

## CURRICULUM VITAE

**DATE PREPARED:** October 05, 2011

### **PART I: General Information**

**Name:** Joseph Felix Rizzo, III

**Home Address:** 31 Farlow Road  
Newton, MA 02458

**Office Address:** Massachusetts Eye and Ear Infirmary  
243 Charles Street  
Boston, MA 02144

**Phone:** (617) 573-3412

**Email:** joseph\_rizzo@meei.harvard.edu

**Fax:** (617) 573-3851

**Place of Birth:** Birmingham, Alabama

### **Education:**

1974 B.S. (Biology and Chemistry), Louisiana State University  
1978 M.D. (Medicine), Louisiana State University, New Orleans, LA

### **Postdoctoral Training:**

07/78-06/79 Intern in Adult Medicine, University of Southern California/Los Angeles  
County Hospital  
07/79-06/82 Resident in Neurology, Tufts/New England Medical Center  
07/82-06/85 Resident in Ophthalmology, Boston University School of Medicine  
07/85-06/86 Clinical Fellow, Neuro-Ophthalmology, Massachusetts Eye and Ear  
Infirmary/Harvard Medical School (Mentor: Simmons Lessell, M.D.)  
07/86-06/01 Laboratory of Richard Masland, Ph.D., Massachusetts General Hospital

### **Licensure and Certification:**

1979 Massachusetts Medical License  
1984 Board-Certified, American Board of Psychiatry and Neurology  
1987 Board-Certified, American Board of Ophthalmology

**Academic Appointments:**

- 1986-1988 Instructor in Ophthalmology, Harvard Medical School, Boston, MA  
1986-1990 Clinical Research Affiliate, Massachusetts Institute of Technology, Cambridge, MA  
1989-1998 Assistant Professor of Ophthalmology, Harvard Medical School, Boston, MA  
1990- Research Affiliate, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, MA  
1998-2010 Associate Professor of Ophthalmology, Harvard Medical School, Boston, MA  
2010- Professor of Ophthalmology, Harvard Medical School, Boston MA  
2010- Director of Alumni, Massachusetts Eye and Ear Infirmary

**Hospital or Affiliated Institution Appointments:**

- 01/86-12/86 Assistant in Ophthalmology, Associate Staff, Massachusetts Eye and Ear Infirmary, Boston, MA  
01/87-12/97 Assistant in Ophthalmology, Active Staff, Massachusetts Eye and Ear Infirmary, Boston, MA  
01/98- Associate Surgeon, Massachusetts Eye and Ear Infirmary and the Massachusetts General Hospital, Boston, MA  
09/01- Staff Ophthalmologist, Veterans Administration Hospital, Jamaica Plain, Boston, Boston, MA  
06/03- Clinical Associate: Surgery Service/Ophthalmology, Massachusetts General Hospital, Boston, MA

**Other Professional Positions and Major Visiting Appointments:**

- 1994-1997 Quarterly Visiting Physician, Rhode Island Hospital, Department of Ophthalmology

**Hospital and Health Care Organization Clinical Service Responsibilities:**

- 1986- Staff Attending, Ophthalmology, Massachusetts Eye and Ear Infirmary

**Major Administrative Responsibilities:**

- 2001- Director, Center of Innovative Visual Rehabilitation, Veterans Administration Hospital, Jamaica Plain, Boston  
2006- Director, Neuro-Ophthalmology Service, Massachusetts Eye and Ear

## Infirmary

### **Major Committee Assignments:**

#### **Affiliated Institution**

- 1989-2008 Fellowship Committee, Massachusetts Eye and Ear Infirmary
- 1990- Medical Records Committee [Chairperson], Massachusetts Eye and Ear Infirmary
- 1991-2010 Patent Committee, Massachusetts Eye and Ear Infirmary
- 1992- Resident Selection Committee, Massachusetts Eye and Ear Infirmary
- 1997-2001 Joint Governing Committee, Schepens-Massachusetts Eye and Ear Infirmary Study Unit
- 2006-2010 Strategic Planning Committee, Massachusetts Eye and Ear Infirmary

### **Professional Societies:**

- 1980- Massachusetts Medical Society, Member
- 1984- American Academy of Neurology, Member
- 1985- American Academy of Ophthalmology, Member
- 1987- Association for Research in Vision and Ophthalmology, Member
- 1987- North American Neuro-Ophthalmic Society, Member
  - Scientific Program Committee, 1991-1996
  - Secretary, 1992-1994
  - Chairperson, Abstracts Subcommittee, 1992-1995
  - Certification and Accreditation Committee, 1993-1999
  - Education Committee, 1993-2006
  - Research Symposium Planning Committee, 1993-1995
  - Nominations Committee, 1993-2000
  - Fellowship Committee, 2004-
  - Frank B. Walsh Committee, 2004-2009
- 1987-1995 Frank Walsh Society, Member
- 1988- American Medical Association, Member
- 1988-1995 Massachusetts Society of Eye Physicians and Surgeons, Member
- 1991-2005 New England Ophthalmological Society, Member
- 2009- The Association for Research in Vision and Ophthalmology, Fellow

### **Community Service Related to Professional Work:**

- 1993-1994 Member, Medical Advisory Board Member Registry of Motor Vehicles, Commonwealth of Massachusetts
- 1994- Member, Medical Advisory Board Myasthenia Gravis Foundation, Massachusetts Chapter

**Editorial Boards:**

- 2003-2004 Ad-Hoc Editorial Board Member, Investigative Ophthalmology and Visual Science
- 2004- Editorial Board Member, Investigative Ophthalmology and Visual Science
- 2007- Editorial Board Member, The Journal of Ocular Biology, Diseases, and Informatics
- 2010- Associate Editor, Investigative Ophthalmology and Visual Science.

**Awards and Honors:**

- 1972 Phi Beta Sigma, Honor Society, Louisiana State University
- 1975 Phi Kappa Phi, Honor Society, Louisiana State University
- 1976 Ciba Award (presented to the person contributing the most to the medical school class), Louisiana State University School of Medicine
- 1978 Dean's Award for "Overall Excellence", Louisiana State University School of Medicine
- 1995 Special Award , Xth Congress European Society of Ophthalmology, Milan, Italy
- 2004 Bartemeus Award (for leadership within the field of retinal prosthetics), Detroit Institute of Ophthalmology
- 2007 Senior Achievement Award, American Academy of Ophthalmology
- 2009 ARVO Fellow, The Association for Research in Vision and Ophthalmology

**Part II: Research, Teaching, and Clinical Contributions****A. Narrative report of Research, Teaching, and Clinical Contributions**

I am a Neuro-Ophthalmologist and a physician scientist, and I direct a research project to develop a retinal prosthesis to restore vision to the blind. My professional time is nearly equally divided between clinical work and research, with additional time allocations for teaching (10%) and administrative responsibilities (5%). An overview of my areas of primary focus is provided below.

**Research**

My research is dedicated toward either studying the mechanisms of visual loss, improving our diagnostic methods for blinding diseases, or developing new treatments for blinding diseases.

Basic Science and Translational Research. I founded the Boston Retinal Implant Project (BRIP) in the late 1980s, and I have since served as co-director of the Project. The BRIP

is a multi-disciplinary research initiative that is based at the Massachusetts Eye and Ear Infirmary, Massachusetts Institute of Technology and the Boston Veterans Administration Hospital. The goal of the BRIP is to develop a retinal prosthesis to offer a new therapeutic option for patients who have acquired blindness. My team currently includes 34 researchers who are distributed across six academic centers.

My primary roles on the Project have been to: 1) set the strategic direction of the Project; 2) perform administrative duties, including hiring and firing of research and administrative staff; 3) coordinate the biological initiatives with our team of engineers; and 4) develop in-vivo techniques related to development of a retinal prosthesis. Regarding the latter, my most recent interest is the development of a technological platform to study the neural code of vision, which I believe will help inform our approach to deliver electrical stimulation to blind patients to create visual images.

### Clinical Research

My clinical research has focused primarily on the study of optic neuritis/multiple sclerosis, ischemic optic neuropathy, pseudotumor cerebri and giant cell arteritis. I have completed three significant clinical research studies that have influenced the diagnosis and treatment of optic neuritis and ischemic optic neuropathy, which are the two most common forms of non-glaucomatous optic neuropathy in adults. Some of my significant findings include: 1) recognition that all women and most men who experience optic neuritis eventually developed multiple sclerosis; 2) the demonstration of a significant overlap in the clinical profiles of optic neuritis and ischemic optic neuropathy; and 3) the recognition that magnetic resonance imaging (MRI) provides the most objective method to distinguish between these two disorders. The improved diagnostic accuracy obtained by MRI reduces the potential that patients with ischemic optic neuropathy might be unnecessarily treated as if they had multiple sclerosis. I also was the first clinician to either recognize the occurrence of optic neuropathy in Familial Dysautonomia, and occult large vessel occlusive disease of the retina and choroid as a cause for persistent monocular visual loss.

### Teaching

I share responsibility for supervision and teaching of one clinical fellow and eight residents per year in the basic evaluation and management of Neuro-Ophthalmic disorders. I provide one-on-one instruction to residents, fellows and medical students on the Neuro-Ophthalmology rotation, and I deliver approximately 35 lectures per year on a wide range of clinical problems. As director of the Neuro-Ophthalmology service, I also design and provide oversight for our fellowship training program. For the past 17 years, I have served as Director of the Neuro-Ophthalmology section of the Lancaster course in Ophthalmology, which is the oldest and largest educational course that is designed for residents-in-training.

### Clinical Care

I deliver medical care to patients only at the Massachusetts Eye and Ear Infirmary, where I practice as one of three full-time Neuro-Ophthalmologists. I evaluate roughly 40% of all patients referred to our service. My practice is primarily one of diagnostic consultation for a wide range of visual disturbances that result from damage to the eye or brain.

### Intersection Among Professional Activities

My goal in becoming a physician-scientist has been to deliver high quality care to individual patients while performing research to hopefully help a much larger number of patients than I would ever meet. My interactions with severely blind patients led me to establish my research project to develop a retinal prosthesis. The scientific knowledge that I gain from my basic/ translational research has helped to improve my ability to understand the problems that affect my patients.

### **B. Funding Information**

- 1986-1991 Physician Scientist Award, National Eye Institute, National Institutes of Health, Title: "Identification of Sub-Populations of Human Retinal Ganglion Cells"
- 1988- Principal Investigator, Lion's Club (yearly application, with continuous funding), Title: "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients"
- 1990-1996 Co-Principal Investigator, Seaver Foundation, Title: "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients"
- 1991-1992 Principal Investigator, The E. Matilda Ziegler Foundation for the Blind, Inc., Title: "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients"
- 1991-1996 Consultant, National Institute on Aging, P01-AG09976, Title: "Sleep, Aging and Circadian Rhythm Disorders"
- 1994-1996 Principal Investigator, Joseph Drown Foundation, Title: "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients"
- 1994-1999 Collaborator, National Institutes of Health, Title: "The Role of Human Visual Cortex in Perception"
- 1996-1997 Principal Investigator, Grousbeck Foundation, Title: "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients"
- 1997-2001 Co-Principal Investigator, Catalyst Foundation, New York, Title: "Retinal Implant Chip for the Blind"
- 1997-2001 Co-Principal Investigator, Keck Foundation, Title: "Development of a Silicon Retinal Implant to Restore Vision to the Blind"
- 2000-2001 Principal Investigator, Wynn Foundation, Title: "Retinal Electrical Stimulation of Patients with RP"
- 2000-2003 P.I., Foundation Fighting Blindness, Grant #: T-VP-1000-69, Title: "In Vitro Electrical Stimulation of Retinas"
- 2000-2005 Co-Principal Investigator, National Institute of Health, Sub-Contract with Second Sight, Title: "Development/Testing of Artificial Retinas for the Blind"
- 2001-2006 Principal Investigator, Veterans Administration, Title: "Center of

- Excellence Project to Support the Center for Innovative Visual Rehabilitation"
- 2002-2003 Principal Investigator, Veterans Administration, Equipment grant to support development of a retinal prosthesis
- 2002-2004 Principal Investigator, Veterans Administration, Title: "High Density Feedthroughs for Implantable Prosthesis Packages"
- 2003-2007 Supervisor/Investigator, Catalyst Foundation, Title: "Second Generation Retinal Implant for the Blind"
- 2004-2006 Principal Investigator, Veterans Administration, Title: "Development of a Biocompatible Retinal Prosthesis"
- 2005-2007 Principal Investigator, Defense Applied Research Program Agency (DARPA), NEOVISION Program, Title: "Study of the Interface between the Retina and a Custom Designed Stimulator Chip"
- 2005-2008 Principal Investigator, National Science Foundation, Title: "Development of a Technological Platform to Study the Neural Code of Vision"
- 2006-2011 Principal Investigator, Veterans Administration, Title: "Center of Excellence" grant (second cycle of funding) to support the "Center for Innovative Visual Rehabilitation"
- 2007-2008 Principal Investigator, TATRC: United States Army Medical Research and Materiel Command, Title: "Development of a Modular, Configurable Retinal Prosthesis"
- 2007-2008 Sub-Contractor (P.I.), National Institutes of Health (SBIR Grant), Title: "Functionalized Coatings for Enhanced Neural Interfaces"
- 2007-2009 Principal Investigator, Department of Defense, Title: "Optimization of Microelectronic Methods to Produce an Implantable Retinal Prosthesis to Treat Blindness"
- 2009-2010 Sub-Contract P.I., N.I.H., ARRA Advanced Engineering Development of a Chronic Retinal Implant
- 2010-2011 Principal Investigator, U.S. Department of Veterans Affairs, Title: "Objective Diagnosis of Mild Blast-Induced TBI".
- 2010-2013 Principal Investigator, U.S. Department of Veterans Affairs, Title: "Use of Penetrating Electrodes in the Boston Retinal Prosthesis."
- 2011-2013 Principal Investigator, Cures for Kids, Title: "Development of an Advanced "Smart Glasses" Prototype to Provide Navigation Assistance for Blind Children."

