
2019 March	Member (Ad-hoc), Study Section: “Emerging Imaging Technologies in Neuroscience; ZRG1 EITN-L (08)”, Division of Neuroscience, Development, and Aging; Center for Scientific Review; NIH
2017 December	Member (Ad-hoc), Special Emphasis Panel: “Clinical Trial Readiness for Rare Neurological and Neuromuscular Diseases, ZNS1 SRB-A(14)”, National Institute of Neurological Disorders & Stroke (NINDS), Center for Scientific Review; NIH
2017 June	Member (Ad-hoc), Diseases and Pathophysiology of the Visual System (DPVS) Study Section, Center for Scientific Review; NIH
2016 January	Member (Ad-hoc), Study Section Special Emphasis Panel ZRG1 SBIB-Z (55), Center for Scientific Review, NIH
2014 October	Member (Ad-hoc), Diseases and Pathophysiology of the Visual System (DPVS) Study Section, Center for Scientific Review (CSR); NIH
2012 December	Member (Ad-hoc), Study Section (Panel/SRG 2013-01 ZGM1 TWD-7); National Institute of General Medical Sciences Special Emphasis Panel Center for Scientific Review, NIH
2012 – present	Reviewer (Ad-hoc), International Glaucoma Association Research Awards; The Royal College of Ophthalmologists & College of Optometrists, UK
2011 February	Member (Ad-hoc), National Glaucoma Research committee; American Health Assistance Foundation (AHAf)
2010 October	Member (Ad-hoc), Special Emphasis Panel ZRG1 CBC 90, Biology and Diseases of the Posterior Eye (BDPE) Study Section;

Center for Scientific Review, NIH  
 2010 February Member (Ad-hoc), Biology and Diseases of the Posterior Eye (BDPE) Study Section; Center for Scientific Review, NIH

**Other Experience / Service to Professional Organizations**

2020 February Invited Participant, “Understanding Human Retina Biology and Perception Workshop”; The National Eye Institute Audacious Goals Initiative for Regenerative Medicine, NIH-NEI, Bethesda, MD

2017 February “Advocacy Day” on Capitol Hill, Washington D.C., represented ARVO and the National Alliance for Eye and Vision Research (NAEVR) while meeting with staff members of U.S. Senators Ron Wyden (D-OR) and Jeff Merkley (D-OR).

2014 – 2017 Member (Elected) and Chair 2016-2017, Annual Meeting Program Committee, Glaucoma Section, Association for Research in Vision and Ophthalmology

2013 – present Member, Program Committee, ARVO-ISIE Imaging in the Eye Conference (International Society for Imaging in the Eye)

2013 – 2022 Member (Chair, 2016-2022), IACUC, Legacy Health, Portland, OR

2013 – 2020 Member, Steering Committee, Glaucoma Progression Scholars

2012 Member, Search Committee;  
 Chief of Ophthalmology, Devers Eye Institute, Legacy Health

2007 – 2009 Member, Basic Science Council, National Board of Examiners in Optometry  
 Representative from Ocular/Visual Biology Committee

2004 – 2009 Member, (Chair, 2007/2008) Ocular/Visual Biology–Ocular Disease/Trauma Examination Development Committee,  
 National Board of Examiners in Optometry

2008 – 2010 Chair, Program Committee, Optometric Glaucoma Society

2004 – 2007 Chair, Membership Mentoring Committee, Optometric Glaucoma Society

2002 – 2009 Member, Research Advisory Committee, Legacy Research Services,  
 Legacy Health System, Portland, OR

2002 October Primary Reviewer & *ad hoc* Member, Institutional Review Board (IRB),  
 Legacy Health System, Portland, OR

2001 – 2006 Certified Central Reader, Data Quality and Endpoint Assessment, Central Reading Center, Portland, OR (Multicentered Memantine Trial, Allergan).

1994 – 2009 Examiner/Senior Examiner, National Board of Examiners in Optometry.

1993 – 1998 Instructor, CE Therapeutics Course, U.C. Berkeley School of Optometry.

**Conference Session Moderator**

2023 October	Session Co-Moderator: “Glaucoma Supersession”, American Academy of Optometry Annual Meeting, New Orleans, LA
2022 Aug	Session Co-Moderator: “Why do retinal ganglion cells die in glaucoma?” Glaucoma Research Society, University of King’s College, Halifax, Canada
2022 Aug	Session Co-Moderator: “Structure-Function” 24th Imaging and Perimetry Society (IPS) Meeting, The Herbert Wertheim School of Optometry and Vision Science, UC-Berkeley, CA
2022 May	Session Co-Moderator: “Transplantation Methods and Models” The RGC Repopulation, Stem Cell Transplantation, and Optic Nerve Regeneration (RReSTORE) Consortium, Denver, CO
2022 May	Session Co-Moderator: “The Last Word in Glaucoma” ISER-BrightFocus Glaucoma Symposium: Concepts and Breakthroughs in Glaucoma, Atlanta, GA
2021 May	Session Moderator: “Imaging in Glaucoma I: Clinical Studies” Glaucoma Section ‘Live Paper Discussion’ (virtual), Association for Research in Vision and Ophthalmology (ARVO)
2019 October	Session Moderator: “Structural Analysis in Glaucoma” Optometric Glaucoma Society 18 <sup>th</sup> Annual Scientific Meeting
2019 April	Session Moderator: “OCT - Clinical Applications II” Multidisciplinary Ophthalmic Imaging Cross-sectional Group, Association for Research in Vision and Ophthalmology (ARVO)
2018 May	Session Moderator: “Capillaries, Blood Flow, OCT Angiography” Glaucoma Section oral presentations, Association for Research in Vision and Ophthalmology (ARVO)
2017 June	Session Moderator and Chair: “Image Reading and Grading” World Glaucoma Congress, Helsinki, Finland
2017 May	Co-organizer of the Glaucoma Section Minisymposium: “Optic Nerve Regeneration: Barriers Past and Future” for the Association for Research in Vision and Ophthalmology (ARVO)
2016 April	Session Moderator: “Glaucoma” Oral Presentations, Imaging in the Eye Conference Association for Research in Vision and Ophthalmology (ARVO)
2015 May	Session Moderator: “Glaucoma Imaging.” Oral Presentations, Association for Research in Vision and Ophthalmology (ARVO)
2015 May	Session Moderator: “Glaucoma” Oral Presentations, Imaging in the Eye Conference Association for Research in Vision and Ophthalmology (ARVO)
2014 May	Session Moderator: “Visual Fields and Visual Function.” Oral Presentations, Association for Research in Vision and Ophthalmology (ARVO)

- 2014 May Session Moderator: “Glaucoma” Oral Presentations, Imaging in the Eye Conference Association for Research in Vision and Ophthalmology (ARVO)
- 2013 May Session Moderator: “Imaging Glaucoma” Oral Presentations, Imaging in the Eye Conference Association for Research in Vision and Ophthalmology (ARVO)
- 2003 May Session Moderator: “Glaucoma: Visual Function & Electrophysiology II”, Association for Research in Vision and Ophthalmology (ARVO)
- 2001 December Session Moderator: “Glaucoma, Treatment, Electrophysiology”, American Academy of Optometry Annual Meeting

### Invited Lectures & Meeting Participation

- Oct 2023 Research Excellence Award Lecture, Optometric Glaucoma Society 21st Annual Scientific and Educational Meeting, New Orleans, LA: “*Unusual structural signs of glaucoma and progression.*”
- Oct 2023 Optometric Glaucoma Society 21st Annual Scientific and Educational Meeting, New Orleans, LA: “*Alterations of microvasculature, blood flow and hemodynamics related to glaucoma.*”
- March 2023 Department of Optometry and Vision Sciences, University of Melbourne (virtual): “*Studies on vascular and hemodynamic changes related to glaucoma*”
- Aug 2022 Glaucoma Research Society, University of King’s College, Halifax, Canada “*Directional OCT and OCT-A in imaging glaucomatous optic nerve head deformation*”
- Aug 2022 Glaucoma Progression Scholars Meeting, The Herbert Wertheim School of Optometry and Vision Science, UC-Berkeley, Berkeley, CA: “*Bench-to-bedside translation and back: optic nerve head schisis in glaucomatous progression*”
- Aug 2022 24th Imaging and Perimetry Society (IPS) Meeting, The Herbert Wertheim School of Optometry and Vision Science, UC-Berkeley, CA: (Keynote) “*Clinical-Pathologic Correlations Informing Structure-Function Relationships in Glaucoma Progression*”
- Sept 2021 Thorny Issues in Ophthalmology Conference, Devers Eye Institute, Portland, OR; “*Stem Cell Derived Retinal Ganglion Cell Transplantation*”
- June 2021 Grand Rounds Seminar, College of Physicians & Surgeons of Columbia University, Dept of Ophthalmology, Edward S. Harkness Eye Institute, NY, NY: “*Unusual Abnormalities of the Retina and Optic Nerve Head Revealed by OCT in Glaucoma*”
- Nov 2020 UC-Berkeley Vision Science Graduate Group and School of Optometry, Oxyopia Lecture Series: “*Translational studies in glaucoma research at the Devers Eye Institute*”
- Sept 2019 Thorny Issues in Ophthalmology Conference, Devers Eye Institute, Portland, OR; “*When and How Does Electrodiagnostic Testing (ERG and VEP) Help with Diagnosis?*”
- May 2019 Multidisciplinary Symposium on Ocular and Medical Imaging, Northwest Eye Surgeons, Seattle, WA; “*OCT imaging for glaucoma: What's new and what might be on the more distant horizon?*”
- March 2019 Pacific University College of Optometry, Forest Grove, OR; “*Pulling & Tugging on the Retina: Mechanical Impact of Glaucoma beyond the Optic Nerve Head*”

- March 2019 World Glaucoma Congress, Melbourne, Australia;  
*“Detecting Progression in Non-Human Primate Glaucoma”*; And:  
*“Electrophysiology is the Best Assessment of Visual Function” (Debate Counterpoint)*
- Feb 2019 Glaucoma Progression Scholars Bi-annual Meeting, Miami, FL;  
*“Progression of optic nerve head rim and circumpapillary RNFL compared using OCT”*
- Jan 2019 Moorfields International Glaucoma Symposium, London, UK;  
*“Pulling & Tugging on the Retina: Mechanical Impact of Glaucoma beyond the Optic Nerve Head”*; And: *“New imaging - where do we go from here?”*
- June 2017 World Glaucoma Congress, Helsinki, Finland;  
*“Interpreting OCT in glaucoma diagnosis and progression.”* (Session Chair); And:  
*“Advanced functional assessment of glaucoma: Update on ERG.”*
- Oct 2016 American Academy of Ophthalmology Annual Meeting, ARVO Symposium, “Paradigm Change in Ocular Imaging”, Chicago, IL: *“Retinal nerve fiber layer and the axon.”*
- May 2015 Association for Research in Vision and Ophthalmology (ARVO) Animals in Research Committee Workshop: *“Eyes on vision: in vivo imaging of animals in vision research.”* Denver, CO. *“In Vivo Assessment of Retinal Ganglion Cell Axon Structure and Function in Rodents and Non-human Primates.”*
- March 2015 Oxyopia Seminar, Indiana University School of Optometry, Bloomington, IN: *“Imaging retinal ganglion cells, their axons and transport in experimental models of optic nerve injury: implications for clinical management of glaucoma and other optic neuropathies.”*
- March 2015 Lasker/IRRF Initiative on Astrocytes and Glaucomatous Neurodegeneration Meeting, Janelia Farm Research Campus, Howard Hughes Medical Institute, Ashburn, VA.
- May 2014 Association for Research in Vision and Ophthalmology (ARVO), Glaucoma Section Minisymposium: *“Mechanisms of Axonal Damage in Optic Nerve Disease.”* Orlando, FL. *“Imaging axonal transport and degeneration.”*
- May 2014 Special Interest Group meeting: *“Polarization-sensitive optical coherence tomography for retinal imaging: What needs to be done to transfer the technology from the laboratory to the clinic?”* ARVO, Orlando, FL: *“Early stage axonal cytoskeletal damage detected in vivo by polarization-sensitive imaging in experimental glaucoma.”*
- Dec 2013 3rd Optic Nerve Conference, Obergurgl, Austria.  
*“The effect of cytoskeletal changes on imaging.”*
- Oct 2013 Ezell Research Symposium, American Academy of Optometry, Seattle, WA;  
*“Axonopathy in Glaucoma: Implications for Diagnosis and Clinical Management.”*
- Sept 2013 Glaucoma Progression Scholars Meeting, Chapel Hill, NC;  
*“The effect of age on optic nerve axon counts, SDOCT scan quality and peripapillary retinal nerve fiber layer thickness measurements in rhesus monkeys.”*
- July 2013 World Glaucoma Congress, Vancouver, B.C., Canada;  
*“Manifestations of axonopathy during early stages of experimental glaucoma.”*
- July 2013 World Glaucoma Congress, Vancouver, B.C., Canada;  
*“Advances in functional assessments in experimental glaucoma models.”*
- Mar 2013 Department of Anesthesiology & Perioperative Medicine Research Conference, Oregon Health & Science University, *“Assessment of Glaucomatous Axonopathy In Vivo.”*

