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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

July 1992 - Aug 1992	Staff Optometrist, V.A. Medical Center, San Francisco, CA
Aug 1992 - July 1996	Clinical Instructor, University of California, Berkeley, CA
July 1996 - Dec 1998	Assistant Clinical Professor, University of California, Berkeley, CA
Feb 2001 - Oct 2004	Assistant Scientist, Legacy Health System, Portland, OR
Jan 2002 – present	Clinical Instructor, Dept. of Ophthalmology, School of Medicine, Oregon Health & Science University, Portland, OR
Jan 2002 – present	Director, Clinical Electrodiagnostics Service, Devers Eye Institute, Legacy Health Systems, Portland, OR
Oct 2004 – present	Associate Scientist, Legacy Health, Portland, OR

Professional Licensure

California Optometry 9833; Oregon Optometry 2824AT

Professional Affiliations

Association for Research in Vision and Ophthalmology (ARVO)
International Society for Clinical Electrophysiology of Vision (ISCEV)
American Academy of Optometry (Fellow, 1999)
Optometric Glaucoma Society (OGS, Founding Member)
Association of International Glaucoma Societies (AIGS)
International Perimetric Society (IPS) & North American Perimetric Society (NAPS)
Glaucoma Progression Scholars (Invited Member)

Other Experience / Service to Professional Organizations

2014 – Feb-May	Member, Program Committee, 12th Annual ARVO-ISIE Conference (International Society for Imaging in the Eye)
2013 – present	Member, Steering Committee, Glaucoma Progression Scholars
2013 – present	Member, IACUC, Legacy Health, Portland, OR
2013 – Feb-May	Member, Program Committee, 11th Annual ARVO-ISIE Conference (International Society for Imaging in the Eye)
2012 – December	Ad-hoc Member, Study Section (Panel/SRG 2013-01 ZGM1 TWD-7); National Institute of General Medical Sciences Special Emphasis Panel Center for Scientific Review, National Institutes of Health
2012 – present	Ad-hoc Reviewer, International Glaucoma Association Research Awards; The Royal College Of Ophthalmologists & College Of Optometrists, UK
2012	Member, Search Committee; Chief of Ophthalmology, Devers Eye Institute, Legacy Health
2011 – February	Ad-hoc Member, National Glaucoma Research committee; American Health Assistance Foundation (AHAF)
2010 – October	Member, Special Emphasis Panel ZRG1 CBC 90, Biology and Diseases of the Posterior Eye (BDPE) Study Section; Center for Scientific Review, National Institutes of Health
2010 – February	Ad-hoc Member, Biology and Diseases of the Posterior Eye (BDPE) Study Section; Center for Scientific Review, National Institutes of Health
2007 – 2008	Guest Editor, Feature Issue on Glaucoma, *Optometry and Vision Science*
2007 – 2009	Member, Basic Science Council, National Board of Examiners in Optometry Representative from Ocular/Visual Biology Committee
2005 – 2010	Associate Editor, Optometric Glaucoma Society Quarterly E-Journal,
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
2003 – May	Session Moderator: "Glaucoma: Visual Function & Electrophysiology II", Association for Research in Vision and Ophthalmology (ARVO)
2002 – October	Primary Reviewer & *ad hoc* Member, Institutional Review Board (IRB), Legacy Health System, Portland, OR
2001 – December	Session Moderator: "Glaucoma, Treatment, Electrophysiology", Annual Meeting, American Academy of Optometry
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.

Invited Referee for Peer-Reviewed Archival Journals

Investigative Ophthalmology and Visual Science
Visual Neuroscience
Experimental Eye Research
Ophthalmology
American Journal of Ophthalmology
PLoS One
Optometry and Vision Science
Retina
Ophthalmic and Physiological Optics
European Journal of Ophthalmology
Physiological Measurement
Progress in Retinal and Eye Research
Graefe's Archive for Clinical and Experimental Ophthalmology
Vision Research
Journal of Vision
Biomedical Optics Express
Archives of Ophthalmology
British Journal of Ophthalmology
Journal of Glaucoma
Documenta Ophthalmologica
Current Eye Research
Acta Ophthalmologica
Expert Review of Ophthalmology
Neurology

Awards / Honors

Optometric Glaucoma Society (OGS) President's Lecture, 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 (ISCEV), 2000.

William C. Ezell Fellowship, American Optometric Foundation, 1996-1997

Invited Lectures & Meeting Participation

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
"Peripaillary 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.
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 (23rd 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, *"The Role of Clinical Electrophysiology in the Diagnosis of Vision Disorders"*
July 2005	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 and Reunion; 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 3rd and 4th–year optometry students:
Primary Care, Ocular Disease, and Contact Lens Clinics. 1992-1998.

D. Supervision of 4th–year Optometry Students Thesis Research Projects: UC-Berkeley 1996-8.

E. Graduate Student: Thesis Advisor, Jonothan Wall, Masters, 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

R01 EY019327 (Fortune, B) 9/1/2009 - 11/30/2013 6.6 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 EY021281-01 (Burgoyne, CF) 12/1/10 - 11/30/2014 1.2 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.

R01 EY019674 (Demirel, PI) 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.

R01 EY019939 (Wang, L) 7/1/2010 - 6/30/2014 1.2 calendar
NIH/NEI
Role: Co-Investigator
Dynamic and Static Autoregulation Impairment in the Optic Nerve Head of Glaucoma.
The major goals of this project are to evaluate the longitudinal course of optic nerve head blood flow autoregulation abnormalities in experimental glaucoma and their anatomical correlates.

