

# Claude F. Burgoyne, M.D.

## Curriculum Vitae

November 15, 2022



Glaucoma Specialist and 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 & Science 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

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**1974-1977 United States Marine Corps**

## 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, (Retired from Clinical/Surgical Practice)**  
**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

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- 1996 – 2005 Adjunct Assistant Professor**  
Department of Biomedical Engineering  
Tulane University, New Orleans, Louisiana
- 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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- 2020 - Present** Retired from Clinical/Surgical Practice July 2020
- 2006 – 2023** Oregon (MD26350) (Now Inactive)
- 1993 – 2014** 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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- 2019 Association for Research and Vision in Ophthalmology Distinguished Service Award**
- 2017 Greek Glaucoma Society Gold Medal of Merit ([link](#))**  
 Given by the Greek Glaucoma Society at its International Glaucoma Congress, for Research Contributions to Glaucoma. Athens, Greece; 8 April, 2017.
- 2017 The Association for Research and Vision in Ophthalmology (ARVO), President ([link](#))**  
 With more than 11,000 members, ARVO is the preeminent eye and vision research organization in the world. Elected by the ARVO Board of Trustees, May 2016. President-Elect (2016-2017), President (2017-2018), Past-President (2018-2019)
- 2015 American Glaucoma Society 2015 Annual Meeting Clinician Scientist Lecturer ([link](#))**  
 The American Glaucoma Society Clinician-Scientist Lecture is given annually by an individual who exemplifies qualities of excellence in patient care and basic research.
- 2013 – 2018 The 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
- 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](#))**  
 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**  
 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.
- 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, Department of Ophthalmology, University of Pittsburgh**

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## MEMBERSHIPS

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- 2016 – present** American Association for the Advancement of Science (AAAS)
- 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
- 2005 – present** Glaucoma Progression Scholars, Invited Member
- 2004 – present** Gerson Lehrman Group’s Council of Healthcare Advisors
- 2003 – present** The Glaucoma Research Society, Invited Member
- 1995 – present** American Glaucoma Society
- 1995 – 2005** Orleans Parish Medical Society
- 1995 – 2005** Louisiana State Medical Society
- 1995 – 2005** American Medical Association
- 1993 – 2005** New Orleans Academy of Ophthalmology
- 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 – 2018** **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*" – approved by the FDA, 6 May, 2016.
- 2005 – 2009** Consultant to the FDA Ophthalmic Device Panel

## PROFESSIONAL SOCIETY ACTIVITIES

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- 2021 – 2023** Member, Association for Research in Vision and Ophthalmology (ARVO) Foundation Board of Governors (<https://www.arvo.org/arvo-foundation/>) (April 30, 2021 - May 10, 2023)
- 2018** Member, Association for Research and Vision in Ophthalmology (ARVO) Strategic Plan Working Group
- 2018** Member, American Academy of Ophthalmology 2018 Laureate Award Selection Committee, (April 2018 and April, 2019)
- 2018** Member, Editor in Chief of *Ophthalmology Glaucoma* Selection Committee American Glaucoma Society, January, 2018
- 2017** The Association for Research and Vision in Ophthalmology (ARVO), President ([link](#)) *With more than 11,000 members, ARVO is the preeminent eye and vision research organization in the world. Elected by the ARVO Board of Trustees, May 2016. President-Elect (2016-2017), President (2017-2018), Past-President (2018-2019).*
- 2016** Association for Research and Vision in Ophthalmology (ARVO) "ARVO at AAO" symposia 2016 American Academy of Ophthalmology meeting , Chicago, IL (Oct 15-18, 2016)
- 2013 – 2018** Association for Research and Vision in Ophthalmology (ARVO) Board of Trustees Glaucoma Section Trustee (*Elected by the Glaucoma section members*)
- 2013 – 2014** World Glaucoma Congress Program Committee  
*Member as of the Vancouver Meeting, 2013*
- 2008 – 2014** 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

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- 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

## NIH ACTIVITIES

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- 2021 NEI Audacious Goals Initiative U24 ZEY1 VSN (09) Study Section Member - 041221**
- 2018 Center for Scientific Review Advisory Council**  
Invited participant in a one day evaluation of the 9 existing vision science scientific review groups so as to provide recommendations to CSR on altering their organization. Tuesday, 25 September, 2018. Washington, DC.
- 2016 Center for Scientific Review Application Ranking Pilot Study**
- 2010 – 2014 AED/DPVS Study Section – Permanent Member**
- 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**  
**Journal of Neuro-Ophthalmology**  
**Ophthalmology**  
**Progress in Retinal and Eye Research**  
**Science**

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## EDITORIAL BOARDS

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- 2008 to 2022** Investigative Ophthalmology and Visual Science
- 2007 to 2022** International Glaucoma Review
- 2006 to 2022** Journal of Glaucoma
- 2003 - 2014** Current Eye Research
- 2004 - 2007** Canadian Journal of Ophthalmology International Advisory Board

## GRANT REVIEWER AND SCIENTIFIC ADVISORY BOARDS

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- 2021** NEI Audacious Goals Initiative U24 ZEY1 VSN (09) Study Section Member - 041221
- 2007 – present** Heidelberg Engineering - Unpaid Scientific Advisor and Consultant
  - 2019 – Organizer, Glaucoma/Myopia OCT Phenotyping Consortium
- 2016 – present** Graybug Vision, Member Clinical Advisory Board - Glaucoma
- 2008 – present** Bright Focus (formerly AHAF) - Member, Research Committee
- 2008 – present** Glaucoma Foundation - Scientific Advisory Board Member
- 2014** NIH Special Emphasis Panel 11/2014 NIH ZRG1 SBIB-Z (55) R - Ad Hoc Reviewer
- 2010 – 2014** NIH AED/DPVS Study Section – Permanent 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
- 2007** 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)

## FOUNDATION BOARD SERVICE

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- 2021 – 2023** Member, Association for Research in Vision and Ophthalmology (ARVO) Foundation Board of Governors (<https://www.arvo.org/arvo-foundation/>) (April 30, 2021 - May 10, 2023)
- 2020 – 2023** Member, Legacy Good Samaritan Hospital Foundation Board of Trustees - Portland, OR



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## FOUNDATION SUPPORT

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- 2005 – present Legacy Good Samaritan Foundation, Portland, OR**  
Unrestricted Research Support  
Principal Investigator
- 2006 – 2021 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

## INDUSTRY SUPPORT: ACTIVE (FUNDED) GRANTS

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- 2007 – present Heidelberg Engineering, Heidelberg, Germany**  
*“Spectralis OCT imaging in Glaucoma”*  
Instruments and Unrestricted Research Support  
Principal Investigator  
No Personal Income / No Intellectual Property

## GRANT SUPPORT: ACTIVE (FUNDED) GRANTS

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- 2018 - 2023 NIH/NEI R01 EY029087 (years 1-5)**  
*“Optic nerve head glymphatics and debris clearance in Glaucoma”*  
Nick Marsh-Armstrong, PhD – UC Davis, Principal Investigator  
Devers Eye Institute Sub-Contract Direct Costs 98,000/year  
Co-investigator
- 2018 - 2023 NIH/NEI R01 EY020922 (years 6-9)**  
*“Functional Testing for Glaucoma”*  
S K Gardiner, Principal Investigator  
Consultant

## GRANT SUPPORT: COMPLETED (INACTIVE) GRANTS

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- 2017 – 2021 NIH/NEI R01 EY011610 (years 20-23)**  
*“IOP-Related Force and Failure in the Optic Nerve Head”*  
Direct Costs 416,000/year  
Principal Investigator
- 2011 – 2019 NIH/NEI R01 EY021281 (years 1-8)**  
*“Optic Nerve Head OCT Imaging in Glaucoma”*  
Principal Investigator
- 2010 – 2015 NIH/NEI R01 EY019939 (years 1 – 5)**  
*“Dynamic and Static Autoregulation Impairment in the Optic Nerve Head of Glaucoma”*  
Lin Wang, PhD Principal Investigator  
Co-Investigator

