

# Claude F. Burgoyne, M.D.

## Curriculum Vitae

August 5, 2014



Glaucoma Clinician and Surgeon, Senior Scientist  
 Van Buskirk Chair for Ophthalmic Research  
 Director, Optic Nerve Head Research Laboratory  
 Devers Eye Institute, Legacy Research Institute

Clinical Professor of Ophthalmology  
 Oregon Health and Sciences University

Discoveries in Sight Research Laboratories  
 Legacy Research Institute  
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**DATE OF BIRTH:** 28 July, 1955  
**CITIZENSHIP:** U.S.A.

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## MILITARY SERVICE

United States Marine Corps - 1974-1977

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## EDUCATION

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- 1987 M.D.**  
*University of Minnesota, Minneapolis, MN*
- 1982 B.A. (Architecture)**  
*University of Minnesota, Minneapolis, MN*

## POSTDOCTORAL TRAINING

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- 1991 – 1993 Fellowship in Glaucoma**  
Wilmer Institute  
The Johns Hopkins Hospital, Baltimore, MD
- 1988 – 1991 Residency in Ophthalmology**  
Eye and Ear Institute  
University of Pittsburgh, Pittsburgh, PA
- 1987 – 1988 Transitional Internship**  
Mercy Hospital, Pittsburgh, PA

## ACADEMIC APPOINTMENTS

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- 2014 – present Adjunct Faculty**  
Integrative Physiology and Neuroscience  
Washington State University, Pullman, WA
- 2010 – present Faculty**  
European School for Advanced Studies in Ophthalmology (ESASO)  
Universita della Svizzera italiana, Lugarno, Switzerland
- 2006 – present Clinical Professor**  
Department of Ophthalmology  
Oregon Health and Science University, Portland, Oregon
- 2005 – present Glaucoma Clinician and Surgeon, Senior Scientist**  
**Van Buskirk Chair for Ophthalmic Research**  
**Director, Optic Nerve Head Research Laboratory**  
Devers Eye Institute, Legacy Research Institute, Portland Oregon
- 2003 – 2005 Professor**  
**Director, Glaucoma Service**  
**Director, LSU/Tulane Optic Nerve Head Biomechanics Laboratory**  
Department of Ophthalmology, LSU Eye Center  
Louisiana State University Health Sciences Center  
School of Medicine, New Orleans, Louisiana
- 1996 – 2005 Adjunct Assistant Professor**  
Department of Biomedical Engineering  
Tulane University  
New Orleans, Louisiana

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- 1994 – 2005 Joint appointment, Neuroscience Center of Excellence  
Louisiana State University**  
Health Sciences Center  
School of Medicine, New Orleans, Louisiana
- 1993 – 2003 Associate Professor, Director, Glaucoma Service**  
Department of Ophthalmology  
LSU Eye Center, Louisiana State University Health Sciences Center  
School of Medicine, New Orleans, Louisiana
- 2001 – 2002 Acting Chairman, Department of Ophthalmology**  
LSU Eye Center, Louisiana State University Health Sciences Center  
School of Medicine, New Orleans, Louisiana
- 1993 – 1999 Assistant Professor  
Director, Glaucoma Service**  
Department of Ophthalmology  
LSU Eye Center, Louisiana State University Health Sciences Center  
School of Medicine, New Orleans, Louisiana

## LICENSURE

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- 2006 – present** Oregon (MD26350)
- 1993 – present** Louisiana (L09763R)
- 1991 – 1994** Maryland (D41727)
- 1986 – 1992** Pennsylvania (MD-044674-E)

## CERTIFICATION

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- 1992 Diplomate, American Board of Ophthalmology**  
11/17/12 - Re-certified for 01/01/13-12/31/22  
08/30/02 - Re-certified for 01/01/03-12/31/12

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## HONORS AND AWARDS

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- 2003 – present** **Named to *Best Doctors in America***  
Best Doctors, Inc., Polling & Research Division, 5230 Woodside Executive Court, Aiken, SC
- 2013 – 2018** **Association for Research and Vision in Ophthalmology, Glaucoma Section Trustee**  
*Elected by section members*
- 2013** **Optometric Glaucoma Society Honoree**  
2013 Annual Meeting, Seattle Washington, 23 October, 2013
- 2013** **Invited Member, Dowling Society of the ARVO Foundation**
- 2011** **American Academy of Ophthalmology Secretariat Award**
- 2011** **ARVO Gold Fellow, Association for Research in Vision and Ophthalmology**
- 2010** **Awardee, Alcon Research Institute ([link](#))**  
This unrestricted \$200,000 award is given by the non-profit Alcon Research Institute for outstanding contributions in the field of vision research.
- 2009** **ARVO Fellow, Association for Research in Vision and Ophthalmology (FARVO)**
- 2008** **The Lewis Rudin Glaucoma Prize ([link](#))**  
Administered by the New York Academy of Medicine, this \$50,000 prize is awarded for the most outstanding scholarly article on glaucoma published in a peer-reviewed journal during the previous calendar year: ***3D Histomorphometry of the Normal and Early Glaucomatous Monkey Optic Nerve Head: Prelaminar Neural Tissues and Cupping***. Yang H, Downs JC, Bellezza A, Thompson HW, Burgoyne CF. *Invest Ophthalmol Vis Sci*; 48:5068-5084, 2007
- 2007** **American Academy of Ophthalmology Achievement Award**
- 2004** **The International Glaucoma Review AIGS Award ([link](#))**  
AIGS (Association of International Glaucoma Societies). This \$25,000 award is given to the two best articles in peer-reviewed World Glaucoma Literature during the named calendar year: ***Three-dimensional reconstruction of normal and early glaucoma monkey optic nerve head connective tissues***. Burgoyne CF, Downs JC, Bellezza AJ, Hart RT. *Invest Ophthalmol Vis Sci* 2004; 45: 4388-4399.
- 2004** **Named to the *New Orleans Top Doctors List***  
Best Doctors, Inc for New Orleans Magazine
- 2003** **Member by Invitation, The Glaucoma Society of the International Congress of Ophthalmology** *Now known as The Glaucoma Research Society*
- 1993 – 1994** **Best Clinical Faculty (Teaching) Award**  
Selected by LSU Eye Center Residents, June 1994
- 1991** **Jay G. Linn, Jr., M.D. Award**  
**Outstanding Resident in Ophthalmology**  
University of Pittsburgh, The Eye and Ear Institute  
Department of Ophthalmology
- 1990 – 1991** **Chief Resident**  
University of Pittsburgh, The Eye and Ear Institute  
Department of Ophthalmology

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## MEMBERSHIPS

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- 2013 – present** European Mechanics Society
- 2008 – present** The von Graefe Society (Charter Member)
- 2008 – present** Oregon Bioscience Association
- 2006 – present** Society for Neuroscience
- 2006 – present** International Society for Matrix Biology
- 2006 – present** Oregon Medical Association (27060)
- 2005 – present** Glaucoma Progression Scholars, Invited Member
- 2004 – present** International Society of Glaucoma Surgery
- 2004 – present** Gerson Lehrman Group's Council of Healthcare Advisors
- 2003 – present** The Glaucoma Research Society, Invited Member
- 1995 – present** American Glaucoma Society
- 1995 – present** Orleans Parish Medical Society
- 1995 – present** Louisiana State Medical Society
- 1995 – present** American Medical Association
- 1993 – present** New Orleans Academy of Ophthalmology
- 1993 – present** Wilmer Residents Association
- 1991 – present** Association for Research in Vision and Ophthalmology
- 1990 – present** American Academy of Ophthalmology
  - 1984 – 1989** American Medical Association
  - 1985 – 1986** Hennepin County Medical Society
  - 1985 – 1986** Minnesota Medical Association