Pending

None.

Completed

R21 EY021311 (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 (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 (Fortune, PI) 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 (Fortune, PI) 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 (Fortune, PI) 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 (Cioffi, PI) 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 (Johnson, PI) 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 (Fortune, PI) 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 (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 (Fortune, PI) 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 intraocular pressure.

M.J. Murdock Charitable Trust Grant (Fortune, Co-PI) 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 (Fortune, PI) 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. Graham S, Fortune B. Electrophysiology in Glaucoma Assessment. In: Shaarawy T, Sherwood MB, Hitchings R, Crowston JG, eds. *Glaucoma*. London: Elsevier; 2013; *forthcoming*.

2. 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.

Peer-Reviewed Publications

1. Goren D, Gardiner SK, **Fortune B**, Demirel S. The effect of glaucomatous disease severity on the structure-function association for two measures of retinal nerve fiber layer thickness. 2013 (*under review*).
2. **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 (*revision under review*).
3. 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 (*in press*).
4. 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 (*in press*).
5. 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 (*in press*).
6. 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*. 2013 (*in press*).
7. 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*. 2013 (*in press*).
8. **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: 24204989; PMC3808404
9. 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: 24199032; PMC3812901
10. 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.
11. Goren D, Demirel S, **Fortune B**, Gardiner SK. Correlating perimetric indices with three nerve fiber layer thickness measures. *Optom Vis Sci*. 2013 (*in press*).
12. **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.
13. 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.
14. 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.
15. 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.
16. 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.

17. 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.
18. 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.
19. 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.
20. 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.
21. **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.
22. Reynaud J, Cull G, Wang L, **Fortune B**, Gardiner S, Burgoyne, CF, Cioffi GA. 2011 Automated optic nerve (ON) axon counts in normal and glaucomatous non-human primate (NHP) eyes – method and comparison to semi-automated hand counts. *Invest Ophthalmol Vis Sci*. 2012;53:2951-2959.
23. Yang H, Qi J, Hardin C, Gardiner SK, Strouthidis NG, **Fortune B**, Burgoyne CF. Spectral Domain Optical Coherence Tomography (SDOCT) Enhanced Depth Imaging (EDI) of the Normal and Glaucomatous Non-human Primate (NHP) Optic Nerve Head (ONH). *Invest Ophthalmol Vis Sci*. 2012;53:394-405.
24. Strouthidis NG, **Fortune B**, Yang H, Sigal IA, Burgoyne CF. The 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.
25. **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.
26. 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.
27. 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.
28. 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.
29. 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.
30. **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.
31. **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.

32. 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.
33. 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.
34. Strouthidis NG, Yang H, **Fortune B**, Downs JC, Burgoyne CF. Detection of the Optic Nerve Head Neural Canal Opening within Histomorphometric and Spectral Domain Optical Coherence Tomography Data Sets. *Invest Ophthalmol Vis Sci*. 2009;50:214-223.
35. **Fortune B**, Cull GA, Burgoyne CF. Relative course of retinal nerve fiber layer (RNFL) birefringence, RNFL thickness and retinal function changes after optic nerve transection. *Invest Ophthalmol Vis Sci*. 2008;49:4444-52.
36. Wang L, Cull G, **Fortune B**, Cioffi GA. Retinal and choroidal vasoreactivity to altered PaCO(2) in rat measured with a modified microsphere technique. *Exp Eye Res*. 2008; 86:908-913.
37. 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.
38. Hood DC, **Fortune B**, Arthur SN, Xing D, Salant JA, Ritch R, Liebmann JM. Blood vessels contributions to retinal nerve fiber layer thickness profiles measured with optical coherence tomography. J Glaucoma. 2008;17:519-528.
39. **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.
40. **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.
41. **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.
42. 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.
43. 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.
44. Bui BV and **Fortune B**. Origin of electroretinogram amplitude growth during light adaptation in pigmented rats. *Vis Neurosci*. 2006;23:155-167.
45. **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.
46. **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.
47. 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.
48. 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.
49. **Fortune B,** Zhang X, Hood DC, Demirel S, Johnson CA. Normative ranges and specificity of the multifocal VEP. *Doc Ophthalmol*. 2004;109:87-100.

50. 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.

51. 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.

52. **Fortune B**, Bui BV, Morrsion 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.

53. Bui BV and **Fortune B**. Ganglion cell contributions to the rat full field electroretinogram. *J. Physiol*. 2004;555(Pt 1):153-73. Epub: 2003 Oct 24.

54. **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.

55. 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.

56. **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.

57. **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.

58. **Fortune B** and Hood DC. Conventional pattern-reversal VEPs are not equivalent to summed multifocal VEPs. *Invest Ophthalmol Vis Sci*. 2003;44:1364-1375.

59. 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.

60. **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.

61. McKendrick AM, Johnson CA, Anderson AJ and **Fortune B**. Elevated vernier acuity thresholds in glaucoma. *Invest Ophthalmol Vis Sci*. 2002;43:1393-1399.

62. 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.

63. **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.

64. 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.

65. **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.

66. **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.

67. **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.

68. **Fortune B**, Cioffi GA, Johnson CA, Kondo Y, Mochizuki K, Kitazwa 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.

69. 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.

70. **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.

71. 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.

72. **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.

73. 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)

74. 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 Opthalmologica Proceedings Series, Kluwer Academic Publishers, 1996), pp. 179-185.

75. 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.

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

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.

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 Laminar 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 PaCO2 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.