### **C. Report of Other (Non-Funded) Activities**

- P.I. Incidence of Polycystic Ovarian Syndrome and Idiopathic Intracranial Hypertension
- P.I. Screening of a Battery of Tests to Identify Better Means of Assessing Vision in Severely Blind Patients
- P.I. Observational Study of Neoplastic Infiltrative Optic Neuropathy
- P.I. fMRI Study of Visual Cortical Plasticity in Patients Who Are Blind from Retinitis Pigmentosa and Age-Related Macular Degeneration

- P.I. "Anatomical Study of the Anatomy of the Carotid Siphon Using Three-Dimensional Magnetic Resonance Angiography."
- P.I. "Study of the Use of Optical Coherence Tomography to Study the Anatomy of Edematous Optic Nerve Heads."
- Collaborator National Institutes of Health, Grant Awarded to NORDIC: Prospective Study of Idiopathic Intracranial Hypertension.
- Collaborator Pfizer Incorporated. Prospective Study of Blindness Associated with the Use of PDE-5 Inhibitor Drugs.

## D. Report of Teaching

### 1. Local Contributions

#### a. Medical School Courses

1990-1991	<u>Course in Human Nervous System and Behavior - New Pathway Curriculum</u>			
	Tutor	10 Medical Students	<i>contact time</i> 2 hours/week for 5 week(s)	<i>prep time</i> 1 hours/week for 5 week(s)
1990-1991	<u>Neurobiology Lecture, "The Retinal Anatomical Basis of Afferent Visual Function"</u>			
	Lecturer	50 Medical Students	<i>contact time</i> 2 hours/year for 1 year(s)	<i>prep time</i> 1 hours/year for 1 year(s)
1992-2009	<u>Introduction to Neuroscience; Health Sciences and Technology</u>			
	Lecturer	40 Medical Students	<i>contact time</i> 2 hours/year for 1 year(s)	<i>prep time</i> none reported

#### b. Graduate Medical Courses

1986-	<u>Neuro-Ophthalmology Lecture Series; Massachusetts Eye and Ear Infirmary</u>			
	Lecturer	10 Residents 10 Other Students	<i>contact time</i> 6 hours/year for 15 year(s)	<i>prep time</i> 6 hours/year for 15 year(s)
1989	<u>Schepens Eye Research Institute, "Neuro-Ophthalmological Aspects of Retinal Disease"</u>			
1989-2002	<u>Neuro-Ophthalmology section Harvard-Post Graduate Review course for Ophthalmologists, Harvard Medical School</u>			
	Lecturer	75 Graduate Students	<i>contact time</i> 4 hours/year for 15 year(s)	<i>prep time</i> 6 hours/year for 15 year(s)



1991-	<u>Lancaster Course in Ophthalmology: Neuro-Ophthalmology Section.</u>			
	<u>Waterville, ME</u>			
	Lecturer	65 Residents	<i>contact time</i> 15 hours/year for 16 year(s)	<i>prep time</i> 10 hours/year for 16 year(s)
1992	<u>Emergency Lecture Series: "Neuro-Ophthalmic Complications of Ocular Trauma"</u>			

**c. Local Invited Presentations**

Annual Invited Lecturer

- 1995- "Ocular Myasthenia", Myasthenia Gravis Support Group of Massachusetts
- 2001- "Neuro-Ophthalmic Manifestations of Chiasmal Disease", Neuro-Endocrinology  
2008 Service, Massachusetts General Hospital

Commencement Speaker

- 1999 Commencement Address: Resident and Fellowship Graduation Ceremony,  
Massachusetts Eye and Ear Infirmary

Grand Rounds

- 1986 "Optic Neuritis and Multiple Sclerosis", Department of Neurology, Beth Israel  
Deaconess Medical Center, Boston
- 1986 "Transient Monocular Blindness", Department of Neurology, Saint Elizabeth's  
Hospital, Brighton
- 1986 "Optic Neuritis and Multiple Sclerosis", Department of Ophthalmology, Boston  
University School of Medicine, Boston
- 1986- Ophthalmology Grand Rounds, Department of Ophthalmology, Massachusetts Eye  
1996 and Ear Infirmary, Boston
- 1987 "Optic Neuritis and Multiple Sclerosis", Department of Ophthalmology,  
Tufts/New England Medical Center, Boston
- 1987 "Clinical Aspects of Afferent Pathway Disease", Department of Ophthalmology,  
Boston University School of Medicine, Boston
- 1987 "Risk of Developing Multiple Sclerosis after Optic Neuritis", Department of

Neurology, Massachusetts General Hospital, Boston

- 1988 "Optic Neuritis and Multiple Sclerosis", Department of Neurology, Brigham and Women's/Beth Israel Hospital, Boston
- 1989 "Optic Neuritis and Multiple Sclerosis", Department of Ophthalmology, Tufts/New England Medical Center, Boston
- 1990 "Clinical Aspects of Afferent Pathway Disease", Department of Ophthalmology, Tufts/New England Medical Center, Boston
- 1992 "Diagnosis and Management of Optic Neuritis", Department of Ophthalmology, Children's Hospital, Boston
- 1993 "Clinical Vignettes that Reveal Aspects of Neuronal Behavior", Department of Neurology, Massachusetts General Hospital, Boston
- 1993 "Clinical Vignettes that Reveal Aspects of Neuronal Behavior", Department of Ophthalmology, Lahey Clinical Medical Center, Burlington, MA
- 1994 "ATP Deficiency Optic Neuropathy", Department of Ophthalmology, Tufts/New England Medical Center, Boston
- 1996 "New Treatment and Concepts of Transient Monocular Blindness", Department of Neurology, Tufts/New England Medical Center, Boston
- 1999 "Development of a Silicon Retinal Prosthesis", Department of Neurosurgery, Massachusetts General Hospital, Boston
- 2000 "Development of a Silicon Retinal Prosthesis", Department of Neurology, Massachusetts General Hospital, Boston
- 2002 "Neuro-Ophthalmic Manifestations of Myasthenia Gravis", Department of Neurology, Tufts/New England Medical Center, Boston
- 2005 "Ophthalmic Aspects of Giant Cell Arteritis", Department of Rheumatology, Boston University School of Medicine, Boston
- 2011 "The Boston Retinal Implant Project: Status and Competitive Landscape," Massachusetts Eye and Ear Infirmary, Boston
- 2011 "The VA-Based Program on Retinal Prosthetics: Our Progress and a Status Report on this Field of Research," Department of Veterans Affairs, Veterans Hospital, Jamaica Plain

Invited Lecturer

- 1991- "Retro-Chiasmal Syndromes", New England College of Optometry  
1995
- 1996 "Overlapping Clinical Features of Retinal and Optic Nerve Disease" and "Retinal Basis for Visual Function", Tufts/Boston University Combined Resident Lecture Series
- 1997 "Management of Temporal Arteritis", Division of Ophthalmology, North Shore Medical Center
- 1997 Vision Rehabilitation Service, Massachusetts Eye and Ear Infirmary
- 1997 "Clinical Overview of the Ocular Motor System", Tufts/Boston University Combined Resident Lecture Series
- 2005 "The Use of Modern Technology to Restore Vision to the Blind", Boston Museum of Science
- 2006 "Development of a Retinal Prosthesis to Restore Vision to the Blind: The Changing Landscape of Military Ophthalmology", Schepens Eye Research Institute, Boston

#### Research Presentation

- 1991 "Retinal Transplantation", Department of Anatomy and Neurobiology, Boston University Graduate Seminar series, Boston
- 1993 "Development of a Silicon Retinal Prosthesis", Massachusetts Institute of Technology Colloquium
- 2002 Center for Innovative, Minimally Invasive Technology, "Development of a Retinal Prosthesis", Massachusetts General Hospital
- 2004 "Puzzling, Retrospective Perceptual Results from Electrical Stimulation of Human Retina", Department of Anatomy and Neurobiology, Boston University School of Medicine, Boston
- 2008 "Development of a Retinal Prosthesis," Lion's Club
- 2009 Development of a Retinal Prosthesis, Boston University, Department of Biomedical Engineering.

#### Seminar

- 1990 "Paraneoplastic Retinopathy", Schepens Eye Research Institute
- 1991 "Optic Neuropathies Masquerading as Retinopathy", Schepens Eye Research Institute, Boston
- 1995 "Management of Temporal Arteritis", Springfield Ophthalmology Association, Springfield, MA
- 2001 "Development of a Retinal Prosthesis" in "The Biology of Ophthalmic Diseases", NEI Postdoctoral Training Program, Massachusetts Eye and Ear Infirmary and the Schepens Eye Research Institute, Boston, MA
- 2007 1st Harvard - wide Neural Prosthesis Seminar, Harvard Medical School
- 2008 "Ischemic Optic Neuropathy", Tufts Medical School
- 2009 Myasthenia Gravis, New England Ophthalmologic Society
- 2010 Clinical, Assessment, and Intervention Updates in Neurorehabilitation, The Inn at Longwood, Boston

**d. Continuing Medical Education Courses**

- 1987 New England Ophthalmological Society, "Optic Neuritis and Multiple Sclerosis"
- 1989- Neuro-Ophthalmology Fall Festival (bi-annual; 8 events in total)
- 1989 Symposium on Head Trauma, Spaulding Rehabilitation Hospital, Boston. "Neuro-Ophthalmic Manifestations of Closed Head Injury"
- 1989- Neuro-Ophthalmology Section (for Ophthalmologists); Harvard Post-Graduate  
2002 Review Course in Ophthalmology
- 1990 New England Ophthalmological Society, "Partial Central Retinal Artery Occlusion"
- 1991 Course in Acute Neurology and Stroke Management, sponsored by St. Elizabeth's Hospital, Brighton, MA
- 1991 American Academy of Ophthalmology, "Traumatic Optic Neuropathy", Update Course
- 1992 New England Council of Optometrists, Regional meeting. "Clinical Overview of the Afferent Visual System"

- 1992 Practicing Ophthalmology for Primary Care Physicians, Massachusetts Eye and Ear Infirmary. "Migraine"
- 1993 New England Ophthalmological Society, "Visual Function in Alzheimer's Disease"
- 1996 New England Ophthalmological Society, "Diagnosis and Management of Temporal Arteritis"
- 1997 Clinical Update Course in Ophthalmology: "Results of the Optic Neuritis Treatment Trial" and "Paraneoplastic Retinopathy"
- 1997 New England Optometric Society, Annual Regional Meeting. "Clinical Aspects of Optic Nerve Disease"
- 2000 "New Treatments for Neo-Vascular Age-Related Macular Degeneration", sponsored by Harvard Medical School
- 2001 New England Council of Optometrists, Regional Meeting. "Retinal and Cortical Visual Field Defects in a Young Woman"
- 2001 New England Council of Optometrists, Regional Meeting. "Development of a Retinal Prosthesis"
- 2002 New England Ophthalmological Society. "Sneeze Induced Neuro-Ophthalmic Complications"
- 2003 New England Ophthalmological Society. "Ischemic Optic Neuropathy"
- 2004 New England Ophthalmological Society. "Traumatic Optic Neuropathy"
- 2005 Director, Kevin Hill Seminar in Ophthalmology on Neuro-Ophthalmology; 5 Lectures
- 2005 New England Ophthalmological Society's 18th Annual Meeting for Ophthalmic Medical Personnel. "Common Forms of Optic Neuropathies"
- 2005 New England Ophthalmological Society. "Pediatric Nystagmus"
- 2006 Chandler Visiting Lecture; Academic Organizer
- 2007 Alumni Meeting, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary; Course Co-Director
- 2008 Illinois Eye Review (annual course): Overview of Clinical Neuro-Ophthalmology

2010 New England Ophthalmological Society. "Giant Cell Arteritis."

2011 Principles and Practice of Clinical Research, International Distance-Learning Clinical Research Training Program. Harvard Medical School.