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- 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
- 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

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- 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

## NORMATIVE, EARLY GLAUCOMA , HIGHLY MYOPIC OCT DATA BASE STUDIES

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### **Heidelberg Engineering Spectralis ONH/RNFL/Macula OCT Normative Data Base (NDB) Studies**

Population 1 : American Mixed Ethnicity NDB - 383 Subjects from 8 sites in Europe, Canada, US

Role : Co-Director with Bal Chauhan, PhD

Data acquisition : July 2012 – January 2013 (completed) – May 13, 2016 FDA approved

Population 2 : Japanese Subjects – 279 Subjects from 7 sites in Japan

Role : Co-Director with Bal Chauhan, PhD

Data acquisition : February 2014 – October 2014 (completed)

Population 3 : American African Descent Subjects - 250 Subjects from 5 sites in US – In process

Population 4 : American Hispanic Descent Subjects – 250 Subjects from 5 sites in US – In process

Population 5 : Chinese Subjects – 250 Subjects from 2 sites in China – planned for 2022

### **Heidelberg Engineering Glaucoma/Myopia OCT Phenotyping Consortium (GMOPC)**

<https://www.heidelbergengineering.com/GMOPC>

Role: Principal Investigator (PI) - (Bal Chauhan, PhD, Linda Zangwill, PhD – (Co-PIs))

Data Acquisition: 2022 through 2023

**Cohort 1: Healthy Highly Myopic (SE ≤ -6D) - 360 subjects from 13 international sites**

**Cohort 2: Highly Myopic with Glaucoma - 360 subjects from 13 international sites**

**Cohort 3: Non-Highly Myopic (SE > -6D) with early Glaucoma (VF MD ≥ -4 dB) - 360 subjects from 13 international sites**

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## FINANCIAL DISCLOSURES (for the past year)

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### Heidelberg Engineering

Unrestricted research funds and use of four instruments.  
Occasional travel expenses. No honorarium.  
Consultant - No personal income, no intellectual property, no patents.

### Life Biosciences

Consultant – Consultant fees; no investments, intellectual property or patents

### Reichert Instruments

Use of an instrument.  
No travel or speaking honorariums. Not a consultant.

### NIH Funding – see Grant Support

## KEYNOTE AND NAMED LECTURES

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### 2022

1. **Korean Ophthalmological Society 2022 Annual Meeting Keynote Lecture:** *“OCT Paradigm Change in Detecting Glaucoma and Myopia.* Seoul Korea, 28 October, 2022.

### 2021

2. **LSU Shreveport Department of Ophthalmology 2021 Alumni Day Keynote lectures:** *“New OCT Paradigms for Detecting the Structural Alterations of Glaucoma and Myopia”* and *“Optic Nerve Head Biomechanics in Aging and Glaucoma”*. Given via Zoom, June 19, 2021.

### 2019

3. **Distinguished Lecture in Ophthalmology:** *“OCT Phenotyping the Optic Nerve Head Tissues in Glaucoma and Myopia”*. University of Pittsburgh Department of Ophthalmology, Pittsburg, PA. October 30, 2019.
2. **University of Buffalo, Department of Ophthalmology, Distinguished Lecture in Vision Science:** *“From Biomechanics to Proteomics – Towards the Mechanism of Axonal Injury in Glaucoma”*. University of Buffalo Department of Ophthalmology, Buffalo, New York. 18 April 2019.
3. **Vanderbilt Distinguished Lecture in Vision Research:** *“Evidence for Early Retrolaminar Demyelination of Structurally Intact Axons in Non-Human Primate Experimental Glaucoma (EG)”*. Vanderbilt Eye Institute/Vanderbilt Vision Research Center, Nashville, TN. 7 February 2019.

### 2018

4. **The Armaly Lecture:** *“Beyond Cup Disc Ratio - OCT Phenotyping the Optic Neuropathy of Glaucoma”* Department of Ophthalmology, University of Iowa, Iowa City, IA. 9 November, 2018

### 2017

5. **Joseph M. Bryan Research Lecture:** *“From Biomechanics to Proteomics – Towards the Mechanisms of Axonal injury in Glaucoma.”* Duke University Eye Center, Durham, NC. 26 October, 2017

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6. **Anagnostakis - Trantas Lecture:** *"The Biomechanics of the Glaucomatous Eye."* Greek Glaucoma Society – International Glaucoma Congress. Athens, Greece. 8 April, 2017.
7. **The Ruthanne B. Simmons Lecture in Ophthalmology:** *"From Biomechanics to Proteomics – Towards the Mechanisms of Axonal injury in Glaucoma."* Department of Ophthalmology, Harvard Medical School. Boston, MA. 28 February, 2017.
8. **The Karen Walker Brandeth Lecture:** *"New Paradigms for Understanding, Imaging and Treating Glaucoma"*. University of California-Berkeley Practicum - Keynote Lecture. Berkeley, CA. 14 January, 2017.
9. **The John Keltner Lectureship:** *"From Biomechanics to Proteomics – Towards the Mechanisms of Axonal injury in Glaucoma."* University of California-Davis – Vision Sciences Annual Symposium Keynote Lecture. Davis, CA. 6 January, 2017.

### 2015

10. **The Lasker/IRRF HHMI Janelia Farm Symposium on Astrocytes and Glaucomatous Neurodegeneration Keynote Lecture:** *"Beyond Lasker/IRRF and Astrocytes - Concepts for the next 5 years of glaucoma research"*. Washington DC. 9 March, 2015.
11. **The American Glaucoma Society Clinician Scientist Lecture:** *"Predicting Optic Nerve Head Susceptibility to Glaucoma."* American Glaucoma Society 2015 Annual Meeting. San Diego, CA. 28 February, 2015.

### 2013

12. **ISER Molecular Mechanisms in Glaucoma Meeting Keynote Lecture:** *"Optic Nerve Head Connective Tissue Deformation, Disorganization and Remodeling in Early Monkey Experimental Glaucoma – Implications for Mechanisms"*. Sarasota, FL. 30 September, 2013.
13. **Swedish Glaucoma Society Annual Meeting Keynote Lecture** (Co-delivered via the Internet with Balwantray Chauhan, PhD): *"Paradigm Change to the Clinical Assessment of the Optic Nerve Head"*. Stockholm, Sweden. 19 September, 2013.
14. **European Mechanics Society Meeting Keynote Lecture:** *"Twenty years from onset through endstage in the Monkey Experimental Glaucoma Model"*. Genoa, Italy. 22-24 July, 2013.
15. **The Leydhecker-Harms Honorary Lecture on Glaucoma:** *"Paradigm Change to the Clinical Assessment of the Optic Nerve Head."* University of Wurzburg Department of Ophthalmology. Wurzburg, Germany. 13 July, 2013.
16. **Simpósio Internacional de Glaucoma da SBG Keynote Lectures:** *"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.
17. **The Henry J. L. Van Dyk Memorial Lecture:** *"OCT Paradigm Change in Clinical Imaging"*. LSU/Ochsner Residency Research Day. New Orleans, LA. 18 May, 2013.
18. **Allergan European Glaucoma Panel IV and Mentoring Programme Keynote Lecture:** *"Optic Nerve Head Biomechanics in Glaucoma and Aging"*. Association for Research in Vision and Ophthalmology pre-meeting. Seattle, WA. 4 May, 2013.

### 2012

19. **The Morten F. Goldberg Lecture:** *"The Demise of the Disc Margin and Cup-Disc Ratio as we Know Them."* Illinois Eye and Ear Infirmary, University Illinois-Chicago Department of Ophthalmology. Chicago, IL. 29 June, 2012

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20. **European Glaucoma Society 2012 Bi-Annual Meeting Keynote Lecture:** *“Optic Nerve Head Biomechanics”*. Copenhagen, Denmark. 18 June, 2012.
21. **The Gaynelle Robertson Lecture:** *“Optic Nerve Head Biomechanics and Susceptibility to Glaucomatous Damage”*. University of Texas Medical Branch – Galveston, Department of Ophthalmology Research Day. Galveston, TX. 8 June, 2012.
22. **The Steven M. Podos Lecture:** *“What, Really, is Glaucomatous Cupping?”* Mt. Sinai Hospital Department of Ophthalmology Stephen M. Podos Symposium. New York, NY. 1 June, 2012.