- Oct 2012 President's Lecture 2012, Optometric Glaucoma Society Annual Scientific Meeting; *"Clinical Tools for Assessment of Glaucomatous Axonopathy."* Phoenix, AZ
- Sept 2012 University of Alabama at Birmingham, Department of Optometry; Clinical Visiting Scholars Program, *"Axonopathy in Glaucoma: Clinical Tools for Assessment of Glaucomatous Axonopathy."*
- Jan 2012 Dept of Optometry & Vision Sciences, University of Melbourne, Melbourne, Australia. *"Axonopathy in Glaucoma: Insights from Experimental Models."*
- Sept 2011 Glaucoma Progression Scholars Meeting, Skaneateles, NY; *"Peripillary Retinal Nerve Fiber Layer Thickness, Retardance and ERG Changes at Onset of Optic Nerve Head Surface Topography Change in Experimental Glaucoma."*
- July 2011 World Glaucoma Congress, Paris, France; *"Electrophysiology and glaucoma diagnosis."*
- June 2011 Physics in Biomedicine (PH 337/BI 410), Portland State University, Portland, OR. *"Imaging Structure and Function of the Eye."*
- Oct 2010 17th Annual Glaucoma Foundation Optic Nerve Rescue and Restoration Think Tank, NYC, NY.
- Sept 2010 34th Annual Devers Eye Institute Thorny Issues in Ophthalmology Conference: *"Axonopathy in Glaucoma: Imaging Structure and Function."* Portland, OR.
- July 2010 XIX Biennial Meeting of the International Society for Eye Research, Montreal, Canada: *"Visualization in vivo of retinal astrocytes, ganglion cells, axons and transport."*
- March 2010 Lasker/IRRF Initiative for Innovation in Vision Science Janelia Farm Research Campus, Howard Hughes Medical Institute, Ashburn, VA. The Role of Astrocytes and Other Glial Cells in Retinal Degeneration, including Glaucoma: *"Electroretinogram abnormalities in glaucoma that might reflect early optic nerve head astrocyte dysregulation."*
- July 2009 World Glaucoma Congress, Boston, USA; *"Electrophysiology and glaucoma diagnosis."*
- Jan 2009 Vision Science Research Seminar Series, School of Optometry, Univ. of Waterloo, Waterloo, Canada and Vision Science Research Program, Toronto Western Hospital Research Institute, Toronto, Canada. *"Signal and noise: can discrepancies between diagnostic measures of structure and function inform us about glaucoma?"*
- Sept 2008 Form & Function in Ocular Disease, Dalhousie University, Halifax Canada, *"When form and function converge."*
- Apr 2008 Morgan/Sarver Symposium (23<sup>rd</sup> annual), University of California, Berkeley, *"Clinical imaging tools for glaucoma diagnosis and management."*
- Mar 2008 Grand Rounds Casey Eye Institute, Oregon Health Sciences University, *"The role of multifocal ERG and VEP in the diagnosis of vision disorders: case studies."*
- Feb 2008 Oxyopia; U.C. Berkeley School of Optometry, Berkeley, CA, *"Bench to bedside: diagnostic methods for glaucoma research and clinical care."*
- July 2007 World Glaucoma Congress, Singapore; Course Co-Chair: *"Electrophysiology and glaucoma diagnosis."*
- July 2007 World Glaucoma Congress, Singapore; Basic & Clinical Science Symposium: *"Can we clinically image axonal degeneration?"*
- May 2007 Visiting Scholar Lecture, University of Alabama at Birmingham, *"Bench to bedside: diagnostic methods for glaucoma research and clinical care."*
- Dec 2005 Grand Rounds Casey Eye Institute, Oregon Health Sciences University,



- July 2005 *“The Role of Clinical Electrophysiology in the Diagnosis of Vision Disorders”*  
World Glaucoma Congress, Vienna, Austria;  
Course Chair: *“Electrophysiology and glaucoma diagnosis.”*
- Oct 2004 Oxyopia; U.C. Berkeley School of Optometry, Berkeley, CA,  
*“The role of retinal, choroidal and optic nerve blood flow in experimental glaucoma: a nested problem in rats.”*
- Jun 2004 Thorny Issues in Ophthalmology, Devers Eye Institute, Legacy Health System  
*“Is Objective Testing of the Visual System Practical?”*
- Dec 2003 Resident Lecture Series, Casey Eye Institute, Oregon Health Sciences University;  
*“Electrophysiology in Glaucoma.”*
- Dec 2002 Hirsch Research Symposium; Annual Meeting of the American Academy of Optometry:  
Caring for the Patient with Diabetes; *“New Electrodiagnostic Techniques for Diabetes”*
- Dec 2002 ARVO Sponsored Symposium; Annual Meeting of the American  
Academy of Optometry: Electrophysiologic Testing in Visual System Disease;  
*“Electrophysiologic Testing in Diabetes”*
- Dec 2002 Ellerbrock Continuing Education; Annual Meeting of the American  
Academy of Optometry: *New Ideas in Glaucoma*; *“Application of the Multifocal  
Technique for Objective Evaluation of the Visual Field in Glaucoma”*
- Nov 2002 Grand Rounds Casey Eye Institute, Oregon Health Sciences University,  
*“Recent advances in electrophysiology: the multifocal technique. Case studies.”*
- Dec 2001 Neurological Sciences Institute, Oregon Health Sciences University,  
*“Comparison of conventional and multifocal VEPs”*
- Mar 2000 Indiana University College of Optometry:  
*“Recent advances in visual electrophysiology: the multifocal technique”*
- Oct 1999 49th Annual Alumni Educational Program and Reunion;  
U.C. Berkeley School of Optometry:
- Oct 1995 45th Annual Alumni Educational Program; U.C. Berkeley School of Optometry:  
*“A Guided Tour of the Peripheral Retina for the Primary Care Optometrist”* and  
*“A Guided Tour of Macular Disease for the Primary Care Optometrist”*

### **Community Service**

- Supervision of Vision and Glaucoma Screenings, Portland, OR
- OASIS Lectures – “The Aging Eye and Vision”, Portland, OR
- Lectures to Native American Tribes – Diabetes and the Eye: Preventative Care
- Volunteer for *The Flying Doctors*, Mexico

## Teaching Experience

### A. Undergraduate Students:

1. "Pathogenesis and clinical-pathologic correlates of diabetic retinopathy."  
In: Molecular & Cell Biology of Ocular Disease.  
UC-Berkeley: Molecular & Cell Biology 135V, 1996 & 1997.
2. "Myopia, hyperopia, astigmatism and presbyopia- what are they?"  
In: The Eye & Vision in a Changing Environment  
UC-Berkeley: Optometry 10, 1995 & 1996.
3. Supervision of Summer Research Interns, Discoveries in Sight, Devers Eye Institute,  
1999-present

### B. Optometry and Vision Sciences Graduate Program (PhD) students:

1. "Color vision defects- rationale for testing." (Lectures on Clinical Color Vision Testing)  
In: Light and Color. UC-Berkeley: Vision Sciences 112: 1994-1996.
2. Senior Instructor, Light and Color Physiology. Vision Sciences 112 Laboratory: 1994-1996
3. "Anatomy and Physiology of the Eye." Vision Science 106 Discussion Section:  
Spring, 1997. Discussion section facilitator (problem-based learning series).
4. Instructor, "Teaching Methods" Vision Sciences 300, Fall 1993.

### C. Clinical Instruction of 3<sup>rd</sup> and 4<sup>th</sup>-year optometry students:

Primary Care, Ocular Disease, and Contact Lens Clinics. 1992-1998.

### D. Supervision of 4<sup>th</sup>-year Optometry Students Thesis Research Projects: UC-Berkeley 1996-8.

### E. Graduate Student Thesis Advisor, Jonathan Wall, Masters of Architecture, UC-Berkeley 1997.

### F. Supervision of Post-Doctoral Research Fellow: Dr. Bang V. Bui, OD, PhD; DIS, 2002-2004.

### G. Supervision of Post-Doctoral Research Fellow: Dr. Carla J. Abbott, OD, PhD; DIS, 2011-2013.

**Research Support****Current Support**

**R01EY030590 (PI: Fortune, B)** 9/1/2019 - 7/31/2024 (NCE) 3.0 calendar  
NIH/NEI

Role: Principal Investigator

*Advancing OCT evaluation to reveal early-stage changes in glaucoma*

Major goals: To advance novel techniques for analysis of OCT scans to reveal early-stage damage and distress of retinal ganglion cells prior to their irreversible loss in experimental glaucoma.

**R01EY030838 (MPI: Di Polo, A; Fortune, B)** 6/1/2020 - 5/31/2025 3.0 calendar  
NIH/NEI

Role: Co-Principal Investigator (MPI)

*Retinal Ganglion Cell Dendrite and Synapse Regeneration in Glaucoma: The Role of Insulin Signaling*

Major goals: to characterize novel bona fide targets for insulin-mediated dendrite regeneration and neuronal repair in glaucoma.

**U24EY033269 (MPI: Meyer, JS; Fortune, B; Sivyer, B; Ou, Y; Howell G)**  
NIH/NEI (AGI) 9/30/2021 - 7/31/2026 3.0 calendar

Role: Co-Principal Investigator (MPI)

*Overcoming Barriers to Retinal Ganglion Cell Replacement in Experimental Glaucoma*

Major Goals: To systematically test a series of manipulations to enhance the survival and integration of human induced pluripotent stem cell-derived retinal ganglion cells in the glaucomatous retina.

**R01EY034973 (MPI: Ou, Y; Sivyer, B; Fortune, B)**  
NIH/NEI (AGI) 7/1/2023 - 4/30/2028 1.8 calendar

Role: Co-Principal Investigator (MPI)

*Retinal circuit disassembly in glaucoma*

Major Goals: To systematically determine the connectivity, function, and transcriptomes of retinal ganglion cells undergoing circuit and synapse disassembly in glaucomatous primate retina.

**R01EY033733 (PI: Thomasy, S)** 3/31/2023 - 2/28/2028 0.6 calendar  
NIH/NEI

Role: Co-Investigator

*Advancing novel therapies for optic neuropathy with a nonhuman primate model.*

Major Goals: To develop a new nonhuman primate model of autosomal dominant optic neuropathy in order to advance novel treatments for retinal ganglion cell dysfunction and loss.

**R01EY031686 (PI: Gardiner, SK)** 9/30/2020 - 8/31/2024 1.2 calendar  
NIH/NEI

Role: Co-Investigator

*Blood Flow and Hemodynamics in Glaucoma.* Major Goals: This project will provide important new information about the role of blood flow in glaucoma. It is known that blood flow in the retina is altered during the disease; this project aims to determine whether that is the result of retinal ganglion cell loss, or a factor that contributes to cell loss, or both. This will be achieved by longitudinal testing of blood flow in the optic nerve head and retina in human participants with glaucoma, and comparison against

other clinical testing modalities. It will reveal new targets both for diagnostic testing and for treatment, and elucidate the processes by which glaucoma progresses and ultimately leads to blindness.

**R01EY031708 (MPI: Rizzo, JF; Jakobs TC; Sigal IA)** 9/30/2021 - 8/31/2024 1.2 calendar  
NIH/NEI

Role: Co-Investigator

*Cross-species vascular anatomy and sensitivity to intraocular pressure in glaucoma*

Major goals: to use sequential in vivo and ex vivo imaging to produce high-resolution three-dimensional maps of the vasculature and the connective tissues of the intra-orbital optic nerve in humans, monkeys, and mice in order to quantify the effects of acutely elevated IOP on the function and biomechanics of the vasculature ex vivo in all three species, and also test the effects of experimental glaucoma on vessel morphology and function in mice and monkeys. The next goal will be to test the hypothesis that features of the vasculature and its relationship with the connective tissues predisposes certain regions to compromised perfusion, and that this susceptibility is amplified by elevated IOP.

### Pending Support

### Completed Support

**R21EY031120 (PI: Meyer, JS; MPI: Fortune, B)** 8/1/2019 - 7/31/2020 1.2 calendar  
NIH/NEI

Role: Co-Principal Investigator

*Targeting the diversity of retinal ganglion cells for replacement therapy*

The major goals of this project are to establish the feasibility of transplantation of human pluripotent stem cell-derived retinal ganglion cells (hPSC-derived RGCs) into the nonhuman primate retina and to identify hPSC-derived RGC subtypes that more efficiently integrate in healthy and glaucomatous retina.

**R01 EY011610 (PI: Burgoyne, CF)** 4/1/2017 - 3/31/2021 Unpaid  
NIH/NEI

Role: Consultant

*IOP-Related Force and Failure in the Optic Nerve Head.*

The principal goal of this proposal is to identify important molecular and cellular components of optic nerve head (ONH) connective tissue and retrolaminar myelin remodeling in monkey early experimental glaucoma.

**R01 EY019939-06 (PI: Wang, L)** 7/1/2010 - 3/31/2020 1.8 calendar  
NIH/NEI

Role: Co-Investigator

*The role of retinal astrocytes in dynamic blood flow autoregulation*

The major goal of this project is to define the cellular and molecular mechanisms underlying hemodynamic abnormalities in glaucoma and to find a means to mitigate retinal ganglion cell damage.

**R01 EY021281-05 (PI: Burgoyne, CF)** 2/1/15 - 1/31/2020 2.4 calendar  
NIH/NEI

Role: Co-Investigator

*Optic Nerve Head SDOCT Imaging in Glaucoma*

Major Goals: To use SDOCT imaging to test three hypotheses regarding glaucomatous damage to the visual system.

**BrightFocus Foundation (PI: Fortune, B)** 7/1/2017 – 6/30/2019 Unpaid

Role: Principal Investigator

NCE to 2/29/2020

*Early-stage axon damage: active transport and cytoskeletal ultrastructure within individual axons of glaucomatous non-human primate eyes.*

The major goal of this project is to determine whether particular modes of non-invasive imaging are capable of reporting on the integrity of sub-microscopic structures within optic nerve fibers at an early stage of damage preceding their complete degeneration and loss from the eye.