**e. Advisory and Supervisory Responsibilities in Clinical or Laboratory Setting**

1986- 19 Undergraduate and Graduate Students (10 Undergraduate; 9 Graduate) for 50 hrs/year, Responsibilities include: supervision of students either in our clinic or in my laboratory, reviewing theses, and jointly performing experiments. Harvard College, MIT, Boston University School of Medicine, University of New South Wales, Australia, UCLA, Brown University, Holy Cross, Louisiana State University

1986- 139 Ophthalmology Residents and Clinical Fellows for 250 hrs/year, Responsibilities include: supervision of 120 residents during their 3 month rotation and 19 fellows over their year-long appointment, supervise emergency room patients, teach, and perform lumbar punctures and temporal biopsies with the residents and , Massachusetts Eye and Ear Infirmary

**f. Leadership Roles**

1989-2002 Director, Neuro-Ophthalmology section Harvard-Post Graduate Review course for Ophthalmologists, Harvard Medical School  
Responsibility: Preparation of lectures and hand-outs that summarize the fundamental clinical issues in the practice of neuro-ophthalmology for a six hour lecture session given once per year.

1991-1992 Member, Advanced Concepts in Visual Science Course Planning Committee, Massachusetts Eye and Ear Infirmary  
Responsibility: Identify topics and lecturers in emerging fields relevant to visual science.

1993 Organizer and Moderator, New England Ophthalmic Society Symposium on Clinical Neuro-Ophthalmology, New England Ophthalmic Society  
Responsibility: Selection of topics and choosing lecturers for a half-day symposium to approximately 200 ophthalmologists.

1995 Course Co-Director, "Biomedical Engineering Society, Annual Meeting", Boston, MA., Biomedical Engineering Society  
Responsibility: Prepare a four hour symposium and select speakers to review the topic of visual prostheses.

- 2007- Trustee, Schepens Eye Research Institute, The Schepens Eye Research Institute  
Responsibility: To provide oversight of The Institute's research activities
- 2008- Symposium Chair, Massachusetts Eye and Ear Infirmary Annual Alumni Meeting, Massachusetts Eye and Ear Infirmary  
Responsibility: Symposium Chair, 2008 Update on Ophthalmology

**g. Advisees/Trainees**

<i>Training Duration</i>	<i>Name</i>	<i>Current Position</i>
1991-1992	Nick Volpe, M.D.	Professor of Ophthalmology, University of Pennsylvania, Philadelphia, PA
1992-1993	Len Levin, M.D., Ph.D.	Professor of Ophthalmology, University of Wisconsin, Madison, WI
1994-1995	Misha Pless, M.D.	Associate Professor of Neurology, Massachusetts General Hospital, Boston, MA
1996-1997	Judith Warner, M.D.	Associate Professor of Ophthalmology, University of Utah School of Medicine, Salt Lake City, UH
1997-1998	Howard Pomeranz, M.D., Ph.D.	Professor of Neuro-Ophthalmology, Long Island Jewish Hospital, Hyde Park, NY
1999-2000	David Newman-Toker, MD, PhD	Assistant Professor of Neurology, Johns Hopkins University School of Medicine
2000-2001	Michael Lee, M.D.	Associate Professor, Department of Ophthalmology, University of Minnesota, Minneapolis, MN
2001-2002	Nathalie Collignon, MD, PhD	Associate Professor of Ophthalmology, University Hospital, University of Liege, Belgium
2002-2003	Dean Cestari, M.D.	Assistant Professor of Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA
2003-2004	Jonathan Kim, M.D.	Associate Professor of Ophthalmology, Loma Linda University Medical Center, Loma Linda, CA
2004-2005	Susan Pepin, M.D.	Assistant Professor of Ophthalmology, Dartmouth Medical School, Hanover, NH
2006-2007	Marc Dinkin, M.D.	Assistant Professor of Neurology, Brigham and Women's Hospital, Boston, MA
2007-2008	Kenneth Chang,	Instructor in Ophthalmology, Harvard Medical

2008-2009	M.D., M.P.H. Ellen Brown- Mitchell, M.D.	School/Massachusetts Eye and Ear Infirmary Pediatric Ophthalmology Fellow, UPMC Eye Center
2008-2009	Adam Cohen, M.D.	Fellow, Brigham & Women's Hospital
2009-2010	Gena Heidary, M.D., Ph.D.	Faculty, Children's Hospital Boston, Department of Ophthalmology, Harvard Medical School
2009-2010	Ming He, M.D.	Massachusetts Eye and Ear Infirmary

## 2. Regional, national, or international contributions

### a. Invited Presentations

#### Regional

- 1987 "Optic Neuritis and Multiple Sclerosis", New England Ophthalmological Society [*Competitively Selected*]
- 1990 "Partial Central Retinal Artery Occlusion", New England Ophthalmological Society [*Competitively Selected*]
- 1991 "Traumatic Optic Neuropathy", American Academy of Ophthalmology; Regional Update Course [*Competitively Selected*]
- 1992 "Clinical Overlap of Optic Neuritis & Ischemic Optic Neuropathy", Rhode Island Society of Eye and Physicians and Surgeons, RI [*Invited Lecture*]
- 1992 Three lectures on clinical Neuro-Ophthalmological topics, Greater New York Ophthalmology Clinical Lecture Series, NY [*Invited Lecture*]
- 1992 "Occult Retinal and Choroidal Vascular Disease", Manhattan Eye, Ear and Throat Hospital, Department of Ophthalmology [*Grand Rounds*]
- 1993 "Occult Retinal & Choroidal Vascular Disease", Rhode Island Hospital, Providence, RI [*Ophthalmology Grand Rounds*]
- 1994 "Optic Neuritis Treatment Trial", Western Massachusetts Ophthalmological Society [*Invited Lecture*]
- 1994 "Variations on the Theme of Ischemic Optic Neuropathy", New York Hospital, Cornell Medical Center, New York [*D. Jackson Coleman Visiting Professorship*]
- 1995 "Steps Toward the Development of a Retinal Prosthesis", Biomedical Engineering Society, Annual Meeting, Boston, MA [*Invited Lecturer*]



- 1997 "Transient Monocular Blindness: New Concepts and Therapy", Department of Neurology, Brown University Medical Center, Providence, RI[*Neurology Grand Rounds*]
- 1999 "Italian-American Biomedical Exchange Symposium", Boston University, Boston, Massachusetts[*Guest Lecturer*]
- 2006 "The Relevance of Neuroscience for the Development of a Retinal Prosthesis to Restore Vision to the Blind", Boston Society of Neurology and Psychiatry, 2006[*Invited Lecturer*]
- 2006 "Development of a Retinal Prosthesis to Restore Vision to the Blind", Advanced Technologies in the Neurosciences, sponsored by Dartmouth Medical School and CIMIT, Hanover, NH[*Invited Lecture*]
- 2009 Higher Cortical Visual Impairment, Georgetown University[*Invited Lecture*]
- 2011 Harnes Lecturer in Ophthalmology. Dartmouth Medical School, Dartmouth-Hitchcock Medical Center.
- 2011 Guest Speaker, Boston College Colloquium Series, Departments of Biology and Physics.
- 2011 Speaker, "Development of the Boston Retinal Prosthesis", 33rd Annual International IEEE EMBS Conference August 30 - September 3, 2011, Boston Marriott Copley Place, Boston, MA,

### **National**

- 1986 "Optic Neuritis and the Risk of Developing Multiple Sclerosis", North American Neuro-Ophthalmic Society[*Competitively Selected*]
- 1986 "A Progressive Neurologic Syndrome Following Immunization", Frank Walsh Neuro-Ophthalmic Society[*Competitively Selected*]
- 1987 "Multiple Sclerosis Following Idiopathic Optic Neuritis", American Academy of Neurology[*Competitively Selected*]
- 1987 "Optic Neuritis and Multiple Sclerosis", University of Iowa, Iowa City, IA[*Ophthalmology Grand Rounds*]
- 1987 "Ophthalmoplegia with Congenital Hypotonia", Frank Walsh Neuro-Ophthalmic Society[*Competitively Selected*]
- 1988 "Clinical Aspects of Retinal Ganglion Cell Function", North American Neuro-ophthalmic Society[*Invited Lecture*]

- 1988 Neuro-Ophthalmology mini-symposium, "Clinical Applications of Optic Nerve Blood Flow Studies", Association for Research in Vision and Ophthalmology [*Invited Lecture*]
- 1988 "How Do We See? Retinal Anatomy Underlying Afferent Visual Function", Louisiana State University School of Medicine, New Orleans, LA [*Ophthalmology Grand Rounds*]
- 1989 "Measurement of Optic Nerve Blood Velocity as a Function of Age in Normal Subjects", North American Neuro-ophthalmic Society [*Competitively Selected*]
- 1990 "Lymphoma Affecting the Neuro-Ophthalmic Pathways", North American Neuro-Ophthalmology Society [*Invited Lecture*]
- 1990 "Paraneoplastic Retinopathy", Frank Walsh Society [*Competitively Selected*]
- 1990 "Optic Neuritis and Ischemic Optic Neuropathy", Neuro-Ophthalmology Conference; University Hospital, Washington, D.C. [*Invited Lecture*]
- 1991 "Acromegaly with Visual Loss", Frank Walsh Society [*Competitively Selected*]
- 1991 "Unconscious Sight Regulating Circadian Rhythms in a Blind Patient", Los Angeles Neuro-Ophthalmology Society, Los Angeles, CA [*Visiting Lecturer*]
- 1991 "Anatomical and Physiological Basis of Afferent Visual Function", North American Neuro-ophthalmology Society [*Seminar*]
- 1992 "ATP Deficiency; A genre of optic neuropathy", North American Neuro-Ophthalmology Society [*Competitively Selected*]
- 1992 "ATP Deficiency: A genre of optic neuropathy", University of Pennsylvania, Philadelphia, PA [*Neurology Grand Rounds*]
- 1992 Three clinical lectures, Pacific Medical Center, San Francisco, CA [*Ophthalmology Grand Rounds*]
- 1993 "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients", Department of Ophthalmology, University of Chicago, Chicago, IL [*Guest Lecturer*]
- 1993 "Development of a Retinal Prosthesis", Louisiana State University Medical Center, New Orleans, LA [*Ophthalmology Grand Rounds*]
- 1993 "Development of a Retinal Prosthesis", Department of Ophthalmology, Mayo Clinic, Rochester, MN [*Visiting Professor*]

- 1993 "Varying the Intensity of Stimulus Light for Detection of Afferent Pupil Defects", North American Neuro-ophthalmology Society [*Competitively Selected*]
- 1993 "Management of Optic Neuritis", American Academy of Ophthalmology [*Competitively Selected*]
- 1993 "Overview of Afferent Visual Function", Southern College of Optometry, Memphis, TN [*Visiting Lecturer*]
- 1993 Case presentations and one clinical lecture, Oregon State Society of Ophthalmology, Portland, Oregon [*Annual Guest Lecturer*]
- 1993 "Development of a Retinal Prosthesis", FASEB Conference, Copper Mountain, CO [*Invited Lecture*]
- 1994 "Pathological Cupping of the Optic Nerve Head", Jules Stein Eye Institute [*Visiting Professor*]
- 1994 "Steps Toward the Development of a Retinal Prosthesis", Nashville Ophthalmological Society, Nashville, TN [*Guest Lecturer*]
- 1994 "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients", Salk Institute, La Jolla, CA [*Invited Lecture*]
- 1994 "Overlapping Clinical Profiles of Retinal and Optic Nerve Disease", Departments of Ophthalmology and Neurology, Vanderbilt University [*Visiting Professor*]
- 1994 "Development of a Retinal Prosthesis", Department of Ophthalmology, Willis-Knighton Hospital, Shreveport, LA [*Visiting Professor*]
- 1994 "Subconscious Sight Regulating Circadian Rhythms in Several Blind Patients", North American Neuro-Ophthalmology Society [*Competitively Selected*]
- 1994 "Development of a Retinal Prosthesis", Defense Science Research Council, La Jolla, CA [*Invited Lecture*]
- 1994 "Implications of the Optic Neuritis Treatment Trial", Rhode Island Hospital [*Ophthalmology Grand Rounds*]
- 1994 "Application of Human Photoreceptor, Retinal Ganglion Cell and Occipital Cortical Density Data to Visual Field Analysis", North American Neuro-Ophthalmology Society, Tucson, AZ [*Competitively Selected*]
- 1994 "Development of a Silicon Retinal Implant to Restore Some Vision to Blind Patients", California Institute of Technology, Pasadena, CA [*Invited Lecture*]
- 1994 "Development of a Retinal Prosthesis", University of Southwestern Louisiana,