## ACADEMIC SERVICE

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- 2004 – 2005** **Focus Group Chair**
  - "Areas for Translational Research"
  - Chancellor's LSUHSC Clinical Research Support Project
- 2001 – 2002** **Acting Chairman**
  - Department of Ophthalmology
  - LSU Eye Center, Louisiana State University Health Sciences Center
  - School of Medicine, New Orleans, Louisiana

## INTERNATIONAL PRIZE SELECTION COMMITTEES

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- 2012 – Present** **The Lewis Rudin Glaucoma Prize Committee**

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## FDA ACTIVITIES

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- 2013** Consultant to Heidelberg Engineering for its pre-submission meeting with the FDA regarding 510(k) submission Q130705 "*Spectralis HRA+OCT with ONH Normative Database*"
- 2005 – 2009** Consultant to the FDA Ophthalmic Device Panel

## PROFESSIONAL SOCIETY ACTIVITIES

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- 2013 – present** Association for Research and Vision in Ophthalmology  
Board of Trustees  
Glaucoma Section Trustee - *Elected by section members*
- 2013 – present** World Glaucoma Congress Program Committee  
*Member as of the Vancouver Meeting, 2013*
- 2008 – present** Program Committee Member  
The Glaucoma Research Society  
Program Chairman 2012 meeting – Würzburg, Germany
- 2010 – 2013** Program Committee Member  
International Society for Imaging the Eye (ISIE)
- 2009 – 2012** Member, Program Committee  
American Glaucoma Society, 2010, 2011, 2012 meetings
- 2011** World Glaucoma Association Consensus Meeting VIII  
*Glaucoma Progression*  
Member, Section 2 – Structural Progression
- 2010** Applied Sciences Working Group Member  
Association for Research in Vision and Ophthalmology
- 2005 – 2008** Program Committee Member  
Glaucoma Section, Association for Research in Vision and Ophthalmology  
Glaucoma Program Chair – 2008 ARVO meeting
- 2001 – 2007** Member, Scientific Advisory Committee  
American Glaucoma Society
- 2004 and 2005** Co-Program Director  
Glaucoma Subspecialty Day  
American Academy of Ophthalmology Annual Meeting
- 2003** Invited Member  
Heidelberg Retinal Tomograph Assessment Group  
Association of International Glaucoma Societies  
First Global Consensus Meeting, UCSD, San Diego, CA

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## NIH ACTIVITIES

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- 2010 – 2016 AED/DPVS Study Section – Member**  
2 study sections per year for 6 years
- 2006 AED Study Section - Ad Hoc Reviewer**  
Special Emphasis Panel, ZRG1 AED
- 2005 AED Study Section - Ad Hoc Reviewer**  
Special Emphasis Panel, ZRG1 AED (01)
- 2003 Glaucoma Program Planning Committee**  
For the National Eye Institute's strategic plan.

## EDITORIAL REVIEWER

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**American Journal of Ophthalmology**  
**Archives of Ophthalmology**  
**Brain Research**  
**Current Eye Research**  
**Experimental Eye Research**  
**Eye**  
**Graefes Archives of Ophthalmology**  
**Investigative Ophthalmology and Visual Science**  
**Journal of Biomechanical Engineering**  
**Journal of Glaucoma**  
**Ophthalmology**  
**Progress in Retinal and Eye Research**  
**Science**

## EDITORIAL BOARDS

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- 2008 to present** Investigative Ophthalmology and Visual Science
- 2007 to present** International Glaucoma Review
- 2006 to present** Journal of Glaucoma
- 2003 to present** Current Eye Research
- 2004-2007** Canadian Journal of Ophthalmology International Advisory Board

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## GRANT REVIEWER AND SCIENTIFIC ADVISORY BOARDS

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- 2010 – present** AED/DPVS Study Section – Member (2010 – 2016)
- 2008 – present** American Health Assistance Foundation (AHAF) - Member, Research Committee
- 2008 – present** Glaucoma Foundation - Scientific Advisory Board Member
  - 2012** NEI Internet Assisted Review Meeting July 25-26, 2012
  - 2010** Atlantic Innovation Fund, Atlantic Canada Opportunities Agency
  - 2009** British Biotechnology and Biological Sciences Research Council  
Swiss National Science Foundation
  - 2007** Fight For Sight - United Kingdom  
Center for Scientific Review  
NIH Special Emphasis Panel 05/2007 Council ZRG1 CB-G 90 - Ad Hoc Reviewer
- 2002 – 2007** American Glaucoma Society
  - 2006** NIH AED Study Section - Ad Hoc Reviewer
  - 2005** The Physicians' Services Incorporated Foundation, Toronto, Ontario  
NIH AED Study Section - Ad Hoc Reviewer
  - 2003** National Institutes of Health Ad Hoc Reviewer
  - 2003** NIH Ad Hoc Reviewer RFA-SBIR Technologies for Enhanced SSS-P Special Emphasis Panel and Visual Function Panel
  - 2003** Natural Sciences and Engineering Research Council of Canada (NSERC)
  - 2003** Fight For Sight - United Kingdom
  - 2002** Canadian Institutes of Health Research (CIHR)



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## FOUNDATION SUPPORT

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- 2005 – present Legacy Health Foundation, Portland, OR**  
Unrestricted Research Support  
Principal Investigator
- 2006 – present Forrest O. Sears Charitable Trust, Mexico, MO**  
Unrestricted Research Support  
Principal Investigator
- 1998 – 2001 The Whitaker Foundation**  
*“Finite Element Modeling of the Load-Bearing Tissues of the Monkey Optic Nerve Head”*  
Principal Investigator

## GRANT SUPPORT: ACTIVE (FUNDED) GRANTS

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- 2012 – 2016 NIH/NEI R01 EY011610 (years 16-19)**  
*“IOP-Related Force and Failure in the Optic Nerve Head”*  
Direct Costs 492,000/year  
Principal Investigator
- 2010 – 2014 NIH/NEI R01 EY021281 (years 1-4)**  
*“Optic Nerve Head SDOCT Imaging in Glaucoma”*  
Direct Costs 250,000/year  
Principal Investigator
- 2007 – present Heidelberg Engineering, Heidelberg, Germany**  
*“Spectralis SD OCT imaging in Glaucoma”*  
Instruments and Unrestricted Research Support  
Principal Investigator
- 2013 – 2016 NIH/NEI R01 EY018926 (years 5 – 7)**  
*“Age-related Changes in Optic Nerve Head Structure and Biomechanics”*  
C Downs, C Girkin, Co-Principal Investigators  
Co-investigator
- 2010 – 2015 NIH/NEI R01 EY019939**  
*“Dynamic and Static Autoregulation Impairment in the Optic Nerve Head of Glaucoma”*  
Lin Wang, PhD Principal Investigator  
Co-Investigator
- 2009 – 2014 NIH/NEI R01 EY019674**  
*“Predicting the Rate of Progression in Glaucoma”*  
S Demirel, Principal Investigator  
Unpaid Consultant

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## GRANT SUPPORT: PENDING GRANTS

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**2014 – 2019 NIH/NEI R01 EY019674 – Renewal Submitted July 2014**