**Glaucoma Research Foundation (PI: Fortune, B)** 3/1/2017 – 12/31/2018 Unpaid

2017 Shaffer Grant for Innovative Glaucoma Research

Role: Principal Investigator

*Axonal transport of mitochondria: developing an in vivo imaging assay for glaucoma research.*

The major goals of this project are to develop a reliable in vivo assay of mitochondrial transport in the rat eye.

**Collins Medical Trust (PI: Wilsey, LJ & Fortune, B)** 11/1/2016 – 10/31/2017 Unpaid

Role: Mentor, Co-Principal Investigator

*Comparing Axon Transport and Cytoskeletal Ultrastructure by Transmission Electron Microscopy*

The major goal of this project is to develop and validate an assay in rodents to correlate axonal transport and cytoskeletal integrity at the level of individual axons using TEM.

**R01 EY10145 (PI: Morrison, JC)** 4/1/2013 – 3/31/2018 Unpaid

Role: Other Significant Contributor (Consultant)

*Studies in Glaucomatous Optic Nerve Damage*

The goal of this project is to identify the earliest optic nerve head cell responses to elevated IOP, along with the cells responsible. These will be determined using microarray analysis of Brown Norway rat eyes with controlled elevation of IOP, in addition to PCR and immunohistochemistry.

**R21 EY024432-01 (PI: Wang, L)** 4/1/2014 – 3/31/2016 1.2 calendar

Role: Co-Investigator

*Astrocyte-mediated Blood Flow Autoregulation as a Disease Mechanism in Glaucoma*

The major goals of this project are to establish an ex vivo and in vivo systems to investigate the roles of astrocytes in normal blood flow autoregulation and as a potential pathological mechanism in glaucoma.

**R01 EY019327 (PI: Fortune, B)** 9/1/2009 - 7/31/2015 4.8 calendar

NIH/NEI

Role: Principal Investigator

*Axonal cytoskeletal changes in experimental glaucoma.*

The major goals of this project are to use clinical imaging tools and retinal functional tests to detect an early stage of glaucomatous damage to optic nerve axons that is characterized by abnormalities of the cytoskeleton.

**R01 EY019674 (PI: Demirel, S)** 9/30/2009 – 8/31/2014 1.2 calendar

NIH/NEI

Role: Co-Investigator

*Predicting the rate of progression in glaucoma*

The major goals of this project are to determine predictors that would enable a clinician to prevent severe visual disability or blindness in an ocular hypertensive or glaucoma patient, by identifying a rapid progression rate or a high likelihood for rapid progression at the earliest stages of the disease.

**R21 EY021311 (PI: Fortune, B)**

8/1/2011 - 10/31/2013

2.4 calendar

NIH/NEI

Role: Principal Investigator

*Imaging retinal astrocytes, ganglion cells and axonal transport in vivo.*

The goal of this project is to develop methods for evaluating two groups of cells and aspects of their function in the living eye using specialized imaging techniques.

**R01 EY011610 (PI: Burgoyne, CF)**

4/1/2007 - 6/30/2012

1.2 calendar

NIH/NEI

Role: Co-Investigator

*IOP-Related Force and Failure in the Optic Nerve Head.*

The major goals of this project are to identify the clinically important components of optic nerve head (ONH) susceptibility to glaucomatous damage using basic engineering principles.

**Legacy Research Discretionary Grant (PI: Fortune, B)**

6/1/2009 – 5/31/2010

Legacy Research Services, Legacy Health

Role: Principal Investigator

*“Imaging axonal transport in vivo.”*

The major goals of this proposal are to develop a method for in vivo imaging of axonal transport in a mammal, to evaluate the effects of perturbations on axonal transport as imaged in vivo and to generate pilot data for an NIH proposal.

**National Glaucoma Research Grant (PI: Fortune, B)**

4/1/2008 – 3/31/2010

**American Health Assistance Foundation (AHAF)**

Role: Principal Investigator

*“Imaging retinal nerve fiber layer pathology in experimental glaucoma”*

The major goals of this project are to use clinical imaging tools and histopathological techniques to evaluate the peripapillary retinal nerve fiber layer and the optic nerve head in experimental glaucoma.

**2008 Shaffer Fund for Innovative Glaucoma Research (PI: Fortune)** 1/1/2008 – 12/31/2009

**Glaucoma Research Foundation (GRF)**

Role: Principal Investigator

*“Imaging the course of axonal degeneration in experimental glaucoma”*

The major goals of this project are to whether degradation of retinal ganglion cell axonal neurofilaments and microtubules is clinically detectable in an experimental model of glaucoma.

**R01 EY05231-17 (PI: Cioffi, GA)**

4/01/1990-6/30/2005

NIH/NEI

Role: Co-Investigator

*“Uveal Vasculature: Optic Nerve Microcirculation”*

The major goals of this project are to determine the basis of early glaucomatous damage and to define optimal methods of detecting early glaucomatous visual function loss.

**R01 EY03424-25 (PI: Johnson, CA)**

1/01/1981-3/31/2007

NIH/NEI

Role: Co-Investigator

*“Perimetry and Psychophysics in Glaucoma”*

The major goal of this project is to investigate a new technique for monitoring retinal ganglion cell loss in glaucoma, the multifocal Visual Evoked Potential, and evaluate the ability of a functional (flicker adaptation abnormalities) and a structural (optic nerve head topography) indicator of early glaucomatous damage to predict the onset and location of future visual field loss.

**Glaucoma Research Pilot Project (PI: Fortune, B)**

2/1/2004 – 1/31/2005

**Glaucoma Research Foundation (GRF)**

Role: Principal Investigator

*“Effects of Acutely Elevated IOP on Retinal Structure and Function in Pigmented Rat”*

The purpose of this project is to identify the level of IOP that causes temporary, and then permanent loss of function among the different cell types within the retina. In particular, we are interested in the effects of a relatively short-term pressure elevation or ‘spike’. We will compare changes in the functional status of different retinal cell types with their microscopic appearance so to determine the relationship between structural and functional damage.

**Legacy Research Advisory Committee Grant (PI: Fortune, PI)**

5/11/2006 – 5/31/2007

Legacy Research Services, Legacy Health

Role: Principal Investigator

*“Assessment of bilateral optic atrophy in non-human primates.”*

The major goals of this proposal are: 1) to obtain magnetic resonance imaging (MRI) scans of the orbits, visual pathways and brain in six rhesus macaques with idiopathic Bilateral Optic Atrophy (BOA) in order to determine whether additional signs of neuro-degenerative disease are present and to rule-out a compressive etiology for optic atrophy; 2) to establish a fibroblast cell line from sub-cutaneous and/or muscle biopsies, which will then be tested for mitochondrial function; 3) to screen ocular fundus photographs from 500 rhesus monkeys at the Oregon National Primate Research Center to determine whether evidence of BOA appears in any of these animals, and thus establish an estimate of prevalence, range of severity and inheritance pattern (if any).

**Legacy Research Services Grant (PI: Fortune, B)**

4/01/2003 – 3/31/2004

Legacy Research Services, Legacy Health

Role: Principal Investigator

*“Chronology of Functional Deficits in a Rat Model of Elevated Intraocular Pressure”*

The major goals of this project are (1) to evaluate the retinal cellular contributions to the rat full-field ERG under various stimulus conditions, with particular emphasis on ganglion cell contributions; and (2) to characterize retinal functional changes in a rat model of glaucoma based on chronically elevated IOP.

**M.J. Murdock Charitable Trust Grant (PI: Cioffi, GA; Co-PI: Fortune, B)**

4/01/2000 – 3/31/2003

Role: Co-Principal Investigator

*“Evaluation of Multifocal Electroretinogram (MERG) for Use in Glaucoma”*

The major goal of this project is to evaluate the Multifocal Electroretinogram, in comparison to standard diagnostic procedures, as well as to other new, highly sensitive diagnostic instruments for detection of early vision damage caused by glaucoma.

**Oregon Lions Sight & Hearing Foundation (PI: Fortune, B)**

12/27/2002 – 12/31/2003

Role: Principal Investigator

*“Retinal Function Testing in Diabetes & Glaucoma.”*

The major goal of this grant was to develop normative ranges for advanced testing algorithms by multifocal electroretinography.

### **Book Chapters**

1. Burgoyne CF, Ivers K, Yang H, Chauhan BC, Fortune B. OCT anatomy for glaucoma: Emerging relationships of interest. In: Iester M, Garway-Heath DT, Lemij H, eds. *Glaucoma Imaging*. Milan: Publicomm; 2017; 1:13-19.
2. Graham S, Fortune B. Electrophysiology in Glaucoma Assessment. In: Shaarawy TM, Sherwood MB, Hitchings RA, Crowston JG, eds. *Glaucoma*. London: Elsevier; 2015; 1:149-168.
3. Graham S, Fortune B. Electrophysiology in Glaucoma Assessment. In: Shaarawy T, Sherwood MB, Hitchings R, Crowston JG, eds. *Glaucoma*. London: Elsevier; 2009;1:151-172.
4. Graham S, Fortune B. Electrophysiology in Glaucoma Assessment. In: Shaarawy T, Sherwood MB, Hitchings R, Crowston JG, eds. *Glaucoma*. London: Elsevier; 2022; *in press*.



**Peer-Reviewed Publications**

1. Jiravarnsirikul A, Yang H, Jeoung JW, Hong SW, Rezapour J, Gardiner S, **Fortune B**, Girard MJA, Nicolela M, Zangwill L, Chauhan BC, Burgoyne CF. OCT Optic Nerve Head Morphology in Myopia IV: Neural Canal Scleral Flange Remodeling in Highly Myopic Eyes. *Am J Ophthalmol*. 2024 (in press). PMID: 38311154
2. Johnson TV, Baranov P, Di Polo A, **Fortune B**, Gokoffski, KK Goldberg JL, Guido W, Kolodkin AL, Mason CA, Ou Y, Reh TA, Ross AG, Samuels BC, Zack DJ. The Retinal Ganglion Cell Repopulation, Stem Cell Transplantation, & Optic Nerve Regeneration (RReSTORE) Consortium. *Ophthalmol Sci*. 2023;3:100390. [PMCID10630665](#)
3. Shiga Y, Nishida T, Jeoung JW, Di Polo A, **Fortune B**. Optical coherence tomography and optical coherence tomography angiography: essential tools for detecting glaucoma and disease progression. *Front. Ophthalmol (Lausanne)*. 2023;3:1217125. [PMCID10655832](#)
4. Alarcon-Martinez L, Shiga Y, Villafranca-Baughman D, Cueva Vargas JL, Vidal Paredes IA, Quintero H, **Fortune B**, Danesh-Meyer H, Di Polo A. Neurovascular dysfunction in glaucoma. *Prog Retin Eye Res*. 2023;97:101217. PMID: 37778617
5. Soucy JR, Aguzzi EA, Cho J, Gilhooley MJ, Keuthan C, Luo Z, Monavarfeshani A, Saleem MA, Wang XW, Wohlschlegel J. Retinal ganglion cell repopulation for vision restoration in optic neuropathy: A roadmap from the RReSTORE Consortium. The RReSTORE Consortium, Baranov P, Di Polo A, **Fortune B**, Gokoffski KK, Goldberg JL, Guido W, Kolodkin AL, Mason CA, Ou Y, Reh TA, Ross AG, Samuels BC, Welsbie D, Zack DJ, Johnson TV. *Mol Neurodegener*. 2023;18(1):64. [PMCID10514988](#)
6. Hong S, Yang H, Gardiner SK, Luo H, Sharpe GP, Caprioli J, Demirel S, Girkin CA, Mardin CY, Quigley HA, Scheuerle AF, **Fortune B**, Jiravarnsirikul A, Zangalli C, Chauhan BC, Burgoyne CF. OCT Optic Nerve Head Morphology in Myopia III: The Exposed Neural Canal Region in Healthy Eyes - Implications for High Myopia. *Am J Ophthalmol*. 2024;258:55-75. PMID: 37673378
7. Dunn M, Cull G, Reynaud J, Jennings D, Holthausen T, Di Polo A, **Fortune B**. Utility of Light-Adapted Full-Field Electroretinogram ON and OFF Responses for Detecting Glaucomatous Functional Damage. *Transl Vis Sci Technol*. 2023;12(8):16. [PMCID10445177](#)
8. Thanos A, Young J, **Fortune B**, Tang SJ. The retinal deep capillary plexus as a venous outflow system; insights from Sturge Weber Syndrome. *Retin Cases Brief Rep*. 2023 (in press) PMID: 37490777
9. Gardiner SK, Cull G, **Fortune B**. Retinal Vessel Pulsatile Characteristics Associated With Vascular Stiffness Can Predict the Rate of Functional Progression in Glaucoma Suspects. *Invest Ophthalmol Vis Sci*. 2023;64(7):30. [PMCID10284309](#)
10. Johnson TV, Calkins DJ, **Fortune B**, Goldberg JL, La Torre A, Lamba DA, Meyer JS, Reh TA, Wallace VA, Zack DJ, Baranov P. The importance of unambiguous cell origin determination in neuronal repopulation studies. *iScience*. 2023;26(4):106361. [PMCID10060674](#)
11. Burgoyne CF, Wang YX, Jeoung JW, Hong S, Gardiner S, Reynaud J, **Fortune B**, Girard MJA, Sharpe G, Nicolela M, Chauhan BC, Yang H. OCT Optic Nerve Head Morphology in Myopia II: Peri-Neural Canal Scleral Bowing and Choroidal Thickness in High Myopia – An American Ophthalmological Society Thesis. *Am J Ophthalmol*. 2023;252:225-252. PMID: 36906092