- Lafayette, LA[*Plenary Lecturer, 37th Midwest Symposium on Circuits and Systems*]
- 1994 Five lectures on clinical Neuro-Ophthalmology, Los Angeles Ophthalmological Research Club, Los Angeles, CA[*Visiting Professor*]
- 1994 "Development of a Retinal Prosthesis", Smith-Ketterwell Institute, San Francisco, CA[*Invited Lecture*]
- 1994 One Clinical Lecture, Pittsburg Ophthalmological Society[*Visiting Lecturer*]
- 1994 "Compressive Optic Neuropathies", Department of Ophthalmology, National Naval Medical Center, Bethesda, MD[*Visiting Professor*]
- 1994 "Histopathology of an Adult Onset Optic Neuropathy", Frank Walsh Neuro-Ophthalmology Meeting, Washington, D.C.[*Competitively Selected*]
- 1995 "Vision Without Perception", American Academy of Ophthalmology, Atlanta, GA[*Seminar*]
- 1995 Four clinical lectures, Department of Ophthalmology, Cleveland Clinic[*Visiting Professor*]
- 1995 "Steps Toward the Development of a Retinal Prosthesis", Science Writers Convention, Orlando, Florida, sponsored by Research to Prevent Blindness[*Guest Lecturer*]
- 1995 One clinical and one basic science lecture, University of New Jersey Medical and Dental Health Science Center[*Visiting Professor*]
- 1995 "Disorders of Ocular Motility" (3 hours), New York City Resident Lecture Series[*Guest Lecturer*]
- 1995 "Childhood Optic Neuritis", Manhattan Eye and Ear Infirmary, Manhattan, NY[*Pediatric Ophthalmology Grand Rounds*]
- 1995 "Steps Toward the Development of a Retinal Prosthesis", NASA-Goddard Space Center, Maryland[*Invited Lecturer*]
- 1995-Two hours each of case presentations by residents and clinical lectures,  
1997 Ophthalmology Department, Brown University, Providence, RI[*Quarterly Visiting Professor*]
- 1995-Five lectures per year of clinical neuro-ophthalmological topics, Stanford  
1998 University-sponsored training course for Ophthalmology residents-in-training, Palo Alto, CA[*Invited Lecturer*]
- 1996 "Development of a Retinal Implant", 2nd Annual RESNA Engineering Research

Symposium, Salt Lake City[*Invited Lecturer*]

1996 Clinical lecture, Department of Ophthalmology, University of Missouri, Columbia, MO[*Visiting Professor*]

1996 "Steps Toward Development of a Retinal Prosthesis" and 3 hours of case discussions, University of Michigan Ophthalmology Grand Rounds[*Visiting Professor*]

1996 Clinical Lecturer, Walter Reed Army Hospital Biennial Ophthalmology Symposium[*Visiting Professor*]

1996 Clinical lecture, Long Island Jewish Hospital/Northshore Hospital Long Island, NY[*Visiting Lecturer*]

1996 "New Concepts of Transient Monocular Blindness", Scheie Eye Institute, University of Pennsylvania[*Ophthalmology Grand Rounds*]

1996 Delivered both Ophthalmology and Neurology Grand Rounds, Department of Neurology, University of Mississippi, Jackson, Mississippi[*Visiting Professor*]

1997 Clinical Lecture, Great Lakes Symposium of VLSI circuits and design, Lafayette, Louisiana[*Invited Plenary Lecturer*]

1998 Presentation in Symposium of Retinal Prostheses, sponsored by "Vision Research", Fort Lauderdale, Florida[*Invited Lecture*]

1999 "Development of a Silicon Retinal Prosthesis", Cornell Medical Center Grand Rounds[*Visiting Professor*]

1999 Regional Biomedical Symposium, University of Southwestern Louisiana, Department of Engineering[*Guest Lecturer*]

2000 "Development of a Silicon Retinal Prosthesis", MACULA 2000/ Atlantic Coast Retinal Meeting[*Guest Lecturer*]

2000 Clinical Lecture, Inauguration, Mann Institute of Biomedical Engineering, University of Southern California, Los Angel[*Invited Lecturer*]

2000 "Development of a Retinal Prosthesis", National Medical Association, Washington, D.C.[*Invited Lecturer*]

2001 "Giant Cell Arteritis", American Academy of Ophthalmology, Sponsored by the North American Neuro-Ophthalmology Society, Dallas[*Competitively Selected*]

2002 "Retinal Prosthesis: The Boston School", Retina Mini-Symposium, American Academy of Ophthalmology meeting[*Invited Lecturer*]

- 2002 "Differential Diagnosis of Optic Neuropathy", American Academy of Ophthalmology, Sponsored by the North American Neuro-Ophthalmology Society, Fort[*Competitively Selected*]
- 2002 "Engineering and Clinical Challenges of Developing a Retinal Prosthesis", Foundation Fighting Blindness, Chicago, IL[*Invited Lecture*]
- 2003 "Retinal Prosthesis: Unexpectedly Small Percepts Evoked in Human Testing", Research Conference sponsored by the Department of Ophthalmology, Stanford University[*Invited Lecture*]
- 2003 "International Conference on Restoration of Neural Function", Veterans Administration, Asilimar, CA[*Invited Lecture*]
- 2003 "Development of a Retinal Prosthesis", John F. Kennedy Rehabilitation Hospital, New Jersey, Department of Neurology[*Invited Lecturer*]
- 2003 "Development of a Retinal Prosthesis", Case Western Reserve University[*Purnell Visiting Professor*]
- 2004 Lecture , The Institute of Ophthalmology and Visual Science, New Jersey Medical School[*Invited Lecturer*]
- 2004 "Regulatory Considerations in the Development of a Retinal Prosthesis", Federal Food and Drug Administration, Center for Drug Evaluation and Research[*Invited Speaker*]
- 2004 "Development of a Retinal Prosthesis", Long Island Jewish Hospital[*Invited Lecture*]
- 2004 Lecture, Chicago Ophthalmological Society[*Invited Lecture*]
- 2004 Lecture, Federation of American Societies for Experimental Biology, Saxtons River, Vermont[*Invited Speaker*]
- 2004 Lecture, New Jersey Institute of Technology, Newark, NJ[*Invited Lecturer*]
- 2005 "The Visual Potential of a Retinal Prosthesis", American College of Eye Surgeons, Fort Lauderdale, FL[*Invited Lecturer*]
- 2005 "Challenges in the Development of a Retinal Prosthesis", Symposium on the "Integration of New Technologies for the Care of Retinal Disease", Aspen, CO[*Invited Lecturer*]
- 2005 "Technologies Related to Development of a Retinal Prosthesis", Dual Sensory Disability Conference, sponsored by the Department of Veterans Affairs, Portland, OR[*Invited Lecturer*]

- 2005 Lecture, White House Conference on "Emerging Technologies in Support of the New Freedom Initiative", Department of Veterans Affairs*[Invited Lecturer]*
- 2005 "The Process of Discovery" Lecture Series, Cleveland Clinic - Case Western Medical School, Cleveland, OH*[Invited Lecturer]*
- 2006 "Replacement and Rescue", Symposium Meeting at the John A. Moran Eye Center, University of Utah School of Medicine*[Invited Lecturer]*
- 2006 "Development of a Retinal Prosthesis", Neuroscience Institute, Medical University of South Carolina, Charleston, SC*[Invited Professor: Neuroscience Grand Rounds]*
- 2006 Neuro-Ophthalmology, 2005-2006 Greater New York Ophthalmology Clinical Lecture Series*[Invited Lecturer]*
- 2006 "A Retinal Prosthesis as a Potential Treatment for Trauma-Induced Blindness", Dartmouth 2006 Poly-Trauma Conference, Hanover, NH*[Invited Lecture]*
- 2006 Clinical Lecture, The New York Eye and Ear Infirmary*[Invited Professor ]*
- 2006 "Strategies and Solutions: the Changing Landscape of Military Ophthalmology", Schepens Eye Research Institute, Boston, MA*[Invited Lecturer]*
- 2007 "Emergency Neuro-Ophthalmology: Diagnosis and Management", American Academy of Ophthalmology Annual Meeting, New Orleans, LA*[Invited Lecturer]*
- 2008 "Use of Retinal Prosthesis to Restore Vision Following Traumatic Ocular Injury and Naturally-Occurring Retinal Diseases", Third Biennial Military Vision Research Symposium: Traumatic Eye and Brain Injury*[Invited Lecture; Moderator]*
- 2008 Product Line Review: Ocular Health "A Novel Retinal Prosthesis that is Modular and Configurable", Telemedicine and Advanced Technology Research Center*[Invited Lecture]*
- 2008 "The Bionic Eye: Posterior Segment - New Therapies", Monroe J. Hirsch Memorial Research, American Academy of Optometry*[Invited Lecture]*
- 2008 Bio-X Symposium: "What Level of Vision Might a Retinal Prosthesis Provide to Blind Patients?", Stanford University*[Invited Lecture]*
- 2009 The Development of Visual Prostheses and other Assistive Devices., NANOS*[Invited Lecture]*
- 2009 Illinois Eye Review: Neuro-Ophthalmology Overview, University of Illinois*[Invited Lecture]*

- 2009 Charles Dwight Townes Memorial Lecture 2009, University of Louisville ,  
University of Louisville[*Invited Lecture*]
- 2010 “The Status of the Field of Visual Prosthetics with Specific Attention to the Boston Retinal Implant Project,” Extraordinary Ophthalmology Lecture Series, Annual Meeting, Department of Ophthalmology, University of Wisconsin, Madison
- 2011 “Updates on Ischemic Optic Neuropathy, Updates on Pseudotumor Cerebri, Interesting Adult Neuro-Ophthalmic Cases,” SUNY Downstate Department of Ophthalmology’s Current Concepts in Ophthalmology 2011, Caesar’s Atlantic City, New Jersey.
- 2011 “The Boston Retinal Implant Project, “NEI/FDA Endpoints Symposium: Use of Functional Vision Endpoints in Visual Prostheses Product Development. National Eye Institute, Bethesda, Maryland.
- 2011 Moderator, “Overview of Progress on the Boston Retinal Prosthesis.” ARVO 2011 Visionary Genomics. Fort Lauderdale, Florida.

### **International**

- 1992 Case presentations and 2 clinical lectures, Universite Laval, Department of Ophthalmology, Quebec, Canada[*Visiting Professor*]
- 1994 Three lectures on clinical neuro-ophthalmology, Fondation Ophtalmologique A. De Rothschild, Paris[*Invited Lecturer*]
- 1994 "Development of a Retinal Prosthesis", Instituto Scientifico, Ospedale S. Raffaele, University of Milan[*Invited Lecture*]
- 1994 "Development of a Silicon Retinal Implant", European Congress of Ophthalmology, Milan, Italy[*Plenary Lecturer*]
- 1994 Two day long course in fundamentals of Neuro-Ophthalmology, Universidad de Valladolid, Spain[*Visiting Professor*]
- 1996 Clinical Lecture, Scandinavian University Research Seminar, given by Merck, Sharpe, and Dohme, Co., Denmark[*Guest Lecturer*]
- 1996 Clinical lectures, Department of Ophthalmology, Sick Children's Hospital, Toronto, Canada[*Visiting Professor*]
- 1997 Two lectures and discussion of case presentations, Department of Ophthalmology, McGill University, Montreal, Canada[*Grand Rounds*]
- 1997 Clinical Lectures, University of Vienna, Department of Ophthalmology[*Visiting Professor and Grand Rounds Lecturer*]



- 1997 Development of a Silicon Retinal Implant, European Congress of Ophthalmology, Budapest, Hungary[*Invited Lecture*]
- 1997 "Neuro-Ophthalmological Disease with Glaucomatous Features", Charles University, Prague, Czech Republic[*Guest Lecturer, Glaucoma Conference*]
- 1998 "Development of a Silicon Retinal Prosthesis", Eighth International Symposium on Retinal Degeneration, Schluchsee, Germany[*Invited Lecturer*]
- 2000 "Perceptual Results from Electrical Stimulation of Human Retina", Hospital for Sick Children, Toronto, Canada[*Invited Lectureship: "Lloyd Morgan" Lecture*]
- 2000 "Development of a Silicon Retinal Implant", Parma from the Heart Medical Symposium on Blindness, Parma, Italy[*Keynote Lecturer*]
- 2000 Lecture, 11th World Congress of Retina International, Toronto, Canada[*Invited Lecturer*]
- 2000 The Eye and the Chip: World Congress on Artificial Vision, 2000, The Detroit Institute of Ophthalmology, Detroit, MI[*Lecturer*]
- 2001 "Development of a Retinal Prosthesis", International Neuro-Ophthalmology meeting, Sardinia, Italy[*Special Lecturer*]
- 2001 "Development of a Silicon Retinal Implant", International Ophthalmology Symposium, 50th Anniversary, Menicon Co, Nagoya, Japan[*Plenary Lecture*]
- 2002 Clinical Lecture, University of Liege, Belgium [*Visiting Professor*]
- 2002 Lecture, International Society of Eye Research, Geneva, Switzerland[*Invited Lecture*]
- 2002 The Eye and the Chip: World Congress on Artificial Vision, 2002, The Detroit Institute of Ophthalmology, Detroit Michigan[*Lecturer*]
- 2004 The Eye and the Chip: World Congress on Artificial Vision, 2004, The Detroit Institute of Ophthalmology, Detroit, Michigan[*Lecturer*]
- 2004 "Development of a Retinal Prosthesis" and clinical case presentations, Swiss Ophthalmology Society[*Invited Lecturer*]
- 2006 Lecture, German Ophthalmological Society, Berlin, Germany[*Invited Lecturer*]
- 2006 "Surgery for Sub- and Epiretinal Implants" , Artificial Vision 2006: The Bonn Dialogue, Bonn, Germany[*Invited Lecture*]
- 2006 Lecture, Shanghai International Biophysical Research Conference, Shanghai,

China[Executive Committee/Invited Lecturer]

2006 Lecture, Brain Machine Interface Symposium, Kyoto, Japan[Invited Lecturer]

2006 "The Visual Potential of a Retinal Prosthesis", The University of Regensburg, Regensburg, Germany[Invited Lecture]

2006 The Eye and the Chip: World Congress on Artificial Vision, 2006, The Detroit Insitute of Ophthalmology, Detroit, Michigan[Lecturer]

2009 14th Congress of Chinese Ophthalmological Society, Chinese Ophthalmological Society[Invited Lecture]

2010 "The Conundrum of the Field of Retinal Prosthetics," Plenary Lecture, Engineering and Physical Sciences in Medicine & The Australian Biomedical Engineering Conference, Melbourne, Australia

2010 "The Ocular Implant: It Does Have a Future," Fourth Amsterdam Retina Debate, Academic Medical Center, Amsterdam, The Netherlands.