*“Predicting the Rate of Progression in Glaucoma”*

S Demirel, Principal Investigator

Co-investigator

**2014 – 2019 NIH/NEI R01 EY025343 – Submitted June 2014**

*“Optic nerve debris clearance by astrocytes in development and glaucoma”*

N Marsh-Armstrong, Principal Investigator

Consultant

**2014 - 2019 NIH/NEI R01 EY024945 – Submitted February 2014**

*“Proteomic Biomarkers for Glaucoma”*

J Crabb, Principal Investigator

Co-investigator

## GRANT SUPPORT: COMPLETED (INACTIVE) GRANTS

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**2009 – 2013 NIH/NEI R01 EY019327**

*“Axonal Cytoskeletal Changes in Experimental Glaucoma”*

B Fortune, Principal Investigator

Co-investigator

**2011 – 2013 NIH/NEI R21 EY021311**

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

B Fortune, Principal Investigator

Unpaid Consultant

**2010 – 2011 American Glaucoma Society Physician Scientist Mid-Career Award**

*“ONH Proteomics in Early Monkey Experimental Glaucoma”*

Principal Investigator

**2008 – 2011 NIH/NEI R01EY019333**

*“Racial Variations in Optic Nerve Head Structure and Biomechanics”*

C Downs, C Girkin, Co-Principal Investigators

Co-investigator

*The renewal of this grant has been folded into the renewal of NIH/NEI R01*

*EY018926 - “Age-related Changes in Optic Nerve Head Structure and Biomechanics”*

*at the request of the NEI Glaucoma Program Officer*

**2008 – 2009 Glaucoma Research Foundation**

*“Axonal Degeneration in Experimental Glaucoma”*

B Fortune, Principal Investigator

Co-investigator

**2007 – 2009 NIH/NEI R21 EY018152**

*“3D Reconstruction of Optic Nerve Heads”*

C Downs, Principal Investigator

Consultant

**2005 – 2007 NIH/NEI R21 EY016149**

*“Development of a Telemetric Monitor for IOP”*

C Downs, Principal Investigator

Co-Investigator

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- 2003 – 2006 NIH/NEI R03 EY014872**  
*"Hyperspectral Imaging of Oxygen Saturation in the ONH"*  
B Khoobehi , Principal Investigator  
Consultant
- 2004 – 2005 022H/M-04 E LSU Board of Regents**  
*"Collaborative Enhancement and Education in Clinical Informatics"*  
H Thompson, Principal Investigator  
Co-Investigator
- 2001 – 2003 LSU Eye Center Musicians Glaucoma Clinic**  
*"Screening for Glaucoma in Wind Players"*  
National Academy of Recording Arts and Sciences  
Principal Investigator
- 1997 – 1999 National Glaucoma Research Grant**  
*"Damage to the Lamina Cribrosa in Early Glaucoma"*  
American Health Assistance Foundation  
Principal Investigator
- 1997 – 1998 NIH/NEI SBIR (R43 EY11818)**  
*"System Software for Digital Optic Disc Change Detection"*  
Consultant
- 1993 – 1997 Career Development Award**  
Research to Prevent Blindness, Inc. New York, New York
- 1991 – 1993 National Research Service Award**  
*"The Mechanical Behavior of the Normal and Glaucomatous Monkey Optic Disc"*  
National Institutes of Health (NRSA; EY07047)

## CLINICAL TRIALS

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### **Alcon Glaucoma Study (C-02-41)**

Claude F. Burgoyne, MD, Principal Investigator-LSU Eye Center  
Protocol approval: 01/21/03  
Start date: February 2003  
Completed: December 2003

### **Alcon Glaucoma Study (C-00-50)**

Claude F. Burgoyne, MD, Principal Investigator-LSU Eye Center  
Protocol approval: 01/24/01  
Start date: March 2001  
Completed: December 2001

### **Pharmacia & Upjohn Latanoprost/Timolol Trial (#9600PG053)**

Claude F. Burgoyne, MD, Principal Investigator-LSU Eye Center  
Protocol approval: 12/16/96  
Start date: June 1997  
Completed: December 1998

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## NORMATIVE DATA BASE STUDIES

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### **Heidelberg Engineering Spectralis ONH/RNFL/Macula SDOCT Normative Data Base**

Population 1: European Descent Patients - 250 Patients from 5 sites – Data in analysis

Role: Co-Director with Bal Chauhan, PhD

Data acquisition: July 2012 – January 2013 (completed)

Population 2: Japanese Patients – 250 Patients from 5 sites

Role: Co-Director with Bal Chauhan, PhD

Data acquisition underway

Population 3: American African Descent Patients - 250 Patients from 5 sites – In process

Population 4: American Hispanic Descent Patients – 250 Patients from 5 sites – In process

Population 5: Chinese Patients – 250 Patients from 5 sites – planned

Population 6: Indian Patients – 250 Patients from 5 sites – planned

Population 7: Extended Biometry Patients – 250 Patients from 5 sites - planned

## FINANCIAL DISCLOSURES (for the past year)

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### **Heidelberg Engineering**

Unrestricted research funds and use of three instruments.

Occasional travel expenses. No honorarium.

Consultant - No personal income.

### **Reichert Instruments**

Use of an instrument.

No travel or speaking honorariums. Not a consultant.

### **NIH Funding – see Grant Support**

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## NAMED LECTURES

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### 2013

1. **Leydhecker-Harms Lecture**  
University of Wurzburg Department of Ophthalmology.  
Wurzburg, Germany. 13 July, 2013.
2. **Henry J. L. Van Dyk Memorial Lecture**  
LSU/Ochsner Residency Research Day.  
New Orleans, LA. 18 May, 2013.

### 2012

3. **Goldberg Lecture**  
Illinois Eye and Ear Infirmary, University Illinois-Chicago Department of Ophthalmology.  
Chicago, IL. 29 June, 2012
4. **Robertson Lecture**  
University of Texas Medical Branch – Galveston, Department of Ophthalmology Research Day.  
Galveston, TX. 8 June, 2012.
5. **Podos Lecture**  
Mt. Sinai Hospital Department of Ophthalmology Stephen M. Podos Symposium.  
New York, NY. 1 June, 2012.

### 2011

6. **Teicher Lecture**  
Columbia University Harkness Eye Institute.  
New York, NY. 3 November, 2011.

### 2009

7. **Rudin Lecture**  
New York University Department of Ophthalmology, Manhattan Eye and Ear Hospital.  
New York, NY, 26 May, 2009.
8. **Mansour F. Armaly Lecture**  
University of Iowa, Department of Ophthalmology.  
Iowa City, IA. 3 April, 2009.

### 2008

9. **Crane Lecture**  
University of Pittsburgh, Department of Ophthalmology.  
Pittsburgh, PA. 25 June, 2008.

### 2005

10. **Swan Lecture**  
Oregon Health Sciences University.  
Portland, OR. 11 November, 2005.
11. **Leopold Lecture**  
Allergan, Inc.  
Irvine, CA. March 2005.