12. Girkin CA, Garner MA, Fazio MA, Clark ME, Karuppanan U, Hubbard MG, Bianco G, Hubbard ST, **Fortune B**, Gross AK. Retinal electrophysiologic response to IOP elevation in living human eyes. *Exp Eye Res.* 2023;229:109420. PMID: 36806673
13. Hong BY, **Fortune B**, Kinast RM, Burgoyne CF, Rees JP, Mansberger SL. Optic nerve cavitations in glaucoma suspect and glaucoma patients. *Am J Ophthalmol Case Rep.* 2022;28:101733. [PMC9636442](#)
14. Zhong F, Wang B, Wei J, Hua Y, Wang B, Reynaud J, **Fortune B**, Sigal IA. A high-accuracy and high-efficiency digital volume correlation method to characterize in-vivo optic nerve head biomechanics from optical coherence tomography. *Acta Biomater.* 2022;143:72-86. PMID: 35196556
15. **Fortune B**, Grzybowski A. Glaucomatous or Non-glaucomatous Optic Neuropathy-It Is a Question? *Am J Ophthalmol.* 2022;234:A5-A7. PMID: 34715077
16. Liu G, Li H, Cull G, Wilsey L, Yang H, Reemmer J, Shen HY, Wang F, **Fortune B**, Bui BV, Wang L. Downregulation of Retinal Connexin 43 in GFAP-Expressing Cells Modifies Vasoreactivity Induced by Perfusion Ocular Pressure Changes. *Invest Ophthalmol Vis Sci.* 2021;62:26. [PMC7846954](#)
17. Lowry EA, Mansberger SL, Gardiner SK, Yang H, Sanchez F, Reynaud J, Demirel S, Burgoyne CF, **Fortune B**. Association of optic nerve head prelaminar schisis with glaucoma. *Am J Ophthalmol.* 2021;223:246-258. [PMID: 33166501](#)
18. Gardiner SK, Mansberger SL, **Fortune B**. Time Lag Between Functional Change and Loss of Retinal Nerve Fiber Layer in Glaucoma. *Invest Ophthalmol Vis Sci.* 2020;61:5. [PMC7645201](#)
19. Sanchez F, Sanders DS, Moon JJ, Gardiner SK, Reynaud J, **Fortune B**, Mansberger SL. Effect of Trabeculectomy on OCT Measurements of the Optic Nerve Head Neuroretinal Rim Tissue. *Ophthalmology Glaucoma.* 2020;3:32-39. [PMC7337263](#)
20. Zhao D, He Z, Wang L, **Fortune B**, Lim JKH, Wong VHY, Nguyen CTO, Bui BV. Response of the Trilaminar Retinal Vessel Network to Intraocular Pressure Elevation in Rat Eyes. *Invest Ophthalmol Vis Sci.* 2020;61:2. [PMC7325622](#)
21. Jeoung JW, Yang H, Gardiner S, Wang YX, Hong S, **Fortune B**, Girard MJA, Hardin C, Wei P, Nicolela M, Vianna JR, Chauhan BC, Burgoyne CF. OCT Optic Nerve Head Morphology in Myopia I: Implications of Anterior Scleral Canal Opening versus Bruch's Membrane Opening Offset. *Am J Ophthalmol.* 2020;9394:30245-2. [PMID: 32445702](#)
22. Wang YX, Yang H, Luo H, Hong SW, Gardiner SK, Jeoung JW, Hardin C, Sharpe GP, Nouri-Mahdavi K, Caprioli J, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, **Fortune B**, Chauhan BC, Burgoyne CF. Peripapillary Scleral Bowing Increases with Age and is Inversely Associated with Peripapillary Choroidal Thickness in Healthy Eyes. *Am J Ophthalmol.* 2020;9394:30162-8. [PMID: 32298653](#)
23. Yang H, Luo H, Hardin C, Wang Y, Jeoung JW, Albert C, Vianna JR, Sharpe GP, Reynaud J, Demirel S, Mansberger SL, **Fortune B**, Nicolela M, Gardiner SK, Chauhan BC, Burgoyne CF. Optical Coherence Tomography Structural Abnormality Detection in Glaucoma Using Topographically Correspondent Rim and Retinal Nerve Fiber Layer Criteria. *Am J Ophthalmol.* 2020;213:203-216. [PMC7214190](#)

24. Gardiner SK, Cull G, **Fortune B**, Wang L. Increased Optic Nerve Head Capillary Blood Flow in Early Primary Open-Angle Glaucoma. *Invest Ophthalmol Vis Sci.* 2019;60:3110-3118. [PMC6645706](#)
25. Hong S, Yang H, Gardiner SK, Luo H, Hardin C, Sharpe GP, Caprioli J, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, **Fortune B**, Chauhan BC, Burgoyne CF. OCT-Detected Optic Nerve Head Neural Canal Direction, Obliqueness and Minimum Cross-Sectional Area in Healthy Eyes. *Am J Ophthalmol.* 2019;208:185-205. [PMC6851461](#)
26. Nagarkatti-Gude N, Gardiner SK, **Fortune B**, Demirel S, Mansberger SL. Optical Coherence Tomography Segmentation Errors of the Retinal Nerve Fiber Layer Persist Over Time. *J Glaucoma.* 2019;28:368-374. [PMID: 30855415](#)
27. Mavrommatis MA, De Cuir N, Reynaud J, De Moraes CG, Xin D, Rajshekhar R, Liebmann JM, Ritch R, **Fortune B**, Hood DC. An Examination of the Frequency of Paravascular Defects and Epiretinal Membranes in Eyes With Early Glaucoma Using En-face Slab OCT Images. *J Glaucoma.* 2019;28:265-269. [PMC6400318](#)
28. Yang H, Luo H, Gardiner SK, Hardin C, Sharpe GP, Caprioli J, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, **Fortune B**, Chauhan BC, Burgoyne CF. Factors Influencing OCT Peripapillary Choroidal Thickness: A Multi-Center Study. *Invest Ophthalmol Vis Sci.* 2019;60:795-806. [PMC6392476](#)
29. **Fortune B**. Pulling and Tugging on the Retina: Mechanical Impact of Glaucoma beyond the Optic Nerve Head. *Invest Ophthalmol Vis Sci.* 2019;60:26-35. [PMID: 30601928](#)
30. **Fortune B**. Optical coherence tomography evaluation of the optic nerve head neuro-retinal rim in glaucoma. *Clin Exp Optom.* 2019;102:286-290. (Invited review). [PMID: 30192017](#)
31. Khawaja AP, Chan MPY, Yip JLY, Broadway DC, Garway-Heath DF, Viswanathan AC, Luben R, Hayat S, Hauser MA, Wareham NJ, Khaw KT, **Fortune B**, Allingham RR, Foster PJ. A Common Glaucoma-risk Variant of SIX6 Alters Retinal Nerve Fiber Layer and Optic Disc Measures in a European Population: The EPIC-Norfolk Eye Study. *J Glaucoma.* 2018;27(9):743-749.
32. **Fortune B**, Ma KN, Gardiner SK, Demirel S, Mansberger SL. Peripapillary Retinoschisis in Glaucoma: Association with Progression and OCT Signs of Müller Cell Involvement. *Invest Ophthalmol Vis Sci.* 2018;59:2818-2827. [PMC5983909](#)
33. Luo H, Yang H, Gardiner SK, Hardin C, Sharpe GP, Caprioli J, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, **Fortune B**, Chauhan BC, Burgoyne CF. Factors Influencing Central Lamina Cribrosa Depth: A Multicenter Study. *Invest Ophthalmol Vis Sci.* 2018; 59:2357-2370. [PMC5939685](#)
34. Hong SW, Koenigsman H, Ren R, Yang H, Gardiner SK, Reynaud J, Kinast RM, Mansberger SL, **Fortune B**, Demirel S, Burgoyne CF. Glaucoma Specialist Optic Disc Margin, Rim Margin and Rim Width Discordance in Glaucoma and Glaucoma Suspect Eyes. *Am J Ophthalmol.* 2019;199:28-43. [PMID: 30414397](#)
35. Greenstein VC, Nunez J, Schurch K, Lee W, **Fortune B**, Tsang S, Allikmets R, Sparrow JR, Hood DC. A Comparison of *en face* Optical Coherence Tomography and Fundus Autofluorescence in Stargardt Disease. *Invest Ophthalmol Vis Sci.* 2017;58:5227-5236. [PMC5642378](#)

36. Wilsey L, Gowrisankaran S, Cull G, Hardin C, Burgoyne CF, **Fortune B**. Comparing three different modes of electroretinography in experimental glaucoma: diagnostic performance and correlation to structure. *Doc Ophthalmol*. 2017 Apr;134(2):111-128. [PMC5542776](#)
37. Stowell C, Burgoyne CF, Tamm ER, Ethier CR; Lasker/IRRF Initiative on Astrocytes and Glaucomatous Neurodegeneration Participants. Biomechanical aspects of axonal damage in glaucoma: A brief review. *Exp Eye Res*. 2017;157:13-19. [PMC5438465](#)
38. Tamm ER, Ethier CR; Lasker/IRRF Initiative on Astrocytes and Glaucomatous Neurodegeneration Participants. Biological aspects of axonal damage in glaucoma: A brief review. *Exp Eye Res*. 2017;157:5-12. [PMID: 28223179](#)
39. Morrison JC, Cepurna WO, Tehrani S, Choe TE, Jayaram H, Lozano DC, **Fortune B**, Johnson EC. A Period of Controlled Elevation of IOP (CEI) Produces the Specific Gene Expression Responses and Focal Injury Pattern of Experimental Rat Glaucoma. *Invest Ophthalmol Vis Sci*. 2016;57:6700-6711. [PMC5156512](#)
40. Mansberger SL, Menda S, **Fortune B**, Gardiner SK, Demirel S. Automated segmentation errors when using optical coherence tomography to measure retinal nerve fiber layer thickness in glaucoma. *Am J Ophthalmol*. 2016;174:1-8. [PMC5548380](#)
41. **Fortune B**, Reynaud J, Hardin C, Wang L, Sigal IA, Burgoyne CF. Experimental glaucoma causes optic nerve head neural rim tissue compression: a potentially important mechanism of axon injury. *Invest Ophthalmol Vis Sci*. 2016;57:4403-11. [PMC5016000](#)
42. Gardiner SK, **Fortune B**, Demirel S. Localized changes in retinal nerve fiber layer thickness as a predictor of localized functional change in glaucoma. *Am J Ophthalmol*. 2016;170:75-82. [PMC5056143](#)
43. **Fortune B**, Hardin C, Reynaud J, Cull G, Yang H, Wang L, Burgoyne CF. Comparing optic nerve head rim width, rim area and peripapillary retinal nerve fiber layer thickness to axon count in experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2016;57:OCT404-12. [PMC4968911](#)
44. Ivers KM, Yang H, Gardiner SK, QinL, Reyes L, **Fortune B**, BurgoyneCF. In vivo detection of laminar and peripapillary scleral hypercompliance in early monkey experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2016;57:OCT388-403. [PMC4968772](#)
45. Wilsey LJ, Reynaud J, Cull G, Burgoyne CF, **Fortune B**. Macular structure and function in non-human primate experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2016;57:1892-1900. [PMC4849889](#)
46. Hood DC, De Cuir N, Mavrommatis MA, Xin D, Muhammad H, Reynaud J, Ritch R, **Fortune B**. Defects along blood vessels in glaucoma suspects and patients. *Invest Ophthalmol Vis Sci*. 2016; 57:1680-1686. [PMC4829107](#)
47. Gardiner SK, Demirel S, Reynaud J, **Fortune B**. Changes in retinal nerve fiber layer reflectance intensity as a predictor of functional progression in glaucoma. *Invest Ophthalmol Vis Sci*. 2016;57:1221-1227. [PMC4794083](#)
48. Wilsey LJ, **Fortune B**. Electroretinography in glaucoma diagnosis. *Curr Opin Ophthalmol*. 2016;27:118-24. (Invited review) [PMC4698880](#)
49. Cull G, Told R, Burgoyne CF, Thompson S, **Fortune B**, Wang L. Compromised optic nerve blood flow and autoregulation secondary to neural degeneration. *Invest Ophthalmol Vis Sci*. 2015;56:7286-92. [PMC4642604](#)