2011 "Boston Retinal Implant: Status and Competitive Landscape," and "Management of Pseudotumor Cerebri," McGill Ophthalmology Research Day 2011; McGill Day Lecture and invited lecture. McGill University, Montreal, Canada.

**b. Professional Leadership Roles related to Teaching**

1977-1978 National. Louisiana State University School of Medicine, New Orleans, LA. President, Student Body

1991 National. North American Neuro-Ophthalmic Society Course. Co-Director of "Neuro-anatomical basis of afferent visual function": Selection of topics and speakers for seminars at our annual meeting.

1991-1999 National. North American Neuro-Ophthalmic Society Member, Scientific Program Committee: Choice of topics and lecturers for mini-symposia given at the yearly educational meeting.

1992 Regional. Lancaster Review Course for Ophthalmologists, Colby College, Waterville, ME. Director, Neuro-Ophthalmology Section: Selection of faculty, organization of subject matter of roughly 30 lectures given over four days, preparation of detailed hand-outs and quality control of presentations.

1992-1995 National. North American Neuro-Ophthalmic Society Chairman, Abstracts Subcommittee: Help choose the best abstracts submitted for presentation at our yearly meeting.

- 1993- National. North American Neuro-Ophthalmic Society Member, Certification and Accreditation Committee: Defining the base of knowledge and associated technical skills necessary to practice Neuro-Ophthalmology as part of an effort to determine if our sub-specialty should attempt to employ a certification standard for its practitioners.
- 1993 National. American Academy of Ophthalmology Course Director and Moderator, "Practical Discussions in Neuro-Ophthalmology" for approximately 1,000 attendees: Selection of six speakers for a four hour symposium.
- 1993 National. Association for Research in Vision and Ophthalmology Moderator, Neuro-Ophthalmic Symposium
- 1993-1995 National. North American Neuro-Ophthalmic Society Member, Research Symposium Planning Committee: Identify topics for mini-symposia for meetings of neuro-ophthalmologists held each year in conjunction with the Association for Research in Vision and Ophthalmology.
- 1994 International. European Congress of Ophthalmology Meeting, Milan, Italy. Course Director, "Practical Neuro-Ophthalmic Discussions": Selection of topics of discussion and lecturers for a two hour long seminar given to 30 attendees.
- 1995 National. North American Neuro-Ophthalmic Society. Course Co-Director, "Visual Rehabilitation": Select topics of presentation and lecturers for a symposium at the annual meeting.
- 1999-2006 National. American Academy of Ophthalmology Member, Faculty Committee, For the preparation of the Neuro-Ophthalmology Text and the Basic Clinical Science Course
- 2000- International (every other year). Detroit Institute of Ophthalmology, Detroit, IL. Member, Scientific Planning Committee, Bi-Annual "Eye and The Chip" International Meeting for Visual Prosthetics
- 2001 National. Association of Research in Vision and Ophthalmology, Ft. Lauderdale, FL. Moderator, Visual Prosthetic Symposium
- 2004 National. Association of Research in Vision and Ophthalmology, Ft. Lauderdale, FL. Moderator, Visual Prosthetic Symposium
- 2005 National. American Academy of Ophthalmology, Chicago, IL Moderator, Neuro-Ophthalmology Sub-Specialty Day

- 2006- Regional. Massachusetts Eye and Ear Infirmary, Boston. Course Director, Neuro-Ophthalmology Fall Festival (Bi-Annual)
- 2006 Regional. Massachusetts Eye and Ear Infirmary, Boston. Academic Organizer, Chandler Visiting Lecture
- 2006 International. Shanghai International Biophysical Research Conference, Shanghai, China. Executive Planning Committee Member/Scientific Organizer of Conference
- 2007 Regional (annual meeting). Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston. Course Co-Director, Alumni Meeting
- 2008 National. NANOS. Organizer, NanoTechnology for Neuro-Ophthalmology
- 2009 National. NANOS. Moderator, Nanotechnology & Evolving Strategies for Vision Restoration, NANOS

### **Description of Teaching Award(s) Received**

- 1986 "Fellow of the Year"  
Massachusetts Eye and Ear Infirmary
- 2000 "Teacher of the Year Award"  
Lancaster Course in Ophthalmology, Waterville, ME

### **Part III: Bibliography**

#### **Original Articles**

1. Rizzo JF, Lessell S, Liebman SD. Optic atrophy in familial dysautonomia. *Am J Ophthalmol.* 1986;102(4):463-7.
2. Rizzo JF, Berson EL, Lessell S. Retinal and neurologic findings in the Laurence-Moon-Bardet-Biedl phenotype. *Ophthalmology.* 1986;93(11):1452-6.
3. Lessell S, Lessell IM, Rizzo JF. Ocular neuromyotonia after radiation therapy. *Am J Ophthalmol.* 1986;102(6):766-70.
4. Rizzo JF, Lessell S. Posterior ischemic optic neuropathy during general surgery. *Am J Ophthalmol.* 1987;103(6):808-11.
5. Snebold NG, Rizzo JF, Lessell S, Pruett RC. Transient visual loss in ornithine transcarbamoylase deficiency. *Am J Ophthalmol.* 1987;104(4):407-12.
6. Rizzo JF, Lessell S. Risk of developing multiple sclerosis after uncomplicated optic

- neuritis: a long-term prospective study. *Neurology*. 1988;38(2):185-90.
7. Fiore PM, Latina MA, Shingleton BJ, Rizzo JF, Ebert E, Bellows AR. The dural shunt syndrome. I. Management of glaucoma. *Ophthalmology*. 1990;97(1):56-62.
  8. Joseph MP, Lessell L, Rizzo JF, Momose KJ. Extracranial Optic Nerve Decompression for Traumatic Optic Neuropathy. *Archives of Ophthalmology*. 1990;108:1091-1093.
  9. Cronin-Golomb A, Corkin S, Rizzo JF, Cohen J, Growdon JH, Banks KS. Visual dysfunction in Alzheimer's disease: relation to normal aging. *Ann Neurol*. 1991;29(1):41-52.
  10. Cronin-Golomb A, Rizzo JF, Corkin S, Growdon JH. Visual function in Alzheimer's disease and normal aging. *Ann N Y Acad Sci*. 1991;640:28-35.
  11. Rizzo JF, Feke GT, Goger DG, Ogasawara H, Weiter JJ. Optic nerve head blood speed as a function of age in normal human subjects. *Invest Ophthalmol Vis Sci*. 1991;32(13):3263-72.
  12. Rizzo JF, Lessell S. Optic neuritis and ischemic optic neuropathy. Overlapping clinical profiles. *Arch Ophthalmol*. 1991;109(12):1668-72.
  13. Rizzo JF, Cronin-Golomb A, Growdon JH, Corkin S, Rosen TJ, Sandberg MA, Chiappa KH, Lessell S. Retinocalcarine function in Alzheimer's disease. A clinical and electrophysiological study. *Arch Neurol*. 1992;49(1):93-101.
  14. Rizzo JF, Gittinger JW. Selective immunohistochemical staining in the paraneoplastic retinopathy syndrome. *Ophthalmology*. 1992;99(8):1286-95.
  15. Rizzo JF, Breen L, Winterkorn J. Peripapillary Hemorrhage. *Survey of Ophthalmology*. 1993;37:362-372.
  16. Rizzo JF, Lessell S. Tobacco amblyopia. *Am J Ophthalmol*. 1993;116(1):84-7.
  17. Rizzo JF. Occult retinal and choroidal vascular disease. The value of timed and directed fluorescein angiography. *Ophthalmology*. 1993;100(9):1407-16.
  18. Masland RH, Rizzo JF, Sandell JH. Developmental variation in the structure of the retina. *J Neurosci*. 1993;13(12):5194-202.
  19. Levin LA, Joseph MP, Rizzo JF, Lessell S. Optic canal decompression in indirect optic nerve trauma. *Ophthalmology*. 1994;101(3):566-9.
  20. Kurylo DD, Corkin S, Dolan RP, Rizzo JF, Parker SW, Growdon JH. Broad-band visual capacities are not selectively impaired in Alzheimer's disease. *Neurobiol Aging*. 1994;15(3):305-11.
  21. Rizzo JF, Lessell S. Cerebrovascular abnormalities in neurofibromatosis type 1. *Neurology*. 1994;44(6):1000-2.
  22. Rizzo JF, Lessell S. Choroidal infarction after optic nerve sheath fenestration. *Ophthalmology*. 1994;101(9):1622-6.
  23. Rizzo JF. Adenosine triphosphate deficiency: a genre of optic neuropathy. *Neurology*. 1995;45(1):11-6.
  24. Czeisler CA, Shanahan TL, Klerman EB, Martens H, Brotman DJ, Emens JS, Klein T, Rizzo JF. Suppression of melatonin secretion in some blind patients by exposure to bright light. *N Engl J Med*. 1995;332(1):6-11.

25. Bianchi-Marzoli S, Rizzo JF, Brancato R, Lessell S. Quantitative analysis of optic disc cupping in compressive optic neuropathy. *Ophthalmology*. 1995;102(3):436-40.
26. Wyatt J, Rizzo J. Ocular Implants for the Blind. *IEEE Spectrum*. 1995;(47-53).
27. Rizzo JF. Visual loss after neurosurgical repair of paraclinoid aneurysms. *Ophthalmology*. 1995;102(6):905-10.
28. Volpe NJ, Rizzo JF. Retinal disease in neuro-ophthalmology: paraneoplastic retinopathy and the big blind spot syndrome. *Semin Ophthalmol*. 1995;10(3):234-41.
29. Kurylo DD, Corkin S, Rizzo JF, Growdon JH. Greater Relative Impairment of Object Recognition than Visuospatial Abilities in Alzheimer's Disease. *Neuropsychology*. 1996;10:74-81.
30. Warner JE, Rizzo JF, Brown EW, Ogilvy CS. Recurrent chiasmal apoplexy due to cavernous malformation. *J Neuroophthalmol*. 1996;16(2):99-106.
31. Levin LA, Rizzo JF, Lessell S. Neural network differentiation of optic neuritis and anterior ischaemic optic neuropathy. *Br J Ophthalmol*. 1996;80(9):835-9.
32. Warner JE, Lessell S, Rizzo JF, Newman NJ. Does optic disc appearance distinguish ischemic optic neuropathy from optic neuritis? *Arch Ophthalmol*. 1997;115(11):1408-10.
33. Klerman EB, Rimmer DW, Dijk DJ, Kronauer RE, Rizzo JF, Czeisler CA. Nonphotic entrainment of the human circadian pacemaker. *Am J Physiol*. 1998;274(4 Pt 2):R991-6.
34. Mendola JD, Rizzo JF, Cosgrove GR, Cole AJ, Black P, Corkin S. Visual discrimination after anterior temporal lobectomy in humans. *Neurology*. 1999;52(5):1028-37.
35. Weinberg DH, Rizzo JF, Hayes MT, Kneeland MD, Kelly JJ. Ocular myasthenia gravis: predictive value of single-fiber electromyography. *Muscle Nerve*. 1999;22(9):1222-7.
36. Grumet AE, Wyatt JL, Rizzo JF. Multi-electrode stimulation and recording in the isolated retina. *J Neurosci Methods*. 2000;101(1):31-42.
37. Pless M, Rizzo JF, Lamkin JC, Lessell S. Concordance of bilateral temporal artery biopsy in giant cell arteritis. *J Neuroophthalmol*. 2000;20(3):216-8.
38. Unsöld AS, Rizzo JF, Lessell S. Optic neuropathy after burns. *Arch Ophthalmol*. 2000;118(12):1696-8.
39. Volpe NJ, Rizzo JF, Lessell S. Acute idiopathic blind spot enlargement syndrome: a review of 27 new cases. *Arch Ophthalmol*. 2001;119(1):59-63.
40. Pless M, Rizzo JF, Shang J. Orbital apex syndrome: a rare presentation of extramedullary hematopoiesis: case report and review of literature. *J Neurooncol*. 2002;57(1):37-40.
41. Andreoli CM, Leff GB, Rizzo JF. Sneeze-induced visual and ocular motor dysfunction. *Am J Ophthalmol*. 2002;133(5):725-7.
42. Rizzo JF, Andreoli CM, Rabinov JD. Use of magnetic resonance imaging to differentiate optic neuritis and nonarteritic anterior ischemic optic neuropathy. *Ophthalmology*. 2002;109(9):1679-84.