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## INVITED LECTURES AND SCIENTIFIC PRESENTATIONS

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### 2014

1. Invited Speaker – Heidelberg Engineering Symposium : *“Individualized Optic Nerve Head Assessment in the OCT Era – Interpretation of the Anatomy”*; What Matters Beyond IOP Symposium – *“Can we gain insights through imaging the lamina, sclera and choroid”*; Co-Course Director – New Advances in OCT imaging – *“How SDOCT Anatomy will Improve Your Clinical Examination of the Optic Nerve Head”*. European Glaucoma Society Meeting, Nice, France. June 8 – 11, 2014
2. Invited Speaker – Animal Models Leading to Clinical Trials Workshop: *“Animal Models for Preclinical Studies of Glaucoma”* and Glaucoma Biomechanics and Blood Flow Paper Session: *“Non-Human Primate (NHP) Optic Nerve Head (ONH) Proteomic Change in Early Experimental Glaucoma (EG)”*. Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Orlando, Florida. May 4 – 8, 2014.
3. Invited Speaker – Heidelberg Engineering Symposium: *“Interpretation of the Anatomy of the Optic Nerve Head (ONH) with SDOCT”* and Glaucoma: The Role of Ocular Imaging Symposium – *“A Paradigm Change in the Clinical Assessment of the Optic Nerve Head Part 1: Clinical Anatomy.”* World Ophthalmology Congress, Tokyo, Japan. April 2 – 6, 2014.
4. Invited Speaker - *“Variability of Glaucoma Specialists’ Rim Width Estimates and Their Accuracy Relative to Colocalized Spectral Domain Optical Coherence Tomography (SDOCT)”* and Glaucoma Neurodegeneration and Neurorescue Symposium – *“What Role Does Aging Play”*. American Glaucoma Society Annual Meeting, Washington, DC. Feb 28 - Mar 1, 2014

### 2013

5. Invited Lecture – *“Spotlight on OCT”* Symposium: *“Lessons from OCT Imaging of the Lamina Cribrosa.”* American Academy of Ophthalmology Meeting, New Orleans, LA. 17 November, 2013.
6. Invited Lecture – Heidelberg Engineering Symposium: *“Paradigm Change to the Clinical Assessment of the Optic Nerve Head in Glaucoma.”* American Academy of Ophthalmology Meeting, New Orleans, LA. 17 November, 2013.
7. Invited Lecture – Heidelberg Engineering Academy, Glaucoma Faculty Inauguration. *“Optic Nerve Head Biomechanics and the Clinical Prediction of Susceptibility”*. London, UK. 30 October, 2013.
8. Invited Lectures – Moorfields Eye Hospital Glaucoma Grand Rounds. *“Paradigm Change to the Clinical Assessment of the Optic Nerve Head in Glaucoma.”* and *“Clinical Implications of ONH Connective Tissue Remodeling in Early Experimental Glaucoma.”* London, UK. 30 October, 2013.
9. Invited Lecture, Optometric Glaucoma Society - American Academy of Optometry Glaucoma Session, American Academy of Optometry Annual Meeting. *“Integrating SDOCT Anatomy into the Clinical Examination of the Optic Nerve Head”*. Seattle, WA. 23 October, 2013.
10. Honoree Award Lecture, Optometric Glaucoma Society Meeting. *“The Death of Cup to Disc Ratio in Glaucoma - Paradigm Change to the Clinical Assessment of the Optic Nerve Head”*. Seattle, WA. 22 October, 2013.
11. Keynote Lecture, ISER Molecular Mechanisms in Glaucoma Meeting. *“Optic Nerve Head Connective Tissue Deformation, Disorganization and Remodeling in Early Monkey Experimental Glaucoma – Implications for Mechanisms”*. Sarasota, FL. 30 September, 2013.
12. Invited Talk. Devers Eye Institute Thorny Issues Conference. *“Cup to Disc Ratio – Soon to be extinct?”* Portland, OR. 20 September, 2013.
13. Keynote Lecture. Swedish Glaucoma Society Annual Meeting, Stockholm, Sweden. Co-delivered via the Internet with Balwantray Chauhan, Phd: *“Paradigm Change to the Clinical Assessment of the Optic Nerve Head”*. 19 September, 2013.

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14. Visiting Lecturer, Department of Ophthalmology, University of Genoa. *"Paradigm change in the clinical disc examination."* Genoa, Italy, 25 July, 2013
15. Keynote Lecture. European Mechanics Society Meeting. *"Twenty years from onset through endstage in the Monkey Experimental Glaucoma Model"*, Genoa, Italy. 22-24 July, 2013.
16. Invited Talks at the World Glaucoma Congress Meetings, Vancouver, Canada, 17-19 July, 2013:
  - i. Best of the American Glaucoma Society Symposium - 17 July, 2013
  - ii. Ocular Biomechanics Symposium - 18 July, 2013
  - iii. Experimental Glaucoma Symposium - 18 July, 2013
  - iv. Heidelberg Engineering Paradigm Change Symposium - 19 July, 2013
17. Keynote Lectures. Simpósio Internacional de Glaucoma da SBG. *"Optic Nerve Head Biomechanics in Glaucoma and Aging"*, *"Paradigm Change to the Clinical Assessment of the Optic Nerve Head"* and *"Excellence in the Clinical Examination of the Optic Disc"*. Sao Paulo, Brazil. 7 June, 2013.
18. Keynote Lecture, Allergan European Glaucoma Panel IV and Mentoring Programme. *"Optic Nerve Head Biomechanics in Glaucoma and Aging"*. Association for Research in Vision and Ophthalmology pre-meeting. Seattle, WA. Saturday, 4 May, 2013.
19. Invited Speaker, University of Kentucky Translational Minisymposium. *"Mechanisms of aging and glaucomatous damage within the optic nerve head"* and *"The Death of Cup-to-Disc-Ratio - SDOCT Paradigm Change in Glaucoma Imaging"*. Lexington, KY. 12 April, 2013.
20. Invited Speaker and Award Recipient, Alcon Research Institute Award Lecture: *Connective Tissue Remodeling in the Monkey Experimental Glaucoma Model – Clinical Implications and Relationship to Axonal Injury*. Alcon Research Institute Awards Symposium, Boston MA. 8 March, 2013.
21. Invited Speaker, American Glaucoma Society Annual Meeting. *"Promising Techniques for Predicting Target IOP in Glaucoma"*. San Francisco, CA. 2 March, 2013

### 2012

22. Invited Speaker, ARVO Optic Nerve Degeneration and Aging Meeting. *"Mechanical Injury to the Optic Nerve Head and Aging"*. Obergurgl, Austria. 6 December, 2012
23. Visiting Professor, University of Michigan Kellogg Eye Institute. *"Optic Nerve Head Biomechanics in Aging and Glaucoma"* and *"SDOCT Paradigm Change in Glaucoma Imaging"*. Ann Arbor, MI. 15 November, 2012.
24. Invited Speaker: *"Optic Disc Margin Anatomy"* within the *"SDOCT Paradigm Change in Glaucoma Imaging"* session of the Glaucoma Research Society meeting, Würzburg, Germany. September 5-9, 2012.
25. Invited Lectures: *"Optic Nerve Head Biomechanics in Aging and Glaucoma"* and *"SDOCT Paradigm Change in Glaucoma Imaging"*. Merck, Sharpe and Dohme Glaucoma Symposium, Seoul, South Korea. August 25, 2012.
26. Invited Lecture: *"The Death of the Disc Margin and Cup to Disc Ratio in Glaucoma"*. Bascom Palmer Eye Institute, University of Miami Department of Ophthalmology, Miami, FL, August 2, 2012.
27. Invited Lecture: *"Clinical Optic Nerve Head Susceptibility Testing – Working Hypotheses and New Directions"*. Wilmer Eye Institute, Johns Hopkins Hospitals, Baltimore, MD. July 16, 2012.
28. Keynote Lecture: *"Optic Nerve Head Biomechanics"*. European Glaucoma Society 2012 Bi-Annual Meeting, Copenhagen, Denmark. 18 June, 2012.
29. Invited Speaker: *"Clinical Targets for Remodeling in Glaucoma"*. Glaucoma Session Minisymposium. ARVO 2012 Annual Meeting. Fort Lauderdale, FL. May 7, 2012.