50. Gardiner SK, Boey PY, Yang H, **Fortune B**, Burgoyne CF, Demirel S. Structural measurements for monitoring change in glaucoma: comparing retinal nerve fiber layer thickness with minimum rim width and area. *Invest Ophthalmol Vis Sci*. 2015;56:6886-91. [PMC4627356](#)
51. Hood DC, **Fortune B**, Mavrommatis MA, Reynaud J, Ramachandran R, Ritch R, Rosen RB, Muhammad H, Dubra A, Chui TYP. Details of glaucomatous damage are better seen on OCT en-face images than on OCT retinal nerve fiber layer thickness maps. *Invest Ophthalmol Vis Sci*. 2015;56:6208-6216. [PMC4703406](#)
52. **Fortune B**. In vivo imaging methods to assess glaucomatous optic neuropathy. *Exp Eye Res*. 2015;141:139-53. (Invited review). [PMC4628854](#)
53. **Fortune B**, Cull G, Reynaud J, Wang L, Burgoyne CF. Relating retinal ganglion cell function and retinal nerve fiber layer (RNFL) retardance to progressive loss of RNFL thickness and optic nerve axons in experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2015;56:3936-44. [PMC4476737](#)
54. Abbott CJ, Choe TE, Burgoyne CF, Cull G, Wang L, **Fortune B**. Comparison of retinal nerve fiber layer thickness in vivo and axonal transport after chronic intraocular pressure elevation in young versus older rats. *PLoS One*. 2014;9:e114546. PMID: [PMC4263742](#)
55. Choe TE, Abbott CJ, Piper C, Wang L, **Fortune B**. Comparison of longitudinal *in vivo* measurements of retinal nerve fiber layer thickness and retinal ganglion cell density after optic nerve transection in rat. *PLoS One*. 2014;9:e113011. PMID: [PMC4231142](#)
56. Yang H, He L, Gardiner SK, Reynaud J, Williams GA, Hardin C, Strouthidis NG, Downs JC, **Fortune B**, Burgoyne CF. Age-related differences in longitudinal structural change by spectral-domain optical coherence tomography in early experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2014;55:6409-6420. PMID: [PMC4197684](#) (Abstract)
57. Wang L, Cull GA, **Fortune B**. Optic nerve head blood flow response to reduced ocular perfusion pressure by alteration of blood pressure and intraocular pressure. *Curr Eye Res*. 2014;2014:1-9. [PMC4482253](#)
58. **Fortune B**, Reynaud J, Cull G, Burgoyne CF, Wang L. The effect of age on optic nerve axon counts, SDOCT scan quality and peripapillary retinal nerve fiber layer thickness measurements in rhesus monkeys. *Transl Vis Sci Technol*. 2014;3:2. PMID: [PMC4043106](#)
59. Wang L, Cull G, Burgoyne CF, Thompson S, **Fortune B**. Longitudinal alterations in the dynamic autoregulation of optic nerve head blood flow revealed in experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2014;55:3509-3516. PMID: [PMC4073995](#)
60. He L, Ren R, Yang H, Hardin C, Reyes L, Reynaud J, Gardiner SK, **Fortune B**, Demirel S, Burgoyne CF. Anatomic vs Acquired Image Frame Discordance in Spectral Domain Optical Coherence Tomography Minimum Rim Measurements. *PLoS One*. 2014;9:e92225. PMID: [PMC3958478](#)
61. Ren R, Yang H, Gardiner SK, **Fortune B**, Hardin C, Demirel S, Burgoyne CF. Anterior Lamina Cribrosa Surface Depth, Age and Visual Field Sensitivity in the Portland Progression Project. *Invest Ophthalmol Vis Sci*. 2014;55:1531-1539. PMID: [PMC3954157](#)
62. Wang L, Burgoyne CF, Cull G, Thompson S, **Fortune B**. Static blood flow autoregulation in the optic nerve head in normal and experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2014;55:873-80. PMID: [PMC3920822](#)

63. Abbott CJ, Choe TE, Lusardi TA, Burgoyne CF, Wang L, **Fortune B**. Evaluation of retinal nerve fiber layer thickness and axonal transport 1- and 2-weeks after 8-hours of acute intraocular pressure elevation in rats. *Invest Ophthalmol Vis Sci*. 2014;55:674-687. PMID: [PMC3915863](#)
64. He L, Yang H, Gardiner SK, Williams GA, Hardin C, Strouthidis NG, **Fortune B**, Burgoyne CF. Longitudinal Detection of Optic Nerve Head Changes by Spectral Domain Optical Coherence Tomography in Early Experimental Glaucoma. *Invest Ophthalmol Vis Sci*. 2014;55:574-586. PMID: [PMC3908685](#)
65. Gardiner SK, Ren R, Yang H, **Fortune B**, Burgoyne CF, Demirel S. A Method to Estimate the Amount of Neuroretinal Rim Tissue in Glaucoma: Comparison with Current Methods for Measuring Rim Area. *Am J Ophthalmol*. 2014;157:540-549. PMID: [PMC3944716](#)
66. **Fortune B**, Reynaud J, Wang L, Burgoyne CF. Does optic nerve head surface topography change prior to loss of retinal nerve fiber layer thickness: a test of the site of injury hypothesis in experimental glaucoma. *PLoS One*. 2013;8:e77831. PMID: [PMC3808404](#)
67. Gardiner SK, **Fortune B**, Demirel S. Signal-to-Noise Ratios for Structural and Functional Tests in Glaucoma. *Transl Vis Sci Technol*. 2013;2:3. PMID: [PMC3812901](#)
68. Bui BV, Hussain A, Fletcher E, Wong VHY, **Fortune B**. Relationship between the magnitude of intraocular pressure during an episode of acute elevation and retinal damage four weeks later in rats. *PLoS One*. 2013;8:e70513. PMID: [PMC3726657](#)
69. Goren D, Demirel S, **Fortune B**, Gardiner SK. Correlating perimetric indices with three nerve fiber layer thickness measures. *Optom Vis Sci*. 2013;90:1353-1360. PMID: [PMC3895434](#)
70. **Fortune B**, Burgoyne CF, Cull G, Reynaud J, Wang L. Onset and progression of peripapillary retinal nerve fiber layer (RNFL) retardance changes occur earlier than RNFL thickness changes in experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2013;54:5653-5661. PMID: [PMC3759219](#)
71. Cull G, Burgoyne CF, **Fortune B**, Wang L. Longitudinal hemodynamic changes within the optic nerve head in experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2013;54:4271-4277. PMID: [PMC3691051](#)
72. Lloyd MJ, Mansberger SL, **Fortune B**, Nguyen H, Torres R, Demirel S, Gardiner SK, Johnson CA, Cioffi GA. Features of optic disc progression in patients with ocular hypertension and early glaucoma. *J Glaucoma*. 2013;22:343-348. PMID: [23719180](#)
73. Abbott CJ, Choe TE, Lusardi TA, Burgoyne CF, Wang L, **Fortune B**. Imaging axonal transport in the rat visual pathway. *Biomedical Optics Express*. 2013;4:364-386. PMID: [PMC3567722](#)
74. Bui BV, He Z, Vingrys AJ, Nguyen CTO, Wong VHY, **Fortune B**. Using the electroretinogram to understand how intraocular pressure elevation affects the rat retina. *Journal of Ophthalmology*. 2013 Article ID 262467:1-15. PMID: [PMC3570935](#)
75. Piper C, **Fortune B**, Cull G, Cioffi GA, Wang L. Basal blood flow and autoregulation changes in the optic nerve of rhesus monkeys with idiopathic bilateral optic atrophy. *Invest Ophthalmol Vis Sci*. 2013;54:714-721. PMID: [PMC3559073](#)
76. Wang L, Cull G, Piper C, Burgoyne CF, **Fortune B**. Anterior and posterior optic nerve head blood flow in nonhuman primate experimental glaucoma measured by laser speckle imaging and microsphere method. *Invest Ophthalmol Vis Sci*. 2012;53:8303-8309. PMID: [PMC3525139](#)

77. Cull GA, Reynaud J, Wang L, Cioffi GA, Burgoyne CF, **Fortune B**. Relationship between orbital optic nerve axon counts and retinal nerve fiber layer thickness (RNFLT) measured by spectral domain optical coherence tomography (SDOCT). *Invest Ophthalmol Vis Sci*. 2012;53:7766-7773. PMID: [PMC3506054](#)
78. Gardiner SK, **Fortune B**, Wang L, Downs JC, Burgoyne CF. Intraocular pressure magnitude and variability as predictors of rates of structural change in non-human primate experimental glaucoma. *Exp Eye Research*. 2012;103:1–8. PMID: [PMC3462301](#)
79. **Fortune B**, Burgoyne CF, Cull GA, Reynaud J, Wang L. Structural and functional abnormalities of retinal ganglion cells measured in vivo at the onset of optic nerve head surface change in experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2012;53:3939-3950. PMID: [PMC3390220](#)
80. Reynaud J, Cull G, Wang L, **Fortune B**, Gardiner S, Burgoyne CF, Cioffi GA. Automated quantification of optic nerve axons in primate glaucomatous and normal eyes--method and comparison to semi-automated manual quantification. *Invest Ophthalmol Vis Sci* 2012;53:2951-2959. PMID: [PMC3382379](#)
81. Yang H, Qi J, Hardin C, Gardiner SK, Strouthidis NG, **Fortune B**, Burgoyne CF. Spectral-domain optical coherence tomography enhanced depth imaging of the normal and glaucomatous nonhuman primate optic nerve head. *Invest Ophthalmol Vis Sci* 2012;53:394-405. PMID: [PMC3292373](#)
82. Strouthidis NG, **Fortune B**, Yang H, Sigal IA, Burgoyne CF. Effect of acute intraocular pressure elevation on the monkey optic nerve head as detected by spectral domain optical coherence tomography. *Invest Ophthalmol Vis Sci*. 2011;52:9431-9437. PMID: [PMC2764538](#)
83. **Fortune B**, Choe TE, Reynaud J, Hardin C, Cull GA, Burgoyne CF, Wang L. Deformation of the rodent optic nerve head and peripapillary structures during acute intraocular pressure elevation. *Invest Ophthalmol Vis Sci*. 2011;52:6651-6661. PMID: [21730343](#)
84. Strouthidis NG, **Fortune B**, Yang H, Sigal IA, Burgoyne CF. Longitudinal Change Detected by Spectral Domain Optical Coherence Tomography in the Optic Nerve Head and Peripapillary Retina in Experimental Glaucoma. *Invest Ophthalmol Vis Sci*. 2011;52:1206-1219. PMID: [PMC3101662](#)
85. O'Leary N, Crabb DP, Mansberger SL, **Fortune B**, Twa MD, Lloyd MJ, Kotecha A, Garway-Heath DF, Cioffi GA, Johnson CA. Glaucomatous Progression in Series of Stereoscopic Photographs and Heidelberg Retina Tomograph Images. *Arch Ophthalmol*. 2010;128:560-8. PMID: [PMC3073138](#)
86. Liang Y, **Fortune B**, Cull G, Cioffi GA, Wang L. Quantification of Dynamic Blood Flow Autoregulation in Optic Nerve Head of Rhesus Monkeys. *Exp Eye Res*. 2010;90:203-209. PMID: [19853603](#)
87. Strouthidis NG, Yang H, Reynaud J, Grimm J, Gardiner S, **Fortune B**, Burgoyne CF. Comparison of Clinical and Spectral Domain Optical Coherence Tomography Optic Disc Margin Anatomy. *Invest Ophthalmol Vis Sci*. 2009;50:4709-4718. PMID: [PMC2751811](#)
88. **Fortune B**, Yang H, Strouthidis NG, Cull GA, Grimm JL, Downs JC, Burgoyne CF. The effect of acute intraocular pressure elevation on peripapillary retinal thickness, retinal nerve fiber layer thickness and retardance. *Invest Ophthalmol Vis Sci*. 2009;50:4719-4726. PMID: [PMC2764538](#)
89. **Fortune B**, Demirel S, Bui BV. Multifocal visual evoked potential responses to pattern-reversal, onset, offset, and sparse pulse stimuli. *Vis Neurosci*. 2009;26:227-235. PMID: [19250600](#)

90. Liang Y, Downs JC, **Fortune B**, Cull G, Cioffi GA, Wang L. Impact of Systemic Blood Pressure on the Relationship between Intraocular Pressure and Blood Flow in the Optic Nerve Head of Non-Human Primates. *Invest Ophthalmol Vis Sci*. 2009;50:2154-2160. PMID: [19074806](#)
91. Demirel S, **Fortune B**, Fan J, Levine RA, Torres R, Nguyen H, Mansberger SL, Gardiner SK, Cioffi GA, Johnson CA. Predicting progressive glaucomatous optic neuropathy using baseline standard automated perimetry data. *Invest Ophthalmol Vis Sci*. 2009;50:674-680. PMCID: [PMC2759404](#)
92. Strouthidis NG, Yang H, **Fortune B**, Downs JC, Burgoyne CF. Detection of optic nerve head neural canal opening within histomorphometric and spectral domain optical coherence tomography data sets. *Invest Ophthalmol Vis Sci* 2009;50:214-223. PMCID: [PMC2726821](#)
93. **Fortune B**, Cull GA, Burgoyne CF. Relative course of retinal nerve fiber layer birefringence and thickness and retinal function changes after optic nerve transection. *Invest Ophthalmol Vis Sci* 2008;49:4444-4452. PMCID: [PMC2720629](#)
94. Wang L, Cull G, **Fortune B**, Cioffi GA. Retinal and choroidal vasoreactivity to altered PaCO<sub>2</sub> in rat measured with a modified microsphere technique. *Exp Eye Res*. 2008; 86:908-913. PMID: [18420196](#)
95. Zhang Y, **Fortune B**, Atchaneeyasakul , McFarland T, Wallace P, Mose K, Main J, Wilson D, Appukuttan B, Stout T. Natural History and Histology in a Rat Model of Laser Induced Photothrombotic Retinal Vein Occlusion. *Curr Eye Res*. 2008;33:365-376. PMID: [18398711](#)
96. Hood DC, **Fortune B**, Arthur SN, Xing D, Salant JA, Ritch R, Liebmann JM. Blood vessel contributions to retinal nerve fiber layer thickness profiles measured with optical coherence tomography. *J Glaucoma*. 2008;17:519-528. PMCID: [PMC2987575](#)
97. **Fortune B**, Wang L, Cull G, Cioffi GA. Intravitreal colchicine causes decreased RNFL birefringence without altering RNFL thickness. *Invest Ophthalmol Vis Sci*. 2008;49:255-61. PMID: [18172100](#)
98. **Fortune B**, Zhang X, Hood DC, Demirel S, Patterson E, Jamil A, Mansberger SL, Cioffi GA, Johnson CA. Effect of recording duration on the diagnostic performance of multifocal visual evoked potentials in high-risk ocular hypertension and early glaucoma. *J Glaucoma*. 2008;17:175-182. PMCID: [PMC2996548](#)
99. **Fortune B**, Demirel S, Zhang X, Hood DC, Patterson E, Jamil A, Mansberger SL, Cioffi GA, Johnson CA. Comparing Multifocal VEP and Standard Automated Perimetry in High-Risk Ocular Hypertension and Early Glaucoma. *Invest Ophthalmol Vis Sci*. 2007;48:1173-80. PMID: [17325161](#)
100. Wang L, **Fortune B**, Cull G, McElwain KM, Cioffi GA. Microspheres method for ocular blood flow measurement in rats: size and dose optimization. *Exp Eye Res*. 2007;84:108-117. PMID: [17069799](#)
101. Wang L, **Fortune B**, Cull, G, Dong J, Cioffi GA. Endothelin B receptor in human glaucoma and experimentally induced optic nerve damage. *Arch Ophthalmol*. 2006;124:717-724. PMID: [16682595](#)
102. Bui BV and **Fortune B**. Origin of electroretinogram amplitude growth during light adaptation in pigmented rats. *Vis Neurosci*. 2006;23:155-167. PMID: [16638169](#)
103. **Fortune B**, Demirel S, Zhang X, Johnson CA, Hood DC. Repeatability of the normal multifocal VEP: implications for detecting progression. *J. Glaucoma*. 2006;15:131-141. PMID: [16633227](#)