**2011**

23. **The Teicher Lecture:** *“Optic Nerve Head Biomechanics and Susceptibility to Glaucomatous Damage”*. Columbia University Harkness Eye Institute. New York, NY. 3 November, 2011.
24. **University of Washington Department of Ophthalmology Resident Alumni Day Keynote Lecture:** *“SDOCT Imaging Targets in Glaucoma – Parts 1 and 2”*. Seattle, WA. June 18, 2011.

**2010**

25. **12th Japan Glaucoma Council Keynote Lecture:** *“Mechanisms of Optic Nerve Head Damage in Glaucoma”*. Tokyo, Japan, December 11, 2010.
26. **Annual United Kingdom and Erie Glaucoma Society (UKEGS) Meeting Keynote Lecture:** *“Optic Nerve Head Biomechanics and the Mechanisms of Cupping and Axon Loss in Aging and Glaucoma”*. London, UK. 3-4 December, 2010.
27. **European Glaucoma Society Meeting Keynote Lecture:** *“Biomechanics in Glaucoma”*. Madrid, Spain. 14 September, 2010

**2009**

28. **The Rudin Glaucoma Prize Lecture:** *“Optic Nerve Head Biomechanics in Aging and Glaucoma.”* New York University Department of Ophthalmology, Manhattan Eye and Ear Hospital. New York, NY, 26 May, 2009.

**2008**

29. **The Crano Lecture:** *“Optic Nerve Head Biomechanics in Aging and Glaucoma.”* University of Pittsburgh, Department of Ophthalmology. Pittsburgh, PA. 25 June, 2008.

**2005**

30. **The Swan Lecture:** *“The Optic Nerve Head as a Biomechanical Structure”*. Oregon Health Sciences University. Portland, OR. 11 November, 2005.
31. **The Leopold Lecture:** *“Optic Nerve Biomechanics in Aging and Glaucoma”*. Allergan, Inc. Irvine, CA. March 2005.

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## INVITED LECTURES AND SCIENTIFIC PRESENTATIONS

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### 2022

1. **Korean Ophthalmological Society 2022 Annual Meeting Keynote Lecture:** *“OCT Paradigm Change in Detecting Glaucoma and Myopia; Korean Glaucoma Society Glaucoma Symposium Invited Lecture: “Retrolaminar Myelin Disruption in Non-Human Primate (NHP) Early Experimental Glaucoma (EG) – Mechanistic and Therapeutic Implications”*. Seoul, Korea; 28 October, 2022.
2. **Invited Lecture:** *“Detection of Glaucoma in Challenging Suspects and Myopic Eyes”*. 2022 American Academy of Ophthalmology Glaucoma Subspecialty Day Meeting. Chicago, Ill. 30 September, 2022.
3. **Invited Lecture:** *“Optic Nerve Head Myopic Alteration: Conceptual and Clinical Implications”*. 2022 Glaucoma Research Society Meeting, Halifax, Nova Scotia, Canada. August 27, 2022.
4. **Invited Lecture:** *“The Art and Skills of Grant Writing”*. Department of Ophthalmology, Hong Kong University, (Virtually Delivered). August 18, 2022.
5. **Invited Lecture:** *“Basic Optic Nerve Head Anatomy for OCT”; “OCT Imaging the Mechanobiology of Glaucomatous Cupping”; “New OCT Structural Parameters to Distinguish Glaucoma from Myopia”*. European Glaucoma Society Meeting; Athens, Greece; June 3-8, 2022.

### 2021

6. **Invited Virtual Talk:** *“An Anatomic Foundation for Moving Beyond “Delta” and “Gamma” Terminology in Myopia using OCT”*. Heidelberg Engineering Virtual Imaging Symposium (VIS) October 16, 2021
7. **Invited Virtual Talk:** *“Challenges to Optic Nerve Head Homeostasis in Aging, Glaucoma and Myopia.”* Advances in Glaucoma Research and Clinical Science Meeting. Given virtually, September 16, 2021.
8. **Invited Virtual Talk:** *“OCT Phenotyping the Structural Alterations of Glaucoma and Myopia in Non-Highly Myopic through Highly Myopic Eyes.”* Romanian Glaucoma Society Session of the World Glaucoma Congress Meeting. Given virtually, July 3, 2021.
9. **LSU Shreveport Department of Ophthalmology 2021 Alumni Day Keynote lectures:** *“New OCT Paradigms for Detecting the Structural Alterations of Glaucoma and Myopia”* and *“Optic Nerve Head Biomechanics in Aging and Glaucoma”*. Given virtually, June 19, 2021.
10. **Invited Virtual Talk:** *“Lamina Cribrosa - What is happening in the deep end?”* - Symposium 3 – Imaging the ONH and Peripapillary Region. American Glaucoma Society 2021 Annual Meeting, 5 March, 2021.

### 2020

11. **Invited Virtual Talk:** *“Will optic nerve head biomechanics help personalised management?”*. European Glaucoma Society 2020 Annual Meeting. December 12 - 13, 2020
12. **Invited Virtual Talk:** *“OCT-Detected Peripapillary Scleral Bowing Increases in Aging and Myopia”*. Korean Glaucoma Society Annual Meeting. Seoul Korea. November 27, 2020
13. **Invited Virtual Lecture:** *“Optic Nerve Head Biomechanics”*. Columbia University Department of Ophthalmology 2021 Virtual Basic Science Course in Ophthalmology (BSCO). Recorded October, 2020.
14. **Invited Virtual Talk:** *“A Glaucoma/Myopia OCT Phenotyping Consortium”*. Heidelberg Engineering Virtual Imaging Symposium. October 30 - 31, 2020

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15. **Invited Virtual Talk:** *“Multicentre Clinical Research and Trials in Glaucoma”*. “Behind the success: Best Practices for Building a Team Science Research Project”. An Association for Research in Vision and Ophthalmology (ARVO) Virtual Conference, August 26, 2020
16. **Invited Virtual Discussant**, Wilmer Eye Institute Glaucoma Service Zoom Journal Club: *“OCT insights into the clinical examination of the optic nerve head tissues”*. Wednesday 20 May, 2020.
17. **Organizing Chair**, Heidelberg Engineering Glaucoma/Myopia OCT Phenotyping Organizational Meeting. Los Angeles, California. 8 February, 2020.

### 2019

18. **Distinguished Lecture in Ophthalmology:** *“OCT Phenotyping the Optic Nerve Head Tissues in Glaucoma and Myopia”*. University of Pittsburgh Department of Ophthalmology, Pittsburgh, PA. October 30, 2019.
19. **Invited Lecture:** *“Non-Human Primate Models of Glaucoma and Biomechanics”*. BrightFocus Glaucoma Fast Track 2019, Emory Conference Center, Atlanta, GA. October, 23, 2019.
20. **Invited Talk:** *“Optic Nerve Imaging with different devices”*. Glaucoma Subspecialty Day, American Academy of Ophthalmology 2019 Annual Meeting. San Francisco, CA. 12 October, 2019.
21. **Invited Talk:** *“The Architecture of the Back of the Eye: Static Biomechanics of the Optic Nerve Head”*. **Joint European Glaucoma Society / American Glaucoma Society** Members Meeting, Bordeaux, France. 30 August, 2019.
22. **NIH EY021281/Heidelberg Engineering - Glaucoma/Myopia OCT Phenotyping Consortium – Initial Meeting:** Meeting Organizer, Moderator and Introductory Speaker - Association for Vision in Research and Ophthalmology 2019 Annual Meeting, Vancouver, British Columbia, Canada. April 28, 2019.
23. **University of Buffalo, Department of Ophthalmology, Distinguished Lecture in Vision Science:** *“From Biomechanics to Proteomics – Towards the Mechanism of Axonal Injury in Glaucoma”*. University of Buffalo Department of Ophthalmology, Buffalo, New York. 18 April 2019.
24. **Session Organizer “Regenerative Medicine in Glaucoma” and Introductory Overview Talk:** *“Optic Nerve Degeneration in Glaucoma”*. American Glaucoma Society Annual Meeting, San Francisco, CA. 15 March, 2019
25. **Vanderbilt Distinguished Lecture in Vision Research:** *“Evidence for Early Retrolaminar Demyelination of Structurally Intact Axons in Non-Human Primate Experimental Glaucoma (EG)”*. Vanderbilt Eye Institute/Vanderbilt Vision Research Center, Nashville, TN. 7 February 2019.
26. **Vanderbilt Eye Institute Grand Rounds:** *“The Death of Cup Disc Ratio - OCT Phenotyping the Optic Neuropathy of Glaucoma”*. Vanderbilt Eye Institute, Nashville, TN. 8 February, 2019