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30. Invited Speaker: *"Laminar Microarchitectural Change in Non-Human Primate Unilateral Early Experimental Glaucoma"*. Glaucoma New Ideas Session. ARVO 2012 Annual Meeting. Fort Lauderdale, FL. May 7, 2012.
31. Invited Speaker: *"The role of IOP in Glaucomatous Damage"* and *"Unmet needs in Glaucoma"*. *"Managing Glaucoma Beyond Intraocular Pressure"* meeting, Chicago, IL. March 19, 2012.
32. Invited Speaker, *"New Targets for SDOCT ONH Imaging in Glaucoma"*. American Glaucoma Society 2012 Annual Meeting, New York, NY. March 1-4, 2012.
33. Session Moderator: *"Neuroprotection and Glia in Glaucoma"*. American Glaucoma Society 2012 Annual Meeting. New York, NY. March 1-4, 2012.

### 2011

34. Invited Lecturer, Harvard Glaucoma Joint Lab Meeting, Boston, MA. 16 November, 2011
35. Keynote Speaker, University of Washington Department of Ophthalmology Resident Alumni Day: *"SDOCT Imaging Targets in Glaucoma – Parts 1 and 2"*. Seattle, WA. June 18, 2011.
36. Invited Lecturer, Vision Science Distinguished Lecture Series, The Eye Center, Medical College of Wisconsin. *"Optic Nerve Head Biomechanics and Susceptibility to Glaucomatous Damage"*. Milwaukee, WI. April 11, 2011.
37. Session Moderator: *"Visual Function and Progression"* and *"AGS Ethics Symposium"*; American Glaucoma Society 2011 Annual Meeting. Dana Point, CA. March 3-6, 2011.
38. Plenary Lecture, *The Optic Nerve Head Connective Tissues in Early Experimental Glaucoma – Mechanisms of Axonal Damage"*. Asia-ARVO, Singapore, Singapore. 21 January, 2011.

### 2010

39. Keynote Lecture, *"Mechanisms of Optic Nerve Head Damage in Glaucoma"*, 12th Japan Glaucoma Council, Tokyo, Japan, December 11, 2010.
40. Keynote Lecture, *"Optic Nerve Head Biomechanics and the Mechanisms of Cupping and Axon Loss in Aging and Glaucoma"*, annual United Kingdom and Erie Glaucoma Society (UKEGS) meeting, London, UK, 3-4 December, 2010
41. Plenary Lecturer, Royal Australian and New Zealand College of Ophthalmology (RANZCO) 2010 Annual Meeting, Adelaide Australia, 19 -22 November, 2010.
  - i. Plenary Lecture: *"New targets for SDOCT ONH imaging in Glaucoma"*
  - ii. Registrars Lecture: *"Optic Nerve Head Biomechanics in Aging and Glaucoma"*
  - iii. Invited Lecture: *"Revisiting the Clinical Disc Margin"*
  - iv. Invited Lecture: *"SDOCT Change Detection in Glaucoma"*
  - v. Invited Lecture: *"Tube or Trab, When and Where?"*
42. Invited Lecture, *"Biomechanics and Clinical Importance of the Deep ONH in Glaucoma"*, Heidelberg Engineering 20th Anniversary Symposium, Heidelberg Germany, talk given via internet from Adelaide Australia, November 19, 2010.
43. Invited Lecture, *"Clinical Targets for Predicting Optic Nerve Head Biomechanics and Susceptibility in Glaucoma"*, Vanderbilt Eye Institute Biomarkers in Eye Disease Symposium, Nashville, TN, November 9-10, 2010.
44. Invited Lecture, *"Does IOP fluctuation Cause Structural Damage"*, American Academy of Ophthalmology Glaucoma Subspecialty Day, Chicago, IL, 16 October, 2010.
45. Keynote Lecture, *"Biomechanics in Glaucoma"*, European Glaucoma Society Meeting, Madrid, 14 September, 2010



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46. Invited Lecture, *"Clinical Research Meets the Lab: New Targets for SDOCT ONH imaging in Glaucoma"*. European School for Advanced Studies in Ophthalmology (ESASO). Lugarno, Switzerland, 3 September 2010.
47. Invited Lecture, *"What damages ganglion cells: the pathophysiology of glaucomatous damage to the optic nerve head and neuroprotection"*. European School for Advanced Studies in Ophthalmology (ESASO). Lugarno, Switzerland, 3 September 2010.
48. Invited Participant, Assessment of the Optic Nerve Head and Lamina Cribrosa Session, *"Targets for Clinical Assessment of Optic Nerve Head Biomechanics"* World Ophthalmology Congress, Berlin, 7 June, 2010.
49. Invited Participant, Optic Nerve Head Imaging Session, *"New Targets for SDOCT imaging of the optic nerve head in Glaucoma."*, World Ophthalmology Congress, Berlin, Germany, June 7, 2010.
50. Invited Participant Allergan Neurorescue Meeting. Berlin, June 5, 2010.
51. Global Leaders Lecture: LV Prasad Eye Institute, Hyderabad, India. Given via an internet Web Broadcast. May 24, 2010.
52. Invited Speaker: *"Biomechanical Implications of early optic nerve head connective tissue damage, deformation and remodeling in the monkey model of experimental glaucoma"*. Thirteenth Annual Vision Research Conference, Ft Lauderdale, FL. April 30 – May 1, 2010.
53. Invited participant and speaker. *"SDOCT imaging in Glaucoma"*. Glaucoma Research Society Bi-annual Meeting. Kyoto, Japan. April 1-3, 2010.
54. Invited Section Chair, *"IOP Tonometry and Telemetry"*, Glaucoma Research Society Bi-annual Meeting. Kyoto, Japan. April 1-3, 2010.
55. Invited Participant and Symposium Co-Chair, *"Incorporating Rates of Change into Clinical Practice"*, American Glaucoma Society Annual Meeting. Naples FL, 5 March, 2010.
56. Invited Participant, Lasker /IRRF Initiative for Innovation in Vision Research – Follow up meeting on the role of the Astrocyte in Glaucoma - March 2010, Janilia Farms Campus of the Howard Hughes Medical Institute, Washington, DC, March 1-3, 2010.
57. Invited Lecturer, California Pacific Medical Center. *"Optic Nerve Head Biomechanics underlies the Clinical Appearance and Behavior of the Aged Optic Nerve Head"* and *"New Targets for SD-OCT Imaging of the Optic Nerve Head in Glaucoma."* San Francisco, CA, 8 February, 2010.

### 2009

58. Invited Lecturer, University of British Columbia. *"Optic Nerve Head Biomechanics underlies the Clinical Appearance and Behavior of the Aged Optic Nerve Head"* and *"New Targets for SD-OCT Imaging of the Optic Nerve Head in Glaucoma"*. Vancouver, Canada, 25 September, 2009.
59. Invited Participant, Lasker /IRRF Initiative for Innovation in Vision Research – August 2009 Workshop, Woods Hole, MA, August 11-13, 2009
60. Invited Lecture, *"A Comparison of Clinical Disc Margin Anatomy using Clinical Photographs and SD-OCT"*, World Glaucoma Congress, Boston, MA, 8 July, 2009.
61. Invited Lecture, Scottish Glaucoma Symposium. *"Optic Nerve Head Biomechanics and Aging"*. Edinburgh, Scotland. 19 June, 2009.
62. Invited Lecture, Retinal Institute of Catalan, Barcelona. *"Clinical Implications of Optic Nerve Head Biomechanics"* and *"Clinical Disc Margin Anatomy by SD-OCT"*. Barcelona, Spain. June 5, 2009.
63. Invited Lecturer, Grand Rounds, State University of New York, Stony Brook, Department of Ophthalmology, *"Optic Nerve Head Biomechanics underlies the Clinical Appearance and Behavior of the Aged Optic Nerve Head"* and *"New Targets for SD-OCT Imaging of the Optic Nerve Head in Glaucoma"*. Stony Brook, NY, 27 May, 2009.