43. Montezuma SR, Rizzo JF, Ziv OR. Combined vitrectomy lens and contact electrode for ERG recording during surgery. *Retina*. 2002;22(6):828-9.
44. Klerman EB, Shanahan TL, Brotman DJ, Rimmer DW, Emens JS, Rizzo JF, Czeisler CA. Photic resetting of the human circadian pacemaker in the absence of conscious vision. *J Biol Rhythms*. 2002;17(6):548-55.
45. Egan RA, Ha Nguyen T, Gass JD, Rizzo JF, Tivnan J, Susac JO. Retinal arterial wall plaques in Susac syndrome. *Am J Ophthalmol*. 2003;135(4):483-6.
46. Banks MC, Robe-Collignon NJ, Rizzo JF, Pasquale LR. Scanning laser polarimetry of edematous and atrophic optic nerve heads. *Arch Ophthalmol*. 2003;121(4):484-90.
47. Kim SK, Andreoli CM, Rizzo JF, Golden MA, Bradbury MJ. Optic neuropathy secondary to sub-tenon anesthetic injection in cataract surgery. *Arch Ophthalmol*. 2003;121(6):907-9.
48. Jensen RJ, Rizzo JF, Ziv OR, Grumet A, Wyatt J. Thresholds for activation of rabbit retinal ganglion cells with an ultrafine, extracellular microelectrode. *Invest Ophthalmol Vis Sci*. 2003;44(8):3533-43.
49. Cestari DM, Rizzo JF. Intracranial hypertension following epidural blood patch. *Neurology*. 2003;61(9):1303.
50. Rizzo JF, Wyatt J, Loewenstein J, Kelly S, Shire D. Methods and perceptual thresholds for short-term electrical stimulation of human retina with microelectrode arrays. *Invest Ophthalmol Vis Sci*. 2003;44(12):5355-61.
51. Rizzo JF, Wyatt J, Loewenstein J, Kelly S, Shire D. Perceptual efficacy of electrical stimulation of human retina with a microelectrode array during short-term surgical trials. *Invest Ophthalmol Vis Sci*. 2003;44(12):5362-9.
52. Rizzo JF, Goldbaum S, Shahin M, Denison TJ, Wyatt J. In vivo electrical stimulation of rabbit retina with a microfabricated array: strategies to maximize responses for prospective assessment of stimulus efficacy and biocompatibility. *Restor Neurol Neurosci*. 2004;22(6):429-43.
53. Montezuma SR, Rizzo JF, Ziv OR. Differential recovery of the electroretinogram, visually evoked cortical potential, and electrically evoked cortical potential following vitrectomy: Implications for acute testing of an implanted retinal prosthesis. *J Rehabil Res Dev*. 2004;41(2):113-20.
54. Yamada K, Chan WM, Andrews C, Bosley TM, Sener EC, Zwaan JT, Mullaney PB, Oztürk BT, Akarsu AN, Sabol LJ, Demer JL, Sullivan TJ, Gottlob I, Roggenkämper P, Mackey DA, De Uzcategui CE, Uzcategui N, Ben-Zeev B, Traboulsi EI, Magli A, de Berardinis T, Gagliardi V, Awasthi-Patney S, Vogel MC, Rizzo JF, Engle EC. Identification of KIF21A mutations as a rare cause of congenital fibrosis of the extraocular muscles type 3 (CFEOM3). *Invest Ophthalmol Vis Sci*. 2004;45(7):2218-23.
55. Collignon-Robe NJ, Feke GT, Rizzo JF. Optic nerve head circulation in nonarteritic anterior ischemic optic neuropathy and optic neuritis. *Ophthalmology*. 2004;111(9):1663-72.
56. Yamauchi Y, Franco LM, Jackson DJ, Naber JF, Ziv RO, Rizzo JF, Kaplan HJ, Enzmann V. Comparison of electrically evoked cortical potential thresholds

- generated with subretinal or suprachoroidal placement of a microelectrode array in the rabbit. *J Neural Eng.* 2005;2(1):S48-56.
57. Ziv OR, Rizzo JF, Jensen RJ. In vitro activation of retinal cells: estimating location of stimulated cell by using a mathematical model. *J Neural Eng.* 2005;2(1):S5-S15.
  58. Jensen RJ, Ziv OR, Rizzo JF. Responses of rabbit retinal ganglion cells to electrical stimulation with an epiretinal electrode. *J Neural Eng.* 2005;2(1):S16-21.
  59. Jensen RJ, Ziv OR, Rizzo JF. Thresholds for activation of rabbit retinal ganglion cells with relatively large, extracellular microelectrodes. *Invest Ophthalmol Vis Sci.* 2005;46(4):1486-96.
  60. Kim JW, Rizzo JF, Lessell S. Delayed visual decline in patients with "stable" optic neuropathy. *Arch Ophthalmol.* 2005;123(6):785-8.
  61. Sweitzer, R, Montezuma, S, Rizzo, JF, Scholz, C. Evaluation of subretinal implants coated with amorphous aluminum oxide and diamond-like carbon. *Journal of Biodegradable and Compatible Polymers.* 2006;21:5-22.
  62. Kim JW, Hills WL, Rizzo JF, Egan RA, Lessell S. Ischemic optic neuropathy following spine surgery in a 16-year-old patient and a ten-year-old patient. *J Neuroophthalmol.* 2006;26(1):30-3.
  63. Montezuma SR, Loewenstein J, Scholz C, Rizzo JF. Biocompatibility of materials implanted into the subretinal space of Yucatan pigs. *Invest Ophthalmol Vis Sci.* 2006;47(8):3514-22.
  64. Shah HA, Montezuma SR, Rizzo JF. In vivo electrical stimulation of rabbit retina: effect of stimulus duration and electrical field orientation. *Exp Eye Res.* 2006;83(2):247-54.
  65. Jensen RJ, Rizzo JF. Thresholds for activation of rabbit retinal ganglion cells with a subretinal electrode. *Exp Eye Res.* 2006;83(2):367-73.
  66. Winter JO, Cogan SF, Rizzo JF. Neurotrophin-eluting hydrogel coatings for enhanced contact with neural prostheses. *J Biomed Mater Res B Appl Biomater.* 2007;81B(2):551-563.
  67. Jensen RJ, Rizzo JF. Responses of Ganglion Cells to Repetitive Electrical Stimulation Electrodes. *J Neural Engineering.* 2007;4(1):S1-6.
  68. Wester ST, Rizzo JF, Balkwill MD, Wall C 3rd. Optokinetic nystagmus as a measure of visual function in severely visually impaired patients. *Invest Ophthalmol Vis Sci.* 2007;48(10):4542-8.
  69. Zaidi FH, Hull JT, Peirson SN, Wulff K, Aeschbach D, Gooley JJ, Brainard GC, Gregory-Evans K, Rizzo JF, Czeisler CA, Foster RG, Moseley MJ, Lockley SW. Short-Wavelength Light Sensitivity of Circadian, Pupillary, and Visual Awareness in Humans Lacking an Outer Retina. *Current Biology.* 2007;17:1-7.
  70. Winter JO, Gokhale M, Jensen RJ, Cogan SF, Rizzo JF. Tissue engineering applied to the retinal prosthesis: neurotrophin-eluting polymeric hydrogel coatings. *Materials Science and Engineering C.* 2008;C 28:448-453.
  71. Jensen RJ, Rizzo JF. Activation of retinal ganglion cells in wild-type and rd1 mice through electrical stimulation of the retinal neural network. *Vision Research.* 2008;48:1562-1568.



72. Dagi LR, Rizzo JF, Cestari DM. Leber hereditary optic neuropathy in an octogenarian. *J Neuroophthalmol*. 2008;28(2):156.
73. Cogan SF, Ehrlich J, Plante TD, Smirnov A, Shire DB, Gingerich M, Rizzo JF. Sputtered iridium oxide films for neural stimulation electrodes. *J Biomed Mater Res B Appl Biomater*. 2008;89B(2):353-61.
74. Liu Y, Dinkin MJ, Rizzo JF, Cestari DM. Multifocal electroretinographic abnormalities in ethambutol-induced visual loss. *J Neuroophthalmol*. 2008;28(4):278-82.
75. Jensen RJ, Rizzo JF 3rd. Activation of ganglion cells in wild-type and rd1 mouse retinas with monophasic and biphasic current pulses. *J Neural Eng*. 2009;6(3):035004.
76. Shire DB, Kelly SK, Chen J, Doyle P, Gingerich MD, Cogan SF, Drohan WA, Mendoza O, Theogarajan L, Wyatt JL, Rizzo JF. Development and implantation of a minimally invasive wireless subretinal neurostimulator. *IEEE Trans Biomed Eng*. 2009;56(10):2502-11.
77. Chen J, Shah HA, Herbert C, Lowenstein JI, Rizzo JF 3rd. Extraction of a chronically implanted, microfabricated, subretinal electrode array. *Ophthalmic Res*. 2009;42(3):128-37.
78. Arvold ND, Lessell S, Bussiere M, Beaudette K, Rizzo JF, Loeffler JS, Shih HA. Visual outcome and tumor control after conformal radiotherapy for patients with optic nerve sheath meningioma. *Int J Radiat Oncol Biol Phys*. 2009;75(4):1166-72.
79. Fried SI, Lasker AC, Desai NJ, Eddington DK, Rizzo III, JF. Axonal sodium channel bands shape the response to electric stimulation in retinal ganglion cells. *J Neurophysiol*. 2009 Apr;101(4):1972-87.
80. Arvold, N.D., Lessell, S., Bussiere, M., Beaudette, K., Rizzo, J.F., Loeffler, J.S., Shih, H. A. Visual outcome and tumor control after conformal radiotherapy for patients with optic nerve sheath meningioma. *Int J Radiat Oncol Biol Phys*. 2009 Nov 15;75(4):1166-72.
81. Jensen RJ, Ziv OR, Rizzo JF 3rd, Scribner D, Johnson L. Spatiotemporal aspects of pulsed electrical stimuli on the responses of rabbit retinal ganglion cells. *Exp Eye Res*. 2009;89(6):972-9.
82. Newman-Toker DE, Rizzo JF III. Subjectively-quantified Maddox rod testing improves diagnostic yield over alternate cover testing alone in patients with diplopia. *J Clin Neurosci*. 2010 Jun;17(6):727-30.
83. Dean M, Cestari, MD, Kim Chan, DO, Nadja Tajouri, MD, Joseph F Rizzo III, MD. The Use of Botulinum Toxin A in the Treatment of See-Saw Nystagmus. *Journal of Pediatric Ophthalmology & Strabismus*. *J Pediatr Ophthalmol Strabismus*. 2010 Jul 22;47:e1-3.
84. Freeman, DK, Eddington, DK, Rizzo, JF & Fried, SI (2010). Selective Activation of Neuronal Targets with Sinusoidal Electric Stimulation. *J Neurophysiol*. 2010 Nov;104(5):2778-91.
85. Cestari DM, Chan K, Tajouri N, Rizzo JF 3<sup>rd</sup> (2010). The use of onabotulinum toxin a in the treatment of see-saw nystagmus. *J Pediatr Ophthalmol Strabismus*. 2010 Jul

22;47:e1-3.

86. Rizzo JF, 3rd. Update on retinal prosthetic research: the Boston retinal implant project. *J Neuroophthalmol.* Jun 2011;31(2):160-168.
87. Jensen RJ, Rizzo JF 3rd. Effects of GABA receptor antagonists on thresholds of P23H rat retinal ganglion cells to electrical stimulation of the retina. *J Neural Eng.* 2011 Jun;8(3):035002.
88. Freeman DK, Rizzo JF 3rd, Fried SI. Encoding visual information in retinal ganglion cells with prosthetic stimulation. *J Neural Eng.* 2011 Jun;8(3):035005.
89. Cai C, Ren Q, Desai NJ, Rizzo JF 3rd, Fried SI. Response variability to high rates of electric stimulation in retinal ganglion cells. *J Neurophysiol.* 2011 Jul;106(1):153-62.
90. Stacy RC, Rizzo JF, Cestari DM. Semin Subtleties in the histopathology of giant cell arteritis. *Ophthalmol.* 2011 Jul;26(4-5):342-8.
91. Thornton IL, Rizzo JF, Cestari DM. Neuromyelitis optica: a review. *Semin Ophthalmol.* 2011 Jul;26(4-5):337-41.
92. Kelly SK, Shire DB, Chen J, Doyle P, Gingerich MD, Cogan SF, Drohan W, Behan S, Theogarajan L, Wyatt JL, Rizzo JF. A Hermetic Wireless Subretinal Neurostimulator for Vision Prostheses. *IEEE Trans Biomed Eng.* 2011 Aug 22.
93. Kelly SK, Shire DB, Chen J, Doyle P, Gingerich MD, Cogan SF, Drohan WA, Theogarajan LS, Wyatt JL, Rizzo JF. Communication and Control System for a 15-Channel Hermetic Retinal Prosthesis. *Biomed Signal Process Control.* 2011 Oct 1;6(4):356-363.