### 2018

27. **Invited Talk:** *“Defining Structural Damage”*. “Definition of Glaucomatous Optic Neuropathy Session”; Glaucoma Research Society Meeting, Parma, Italy, 30 August 2018.
28. **Invited Talk:** *“Optic Nerve Head (ONH) Biomechanics, Homeostasis, Aging and Glaucoma.”* Lasker/IRRF Initiative for Innovation in Vision Science Special Interest Group – *“Astrocytes and Glaucomatous Neurodegeneration”* - at the 2018 Annual Meeting of the Association for Research in Vision and Ophthalmology, (ARVO), Honolulu, HI, 30 April, 2018
29. **Invited Research Seminar:** *“From Biomechanics to Proteomics – Towards the Mechanisms of Axonal Injury in Glaucoma.”* Washington State University Department of Neuroscience, Vancouver, WA. 2 February, 2018



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**2017**

30. **Casey Eye Institute Residents Lecture:** *“Optic Nerve Head Anatomy and Mechanisms of Glaucomatous Damage.”* Casey Eye Institute, Oregon Health Sciences University, Portland, Oregon, 3 November, 2017.
31. **Devers Eye Institute/Casey Eye Institute Grand Rounds:** *“Paradigm Change in OCT Phenotyping Glaucoma – Progress and Predictions”.* Devers Eye Institute, Portland OR, 3 November, 2017.
32. **Joseph M. Bryan Research Lecture:** *“From Biomechanics to Proteomics – Towards the Mechanisms of Axonal injury in Glaucoma.”* Duke University Eye Center, Durham, NC. 26 October, 2017
33. **Residents Lecture:** Paradigm Change in OCT Phenotyping Glaucoma. Duke University Eye Center, Durham, NC. 27 October, 2017
34. **Invited Speaker: ISER/Bright Focus 2017 Glaucoma Symposium – Fast Track Workshop -** *“Pathophysiology of Glaucomatous Optic Nerve Head Damage in the Human and Non-Human Primate”.* Emory Conference Center, Atlanta, Georgia; 5 October, 2017.
35. **Moderator:** Platform Session IX: *“Biomechanics”*, ISER/Bright Focus 2017 Glaucoma Symposium, Emory Conference Center, Atlanta, Georgia; 7 October, 2017
36. **Invited Speaker: Korean English Glaucoma Academy,** *“From Biomechanics to Proteomics – Towards the Mechanism of Axonal Insult in Glaucoma”* and *“Paradigm Change in OCT Phenotyping Glaucoma”*, Incheon, Korea. 26-27 May, 2017.
37. **Invited Speaker:** Glaucoma Conference: *“Paradigm Change in OCT Phenotyping Glaucoma”*; Grand Rounds: *“From Biomechanics to Proteomics – Towards the Mechanism of Axonal Insult in Glaucoma”.* Jules Stein Eye Institute, University of California Los Angeles (UCLA). Los Angeles, CA. 12 April, 2017.
38. **Anagnostakis - Trantas Lecture:** *“The Biomechanics of the Glaucomatous Eye.”* Greek Glaucoma Society – International Glaucoma Congress. Athens, Greece. 8 April, 2017.
39. **Invited Speaker:** International Glaucoma Congress of the Greek Glaucoma Society; *“Site of Damage in Glaucoma”*, Athens, Greece, 7 April, 2017.
40. **Invited Speaker:** First International Congress of the Associazione Italiana per lo Studio de Glaucoma (AISG); Optic Nerve in Glaucoma Session: *“The Lamina Cribrosa in Glaucoma”*, Rome, Italy, 16 March, 2017.
41. **The Ruthanne B. Simmons Lecture in Ophthalmology:** *“From Biomechanics to Proteomics – Towards the Mechanisms of Axonal injury in Glaucoma.”* Department of Ophthalmology, Harvard Medical School. Boston, MA. 28 February, 2017.
42. **The Karen Walker Brandeth Lecture:** *“New Paradigms for Understanding, Imaging and Treating Glaucoma”.* University of California-Berkeley Practicum - Keynote Lecture. Berkeley, CA. 14 January, 2017.
43. **The John Keltner Lectureship:** *“From Biomechanics to Proteomics – Towards the Mechanisms of Axonal injury in Glaucoma.”* University of California-Davis – Vision Sciences Annual Symposium Keynote Lecture. Davis, CA. 6 January, 2017.

**2016**

44. **Invited Speaker: Grand Rounds:** *“Paradigm Change in OCT Phenotyping Glaucoma”*; Research Seminar: *“From Biomechanics to Proteomics – Towards the Mechanism of Axonal Insult in Glaucoma”.* Moran Eye Center, University of Utah, Salt Lake City, Utah, 16 November, 2016.
45. **Invited Speaker:** *“Why Optic Nerve Head Aging is our only Normal Tension Glaucoma Model”.* Form and Function in Ocular Disease Meeting. Dalhousie University Department of Ophthalmology, Halifax Nova Scotia, 29 October, 2016.