104. **Fortune B**, Wang L, Bui BV, Burgoyne CF, Cioffi GA. Idiopathic bilateral optic atrophy in rhesus macaque. *Invest Ophthalmol Vis Sci*. 2005;46:3943-3956. PMID: [16249467](#)
105. Hood DC, Zhang X, Rodarte C, Yang EB, Ohri N, **Fortune B**, Johnson CA. Determining abnormal interocular latencies of multifocal visual evoked potentials. *Doc Ophthalmol*. 2004; 109:177-187. PMID: [15881264](#)
106. Hood DC, Ohri N, Yang EB, Rodarte C, Zhang X, **Fortune B**, Johnson CA. Determining abnormal latencies of multifocal visual evoked potentials: a monocular analysis. *Doc Ophthalmol*. 2004; 109:189-199. PMID: [15881265](#)
107. **Fortune B**, Zhang X, Hood DC, Demirel S, Johnson CA. Normative ranges and specificity of the multifocal VEP. *Doc Ophthalmol*. 2004;109:87-100. PMID: [15675203](#)
108. Bui BV, Edmunds B, Cioffi GA, **Fortune B**. The gradient of retinal functional changes during acute intra-ocular pressure elevation. *Invest Ophthalmol Vis Sci*. 2005;46:202-213. PMID: [15623775](#)
109. Cioffi GA, Wang L, **Fortune B**, Cull G, Dong J, Bui B, Van Buskirk EM. Chronic ischemia induces preferential temporal axonal damage in experimental primate optic neuropathy. *Arch Ophthalmol*. 2004;122:1517-1525. PMID: [15477464](#)
110. **Fortune B**, Bui BV, Morrision JC, Johnson EC, Cepurna WO, Dong J, Cioffi GA. Selective ganglion cell functional loss in rats with experimental glaucoma. *Invest Ophthalmol Vis Sci*. 2004;45:1854-1862. PMID: [15161850](#)
111. Bui BV, **Fortune B**. Ganglion cell contributions to the rat full-field electroretinogram. *J. Physiol*. 2004;555:153-173. PMCID: [1664823](#)
112. **Fortune B**, Bui BV, Cull G, Wang L, Cioffi GA. Inter-ocular and inter-session reliability of the electroretinogram photopic negative response (PhNR) in non-human primates. *Exp Eye Res*. 2004;78:83-93. PMID: [14667830](#)
113. Bui BV, **Fortune B**, Cull G, Wang L, Cioffi GA. Baseline characteristics of the transient pattern electroretinogram in non-human primates: inter-ocular and inter-session variability. *Exp Eye Res*. 2003;77:555-566. PMID: [14550397](#)
114. **Fortune B**, Wang L, Bui BV, Cull G, Dong J, Cioffi GA. Local ganglion cell contributions to the macaque electroretinogram revealed by experimental nerve fiber layer bundle defect. *Invest Ophthalmol Vis Sci*. 2003;44:4567-79. PMID: [14507906](#)
115. **Fortune B**, Goh K, Demirel S, Novitsky K, Cioffi GA, Mansberger SL, Johnson CA. Detection of Glaucomatous Visual Field Loss Using Multifocal VEP. In: Henson DB, Wall M, eds. *Perimetry Update 2002/3. Proceedings of the XVth International Perimetric Society Meeting*. The Hague: Kugler Publications, 2003;251-260.
116. **Fortune B** and Hood DC. Conventional pattern-reversal VEPs are not equivalent to summed multifocal VEPs. *Invest Ophthalmol Vis Sci*. 2003;44:1364-1375. PMID: [12601070](#)
117. Wang L, Dong J, Cull G, **Fortune B**, Cioffi GA. Varicosities of Intraretinal Ganglion Cell Axons in Human and Non-Human Primates. *Invest Ophthalmol Vis Sci*. 2003;44:2-9. PMID: [12506048](#)
118. **Fortune B**, Bearse MA, Cioffi GA, Johnson CA. Selective Loss of Oscillatory Component in Temporal Retinal Multifocal ERG Responses in Glaucoma. *Invest Ophthalmol Vis Sci*. 2002;43:2638-2647. PMID: [12147597](#)

119. McKendrick AM, Johnson CA, Anderson AJ and **Fortune B**. Elevated vernier acuity thresholds in glaucoma. *Invest Ophthalmol Vis Sci*. 2002;43:1393-1399. PMID: [11980852](#)
120. McKendrick AM, Anderson AJ, Johnson CA and **Fortune B**: Appearance of the frequency doubling stimulus at threshold, in normals and glaucoma patients. *Invest Ophthalmol Vis Sci*. 2002;44:1111-1116. PMID: [12601037](#)
121. **Fortune B** and Johnson CA. The decline of photopic multifocal electroretinogram responses with age is primarily due to pre-retinal optical factors. *J Opt Soc Am A*. 2002; 19:173-184. PMID: [11778721](#)
122. Wang L, Cioffi GA, Cull G, Dong J, **Fortune B**. Immunohistologic evidence for retinal glial cell changes in human glaucoma. *Invest Ophthalmol Vis Sci*. 2002;43:1088-1094. PMID: [11923250](#)
123. **Fortune B**, Johnson CA, Cioffi GA. The topographic relationship between multifocal electroretinographic (MERG) and behavioral perimetric measures of function in glaucoma. *Optom Vis Sci*. 2001;78:206-214. PMID: [11349928](#)
124. **Fortune B**, Cull G, Wang L, Van Buskirk EM, Cioffi GA. Factors affecting the use of multifocal electroretinography to monitor function in a primate model of glaucoma. *Doc Ophthalmol*. 2002;105:151-178. PMID: [12462442](#)
125. **Fortune B**, Johnson CA, Cioffi GA. Does the multifocal electroretinogram (mERG) provide a topographic, objective measure of ganglion cell function in glaucoma? In: Wall M, Mills RP, eds. *Perimetry Update 2000/1*. The Hague: Kugler Publications, 2001. pp:9-17.
126. **Fortune B**, Cioffi GA, Johnson CA, Kondo Y, Mochizuki K, Kitazawa Y: The relationship between multifocal electroretinogram and standard automated perimetry findings in normal tension glaucoma. In: Weinreb RN, Krieglstein GK, & Kitazawa Y, eds. *Glaucoma in the 21st Century*. London: Harcourt Publishers Ltd, 2000. pp:73-78.
127. Schneck ME, **Fortune B**, Adams AJ. The fast oscillation of the electrooculogram reveals sensitivity of the human outer retina/retinal pigment epithelium to glucose level. *Vision Research*. 2000; 40:3447-3453. PMID: [11058741](#)
128. **Fortune B**, Schneck ME and Adams, AJ. Multifocal electroretinogram delays reveal local retinal dysfunction in early diabetic retinopathy. *Invest Ophthalmol Vis Sci*. 1999;40:2638-2651. PMID: [10509661](#)
129. Schneck ME, **Fortune B**, Switkes E, Crognale M, and Adams AJ. Acute effects of blood glucose on chromatic VEP's in persons with diabetes and normal persons. *Invest Ophthalmol Vis Sci*. 1997;38:800-810. PMID: [9112974](#)
130. **Fortune B**, Schneck ME, Hong H, and Adams AJ. Variation in retinal pigment epithelial function with blood glucose as measured with the fast oscillation of the electro-oculogram. *Vision Science and Its Applications*. Technical Digest Series 1997; 1:250-253.
131. Schneck ME, **Fortune B**, Crognale M, Switkes E, Adams T. Influence of Blood Glucose Level on Chromatic VEP in Type I Diabetes. *Vision Science and Its Applications*. Technical Digest Series Vol. 1, pp 38-42, 1996. OSA (Optical Society of America, Washington, D.C., 1996)
132. Schneck ME, Lee E, **Fortune B**, Switkes E, Crognale M, Adams AJ. Spatio-chromatic VEP's in Recovered Optic Neuritis and Multiple Sclerosis. *Color Vision Deficiencies XIII* (Documenta Ophthalmologica Proceedings Series, Kluwer Academic Publishers, 1996), pp. 179-185.

133. Wyatt HJ, Pola J, **Fortune B**, and Posner M. Smooth Pursuit Eye Movements with Imaginary Targets Defined by Extrafoveal Cues. *Vision Research*. 1994;34(6):803-820. PMID: [8160395](#)

## Book Reviews

Neuro-Ophthalmic System: Clinical Procedures. (1999) Modica PA. Butterworth-Heinemann, Woburn, MA. Reviewed in *Optom Vis Sci.* 1999;76(11):738.

## Other Published Reviews

**Fortune B.** Optic disc evaluation in glaucoma. *Ophthalmology Management.* 2018; June 22(6):26-29.

Imaging: comment on [“Diagnostic assessment of glaucoma and non-glaucomatous optic neuropathies via optical texture analysis of the retinal nerve fibre layer.” Leung CKS; Lam AKN; Weinreb RN et al., *Nature Biomedical Engineering.* 2022;6:593-604”] In: *International Glaucoma Review.* 2022;22-4. ed: Weinreb RN.

Imaging: comment on [“Imaging individual neurons in the retinal ganglion cell layer of the living eye.” Rossi EA, Granger CE, Sharma R, Yang Q, Saito K, Schwarz C, Walters S, Nozato K, Zhang J, Kawakami T, Fischer W, Latchney LR, Hunter JJ, Chung MM, Williams DR. *Proc Natl Acad Sci USA.* 2017;114:586-591.] In: *International Glaucoma Review.* 2017;18-3. ed: Weinreb RN.

Electrodiagnostics: comment on [“Photopic negative response versus pattern electroretinogram in early glaucoma.” Preiser D, Lagrèze WA, Bach M, Poloschek CM. *Invest Ophthalmol Vis Sci.* 2013; 54: 1182-1191.] In: *International Glaucoma Review.* 2013;15-1. ed: Weinreb RN.

Pathophysiology: comment on [“Wavelength-dependent change of retinal nerve fiber layer reflectance in glaucomatous retinas.” Huang XR; Zhou Y; Knighton RW, Kong W, Feuer WJ. *Invest Ophthalmol Vis Sci.* 2012; 53: 5869-5876.] In: *International Glaucoma Review.* 2013;14-3. ed: Weinreb RN.

Pathophysiology: comment on [“Reflectance Decreases before Thickness Changes in the Retinal Nerve Fiber Layer in Glaucomatous Retinas.” Huang X-R, Zhou Y, Kong W, Knighton RW. *Invest Ophthalmol Vis Sci.*, 2011; 52(9):6737-6742.] In: *International Glaucoma Review.* 2012;13-4. eds: Weinreb RN, Greve E.

Perimetry: High-resolution multifocal pupillographic perimetry; comment on [“High-Resolution Multifocal Pupillographic Objective Perimetry in Glaucoma.” Carle CF, James AC, Kolic M et al., *Invest Ophthalmol Vis Sci.*, 2011; 52: 604-610.] In: *International Glaucoma Review.* 2011;13-1. eds: Weinreb RN, Greve E.

Intraocular Pressure: Effect IOP on cytoskeletal protein F-actin; comment on [“Altered F-actin distribution in retinal nerve fiber layer of a rat model of glaucoma.” Huang XR, Knighton RW. *Exp Eye Res.* 2009;88:1107-1114.] In: *International Glaucoma Review.* 2009;11-2. eds: Weinreb RN, Greve E.

IOP, VF, Imaging and Electrophysiology: Novel VEP technique for diagnosis; comment on [“Novel electrophysiological instrument for rapid and objective assessment of magnocellular deficits associated with glaucoma.” Zemon V, Tsai JC, Forbes M, Al-Aswad LA, Chen CM, Gordon J, Greenstein VC, Hu G, Strugstad EC, Dhrami-Gavazi E, Jindra LF. *Doc Ophthalmol.* 2008;117:233-243.] In: *International Glaucoma Review.* 2009;10-4. eds: Weinreb RN, Greve E.

Structure-function correlation in glaucoma; comment on: [“Topographic comparison of the visual function on multifocal visual evoked potentials with optic nerve structure on heidelberg retinal tomography.” Punjabi OS, Stamper RL, Bostrom AG, Han Y, Lin SC. *Ophthalmol.* 2008;115:440-446.] In: *International Glaucoma Review.* 2008;10-1:175. ed: Greve E.