### **Proceedings of Meetings**

1. Winter JO, Han N, Jensen R, Cogan SF, Rizzo JF. Adhesion molecules promote chronic neural interfaces following neurotrophin withdrawal. In: *Conf Proc IEEE Eng Med Biol Soc.*;2009. p. 7151-4.
2. Kelly SK, Shire DB, Chen J, Doyle P, Gingerich MD, Drohan WA, Theogarajan LS, Cogan SF, Wyatt JL, Rizzo JF. Realization of a 15-channel, hermetically-encased wireless subretinal prosthesis for the blind. In: *Cof Proc IEEE Engl Med Biol Soc.* 2009. p. 200-3.
3. J.O. Winter, N. Han, R. Jensen, S.F. Cogan, J.F. Rizzo, III. Combined Effect of Brain Derived Neurotrophic Factor and Cell Adhesion Molecules on Neurite Extension and Persistence. In: *Proceedings of EMBS Annual Meeting*; Sept. 2-6, 2009; Minneapolis, Minnesota.

### **Reviews/Chapters/Editorials**

1. Rizzo JF. The Retina - Basic Science and Clinical Review. In: Lessell S, van Dalen JTW (eds.) *Current Neuro-Ophthalmology*. Chicago, IL: Medical Publishers;1989.
2. Rizzo JF. The Retina - Basic Science and Clinical Review. In: Lessell S, van Dalen

- JTW (eds.) *Current Neuro-Ophthalmology*. Chicago, IL: Medical Publishers;1990.
3. Rizzo JF. Neuro-Ophthalmologic Disease of the Retina. In: Albert DM, Jakobiec FA (eds.) *Principles and Practice of Ophthalmology*. WB Saunders Co.;1993. p. 2507-2528.
  4. Berestka JS, Rizzo JF. Controversy in the Management of Traumatic Optic Neuropathy. *International Ophthalmology Clinics*. 1994.
  5. Rizzo JF. Neuro-Ophthalmologic Disease of the Retina. In: Albert DM, Jakobiec FA (eds.) *Principles and Practice of Ophthalmology*. WB Saunders Company;1994. p. 2507-2528.
  6. Volpe N, Rizzo JF. Retinal Disease in Neuro-Ophthalmology: Paraneoplastic retinopathy and the Big Blind Spot Syndrome. *Seminars in Ophthalmology*. 1995;10(3 (September)):234-241.
  7. Rizzo JF, Volpe N. Cancer-Associated Retinopathy. In: Pepose JS, Holland GN, Wilhelmus KR (eds.) *Ocular Infection and Immunity*. St. Louis, MO: Mosby;1996. p. 585-599.
  8. Cohen RG, Rizzo JF, Lou P. New Developments in Cancer Associated Retinopathy. *International Ophthalmology Clinics*. 1997.
  9. Rizzo JF, Wyatt JL. Prospects for a Visual Prosthesis. *Neuroscientist*. 1997;3(4):251-262.
  10. Rizzo JF. Retinal Anatomy: Clinical Correlation. *Walsh and Hoyt's Clinical Neuro-Ophthalmology*. 1997.
  11. Davis EA, Rizzo JF. Ocular Manifestations of Multiple Sclerosis. *International Ophthalmology Clinics*. 1998;38(1):129-139.
  12. Rizzo JF, Loewenstein J, Wyatt J. Development of an Epiretinal Electronic Visual Prosthesis: The Harvard Medical School - Massachusetts Institute of Technology Research Program. In: Hollyfield JG and LaVail MM (eds.) *Retinal Degenerative Diseases and Experimental Therapy*. New York, NY: Kluwer Academic/Plenum Pub;1999. p. 463-469.
  13. Feke GT, Rizzo JF, Hayes MT, Kneeland MD, Kelly JJ. Ocular myasthenia gravis: predictive value of single-fiber electromyography. *Muscle Nerve*. 1999;9(22):1222-7.
  14. Rizzo JF, Wyatt JL. Retinal Prosthesis. In: Berger JW, Fine SL, Maguire MG (eds.) *Age-related macular degeneration*. St. Louis, MO: Mosby, Inc.;1999. p. 413-432.
  15. Zacks DN, Rizzo JF. The Diagnostic Challenge of Occult Large Vessel Ischemia of the Retina and Choroid. *Current Opinion in Ophthalmology*. 1999;10:371-375.
  16. Pomeranz HD, Rizzo JF, Lessell S. Treatment of Traumatic Optic Neuropathy. *International Ophthalmology Clinics*. 1999;39(1):185-194.
  17. Rizzo JF. Neuro-Ophthalmologic Disease of the Retina. Albert DM and Jakobiec FA (eds.) *Principles and Practice of Ophthalmology*. 2000;5:4083-4108.
  18. Egan R, Rizzo JF. Neuro-Ophthalmological Complications of Ocular Surgery. *International Ophthalmology Clinics*. 2000;40(1):93-105.
  19. Shen T, Sakai O, Curtin H, Rizzo JF. Magnetic Resonance Imaging of Primary Anterior Visual Pathway Tumors. *International Ophthalmology Clinics*. 2001;41(1):171-180.

20. Newman-Toker DE, Rizzo JF. Neuro-Ophthalmic Diseases Masquerading as Benign Strabismus. *International Ophthalmology Clinics*. 2001;41(4):115-127.
21. Ambati B, Rizzo JF. Nonglaucomatous Cupping of the Optic Disc. *International Ophthalmology Clinics*. 2001;41(1):139-149.
22. Rizzo JF, Wyatt J, Humayun M, de Juan E, Liu W, Chow A, Eckmiller R, Zrenner E, Yagi T, Abrams G. Retinal prosthesis: an encouraging first decade with major challenges ahead. *Ophthalmology*. 2001;108(1):13-14.
23. Lee MS, Rizzo JF, Lessell S. Neuro-Ophthalmic Complications of Cataract Surgery. *Seminars in Ophthalmology*. 2002;17(3-4):149-152.
24. Cestari D, Rizzo JF. The neuro-ophthalmic manifestations and treatment options of unruptured intracranial aneurysms. *International Clinics of Ophthalmology*. 2003;44(1):169-187.
25. Loewenstein JI, Montezuma SR, Rizzo JF. Outer retinal degeneration: an electronic retinal prosthesis as a treatment strategy. *Arch Ophthalmol*. 2004;122(4):587-96.
26. Kim JW, Rizzo JF, Lessell S. Controversies in the Management of Optic Nerve Sheath Meningiomas. *International Ophthalmology Clinics*. 2005;45(4):15-23.
27. Rizzo JF. Disability level low 10 years after optic neuritis. *Journal Watch Neurology*. 2005;3(20):20.
28. Rizzo JF. The Embryology, Anatomy, and Physiology of the Afferent Visual System. In: Walsh and Hoyt's *Clinical Neuro-Ophthalmology*. Williams & Wilkins;2005.
29. Loewenstein JL, Warden SM, Rizzo JF. Visual Prostheses. In: Hartnett ME, Trece M. (eds.) *Pediatric Retinal Diseases*. Lippincott Williams & Wilkins;2005.
30. Merabet L, Rizzo JF, Amedi A, Somers D, Pascuale-Leone A. What Blindness Can Tell Us about Seeing Again: Merging Neuroplasticity with Neuroprostheses. *Nature Reviews Neuroscience*. 2005;6(1):71-77.
31. Dinkin M, Rizzo JF. Abnormal Eye Movements in Children. *International Ophthalmology Clinics*. 2007;In Press.
32. Poggel DA, Merabet LM, Rizzo JF. Artificial Vision. In: Parasuraman R, Rizzo JF (eds.) *Neuroergonomics: The Brain at Work*. Oxford University Press;2007. p. 329-345.
33. Rizzo JF, Snebold L, Kenney M. Development of a Visual Prosthesis: A Review of the Field. In: Rizzo JF, Tombran-Tink, Barnstable (eds.) *Visual Prostheses and Ophthalmic Devices*. Humana Press;2007.
34. Dinkin M, Banks M, Rizzo JF. Imaging the Nerve Fiber Layer and Optic Disc. *Essentials in Ophthalmology*. 2007;In Press.
35. Rizzo JF. Neuro-Ophthalmologic Disease of the Retina. In: Albert DM, Jakobiec FA (eds.) *Principles and Practice of Ophthalmology*. WB Saunders Company;2007.
36. Pepin S, Rizzo JF. Ophthalmic Manifestations of Systemic Disease. In: Albert DM, Jakobiec FA (eds.) *Principles and Practice of Ophthalmology*. WB Saunders Company;2007.
37. Winter JO, Cogan SF, Rizzo JF. Retinal prostheses: Current challenges and future outlook. *Journal of Biomaterials Science, Polymer Edition*. 2007;In Press.

38. Merabet L, Rizzo JF, Pascaul-Leone A, Fernandez E. 'Who is the ideal candidate?': Decisions and issues relating to visual neuroprosthesis development, patient testing, and neuroplasticity. *J Neural Engineering*. 2007;4(1):S130-135.
39. Winter JO, Cogan SF, Rizzo JF. Retinal Prostheses: current challenges and future outlook. *J Biomater Sci Polym Ed*. 2007;18(8):1031-55.
40. Dinkin MJ, Rizzo JF. Abnormal eye movements in children. *Int Ophthalmol Clin*. 2008;48(2):95-134.
41. Muhammad Ali Memon, MD and Joseph F. Rizzo III, MD. Development of Visual Prostheses and Other Assistive Devices. In: Leonard A. Levin (ed.) *Ocular Diseases*. Elsevier;2009.
42. Chang KK, Rizzo JF. Recent advances in the immunopathology of giant cell arteritis. *Int Ophthalmol Clin*. 2009;49(1):99-109.
43. Muhammad Ali Memon, MD and Joseph F. Rizzo III, MD. The Development of Visual Prosthetic Devices to Restore Vision to the Blind. In: Hunter Peckham, Ph.D (ed.) *Neuro-Modulation*. Elsevier;2009.
44. Rizzo JF, O'Malley ER, Hessburg PC. The eye and the chip 2008. *J Neural Eng*. 2009;6(3):030201.
45. Kenneth K. Chang, MD, MPH Joseph F. Rizzo, III, MD. Recent Advances in the Immunopathology of Giant Cell Arteritis. In: *International Ophthalmology Clinics* (ed.) *Ocular Pathology*. Philadelphia, Pa: Lippincott Williams & Wilkins;2009. p. 99-109.
46. Ming He, Dean Cestari, Mary Beth Cunnane, Joseph Rizzo (2010). The Use of Diffusion MRI in Ischemic Optic Neuropathy and Optic Neuritis. *Seminars in Ophthalmology*, in press.
47. Heidary, G., Rizzo, J.F. (2010). Use of Optical Coherence Tomography to Evaluate Papilledema and Pseudopapilledema. *Seminars in Ophthalmology*, in press.
48. Daniel K. Freeman, Joseph F. Rizzo III, Shelley I Fried (2011). Encoding visual information in ganglion cells with prosthetic stimulation. *Neural Eng*. **8** (2011) 035005 (18pp).

### **Books, Monographs, and Textbooks**

1. Rizzo JF, co-editor. Principles and Practice of Ophthalmology. In: *Neuro-Ophthalmology*, vol. 4. WB Saunders Company;1993. p. 2387-2847.
2. Rizzo JF, co-author. *Neuro-Ophthalmology*. In: American Academy of Ophthalmology, Basic and Clinical Science Course. section 5 ;2001.
3. Rizzo JF, co-author. *Neuro-Ophthalmology*. In: American Academy of Ophthalmology, Basic and Clinical Science Course. section 5 ;2004.
4. Rizzo JF, co-editor. Special Edition on Visual Prosthetics. *Journal of Neural Engineering*. volume 2 ;2005.
5. Rizzo JF, co-editor. *Visual Prosthetics and Ophthalmic Devices*. Humana Press;2005.