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46. **Invited Session Organizer and Session Co-Moderator:** American Academy of Ophthalmology (AAO) – Association for Research in Vision and Ophthalmology (ARVO) Symposium: *“Paradigm Change in Ocular Imaging”*. AAO Annual Meeting, Chicago IL, 18 October, 2016.
47. **Invited Speaker:** *“Does Optic Nerve Head Biomechanics Determine Optic Nerve Head Tissue Damage in Glaucoma?”* American Academy of Ophthalmology Glaucoma Subspecialty Day, Section III – *“Glaucoma – It’s not just about IOP”*, Chicago IL, 15 October, 2016.
48. **Invited Speaker:** *“Optic Nerve Head Phenotyping in Glaucoma”*. Thorny Issues in Ophthalmology Conference, Devers Eye Institute, Portland Oregon, 30 September, 2016.
49. **Invited Speaker:** *“Optic Nerve Head Biomechanics in Aging and Glaucoma”*. Thorny Issues in Ophthalmology Conference, Advanced Course for Ophthalmic Technicians, Devers Eye Institute, Portland Oregon, 30 September, 2016.
50. **Invited Speaker:** *“Neural Tissues under Pressure: ONH – IOP vs CNS – CSFp”*. Glaucoma Research Society Meeting. Seoul, Korea. 1-3 September, 2016.
51. **Invited Speaker:** *“How to Define a Glaucomatous Optic Neuropathy”*. International Intra-cranial Pressure Gradient Disease (IIPGD) Summit. Beijing, China. 27-28 August, 2016.
52. **Invited Lecture:** *Deep Optic Nerve Head Phenotyping in Glaucoma”* Beijing Institute of Ophthalmology, Tongren Hospital, Beijing, China. 25 August, 2016.
53. **Invited Speaker:** *Deep Optic Nerve Head Phenotyping in Glaucoma”* - OCT course: *“Recent Advances”*, 20 June, 2016. *“Why the Neuroretinal Rim and Retinal Nerve Fiber Layer Behave Differently in Glaucoma”* – Heidelberg Engineering Symposium, 21 June, 2016. *“Laminar Biomechanics and Axonal Changes Where are we now?”* - Hot Topics Session: *“Targets and Developments in Medical Treatment”* 23 June, 2016. European Glaucoma Society Meeting, Prague, Czech Republic. 20-23 June, 2016.
54. **Invited Speaker:** *“Optic Nerve Head Biomechanics in Aging and Glaucoma”*. Loyola University Department of Ophthalmology, Skowron Eye Research Symposium, Loyola University Translational Research Center, Chicago, IL. 25 May, 2016
55. **Invited Speaker:** *“Optic Nerve Head Biomechanics in Aging and Glaucoma”*. Mayo Clinic Department of Ophthalmology, Grand Rounds, Rochester, MN. 23 May, 2016.
56. **Invited Panel Member for an ARVO Special Interest Group (SIG):** *“Connective Tissue Stiffness in Glaucoma”*. The Association for Research in Vision and Ophthalmology (ARVO) 2016 Annual Meeting, Seattle, WA. 2 May, 2016.
57. **Invited Speaker:** *“Paradigm Change in OCT Phenotyping Glaucoma”* and *“Optic Nerve Head Biomechanics in Aging and Glaucoma”*. Hofstra University Department of Ophthalmology, Grand Rounds, Great Neck, NY. 20 April, 2016.
58. **Invited Speaker:** *“Deep Optic Nerve Head Phenotyping in Glaucoma”*. Japan Focus Symposium at the Japanese Ophthalmological Society, Sendai, Japan. 16 April, 2016.
59. **Invited Speaker:** *“Is the Lamina the Site of Damage in Glaucoma?”* and *“Imaging the Lamina, Sclera, and Choroid in Glaucoma.”* Greek Glaucoma Society and International Glaucoma Congress Meetings. Athens, Greece. 1-2 April, 2016

### 2015

60. **Invited Speaker:** *“Integrating OCT Anatomy into the Clinical Examination of the Optic Nerve Head”*. SUNY Downstate Department of Ophthalmology, Grand Rounds and Clinical Research Seminar. Brooklyn, New York. 19 November, 2015.

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61. **Invited Speaker:** *"Paradigm Change in OCT Phenotyping Glaucoma" and "The Connective Tissue Phenotype of Cupping in Monkey Experimental Glaucoma"*. Emory University, Department of Ophthalmology, Grand Rounds and Research Seminar, respectively. Atlanta, Georgia. 13 November, 2015.
62. **Invited Speaker:** *"Optic Nerve Head OCT Phenotyping - Implications for Lamellar Angiography"*. Optical Coherence Tomography Angiography Summit, Oregon Health Science University, Portland, OR. 25 July, 2015.
63. **Invited Speaker:** *"Optic Nerve Head Connective Tissue Deformation, Remodeling and Failure in Glaucoma – Implications for Insult and Regeneration"*. Louis J. Fox Center for Vision Restoration Conference, University of Pittsburgh Medical Center Eye Center. Pittsburgh, PA. 25 June, 2015
64. **Invited Lecturer:** *"From Biomechanics to Proteomics – Toward the Mechanisms of Axonal Insult in Glaucoma"; "SDOCT Phenotyping Glaucoma"; Integrating SDOCT Anatomy into the Clinical Examination of the Optic Nerve Head"; and "Concepts for the Next Five year of Glaucoma Research"*. Departments of Ophthalmology and Vision Sciences, Chinese University of Hong Kong – Hong Kong Eye Hospital and Prince of Wales Hospitals. Hong Kong, China. June 10-11, 2015.
65. **Invited Speaker: Heidelberg Engineering Symposium:** *"Fundamentals of Minimum Rim Width Estimation"*; WGC Plenary Session – Translational Glaucoma – *"Optic Nerve Head Biomechanics"*; Co-Moderator – *"Rapid-Fire"* Session. World Glaucoma Congress, Hong Kong, China. June 5-9, 2015.
66. **Invited Lecture:** *"From Optic Nerve Head Biomechanics to Proteomics – Toward the Mechanisms of Axonal Insult in Glaucoma"*. Cleveland Clinic, Cole Eye Institute, "Distinguished Lecture Series", Cleveland, OH. 22 May, 2015.
67. **Meeting Co-organizer and Speaker:** *"Our plans for the American Mixed-Ethnicity Normative Data Base."* Heidelberg Spectralis Japanese Normative Data Base Investigators Meeting. Tokyo, Japan. 10 May, 2015.
68. **Paper Session Moderator:** *"Biomechanics and Blood Flow"*, 2015 Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting; Denver Colorado. 6 May 2015.
69. **Invited Speaker:** *"Glaucoma and Aging"*; 2015 Allergan "The Cutting Edge" meetings; Haydock, London and Birmingham, England. 25, 26, 27 March, 2015.
70. **Invited Speaker:** *"The Morphologic Differences between Glaucoma and other Optic Neuropathies"*; 2015 Joint North American Neuro-Ophthalmology Society (NANOS) /American Glaucoma Society (AGS) Symposium entitled *"Glaucoma, the other Optic Neuropathy"*. San Diego, CA. 26 February, 2015.
71. **Invited Speaker:** *"Definition of the Disc Margin – Does it really matter?"*; 2015 Joint American Glaucoma Society (AGS) / North American Neuro-Ophthalmology Society (NANOS) Symposium entitled *"Optic Nerve Imaging: New Parameters and Techniques"*. San Diego, CA. 26 February, 2015.

### 2014

72. **Invited Speaker:** *"Case #1: Ocular Coherence Tomography Is The Gold Standard"; "The Battle of Glaucoma: How to Diagnose, Assess, and Manage Glaucoma That is Getting Worse, Prevent Blindness America Symposium"* American Academy of Ophthalmology Meeting, Chicago, Illinois. 21 October, 2014.
73. **Invited Speaker:** *"Making Experimental Models Relevant to Human Glaucoma" Session: "Defining a Glaucomatous Optic Neuropathy in the Monkey"*; Glaucoma Research Society Meeting, Grand Teton National Park, Wyoming. August 28-31, 2014.

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74. **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.
75. **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.
76. **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.
77. **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

78. **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.
79. **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.
80. **Invited Lecture:** Heidelberg Engineering Academy, Glaucoma Faculty Inauguration. *“Optic Nerve Head Biomechanics and the Clinical Prediction of Susceptibility”*. London, UK. 30 October, 2013.
81. **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.
82. **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.
83. **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.
84. **Invited Talk:** Devers Eye Institute Thorny Issues Conference. *“Cup to Disc Ratio – Soon to be extinct?”* Portland, OR. 20 September, 2013.
85. **Visiting Lecturer:** Department of Ophthalmology, University of Genoa. *“Paradigm change in the clinical disc examination.”* Genoa, Italy, 25 July, 2013
86. **Invited Talks** - 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

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87. **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.
88. **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.
89. **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.
90. **Invited Speaker:** American Glaucoma Society Annual Meeting. “Promising Techniques for Predicting Target IOP in Glaucoma”. San Francisco, CA. 2 March, 2013.

### 2012

91. **Invited Speaker:** ARVO Optic Nerve Degeneration and Aging Meeting. “*Mechanical Injury to the Optic Nerve Head and Aging*”. Obergurgl, Austria. 6 December, 2012. 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.
92. **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.
93. **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.
94. **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.
95. **Invited Lecture:** “*Clinical Optic Nerve Head Susceptibility Testing – Working Hypotheses and New Directions*”. Wilmer Eye Institute, Johns Hopkins Hospitals, Baltimore, MD. July 16, 2012.
96. **Invited Speaker:** “*Clinical Targets for Remodeling in Glaucoma*”. Glaucoma Session Minisymposium. ARVO 2012 Annual Meeting. Fort Lauderdale, FL. May 7, 2012.
97. **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.
98. **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.
99. **Invited Speaker:** “*New Targets for SDOCT ONH Imaging in Glaucoma*”. American Glaucoma Society 2012 Annual Meeting, New York, NY. March 1-4, 2012.
100. **Session Moderator:** “*Neuroprotection and Glia in Glaucoma*”. American Glaucoma Society 2012 Annual Meeting. New York, NY. March 1-4, 2012.