Structure-function correlation in glaucoma; comment on: [“The relationship between retinal ganglion cell function and retinal nerve fiber thickness in early glaucoma.” Ventura LM, Sorokac N, De Los Santos R, Feuer WJ, Porciatti V. *Invest Ophthalmol Vis Sci.* 2006;47:3904-11.] In: *International Glaucoma Review.* 2006;8-3:638. ed: Greve E.

Structure and function: comparison of diagnostics for glaucoma; comment on: [“Comparison of objective diagnostic tests in glaucoma: Heidelberg retinal tomography and multifocal visual evoked potentials.” Balachandran C, Graham SL, Klistorner A, Goldberg I. *J Glaucoma.* 2006 Apr;15(2):110-6.] In: *International Glaucoma Review.* 2006;8-2:151-152. ed: Greve E.

Multifocal VEP in glaucoma; comment on: [“Repeat reliability of the multifocal visual evoked potential in normal and glaucomatous eyes.” Chen CS, Hood DC, Zhang X, Karam EZ, Liebmann JM, Ritch R, Thienprasiddhi P, Greenstein VC. *J Glaucoma.* 2003 Oct;12(5):399-408.] In: *International Glaucoma Review.* 2004;5-3:440. ed: Greve E.

Multifocal VEP in glaucoma; comment on: [“Multifocal visual evoked potential responses in glaucoma patients with unilateral hemifield defects.” Thienprasiddhi P, Greenstein VC, Chen CS, Liebmann JM, Ritch R, Hood DC. *Am J Ophthalmol.* 2003 Jul; 136(1): 34-40.] In: *International Glaucoma Review.* 2003;5-2:234. ed: Greve E.

Structure-function correlation in glaucoma; comment on: [“Effect of intraocular pressure on optic disc topography, electroretinography, and axonal loss in a chronic pressure-induced rat model of optic nerve damage.” Chauhan BC, Pan J, Archibald ML, LeVatte TL, Kelly MEM, Tremblay F. *Invest Ophthalmol Vis Sci.* 2002 Sep; 43(9): 2969-76 In: *International Glaucoma Review.* 2003;4-3. ed: Greve E. online ref: <http://www.Glaucom.com/GEM/redir43.asp?gem=2>

Structure-function correlation in glaucoma; comment on: [“Relationship between electrophysiological, psychophysical, and anatomical measurements in glaucoma.” Garway-Heath DF, Holder GE, Fitzke FW, Hitchings RA. *Invest Ophthalmol Vis Sci.* 2002 Jul; 43(7): 2213-2220.] In: *International Glaucoma Review.* 2002;4-2:246. ed: Greve E.

### Published Editorials

**Fortune B**, McKendrick AM, Hare WA, Weinreb RN. A great ocean of truth lay undiscovered. *Optom Vis Sci.* 2008 Jun;85(6):368-369. PMID: [18521015](https://pubmed.ncbi.nlm.nih.gov/18521015/)

**Published Abstracts / Conference Presentations (1994-2012)**

1. Reynaud J, Cull G, Dyrud E, Wang L, **Fortune B**, Gardiner SK, Burgoyne CF, Cioffi GA. Automated Optic Nerve Axon Counts in Normal Glaucomatous Non-Human Primate Eyes - Method Comparison to Semi-Automated Hand Counts. ARVO Meeting Abstracts March 26, 2012 53:2495.
2. Piper C, **Fortune B**, Cull G, Burgoyne, CF Cioffi GA, Wang L. Basal Blood Flow Autoregulation Changes Within the Optic Nerve Head Of Rhesus Monkey With Idiopathic Bilateral Optic Atrophy. ARVO Meeting Abstracts March 26, 2012 53:6842.
3. Wang L, Grant A. Cull, Piper C, Claude F. Burgoyne, **Fortune B**. Lower Limit of Blood Flow Autoregulation in Optic Nerve Head ARVO Meeting Abstracts March 26, 2012 53:6851.
4. Whitworth MD, Demirel S, Blachly CL, **Fortune B**, Johnson CA, Gardiner SK. Spatial Correspondence Between Retinal Nerve Fiber Layer Thickness From OCT Perimetric Sensitivity. ARVO Meeting Abstracts March 26, 2012 53:723.
5. Cull G, Piper C, **Fortune B**, Wang L. Longitudinal Changes in the Dynamic Response to an Acute Intraocular Pressure (IOP) Challenge in a Non-human Primate (NHP) model of Experimental Glaucoma (EG). ARVO Meeting Abstracts March 26, 2012 53:2830.
6. Qin L, Yang H, Williams G, Gardiner SK, Downs JC, **Fortune B**, Burgoyne CF. Spectral Domain Optical Coherence Tomography (SDOCT) detected lamina cribrosa compliance during acute compliance testing between young old normal Non-human Primate (NHP) eyes. ARVO Meeting Abstracts March 26, 2012 53:2824.
7. Hardin CA, Yang H, Roujin Ren, Gardiner SK, Blachly CL, Whitworth M, **Fortune B**, Demirel S, Burgoyne CF. Enhanced Correlation Between Retinal Nerve Fiber Layer Thickness (RNFLT) the Spectral Domain Optical Coherence Tomography (SDOCT) derived Neuroretinal Rim Parameter "Bruch's Membrane Opening Minimum Rim Area" (BMO-MRA) in Human Ocular Hypertension Glaucoma. ARVO Meeting Abstracts March 26, 2012 53:2821.
8. Choe TE, Abbott CJ, Reynaud J, Claude F. Burgoyne, **Fortune B**. Comparison Of Spectral Domain Optical Coherence Tomography (SDOCT) Imaging Modalities To Identify Deeper Structures Within The Rat Optic Nerve Head (ONH). ARVO Meeting Abstracts March 26, 2012 53:2820.
9. Williams G, Yang H, Ziyang Liu, Gardiner SK, Hardin CA, J Downs JC, **Fortune B**, Burgoyne CF. Spectral Domain Optical Coherence Tomography (SDOCT) detects lamina cribrosa hypercompliance in Non-human Primate (NHP) early experimental glaucoma (EEG). ARVO Meeting Abstracts March 26, 2012 53:3692.
10. Abbott CJ, Choe TE, Lusardi TA, Wang L, Burgoyne CF, **Fortune B**. Substantial Thickening of the Rat Peripapillary Retinal Nerve Fiber Layer but No Alteration of Axonal Transport 1- 2-weeks after an 8-hour Elevation of Intraocular Pressure (IOP). ARVO Meeting Abstracts March 26, 2012 53:5083.
11. **Fortune B**, Burgoyne CF, Cull G, Wang L. Onset Progression of Retinal Nerve Fiber Layer (RNFL) Damage in Experimental Glaucoma Occur Earlier by Scanning Laser Polarimetry (SLP) than by Spectral Domain Optical Coherence Tomography (SDOCT). ARVO Meeting Abstracts March 26, 2012 53:240.
12. **Fortune B**, Choe TE, Hardin C, Reynaud J, Cull G, Burgoyne CF, Wang L. Deformation of the Rodent Optic Nerve Head (ONH) Peripapillary Structures during after Acute Intraocular Pressure (IOP) Elevation. ARVO Meeting Abstracts April 22, 2011 52:2437.
13. Choe TE, Wang L, Theresa A. Lusardi TA, Cory J. Szybala CJ, Burgoyne CF, **Fortune B**. Axonal Transport of Cholera Toxin B Subunit (CTB) in the Rodent Visual Pathway Is Dependent on Intact Axonal Microtubules. ARVO Meeting Abstracts April 22, 2011 52:2448.

14. Williams G, Yang H, **Fortune B**, Hardin C, Strouthidis NG, Gardiner SK, Burgoyne CF. Change Detection within Optic Nerve Head (ONH) Retinal Nerve Fiber Layer (RNFL) Parameters Derived by Spectral Domain Optical Coherence Tomography (SDOCT) in Young versus Old Unilateral Experimental Glaucoma (EG) Monkeys. ARVO Meeting Abstracts April 22, 2011 52:165.
15. Qi J, Yang H, Hardin C, Gardiner SK, Strouthidis NG, **Fortune B**, Burgoyne CF. Spectral Domain Optical Coherence Tomography (SDOCT) Enhanced Depth Imaging (EDI) Of The Normal Glaucomatous Non-human Primate Optic Nerve Head. ARVO Meeting Abstracts April 22, 2011 52:166.
16. Hardin CA, Yang H, Williams G, Strouthidis NG, Gardiner SK, **Fortune B**, Burgoyne CF. Individual-eye (IE) Versus Sample-based (SB) Variability Estimates for Optic Nerve Head (ONH) Retinal Nerve Fiber Layer (RNFL) Spectral Domain Optical Coherence Tomography (SDOCT) Parameters in Non-Human Primates (NHPs). ARVO Meeting Abstracts April 22, 2011 52:174.
17. Cull G, Reynaud J, Wang L, Cioffi GA, Burgoyne CF, **Fortune B**. Comparison of Retinal Nerve Fiber Layer Thickness (RNFLT) Measured In Vivo by Spectral Domain Optical Coherence Tomography (SDOCT) Orbital Optic Nerve Axon Counts at an Early Stage of Experimental Glaucoma in Non-human Primates (NHPs). ARVO Meeting Abstracts April 22, 2011 52:179.
18. Yang H, Gardiner SK, Williams G, Hardin C, Strouthidis NG, Downs JC, **Fortune B**, Burgoyne CF. Spectral Domain Optical Coherence Tomography (SDOCT) Detected Optic Nerve Head (ONH) Change Demonstrates Age-Related Differences in Young vs Old Monkey Early Experimental Glaucoma (EEG). ARVO Meeting Abstracts April 22, 2011 52:5921.
19. Strouthidis NG, **Fortune B**, Yang H, Ian A. Sigal, Burgoyne CF. The Effect of Acute Intraocular Pressure Elevation on the Monkey Optic Nerve Head ARVO Meeting Abstracts April 22, 2011 52:4811.
20. Cull G, Reynaud J, Burgoyne CF, and **Fortune B**. Retinal Functional Abnormalities at the Onset of Optic Nerve Head (ONH) Surface Topography Change in Experimental Glaucoma. ARVO Meeting Abstracts April 11, 2010 51:5518.
21. Strouthidis NG, Yang H, **Fortune B**, Sigal IA, and Burgoyne CF. Visualization of the Anterior Lamellar Cribrosa Surface (ALCS) in Normal and Experimental Glaucoma (EG) Eyes Using Spectral Domain Optical Coherence Tomography (SD-OCT). ARVO Meeting Abstracts April 11, 2010 51:3857.
22. Williams G, Yang H, Hardin C, Strouthidis NG, Sigal IA, **Fortune B**, and Burgoyne CF. Spectral Domain Optical Coherence Tomography (SD-OCT) Detected Optic Nerve Head (ONH) Structural Change in Young vs. Old Monkey Early Experimental Glaucoma (EEG). ARVO Meeting Abstracts April 11, 2010 51:4805.
23. **Fortune B**, Cull G, and Burgoyne CF. Retinal Nerve Fiber Layer (RNFL) Thickness and Retardance at the Onset of Optic Nerve Head (ONH) Surface Topography Change in Experimental Glaucoma. ARVO Meeting Abstracts April 11, 2010 51:4920.
24. Wang L, Szybala CJ, Burgoyne CF, and **Fortune B**. Fluorescent Markers of Retinal Astrocytes, Ganglion Cells, Axons and Axonal Transport Visualized in vivo by Confocal Scanning Laser Ophthalmoscopy (CSLO). ARVO Meeting Abstracts April 11, 2010 51:2144.
25. **Fortune B**, Yang H, Strouthidis NG, Cull GA, Grimm JL, Downs JC, and Burgoyne CF. The Effect of Acute Intraocular Pressure Elevation on Peripapillary Retinal Thickness, Retinal Nerve Fiber Layer Thickness and Retardance. ARVO Meeting Abstracts April 11, 2009 50:5824.
26. Reynaud J, Cull G, Wang L, **Fortune B**, Strouthidis NG, Burgoyne CF, and Cioffi GA. Automated Detection of Regional Axonal Damage in Optic Nerve Cross-Section Images. ARVO Meeting Abstracts April 11, 2009 50:5829.