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64. Invited Speaker, ARVO 2009 Special Interest Group (SIG) on High Resolution OCT Imaging in Glaucoma: *"New Targets for SD-OCT Imaging of the Optic Nerve Head in Glaucoma"*. Association for Research in Vision and Ophthalmology Research Meeting, Ft Lauderdale, FL. 6 May, 2009.
65. Invited Speaker, ARVO 2009 Special Interest Group (SIG) on Risk Factors in Addition to IOP in Glaucoma: *"Non-IOP related contributions to the Biomechanical Paradigm of Glaucomatous Damage"*. Association for Research in Vision and Ophthalmology Research Meeting, Ft Lauderdale, FL. 4 May, 2009.
66. Invited Speaker, ARVO 2009 Glaucoma Minisymposium: *"The Biomechanics of Axonal Damage in Glaucoma"*. Association for Research in Vision and Ophthalmology Research Meeting, Ft Lauderdale, FL. 4 May, 2009.
67. Invited Professor, Department of Ophthalmology, University of Iowa. "New Targets for SD-OCT imaging in Glaucoma" – Research Lecture; "Reflections on Being a Professional – Residents Lecture; "New Concepts in Clinical Disc Margin Anatomy" – Clinical Lecture 1; Optic Nerve Head Biomechanics underlies the Clinical Appearance and Behavior of the Aged Optic Nerve Head" – Clinical Lecture 2; Grand Round Case Discussions. Iowa City, IA, May 2 and 3, 2009.
68. Invited Lecture: *"Ocular Biomechanics – Realistic Expectations"*. Special Interest Group on Corneal Biomechanics, American Glaucoma Society, San Diego, CA. 6 March, 2009
69. Invited Lecture: *"What differentiates Glaucomatous Progression from Accelerated Aging?"*, Symposium on Progression, American Glaucoma Society, San Diego, CA. 6 March, 2009
70. Invited Faculty and Lecturer: 7th International Spectralis Symposium (ISS), Miami, FL. February 27-28, 2009.
71. Invited Lecturer and Meeting Co-organizer, Yosemite Glaucoma Summit 2009, Yosemite National Park, CA, 22-25 January 2009.

### 2008

72. Visiting Professor, Department of Ophthalmology, University of California. *"Optic Nerve Head Biomechanics in Glaucoma and Aging."* San Francisco, CA, December 4, 2008.
73. Invited Lecturer. Heidelberg Engineering Webinar. *"New Targets for SD-OCT imaging in Glaucoma"*. 25 November, 2008.
74. Invited Lecture. Fifth Internationale University Programme on Ocular Ischaemia. *"Optic Nerve Head Biomechanics – Interactions with Blood Flow and Age"*. Dublin, Ireland. October 24-26, 2008.
75. Invited Lecturer. Joint Session of the American Association of Ophthalmology and the Optometric Glaucoma Society on the Pathophysiology of Glaucomatous Damage. *"Optic Nerve Head Biomechanics – Basic Science"*, and *"Optic Nerve Head Biomechanics – Clinical Implications"*. Anaheim, CA. October 22, 2008.
76. Invited Lecturer. Optometric Glaucoma Society Meeting. *"New Targets for SD-OCT imaging in Glaucoma"*. Anaheim, CA. October 21, 2008.
77. Visiting Professor. New York Eye and Ear Infirmary. *"The importance of Prelaminar and Lamellar Cupping"*. New York, NY, 3 October, 2008.
78. Invited Lecturer. German Society of Ophthalmology, Berlin, Germany, 20 September, 2008
79. Invited Participant. Second International Glaucoma Think Tank. Florence, Italy. July 24-27, 2008.
80. Invited Lecturer, University of California – Davis, Napa Ophthalmology Symposium – *"Elder Eyes: New Treatments for the Aging Eye"*. Napa, CA, May 16-18, 2008.
  - i. Telemetric IOP monitoring in Glaucoma
  - ii. New targets for OCT imaging of the ONH in Glaucoma
  - iii. Biomechanics underlies the susceptibility and clinical behavior of the Aged Optic Nerve Head.

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81. Invited Lecturer, 1st International Glaucoma Blood Flow Symposium. New York Academy of Medicine, New York, NY, May 2nd 2008.
82. Invited participant, ARVO/Pfizer Ophthalmic Research Institute Conference, Fort Lauderdale, FL, April 25-26, 2008.
83. Invited Participant, Glaucoma Research Society, Co-organizer Basic Science Session. Queenstown, New Zealand, 20-23 February 2008.

### 2007

84. Visiting Lecturer, Friedrich-Alexander-University of Erlangen-Nuremberg. Nuremberg, Germany, December 3rd 2007.
85. Invited Speaker, Pacific Atlantic Glaucoma Symposium, Newport, CA, October 19-20, 2007.
86. Invited Speaker, 14th Annual Glaucoma Foundation Optic Nerve Rescue and Restoration Think Tank – High Resolution Imaging of the Eye: Advanced Optics, Microtechnology and Nanotechnology- “*New Targets for Optic Nerve Head OCT Imaging in Ocular Hypertension*” New York, NY, September 2007
87. Invited Speaker, Association for International Glaucoma Societies World Congress, Singapore, July 17-19, 2007
88. Invited Speaker, UC Irvine, Irvine, CA. June 6, 2007
89. Invited Lecture, Bascom Palmer Frontiers in Vision Science Lecture Series. Miami, FL, 29 March, 2007.
90. Invited Speaker, Yosemite Glaucoma Summit, Yosemite National Park, CA, 8 – 11 February, 2007.

### 2006

91. Invited Speaker, Glaucoma Subspecialty Day, American Academy of Ophthalmology meeting. Las Vegas, NV, November 2006. Presentation chosen as a meeting highlight for on line presentation: “*Biomechanics: Merging Vascular and Mechanical Models*” by Claude F Burgoyne MD
92. Invited Speaker, Pathology Subspecialty Day, American Academy of Ophthalmology meeting. Las Vegas, NV, November 2006.
93. Invited Participant, Pfizer IOP Control Expert Panel. Las Vegas, NV, November 2006.
94. Visiting Lecturer, Washington University Department of Ophthalmology. St Louis, MI, 19th October 2006.
95. Invited Session Moderator, International Glaucoma Think Tank. Taormina, Italy 27-29th July 2006
96. Invited Speaker and Imaging Session Moderator, International Perimetric Society Meeting. Portland, OR, 13th July 2006.
97. Invited Speaker – Glaucoma Progression Scholars Meeting. Portland, OR, 10th July 2006.
98. Invited Speaker, Imaging in Glaucoma Session, Oxford Ophthalmological Congress. Oxford, UK, 4th July 2006.
99. Invited Speaker, Basic Research Session, Glaucoma Society of the International Congress of Ophthalmology. Vancouver, British Columbia, Canada, 30th June, 2006.
100. Invited Speaker, Intraocular Pressure Fluctuation Meeting, Allergan Pharmaceuticals, Irvine, CA, 16th June 2006.