### 2011

101. **Invited Lecturer:** Harvard Glaucoma Joint Lab Meeting, Boston, MA. 16 November, 2011
102. **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.
103. **Session Moderator:** “*Visual Function and Progression*” and “*AGS Ethics Symposium*”; American Glaucoma Society 2011 Annual Meeting. Dana Point, CA. March 3-6, 2011.

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104. **Plenary Lecture:** The Optic Nerve Head Connective Tissues in Early Experimental Glaucoma – Mechanisms of Axonal Damage”. Asia-ARVO, Singapore, Singapore. 21 January, 2011.

**2010**

105. **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?”
106. **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.
107. **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.
108. **Invited Lecture:** “*Does IOP fluctuation Cause Structural Damage*”, American Academy of Ophthalmology Glaucoma Subspecialty Day, Chicago, IL, 16 October, 2010.
109. **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.
110. **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.
111. **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.
112. **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.
113. **Invited Participant:** Allergan Neurorescue Meeting. Berlin, June 5, 2010.
114. **Global Leaders Lecture:** LV Prasad Eye Institute, Hyderabad, India. Given via an internet Web Broadcast. May 24, 2010.
115. **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.
116. **Invited participant and speaker:** “*SDOCT imaging in Glaucoma*”. Glaucoma Research Society Bi-annual Meeting. Kyoto, Japan. April 1-3, 2010.
117. **Invited Section Chair -** “*IOP Tonometry and Telemetry*”, Glaucoma Research Society Bi-annual Meeting. Kyoto, Japan. April 1-3, 2010.
118. **Invited Participant and Symposium Co-Chair -** “*Incorporating Rates of Change into Clinical Practice*”, American Glaucoma Society Annual Meeting. Naples FL, 5 March, 2010.
119. **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.

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120. **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**

121. **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.
122. **Invited Participant:** Lasker /IRRF Initiative for Innovation in Vision Research – August 2009 Workshop, Woods Hole, MA, August 11-13, 2009
123. **Invited Lecture:** “*A Comparison of Clinical Disc Margin Anatomy using Clinical Photographs and SD-OCT*”, World Glaucoma Congress, Boston, MA, 8 July, 2009.
124. **Invited Lecture:** Scottish Glaucoma Symposium. “*Optic Nerve Head Biomechanics and Aging*”. Edinburgh, Scotland. 19 June, 2009.
125. **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.
126. **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.
127. **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.
128. **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.
129. **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.
130. **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.
131. **Invited Lecture:** “*Ocular Biomechanics – Realistic Expectations*”. Special Interest Group on Corneal Biomechanics, American Glaucoma Society, San Diego, CA. 6 March, 2009.
132. **Invited Lecture:** “*What differentiates Glaucomatous Progression from Accelerated Aging?*” Symposium on Progression, American Glaucoma Society, San Diego, CA. 6 March, 2009.
133. **Invited Faculty and Lecturer:** 7th International Spectralis Symposium (ISS), Miami, FL. February 27-28, 2009.
134. **Invited Lecturer and Meeting Co-organizer:** Yosemite Glaucoma Summit 2009, Yosemite National Park, CA, 22-25 January 2009.

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**2008**

135. **Visiting Professor:** Department of Ophthalmology, University of California. *“Optic Nerve Head Yited 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.
136. **Invited Lecturer:** Optometric Glaucoma Society Meeting. *“New Targets for SD-OCT imaging in Glaucoma”.* Anaheim, CA. October 21, 2008.
137. **Visiting Professor:** New York Eye and Ear Infirmary. *“The importance of Prelaminar and Lamellar Cupping”.* New York, NY, 3 October, 2008.
138. **Invited Lecturer:** German Society of Ophthalmology, Berlin, Germany, 20 September, 2008.
139. **Invited Participant:** Second International Glaucoma Think Tank. Florence, Italy. July 24-27, 2008.  
**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.
140. **Invited Lecturer:** 1st International Glaucoma Blood Flow Symposium. New York Academy of Medicine, New York, NY, May 2nd 2008.
141. **Invited Participant:** ARVO/Pfizer Ophthalmic Research Institute Conference, Fort Lauderdale, FL, April 25-26, 2008.
142. **Invited Participant:** Glaucoma Research Society, Co-organizer Basic Science Session. Queenstown, New Zealand, 20-23 February 2008.

**2007**

143. **Visiting Lecturer:** Friedrich-Alexander-University of Erlangen-Nuremberg. Nuremberg, Germany, December 3rd 2007.
144. **Invited Speaker:** Pacific Atlantic Glaucoma Symposium, Newport, CA, October 19-20, 2007.
145. **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.
146. **Invited Speaker:** Association for International Glaucoma Societies World Congress, Singapore, July 17-19, 2007.
147. **Invited Speaker:** UC Irvine, Irvine, CA. June 6, 2007.
148. **Invited Lecture:** Bascom Palmer Frontiers in Vision Science Lecture Series. Miami, FL, 29 March, 2007.
149. **Invited Speaker:** Yosemite Glaucoma Summit, Yosemite National Park, CA, 8 – 11 February, 2007.

**2006**

150. **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.
151. **Invited Speaker:** Pathology Subspecialty Day, American Academy of Ophthalmology meeting. Las Vegas, NV, November 2006.
152. **Invited Participant:** Pfizer IOP Control Expert Panel. Las Vegas, NV, November 2006.



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153. **Visiting Lecturer:** Washington University Department of Ophthalmology. St Louis, MI, 19th October 2006.
154. **Invited Session Moderator:** International Glaucoma Think Tank. Taormina, Italy 27-29th July 2006.
155. **Invited Speaker and Imaging Session Moderator:** International Perimetric Society Meeting. Portland, OR, 13th July 2006. **Invited Speaker – Glaucoma Progression Scholars Meeting.** Portland, OR, 10th July 2006.
156. **Invited Speaker:** Imaging in Glaucoma Session, Oxford Ophthalmological Congress. Oxford, UK, 4th July 2006.
157. **Invited Speaker:** Basic Research Session, Glaucoma Society of the International Congress of Ophthalmology. Vancouver, British Columbia, Canada, 30th June, 2006.
158. **Invited Speaker:** Intraocular Pressure Fluctuation Meeting, Allergan Pharmaceuticals, Irvine, CA, 16th June 2006.

### 2005

159. **Invited Speaker and Faculty:** Alcon Glaucoma Specialists Forum. Fort Worth, TX, Nov 2005.
160. **Invited Speaker and Faculty:** Allergan Fellows Program. Irvine, CA, Sept 23-24th 2005.
161. **Invited Speaker and Faculty:** World Glaucoma Congress. Vienna, Austria, July 2005.
162. **Invited Speaker:** Vision Sciences Research Group: University of California, Davis, Sacramento, CA, June 2005.
163. **Visiting Lecturer, Visiting Professor Grand Rounds Series:** University of Michigan. Ann Arbor, MI, May 2005.
164. **Moderator:** Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, May 2005.
165. **Invited Speaker:** AHAF Catalyst Meeting. Fort Lauderdale, FL, February 2005.