27. Williams G, Strouthidis NG, **Fortune B**, Yang H, Grimm J, Reynaud J, Cull G, Wang L, and Burgoyne CF. Detection of Longitudinal Optic Nerve Head (ONH) and Retinal Nerve Fiber Layer Thickness (RNFLT) Changes In Experimental Glaucoma Using Spectral Domain Optical Coherence Tomography (SD-OCT). ARVO Meeting Abstracts April 11, 2009 50:2253.
28. Grimm J, Yang H, Strouthidis NG, Burgoyne CF, and **Fortune B**. Precision of Retinal Nerve Fiber Layer Thickness (RNFLT) Estimates from Spectral-Domain Optical Coherence Tomography (SD-OCT) Radial B-scans. ARVO Meeting Abstracts April 11, 2009 50:2265.
29. Demirel S, **Fortune B**, Fan J, Levine RA, Torres R, Nguyen H, Mansberger SL, Gardiner SK, Cioffi GA, and Johnson CA. Predicting Progressive Glaucomatous Optic Neuropathy Using Standard Automated Perimetry. *Invest Ophthalmol Vis Sci.* 2008; 49: E-Abstract 1153.
30. Wang L, Cull G, **Fortune B**, and Cioffi G. Retinal and Choroidal Vasoreactivity to Altered PaCO<sub>2</sub> in Rat Measured With a Modified Microsphere Technique. *Invest Ophthalmol Vis Sci.* 2008; 49: E-Abstract 2079.
31. Burgoyne CF, Williams G, and **Fortune B**. Posterior Bowing of the Lamina Cribrosa and Peripapillary Sclera Are Clinically Detectable Within Heidelberg Spectralis 3D OCT Volumes of the Non-Human Primate (NHP) Optic Nerve Head (ONH) Following Acute and Chronic IOP Elevation. *Invest Ophthalmol Vis Sci.* 2008; 49: E-Abstract 3655.
32. **Fortune B**, Cull GA, and Burgoyne CF. Retinal Nerve Fiber Layer Birefringence Declines Prior to Thickness After Onset of Experimental Glaucoma or Optic Nerve Transection in Non-Human Primates. *Invest Ophthalmol Vis Sci.* 2008; 49: E-Abstract 3761.
33. O'Leary N, Mansberger SL, Twa MD, **Fortune B**, Lloyd MJ, Cioffi GA, Johnson CA, Garway-Heath DF, and Crabb DP. Glaucomatous Progression in Series of Stereo-Paired Photographs and Heidelberg Retinal Tomography Images. *Invest Ophthalmol Vis Sci.* 2008; 49: E-Abstract 5431.
34. Cull GA, **Fortune B**, Cioffi GA, and Burgoyne CF. Changes in Retinal Function After Onset of Experimental Glaucoma or Optic Nerve Transection in Non-Human Primates. *Invest Ophthalmol Vis Sci.* 2008; 49: E-Abstract 717.
35. Mansberger SL, Nguyen H, Torres R, Demirel S, **Fortune B**, Gardiner SK, Cioffi GA, and Johnson CA. Patterns of Optic Disc Change in Early Glaucoma and Glaucoma Suspect Patients. *Invest Ophthalmol Vis Sci.* 2007; 48: E-Abstract 3338.
36. Cull GA, **Fortune B**, Wang L, and Cioffi GA. Longitudinal Structural Evaluation of Experimental Retinal Nerve Fiber Layer Defects in Rhesus Monkeys. *Invest Ophthalmol Vis Sci.* 2007; 48: E-Abstract 3343.
37. Wang L, Cull G, **Fortune B**, and Cioffi GA. Dual Size Mixture of Microspheres for Sequential Ocular Blood Flow Measurement in Rats. *Invest Ophthalmol Vis Sci.* 2007; 48: E-Abstract 2294.
38. **Fortune B**, Wang L, Cull G, and Cioffi GA. Intravitreal Colchicine Causes Decreased Retinal Nerve Fiber Layer Thickness Measured by Scanning Laser Polarimetry but Not by Optical Coherence Tomography in Non-Human Primates. *Invest Ophthalmol Vis Sci.* 2007; 48: E-Abstract 2877.
39. Demirel S, **Fortune B**, Zhang X, Hood DC, Patterson E, Jamil A, Mansberger SL, Cioffi GA, and Johnson CA. Effect of Recording Duration on Diagnostic Performance of Multifocal Visual Evoked Potentials in High-Risk Ocular Hypertension and Early Glaucoma. *Invest Ophthalmol Vis Sci.* 2007; 48: E-Abstract 4453.
40. Cull GA, **Fortune B**, Wang L, and Cioffi GA. In vivo Assessment of Retinal Nerve Fiber Layer by CSLO, SLP, and OCT in Rhesus Monkeys With Idiopathic Bilateral Optic Atrophy. *Invest Ophthalmol Vis Sci.* 2006; 47: E-Abstract 745.
41. **Fortune B**, Demirel S, Zhang X, Hood DC, Patterson E, Jamil A, Mansberger SL, Cioffi GA, and Johnson CA. Comparison Between Multifocal Visual Evoked Potentials (mfVEP) and Standard



- Automated Perimetry (SAP) in High-Risk Ocular Hypertension and Early Glaucoma. *Invest Ophthalmol Vis Sci.* 2006; 47: E-Abstract 1126.
42. Wang L, Cull GA, **Fortune B**, and Cioffi GA. Microspheres Size Optimization in Ocular Blood Flow Measurement in Rats. *Invest Ophthalmol Vis Sci.* 2006; 47: E-Abstract 470.
  43. Cull GA, Wang L, **Fortune B**, Burgoyne CF, and Cioffi GA. Differential Loss of Small vs. Large Axons in Three Different Experimental Glaucoma Models in Macaque Monkeys. *Invest Ophthalmol Vis Sci.* 2005; 46: E-Abstract 1232.
  44. Wang L, **Fortune B**, Cull G, Bui B, and Cioffi GA. Ocular Blood Flow in the Rat During Acute Elevation of Intraocular Pressure. *Invest Ophthalmol Vis Sci.* 2005; 46: E-Abstract 1331.
  45. **Fortune B**, Demirel S, and Bui BV. Multifocal VEP Responses to Pattern-Reversal, Onset, Offset, and Sparse Pulse Stimuli. *Invest Ophthalmol Vis Sci.* 2005; 46: E-Abstract 3755.
  46. Zhang X, **Fortune B**, Hood DC, and Johnson CA. Utilizing Higher Order Kernels to Improve the Signal-to-Noise Ratio of the Multifocal Visual Potential (mfVEP). *Invest Ophthalmol Vis Sci.* 2005; 46: E-Abstract 3759.
  47. Bui BV, and **Fortune B**. Origin of Electroretinogram Amplitude Growth During Light Adaptation in Rat. *Invest Ophthalmol Vis Sci.* 2005; 46: E-Abstract 2250.
  48. Burgoyne CF, Downs JC, Bellezza A, Wang L, **Fortune B**, Cull G, and Cioffi GA. Axon Loss at the Onset of Confocal Scanning Laser Tomographic (CSLT) Detected Optic Nerve Head (ONH) Surface Change in Early Experimental Glaucoma (EEG) Is Modest (16–29%) and Diffuse (Central and Peripheral). *Invest Ophthalmol Vis Sci.* 2005; 46: E-Abstract 2372.
  49. Bui BV, **Fortune B**, Edmunds B, and Cioffi GA. Long-term recovery of electroretinogram components from short-term acute intra-ocular pressure elevation in rats. *Invest Ophthalmol Vis Sci.* 2004; 45: E-Abstract 2126.
  50. Edmunds B, **Fortune B**, Bui BV, and Cioffi GA. The electroretinogram during acute intraocular pressure elevation in rats. *Invest Ophthalmol Vis Sci.* 2004; 45: E-Abstract 2128.
  51. **Fortune B**, Bui BV, Morrison JC, Johnson EC, Dong J, Cepurna WO, Jia L, Barber S, and Cioffi GA. Selective loss of the electroretinogram scotopic threshold response (STR) at low levels of elevated intraocular pressure in a rat model of experimental glaucoma. *Invest Ophthalmol Vis Sci.* 2004; 45: E-Abstract 3467.
  52. Neuringer M, Billingslea A, **Fortune B**, Johnson EJ, and Snodderly DM. Multifocal ERG in monkeys without macular pigment. *Invest Ophthalmol Vis Sci.* 2004; 45: E-Abstract 5145.
  53. Cioffi GA, **Fortune B**, Wang L, Grant C, Bui BV, and Dong J. Idiopathic bilateral optic nerve atrophy in rhesus macaque (*Macaca mulatta*). *Invest Ophthalmol Vis Sci.* 2004; 45: E-Abstract 1115.
  54. Engelman CJ, Cull G, Bui BV, **Fortune B**, Edmunds B, Wang L, Cioffi GA. Optic Nerve Changes after Exposure to Endothelin-1: A Comparison between Confocal Scanning Laser Tomography, Stereoscopic Optic Nerve Photography and Histology. *Invest Ophthalmol Vis Sci* 2004 45: E-Abstract 5524.
  55. **Fortune B**, Wang L, Cull G, Bui B, Dong J, and Cioffi GA. Local Functional and Histological Changes after Intraretinal Ganglion Cell Axotomy in Macaque Retina. *Invest Ophthalmol Vis Sci.* 2003 44: E-Abstract 1039.
  56. Bui BV, **Fortune B**, Morrison JC, and Cioffi GA. Ganglion Cell Contribution to the Rat Full Field Electroretinogram. *Invest Ophthalmol Vis Sci.* 2003 44: E-Abstract 36.
  57. Wang L, **Fortune B**, Cull G, Dong J, and Cioffi GA. Endothelin B Receptor Expression in Glial Cells after Ganglion Cell Axon Transection. *Invest Ophthalmol Vis Sci.* 2003 44: E-Abstract 3326.
  58. **Fortune B**, Hood DC, and Johnson CA. Comparison of Conventional and Multifocal VEPs. *Invest Ophthalmol Vis Sci.* 2002 43: E-Abstract 2126.

59. **Fortune B**, Wang L, Bui B, Cull G, Dong J, Cioffi GA. Local functional losses upstream from focal intraretinal laser axotomy in macaque retina. (2002) [Abstract]. *Journal of Vision*, 2(10), 112a, <http://journalofvision.org/2/10/112/>, DOI 10.1167/2.10.112.\
60. **Fortune B**, Goh K, Demirel S, Novitsky K, Cioffi GA, Johnson CA. Detection of Glaucomatous Visual Field Loss Using Multifocal VEP. Proceedings of the International Perimetry Society, 2002. In: Wall M, Mills RP, eds. *Perimetry Update 2002/3*. The Hague: Kugler Publications, 2003 (in press).
61. **Fortune B**, Hood DC, Chen CS, Zhang X, Johnson CA and Cioffi GA. Comparison of Conventional (ISCEV standard) and Multifocal VEPs in Glaucoma and Control Subjects. *Optom Vis Sci*. 2001; 78(12s):31.
62. **Fortune B**, Cioffi GA, Johnson CA. Glaucoma causes selective reduction of an oscillatory component in multifocal ERG responses from the temporal retina. *Invest Ophthalmol Vis Sci*. 2001; 42(4): S147.
63. Anderson AJ, McKendrick AM, **Fortune B**, Johnson CA. Appearance of the frequency doubling stimulus at threshold. *Invest Ophthalmol Vis Sci*. 2001; 42(4): S151.
64. Johnson CA, McKendrick AM, **Fortune B**, Anderson AJ. Increased vernier acuity thresholds in glaucoma. *Invest Ophthalmol Vis Sci*. 2001; 42(4): S719.
65. Wang L, Cull G, **Fortune B**, Cioffi GA. Retinal glial cell changes in human glaucoma. *Invest Ophthalmol Vis Sci*. 2001; 42(4): S830.
66. **Fortune B**, Johnson CA, Cioffi GA. Abnormal macular function in human glaucoma revealed by three different modes of multifocal ERG stimulation. *Documenta Ophthalmologica*. 2000 (Proceedings of ISCEV Annual Meeting, Sydney, AU).
67. **Fortune B**, Cioffi GA, C.A. Johnson CA, Bearse MA Jr., Johnson MA. Topographic Assessment of Function in Glaucoma: Comparison of Three Different Modes of Multifocal ERG Stimulation. *Invest Ophthalmol Vis Sci*. 2000; 41(4): S326.
68. Cull G, **Fortune B**, Wang L, Oguri A, Cioffi GA. Effects of Isoflurane Anesthesia on Photopic Multifocal and Ganzfeld Flash Electroretinograms in Normal Macaque Eyes. *Invest Ophthalmol Vis Sci*. 2000; 41(4): S500.
69. Wang L, Cioffi GA, Hernandez MR, **Fortune B**, Cull G, Oguri A, Van Buskirk EM. Topographic, Functional and Histological Changes of the Optic Nerve in A Primate Chronic Ischemia Model *Invest Ophthalmol Vis Sci*. 2000; 41(4): S898.
70. Mansberger SL, Spry PGD, **Fortune B**, Eke T, Johnson CA, Cioffi GA. Frequency Doubling Perimetry and the Detection of Eye Disease in the Community. *Invest Ophthalmol Vis Sci*. 2000; 41(4): S87.
71. **Fortune B**, Adams AJ, and Schneck ME. Ophthalmoscopic and Angiographic Features of Diabetic Retinopathy Are Associated with Local ERG Response Delays. *Invest Ophthalmol Vis Sci*. 1999; 40(4): S714.
72. Schneck ME, **Fortune B**, and Adams AJ. Alterations in rod- and cone-mediated human retinal responses following glucose ingestion. *Invest Ophthalmol Vis Sci*. 1999; 40(4): S713.
73. **Fortune B**. and Schneck M.E. Effect of Blood Glucose on the Components of the Human Electroretinogram. *Invest Ophthalmol Vis Sci*. 1997; 38(4): S316.
74. Adams AJ, **Fortune B**, Hong H, and Schneck ME. Blood Glucose Effects on the Fast Oscillation of the EOG. *Invest Ophthalmol Vis Sci*. 1997; 38(4): S888.
75. Rad CN, Boren A, **Fortune B**, Schneck ME, and Severin T. Selective S-cone System Loss in Glaucoma and Glaucoma Suspects Measured with Isoluminant VEP's. *Invest Ophthalmol Vis Sci*. 1997; 38(4): S573.

76. Schneck ME, **Fortune B**, Crognale MA, Switkes E, Lee E, and Adams AJ. Effect of Blood Glucose on Chromatic and Achromatic Visually Evoked Potentials in Type I Diabetics and Normals. *Invest Ophthalmol Vis Sci*. 1996; 37(4):S976.
77. **Fortune B**. Complications of Herpes Zoster Ophthalmicus (HZO): A Case Report. *Optometry and Vision Science*. 1994; 71(12s):40.