### 2005

101. Invited Speaker and Faculty, Alcon Glaucoma Specialists Forum. Fort Worth, TX, Nov 2005.
102. Invited Speaker and Faculty, Allergan Fellows Program. Irvine, CA, Sept 23-24th 2005.
103. Invited Speaker and Faculty, World Glaucoma Congress. Vienna, Austria, July 2005.
104. Invited Speaker, Vision Sciences Research Group: University of California, Davis, Sacramento, CA, June 2005.

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105. Visiting Lecturer, Visiting Professor Grand Rounds Series: University of Michigan. Ann Arbor, MI, May 2005.
106. Moderator, Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, May 2005.
107. Invited Speaker, AHAF Catalyst Meeting. Fort Lauderdale, FL, February 2005.

### 2004

108. Invited Speaker, New York Glaucoma Society, New York, NY, December 2004.
109. Visiting Lecturer, New York Eye and Ear Infirmary, New York, NY, December 2004.
110. Visiting Lecturer, Mount Sinai Hospital, Department of Ophthalmology, New York, NY, December 2004
111. Invited Speaker, Optometric Glaucoma Society, Tampa, FL, December 2004.
112. Invited Speaker, Alcon Glaucoma Specialists Meeting, Fort Worth, TX, November 2004.
113. Invited Speaker, Alcon Glaucoma Fellows Meeting, Fort Worth, TX, November 2004.
114. Co-Chair, Glaucoma Subspecialty Day, American Academy of Ophthalmology meeting, New Orleans, LA, October 2004.
115. Invited Participant, Risk Analysis in the Glaucoma Continuum Symposium, Boston, MA, July 2004.
116. Invited Speaker, European Glaucoma Society Meeting, Florence, Italy, May 2004.
  
117. Session Moderator, ARVO, Fort Lauderdale, FL, April 2004.
118. Invited Speaker, Ocular Therapy Update, San Diego, CA, February 2004.

### 2003

119. Invited Speaker, Glaucoma Subspecialty Day, American Academy of Ophthalmology. Anaheim, CA, November 2003.
120. Invited Participant, Consensus Meeting of the Association of International Glaucoma Societies. San Diego, CA, November 2003.
121. Visiting Lecturer, Duke Glaucoma Symposium, Duke University Medical Center, Durham, NC, September 2003
122. 33rd Cambridge Ophthalmologist Symposium, St. John's College. Cambridge, UK, Sept 2003.
123. Visiting Lecturer, Moorfields Eye Hospital, London, UK, September 2003.
124. Moderator, Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, May 2003.
125. Glaucoma Society of the International Congress of Ophthalmology. Chantilly, France, May/June 2003.
126. Washington Academy of Eye Physicians and Surgeons, Seattle, WA, April 2003.
127. 11th Annual Mardi Gras Conference, LSU, Baton Rouge, LA, February/March 2003.
128. 2002-03 Rich Lecture Series, University of Alabama. Birmingham, AL, February 2003.

### 2002

129. Visiting Professor's Program, Department of Ophthalmology, University of Toronto, December 2002, Toronto, Canada
130. Editor's Choice Session, American Academy of Ophthalmology, Orlando, FL, October 2002.
131. Glaucoma 2002 Subspecialty Day, American Academy of Ophthalmology, Orlando, FL, October 2002.
132. International Congress of Eye Research, Geneva, Switzerland, October 2002.
133. The Canadian Glaucoma Meeting, Dalhousie University. Halifax, Nova Scotia, Canada, September 2002
134. Alcon Research Laboratories, Research Campus, Fort Worth, TX, September 2002.

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- 135. Thorny Issues in Ophthalmology, Devers Eye Institute, Legacy Health. Portland, OR, June 2002.
- 136. Moderator, Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 2002.
- 137. ARVO Mini-symposium, Fort Lauderdale, FL, May 2002.

**2001**

- 138. Jules Stein Eye Institute, UCLA, Los Angeles, CA, December 2001.
- 139. American Academy of Ophthalmology, New Orleans, LA, November 2001.
- 140. Biomedical Engineering Department Seminar, Tulane University, New Orleans, LA, September 2001
- 141. Moderator, Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, May 2001.

**2000**

- 142. American Academy of Ophthalmology: Glaucoma 2000 Subspecialty Day. Dallas, TX, October 2000.
- 143. Moderator, Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 2000.
- 144. ARVO Mini-symposium, Fort Lauderdale, FL, May 2000.

**1999**

- 145. The Shape of Glaucoma: Imaging Workshop in Glaucoma. Rotterdam, The Netherlands, February 1999

**1998**

- 146. ARVO Mini-symposium, Fort Lauderdale, FL, May 1998.

**1997**

- 147. Finnish Ophthalmological Society, Tampere, Finland, September 1997
- 148. Alabama Academy of Ophthalmology, Point Clear, AL, July 1997

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## PhD DISSERTATIONS SUPERVISED

---

**2009 – present Marta Pazos, MD**

Optic Nerve Head Research Laboratory, Devers Eye Institute, Legacy Research  
*“3D Histomorphometric Reconstruction of the Normal and Experimental Glaucomatous Rat Optic Nerve Head”*  
Principal Advisor

**2008 – 2012 Nick Strouthidis, MD, PhD**

Optic Nerve Head Research Laboratory, Devers Eye Institute, Legacy Research  
*“SD-OCT Imaging of the Monkey and Human Optic Nerve Head”*  
Principal Advisor

**2002 – 2009 Hongli Yang, BSE, PhD**

Department of Biomedical Engineering, Tulane University, New Orleans, Louisiana  
*“Optic Nerve Head Biomechanics of Normal and Glaucomatous Monkeys: An Experimental and Computational Study”*  
Principal Advisor

**2002 – 2008 Michael Girard, BSE, PhD**

Department of Biomedical Engineering, Tulane University, New Orleans, Louisiana  
*“Scleral Biomechanics in the Normal, Glaucomatous and Aging Eye”*  
Principal Advisor

**1996 – 2002 Anthony J. Bellezza, BSE, PhD**

Department of Biomedical Engineering, Tulane University, New Orleans, Louisiana  
*“Biomechanical Properties of the Normal and Early Glaucomatous Optic Nerve Head: An Experimental and Computational Study Using the Monkey Model”*  
Principal Advisor

**1996 – 2002 J. Crawford Downs, MA, MS, PhD**

Department of Biomedical Engineering, Tulane University, New Orleans, Louisiana  
*“Experimental and Computational Modeling of the Posterior Scleral Shell of the Normal and Glaucomatous Monkey Eye”*  
Principal Advisor

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## MASTER'S THESES SUPERVISED

---

**2000 – 2002 Christopher J. Rintalan, BSE, MS**

Department of Biomedical Engineering Tulane University, New Orleans, Louisiana

*"Measures of Anterior Scleral Canal Architecture Within Sagittal Sections of Normal and Early Glaucomatous Monkey Optic Nerve Heads"*

Principal Advisor

**1998 – 2001 John Ervin, MD, MPH**

Department of Public Health and Preventive Medicine, Louisiana State University Health Sciences Center School of Graduate Studies, New Orleans, LA

*"Clinician Change Detection within the Stereophotos of the LSU Experimental Glaucoma Study"*