### 2004

166. **Invited Speaker:** New York Glaucoma Society, New York, NY, December 2004.
167. **Visiting Lecturer:** New York Eye and Ear Infirmary, New York, NY, December 2004.
168. **Visiting Lecturer:** Mount Sinai Hospital, Department of Ophthalmology, New York, NY, December 2004
169. **Invited Speaker:** Optometric Glaucoma Society, Tampa, FL, December 2004.
170. **Invited Speaker:** Alcon Glaucoma Specialists Meeting, Fort Worth, TX, November 2004.
171. **Invited Speaker:** Alcon Glaucoma Fellows Meeting, Fort Worth, TX, November 2004.
172. **Co-Chair:** Glaucoma Subspecialty Day, American Academy of Ophthalmology meeting, New Orleans, LA, October 2004.
173. **Invited Participant:** Risk Analysis in the Glaucoma Continuum Symposium, Boston, MA, July 2004.
174. **Invited Speaker:** European Glaucoma Society Meeting, Florence, Italy, May 2004.
175. **Session Moderator:** ARVO, Fort Lauderdale, FL, April 2004.
176. **Invited Speaker:** Ocular Therapy Update, San Diego, CA, February 2004.

### 2003

177. **Invited Speaker:** Glaucoma Subspecialty Day, American Academy of Ophthalmology. Anaheim, CA, November 2003.
178. **Invited Participant:** Consensus Meeting of the Association of International Glaucoma Societies. San Diego, CA, November 2003.

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179. **Visiting Lecturer:** Duke Glaucoma Symposium, Duke University Medical Center, Durham, NC, September 2003.
180. **Invited Speaker:** 33rd Cambridge Ophthalmologist Symposium, St. John's College. Cambridge, UK, Sept 2003.
181. **Visiting Lecturer:** Moorfields Eye Hospital, London, UK, September 2003.
182. **Moderator:** Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, May 2003.
183. **Invited Speaker:** Glaucoma Society of the International Congress of Ophthalmology. Chantilly, France, May/June 2003.
184. **Invited Speaker:** Washington Academy of Eye Physicians and Surgeons, Seattle, WA, April 2003.
185. **Invited Speaker:** 11th Annual Mardi Gras Conference, LSU, Baton Rouge, LA, February/March 2003.
186. **Invited Speaker:** 2002-03 Rich Lecture Series, University of Alabama. Birmingham, AL, February 2003.

### 2002

187. **Visiting Professor:** Department of Ophthalmology, University of Toronto, Toronto, Canada, December 2002.
188. **Invited Speaker:** Editor's Choice Session, American Academy of Ophthalmology, Orlando, FL, October 2002.
189. **Invited Speaker:** Glaucoma 2002 Subspecialty Day, American Academy of Ophthalmology, Orlando, FL, October 2002.
190. **Invited Speaker:** International Congress of Eye Research, Geneva, Switzerland, October 2002.
191. **Invited Speaker:** The Canadian Glaucoma Meeting, Dalhousie University. Halifax, Nova Scotia, Canada, September 2002.
192. **Invited Speaker:** Alcon Research Laboratories, Research Campus, Fort Worth, TX, September 2002.
193. **Invited Speaker:** Thorny Issues in Ophthalmology, Devers Eye Institute, Legacy Health. Portland, OR, June 2002.
194. **Moderator:** Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 2002.
195. **Invited Speaker:** ARVO Mini-symposium, Fort Lauderdale, FL, May 2002.

### 2001

196. **Invited Speaker:** Jules Stein Eye Institute, UCLA, Los Angeles, CA, December 2001.
197. **Invited Speaker:** American Academy of Ophthalmology, New Orleans, LA, November 2001.
198. **Invited Speaker:** Biomedical Engineering Department Seminar, Tulane University, New Orleans, LA, September 2001.
199. **Moderator:** Association for Research in Vision and Ophthalmology. Fort Lauderdale, FL, May 2001.

### 2000

200. **Invited Speaker:** American Academy of Ophthalmology: Glaucoma 2000 Subspecialty Day. Dallas, TX, October 2000.
201. **Moderator:** Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 2000.
202. **Invited Speaker:** ARVO Mini-symposium, Fort Lauderdale, FL, May 2000.

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### 1999

203. **Invited Speaker:** The Shape of Glaucoma: Imaging Workshop in Glaucoma. Rotterdam, The Netherlands, February 1999

### 1998

204. **Invited Speaker:** ARVO Mini-symposium, Fort Lauderdale, FL, May 1998.

### 1997

205. **Invited Speaker:** Finnish Ophthalmological Society, Tampere, Finland, September 1997

206. **Invited Speaker:** Alabama Academy of Ophthalmology, Point Clear, AL, July 1997

## PhD DISSERTATIONS SUPERVISED

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### 2009 – 2016 **Marta Pazos, MD, PhD**

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”*

Co-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”*

Co-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”*

Co-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”*

Co-Principal Advisor

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## MASTER'S THESES SUPERVISED

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**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

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**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,**

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

## GLAUCOMA CLINICAL FELLOWSHIP TRAINEES

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**2018 - 2019 David Sanders, MD, PhD and Eugene Lowry, MD, PhD**

**2017 - 2018 Yungtai Kung, MD and Jessica Moon, MD**

**2016 - 2017 Nisha Nagarkatti-Gude, MD, PhD and David Simons, MD, PhD**

**2015 – 2016 Brendan Butler, MD and Kelly Ma, MD**

**2014 – 2015 Eliesa Ing, MD and Shivali Menda, MD**

**2013 – 2014 Pui Yi, Boey, MD and Igor Estrovich, MD**

**2012 – 2013 Helen Koenigsman, MD**

**2011 – 2012 Derrick Pau, MD and Hanna Takusagawa, MD**

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2010 – 2011 Yvonne Chu, MD and Robert Kinast, MD  
2009 – 2010 Chris Shen, MD  
2009 Marta Pazos Lopez, MD  
2008 – 2009 Zack Hoffeldt, MD and Michael Lloyd, 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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2018 - 2019 Yaxing Wang, MD  
*"OCT Optic Nerve Head Tilt, Rotation and Peripapillary Bowing in Healthy Human Eyes "*

2018 - 2019 Jin Wook Jeoung, MD, PhD  
*"OCT Optic Nerve Head Phenotyping in Myopic Eyes with and without Glaucoma"*

2017 - 2018 Seungwoo Hong, MD, PhD  
*"OCT Optic Nerve Head Phenotyping in Human Glaucoma"*

2016 – 2018 Haomin Luo, MD  
*"OCT Optic Nerve Head Phenotyping in Human Glaucoma"*

2014 –2015 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 Camila Zangalli, 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"*

## GOOGLE SCHOLAR CITATIONS

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**Google Scholar Citation Page - [Link](#)**

Citations 13003  
h-index 60

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## BOOK CHAPTERS

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1. Ren R, Yang H, Gardiner SK, Hardin C, Demirel S, **Burgoyne CF**. Aging Effect of Lamina Cribrosa Depth in Ocular Hypertension and Glaucoma. In: Wang N, editor. *Intraocular and Intracranial Pressure Gradient in Glaucoma*. Singapore: Springer Nature; 2019. p. 205-9.
2. **Burgoyne CF**. How to Define a Glaucomatous Optic Neuropathy. In: *Intraocular and Intracranial Pressure Gradient in Glaucoma* Wang N (ed): Springer Nature; 2019:255-266.
3. Yang H, Reynaud J, Lockwood H, Williams G, Hardin C, Reyes L, Gardiner SK, **Burgoyne CF**. 3D Histomorphometric Reconstruction and Quantification of the Optic Nerve Head Connective Tissues. In: *Methods in Glaucoma Research*, Jacobs T (ed) New York, NY: Springer; Accepted for publication Nov 2016, Forthcoming 2017.
4. **Burgoyne CF**. Ivers KM, Yang H, Chauhan BC, Fortune, B. OCT Anatomy for Glaucoma – Emerging Relationships of Interest. In: *Optic Nerve Head and Retinal Nerve Fibre Analysis, 2nd Edition*. Lester M, Lemij H, Garway-Heath D (eds). Italy: PubliComm. 2017.
5. 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.
6. **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.
7. 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
8. 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.
9. **Burgoyne CF**. Chapter 1: The Glaucomatous Optic Nerve. In: *Pearls of Glaucoma Management*, Giaconi J, Law SK, Coleman AL, Caprioli J (eds). Berlin, Heidelberg: Springer-Verlag; 2010:1-13.
10. **Burgoyne CF**. Are Myopic Eyes more susceptible to glaucomatous damage? In: *Important Questions About Glaucoma*. Susanna R, ed. Cultura Medica, Sao Paulo, Brazil, 2004.
11. **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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### Published

#### 2022

1. Bennett Hong, Brad Fortune, Robert Kinast, Claude Burgoyne, Jack Phillip Rees, Steven Mansberger. Optic Nerve Cavitations in Glaucoma Suspect and Glaucoma Patients. *Am J Ophthalmol*. Accepted for Publication 19 October, 2022.

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2. Chaudhary, P., C. Stowell, J. Reynaud, S. K. Gardiner, H. Yang, G. Williams, I. Williams, N. Marsh-Armstrong, and C. F. Burgoyne. "Optic Nerve Head Myelin-Related Protein, Gfap, and Iba1 Alterations in Non-Human Primates with Early to Moderate Experimental Glaucoma." *Invest Ophthalmol Vis Sci* 63, no. 11 (Oct 3 2022): 9. <https://doi.org/10.1167/iovs.63.11.9>.  
<https://www.ncbi.nlm.nih.gov/pubmed/36239974>.

### 2021

3. Lowry, E. A., S. L. Mansberger, S. K. Gardiner, H. Yang, F. Sanchez, J. Reynaud, S. Demirel, C. F. Burgoyne, and B. Fortune. "Association of Optic Nerve Head Prelaminar Schisis with Glaucoma." *Am J Ophthalmol* 223 (Mar 2021): 246-58. <https://doi.org/10.1016/j.ajo.2020.10.021>.
4. Schwaner, S. A., R. N. Perry, A. M. Kight, E. Winder, H. Yang, J. C. Morrison, C. F. Burgoyne, and C. Ross Ethier. "Individual-Specific Modeling of Rat Optic Nerve Head Biomechanics in Glaucoma." *J Biomech Eng* 143, no. 4 (Apr 1 2021). <https://doi.org/10.1115/1.4049157>.  
<https://www.ncbi.nlm.nih.gov/pubmed/33210142>.

### 2020

5. Ritch M, Hannon B, Read A, Feola A, A. Cull G, Reynaud J, C. Morrison J, **Burgoyne CF**, Pardue M, Ethier C. AxoNet: an AI-based tool to count retinal ganglion cell axons. *Sci Rep* 10(1): 8034.. ([Full text-Free PDF](#))
6. Wang Y, Yang H, Luo H, Hong SW, Gardiner SK, Jeoung JW, Sharpe GP, Nouri-Mahdavi K, Caprioli J, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, Fortune B, Chauhan BC, **Burgoyne CF**. Peripapillary Scleral Bowing Increases with Age and is Inversely Associated with Peripapillary Choroidal Thickness in Healthy Eyes. *Am J Ophthalmol* 2020; 217: 91-103. DOI: <https://doi.org/10.1016/j.ajo.2020.03.050>. [PMC9225952](#).
7. Jeoung JW, Yang H, Gardiner SK, Wang Y, Hong S, Fortune B, Girard MJ, Hardin C, Wei P, Nicoleta MT, Vianna JR, Chauhan BC, **Burgoyne CF**. OCT Optic Nerve Head Morphology in Myopia I: Implications of Anterior Scleral Canal Opening versus Bruch's Membrane Opening Offset. *American Journal of Ophthalmology. Am J Ophthal*, 2020; 218: 105-119. ([Full Text Free PDF - PMC9285095](#))
8. Yang HL, Luo H, Hardin C, Wang YX, Jeoung JW, Albert C, Vianna J, Sharpe GP, Reynaud J, Demirel S, Mansberger SL, Fortune B, Nicoleta M, Gardiner SK, Chauhan BC, **Burgoyne C**. OCT Structural Abnormality Detection in Glaucoma using Topographically Correspondent Rim and Retinal Nerve Fiber Layer Criteria. *American Journal of Ophthalmology* 2020; 213:203–216. ([Full text-free PDF](#))
9. Chauhan BC, Vianna JR, Sharpe GP, Demirel S, Girkin CA, Mardin CY, Scheuerle AF, **Burgoyne CF**. Differential Effects of Aging in the Macular Retinal Layers, Neuroretinal Rim and Peripapillary Retinal Nerve Fibre Layer. *Ophthalmology* 2020; 127:177-185. ([Full text- free PDF](#))

### 2019

10. Fazio M, Girard M, Lee W, Morris J, **Burgoyne C**, Downs J. The Relationship between Scleral Strain Change and Differential Cumulative IOP Exposure in the Nonhuman Primate Chronic Ocular Hypertension Model. *Investigative Ophthalmology & Visual Science* 2019; 60:4141-4150. ([Full text- free PDF](#))
11. Hong S, Yang H, Gardiner SK, Luo H, Hardin C, Sharpe GP, Caprioli J, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, Fortune B, Chauhan BC, **Burgoyne CF**. OCT-Detected Optic Nerve Head Neural Canal Direction, Obliqueness and Minimum Cross-Sectional Area in Healthy Eyes, *Am J Ophthalmol* 2019; 208: 185-205. ([Full text- free PDF](#))

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- Hong SW, Koenigsman H, Yang H, Ren R, Reynaud J, Kinast R, Mansberger SL, Fortune B, Demirel S, Gardiner SK, **Burgoyne CF**. Glaucoma Specialist Detection of Optical Coherence Tomography Suspicious Rim Tissue in Glaucoma and Glaucoma Suspect Eyes. *Am J Ophthalmol* 2019; 199: 28-43. PMID: PMC6382546 ([Full text - free PDF](#))

### 2018

- Yang H, Luo H, Gardiner SK, Hardin H, Sharpe GP, Caprioli J, Demirel S, Girkin CA, Liebmann JM, Mardin CY, Quigley HA, Scheuerle AF, Fortune B, Chauhan BC, **Burgoyne CF**. Factors Influencing OCT Peripapillary Choroidal Thickness: A Multi-Center Study. *Invest Ophthalmol Vis Sci*. 2019; 60(2):795-806 ([Full text - free PDF](#))
- Zangalli C, Vianna J, Reis A, Migel-Neto J, **Burgoyne CF**, Chauhan BC, Costa V. Bruch's membrane opening minimum rim width and retinal nerve fiber layer thickness in a Brazilian population of healthy subjects. *PLoS One*. 2018 Dec 18;13(12):e0206887. PMID: PMC6298691 ([Full text - free PDF](#))
- Hong SW, Koenigsman H, Ren R, Yang H, Gardiner SK, Reynaud J, Kinast R, Mansberger SL, Fortune B, Demirel S, **Burgoyne CF**. Glaucoma Specialist Optic Disc Margin, Rim Margin and Rim Width Discordance in Glaucoma and Glaucoma Suspect Eyes. *Am J Ophthalmol* 2018; 192: 65-76. PMID: PMC6064671 ([Full text - free PDF](#))
- Schwaner SA, Kight AM, Perry RN, Pazos M, Yang H, Johnson EC, Morrison JC, **Burgoyne CF**, Ethier CR. A methodology for individual-specific modeling of rat optic nerve head biomechanics in glaucoma. *Journal of Biomechanical Engineering* 2018; 140 (8). PMID: PMC6056184 ([Abstract](#))
- Torres L, Vianna J, Glen S, Araie M, Caprioli J, Demirel S, Girkin C, Hangai M, Iwase A, Liebmann J, Mardin C, Nakazawa T, Quigley H, Scheuerle A, Sugiyama K, Tanihara H, Tomita G, Yanagi Y, **Burgoyne CF**, Chauhan BC. Protruded Retinal Layers Within the Optic Nerve Head Neuroretinal Rim. *Acta Ophthalmologica*; 2018; 96:e493-e502. PMID: PMC6093290 ([Abstract](#))
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