Principal Advisor

## SENIOR HONOR THESES SUPERVISED

---

**2003 Jonathan Pottle, BSE**

Department of Biomedical Engineering. Tulane University, New Orleans, Louisiana

*"Geometric Characterization of Bruch's Membrane Opening within Three-Dimensional Reconstructions of Optic Nerve Heads from Normal and Early Glaucomatous Monkey Eyes"*

Principal Advisor

**2000 – 2001 Richard A. Blidner, BSE**

Department of Biomedical Engineering, Tulane University, New Orleans, Louisiana

*"Peripapillary Scleral Thickness in the Perfusion-Fixed Monkey Eye"*

Principal Advisor

**1999-2000 Michael Ensor, BSE**

Department of Biomedical Engineering, Tulane University, New Orleans, Louisiana

*"Posterior Scleral Thickness Measurements in Perfusion-Fixed Normal and Glaucomatous Monkey Eyes"*

Principal Advisor

**1999 – 2000 Christopher J. Rintalan, BSE**

Department of Biomedical Engineering, Tulane University, New Orleans, Louisiana

*"Enlargement of the Anterior Scleral Canal Opening in Rhesus Monkeys with Early Experimental Glaucoma"*

Principal Advisor

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## GLAUCOMA CLINICAL FELLOWSHIP TRAINEES

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2013 – 2014 Pui Yi, Boey, MD  
2013 – 2014 Igor Estrovich, MD  
2012 – 2013 Helen Koenigsman, MD  
2011 – 2012 Derrick Pau, MD  
2011 – 2012 Hanna Takusagawa, MD  
2010 – 2011 Robert Kinast, MD  
2010 – 2011 Yvonne Chu, MD  
2009 – 2010 Chris Shen, MD  
2008 – 2009 Marta Pazos Lopez, MD  
2008 – 2009 Michael Lloyd, MD  
2008 – 2009 Zack Hoffeldt, MD  
2007 – 2008 Paul Mackenzie, MD  
2006 – 2007 Hung Pham, MD  
2004 – 2005 Adam Ahmadi, MD  
2000 – 2001 Michael Magbalon, MD

## POST-DOCTORAL RESEARCH FELLOWS

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2014 – Kevin Ivers, PhD  
*“Longitudinal SDOCT Optic Nerve Head change in Monkey and Human Glaucoma”*

2013 – 2014 Pui Yi, Boey, MD  
*“Longitudinal Rates of Change within SDOCT Optic Nerve Head Data Sets”*

2013 – 2014 Camilla Zangali, MD  
*“3D Histomorphometric support for SDOCT ONH imaging”*

2012 – 2013 Lin (Jonathan) He, PhD  
*“SDOCT Optic Nerve Head Progression Detection in Monkey and Human glaucoma”*

2011 – 2012 Ruojin Ren, MD, PhD  
*“Post-mortem and SDOCT 3D reconstruction of the Optic Nerve Head”*

2009 – 2010 Hongli Yang, PhD  
*“Post-mortem and in vivo 3D reconstruction of the Optic Nerve Head”*

2007 – 2010 Cheri Stowell, PhD  
*“Proteomics of Early Experimental Glaucoma in the Monkey Eye”*

2008 – 2009 Nick Strouthidis, MD  
*“SD-OCT Imaging of the Monkey and Human Optic Nerve Head”*

2002 – 2004 Crawford Downs, PhD  
*“Optic Nerve Head Biomechanics of the Monkey Eye”*



August 5, 2014

## BOOK CHAPTERS

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1. Downs JC, Roberts MD, **Burgoyne CF**. Biomechanics of the optic nerve head. In: Encyclopedia of the Eye, Darlene AD (ed) Oxford: Academic Press; 2010:183-201.
2. **Burgoyne CF**, Yang H, Downs JC. Chapter 16 - Clinical Cupping: Lamellar and Prelamellar Components. In: Schacknow PN, Samples JR (eds), *The Glaucoma Book: A Practical, Evidence-Based Approach to Patient Care*. New York, NY: Springer 2010.
3. Downs JC, Roberts MD and **Burgoyne CF**. Chapter 7: Mechanical Strain and Restructuring of the Optic Nerve Head. In: Glaucoma 1st edn. Shaarawy T, Sherwood MB, Hitchings RA and Crowston JG (eds). W. B. Saunders, London, 2009
4. Sigal IA, Roberts MD, Girard MJA, **Burgoyne CF**, Downs JC. Chapter 20: Biomechanical Changes of the Optic Disc. In: Levin LA, Albert DM (eds), *Ocular Disease: Mechanisms and Management*. New York: Elsevier/Saunders; 2010.
5. **Burgoyne CF**. Chapter 1: Why is the optic nerve important in the diagnosis and management of Glaucoma? In: *Frequently Asked Questions in Glaucoma*. Berlin, Heidelberg: Verlag-Springer GmbH, Berlin and Heidelberg; 2009.
6. **Burgoyne CF**. Are Myopic Eyes more susceptible to glaucomatous damage? In: *Important Questions About Glaucoma*. Susanna R, ed. Cultura Medica, Sao Paulo, Brazil, 2004.
7. **Burgoyne CF**, Thompson HW, Mercante DE, Amin R: Basic issues in the sensitive and specific detection of optic nerve head surface change within longitudinal LDT TopSS images: Introduction to the LSU experimental glaucoma (LEG) study. In: *Optic Nerve Head Imaging at the Millennium*. Lemij H (ed). Kugler Publications, The Hague, Netherlands, 2000.

## PEER REVIEWED PUBLICATIONS

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### Submitted for Publication

1. Zangalli C, Yang H, Lockwood H, Williams G, Fortune B, Girard MJ, Mari JM, Reynaud J, **Burgoyne CF**. Deep Optic Nerve Head Anatomy within Spectral Domain Optical Coherence Tomography Compared to Co-localized 3D Histomorphometry. *Invest Ophthalmol Vis Sci* 2014; Submitted for Publication.
2. Yang H, He L, Gardiner SK, Reynaud J, Williams G, 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; Submitted for Publication.

### 2014

3. 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: 4043106. ([Full text – free PDF](#))
4. 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. ([Abstract](#))
5. 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: 3958478. ([Full text – free PDF](#))

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6. 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 Mar;157(3):540-549.e2 ([Abstract](#))
7. 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;55:873-880. PMID: 3920822. ([Abstract](#))
8. 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: 3915863. ([Abstract](#))
9. 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: 3954157. ([Abstract](#))
10. He L, Yang H, Gardiner S, Williams G, 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:3908685. ([Abstract](#))

### 2013

11. Chauhan BC, **Burgoyne CF**. From clinical examination of the optic disc to clinical assessment of the optic nerve head: a paradigm change. *Am J Ophthalmol* 2013;156:218-227 e212. PMID:3720683 ([Abstract](#))
12. 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. ([Full text – free PDF](#))
13. 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:3759219 ([Full text - free PDF](#))
14. 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:3691051 ([Full text - free PDF](#))
15. Abbott CJ, Choe TE, Lusardi TA, **Burgoyne CF**, Wang L, Fortune B. Imaging axonal transport in the rat visual pathway. *Biomed Opt Express* 2013;4:364-386. PMID:3567722. ([Full text – free PDF](#))
16. Chauhan BC, O'Leary N, Almobarak FA, Reis AS, Yang H, Sharpe GP, Hutchison DM, Nicolela MT, **Burgoyne CF**. Enhanced detection of open-angle glaucoma with an anatomically accurate optical coherence tomography-derived neuroretinal rim parameter. *Ophthalmology* 2013;120:535-543. PMID:3667974 ([Full text - Free PDF](#))

### 2012

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