### **Educational Materials**

1. Rizzo JF. The Patient with Diplopia. Basic and Clinical Science Course, Section 5. Sponsored by the American Academy of Ophthalmology. 2001.
2. Rizzo JF. The Patient with Nystagmus or Spontaneous Eye Movement Disorders. Basic and Clinical Science. Course, Section 5. Sponsored by the American Academy of Ophthalmology. 2001.
3. Rizzo JF. The Patient with Ocular Motility Disorders Not Causing Diplopia. Basic and Clinical Science Course, Section 5. Sponsored by the American Academy of Ophthalmology. 2001.
4. Rizzo JF. The Patient with Diplopia. Basic and Clinical Science Course, Section 5. Sponsored by the American Academy of Ophthalmology. 2005.
5. Rizzo JF. Nystagmus and other Ocular Oscillations. Basic and Clinical Science Course, Section 5. Sponsored by the American Academy of Ophthalmology. 2005.
6. Rizzo JF. Supranuclear Control of Eye Movements. Basic and Clinical Science Course, Section 5. Sponsored by the American Academy of Ophthalmology. 2005.
7. Rizzo JF, Co-Editor. "Ophthalmology Rounds", Nationwide distribution of case-based educational material, in CME format, to all American ophthalmologists, published by Snell Medical Communications; 10 publications per year 2006-2010.

### **NonPrint Materials**

1. Audiovisual Teaching Collection of Ocular Motility Disorders. 1992. A comprehensive teaching videotape of more than 25 eye movement disorders. This teaching tool is organized with regard to the anatomical site of the neural lesion that is responsible for each motility problem, starting with cerebral lesions and progressing in an orderly descending fashion through the brain. This anatomical approach is a unique format for teaching of eye movement disorders. These video clips have been digitally merged with anatomical slides to facilitate teaching the relationship between specific lesions and particular eye movement irregularities. Examples of these disorders, many of which are uncommon, were solicited from colleagues around the country. This videotape was expanded upon in 1997.
2. Rizzo JF, Brookman JC. Digital Compendium of Clinically-Relevant Neuro-Ophthalmic Literature. 2007. Students and residents face a significant challenge when attempting to build a foundation of knowledge in a new field. The internet has made available an enormous volume of medical information, but younger trainees do not have the experience to appropriately decide which articles would provide the most informative evidence to help support their education. This compendium contains approximately 150 published articles and editorials, as well as topic notes, clinical cases, images and videos covering the width and breadth of subjects in Neuro-ophthalmology. The articles were reviewed and annotated by Dr. Rizzo. A web interface was designed and developed in Macromedia Dreamweaver 8 using XHTML

1.0 and CSS scripting language.

## **Patents**

1. David J. Edell, John L. Wyatt, Jr., Joseph F. Rizzo III. Method and Apparatus for Preferential Neuron Stimulation. US Patent # 5411540. 1995 May 2.
2. Dave J. Edell, John L. Wyatt, Jr., Joseph F. Rizzo, III. Low Pressure Neural Contact Structure. US Patent # 5476494. 1995 Dec 19.
3. Joseph F. Rizzo, III. Medication Dispensing Intra-Ocular Lens System. US Patent # 5554187. 1996 Sep 10.
4. David J. Edell, Joseph F. Rizzo, III, John L. Wyatt, Jr. Low Pressure Neural Contact Structure. US Patent # 5575813. 1996 Nov 19.
5. Joseph F. Rizzo III, M.D. Methods for Epiretinal Implantation. US Patent # 5597381. 1997 Jan 28.
6. Joseph F. Rizzo, III, John L. Wyatt, Jr. Intra-Ocular Lens System Including Microelectric Components. US Patent # 5800530. 1998 Sep 1.
7. Joseph F. Rizzo, III, John L. Wyatt, Jr. Intra-Ocular Lens System Including Microelectric Components. US Patent # 6120538. 2000 Sep 19.
8. Doug Shire, Joseph F. Rizzo, III, John L. Wyatt, Jr. Chronically Implantable Retinal Prosthesis. US Patent # 6324429. 2001 Nov 27.
9. John L. Wyatt, Jr., Joseph F. Rizzo, III, Doug Shire. Inflatable Neural Prosthesis. US Patent # 6368349. 2002 Apr 9.
10. Joseph F. Rizzo, III, John L. Wyatt, Jr., Luke Theogarajan. Minimally Invasive Retinal Prosthesis. US Patent # 6976998. 2005 Dec 20.
11. Shawn K. Kelly, John L. Wyatt, Joseph F. Rizzo, III. System for and Method of Power Efficient Electrical Tissue Stimulation. US Patent # 7295872. 2007 Nov 13.
12. Kenneth J. Mandell, Paula T. Hammond, Renee C. Smith, Joseph F. Rizzo III. Drug Delivery Coating and Devices. Submitted, 2010.

## **Abstracts**

1. Rizzo JF, Masland R. Transplantation of organized retinal tissue between adult rabbits. *Investigative Ophthalmology and Visual Science Supplement*. 1990;(31):596.
2. Reichel E, Adamian M, Lessell S, Rizzo JF, Berson EL. Peripapillary cone density in the normal human retina. *Investigative Ophthalmology and Visual Science*. 1991;(32):912.
3. Rizzo JF, Sorkin JA. Pupillodynamic study of the swinging flashlight test: Intensity of stimulating light variably affects components of the pupil response. *Investigative Ophthalmology and Visual Science*. 1991;(32):951.
4. Rizzo JF, Masland RH. Immunohistochemical staining of large ganglion cells in the

- human retina. *Investigative Ophthalmology and Visual Science Supplement*. 1992;(33):940.
5. Rizzo JF. Preservation of Central Acuity with Macular Infarction: Hypotheses on the Resilience of Foveal Outflow Channels to Retinal Ischemia. *Investigative Ophthalmology and Visual Sciences Supplement*. 1993;(34):2513.
  6. Mann J, Edell D, Rizzo JF, Raffel J, Wyatt JL. Development of a silicon retinal implant: Microelectronic system for wireless transmission of signal and power. *Investigative Ophthalmology and Visual Science Supplement*. 1994;4(35):1380.
  7. Rizzo JF, Socha M, Edell D, Antkowiak B, Brock D. Development of a silicon retinal implant: Surgical methods and mechanical design. *Investigative Ophthalmology and Visual Science Supplement*. 1994;4(35):1535.
  8. Miller S, Rizzo JF, Wyatt JL. Development of a silicon retinal implant: Long-term biocompatibility of materials. *Investigative Ophthalmology and Visual Science Supplement*. 1995;4(36):S746.
  9. Wyatt J, Mann J, Edell D, Raffel J, Raffel J, Rizzo JF. Development of a silicon retinal implant: Demonstration of microelectronic system for optical transmission of signal and power. *Investigative Ophthalmology and Visual Science Supplement*. 1995;4(36):S249.
  10. Castelbuono A, Rizzo JF. Distributions of human photoreceptors, retinal ganglion cells and area of the striate cortex applied to Goldmann field charts. *Investigative Ophthalmology and Visual Science Supplement*. 1995;4(36):S455.
  11. Rizzo JF, Moss JD, Socha MM, Wyatt JL. Hermetic Encapsulation Testing for a Retinal Prosthesis. *Investigative Ophthalmology and Visual Science Supplement*. 1999:3869-B727.
  12. Rizzo JF, Socha MM, Moss JD, Shahin M, Herndon T, Wyatt JL. Mechanical Design and Surgical Implantation of Second Generation Retinal Prosthesis. *Investigative Ophthalmology and Visual Science Supplement*. 1999:3885-B743.
  13. Rizzo JF, Loewenstein J, Shahin M, Coury A. Novel Retinal Adhesive Used to Attach Electrode Array to Retina. *Investigative Ophthalmology and Visual Science Supplement*. 1999:3874-B732.
  14. Rizzo JF, Brumet AE, Wyatt JL. Ten Micron Diameter Electrodes Directly Stimulate Rabbit Retinal Ganglion Cell Axons. *Investigative Ophthalmology and Visual Science Supplement*. 1999:3883-B741.
  15. Shahin ME, Rizzo JF, Wyatt JL, Loewenstein J. Evaluation of External Electrical Stimulation of the Eye as a Screening Test for Acute Intraocular Retinal Stimulation. *Investigative Ophthalmology and Visual Science Supplement*. 2000.
  16. Grumet AE, Rizzo JF, Wyatt JL. In-vitro Electrical Stimulation of Human Retinal Ganglion Cell Axons. *Investigative Ophthalmology and Visual Science Supplement*. 2000.
  17. Caulfield RE, Wyatt JL, Rizzo JF. Calculated Power Limits Affecting Retinal Prosthesis. *Investigative Ophthalmology and Visual Science Supplement*. 2001.
  18. Shire DB, Wyatt JL, Rizzo JF. Progress Toward an Inflatable Neural Prosthesis. *Investigative Ophthalmology and Visual Science Supplement*. 2001.



19. Halpern L, Rizzo JF. The Efficacy and Safety of Pulse Taper Corticosteroid in the Management of Giant Cell Arteritis a Retrospective of 61 Patients. *Investigative Ophthalmology and Visual Science Supplement*. 2001.
20. Sippel KC, Rizzo JF. Blepharophimosis-ptosis-epicanthus Inversus Syndrome with Unexplained Visual Loss. *Investigative Ophthalmology and Visual Science Supplement*. 2002.
21. Sun JK, Rizzo JF. Delayed Visual Recovery Associated with Hyperbaric Oxygen Treatment after Retinal Artery Occlusion. *Investigative Ophthalmology and Visual Science Supplement*. 2002.
22. Jensen RJ, Ziv OR, Rizzo JF. Effect of Epiretinal vs Transretinal in in-vitro Electrical Stimulation of Rabbit Retinal Ganglion Cells. *Investigative Ophthalmology and Visual Science Supplement*. 2002.
23. Ziv OR, Jensen RJ, Rizzo JF. In-vitro Activation of Ganglion Cells in Rabbit Retina: Effects of Glutamate Receptor Agents. *Investigative Ophthalmology and Visual Science Supplement*. 2002.
24. Shire DB, Rizzo JF, Loewenstein J. Microfabricated Tacks to Attach a Prosthesis to the Retina. *Investigative Ophthalmology and Visual Science Supplement*. 2002.
25. Scholz C, Vayaboury W, Enzmann V, Shire BD, Rizzo JF. Biocompatible Block Copolymers for Coating Sub-Retinal Prostheses. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
26. Yun D, Gotto DC, Merabet L, Rizzo JF. Boston Retinal Implant Project: An Accessible Web-Based Educational Resource. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
27. Poggel DA, Toth LJ, Kim D-S, Rizzo JF. Brain Activation Maps in Patients with Retinal Degeneration. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
28. Liang L, Rizzo JF, Sandell JH. Chx10 and Nestin Labeling in Retinitis Pigmentosa Retina. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
29. Merabet LB, Pascuale-Leone A, Fernandez E, Rizzo JF. Decisions and Issues Relating to Visual Neuroprosthesis Development, Neuroplasticity and Patient Testing. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
30. Drohan WA, Kelly SK, Rizzo JF, Wyatt JL, Fried SI. Development of Retinal Ganglion Cell Model to Assess Optimal Stimulation Parameters. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
31. Swider G, Drohan W, Ziv OR, Kelly SK, Wyatt JL, Rizzo JF. Development of Stimulation/Recording System for Evaluation of Retinal Implants. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
32. Gingerich MD, Shire DB, Wyatt JL, Rizzo JF. Development Towards a Flexible Passive Penetrating Electrode Array Technology for a Subretinal Prosthesis. *Investigative Ophthalmology and Visual Science Supplement*. 2007.
33. Rizzo JF, Brookman J. Digital Compendium of Clinically-Relevant Neuro-Ophthalmic Literature. North American Neuro-Ophthalmology Society. 2007.
34. Winter J, Gokhale MN, Cogan SF, Rizzo JF. Drug Delivery Systems to Promote

- Electrode-Host Integration in Retinal Prostheses. Investigative Ophthalmology and Visual Science Supplement. 2007.
35. Wyatt JL, Eisenman A, Valavanis S, Fried S, Stasheff S, Rizzo JF. Estimating Visual Motion from Neural Output of Rabbit Retina. Investigative Ophthalmology and Visual Science Supplement. 2007.
  36. Kelly SK, Swider GW, Drohan WA, Wyatt JL, Rizzo JF. Exploration of Optimal Coil Designs for Retinal Implant Power and Data Telemetry. Investigative Ophthalmology and Visual Science Supplement. 2007.
  37. Franco LM, Uhlenhuth M, Osasona A, Vayaboury W, Scholz C, Shire D, Rizzo JF, Kaplan H, Enzmann E. In-vitro Biocompatibility of Polymers Used in the Fabrication of Microelectrode Arrays. Investigative Ophthalmology and Visual Science Supplement. 2007.
  38. Ziv OR, Jensen RJ, Rizzo JF. Multielectrode Recording of Burst Responses from Retinal Ganglion Cells to Photic Stimuli of Variable Duration and Intensity. Investigative Ophthalmology and Visual Science Supplement. 2007.
  39. Shire DB, Ziv OR, Gingerich MD, Jensen R, Rizzo JF, Cogan SF. Progress Toward a Platform for Studying Neural Coding of Vision: Recordings from a Flexible, Transparent Multielectrode Array. Investigative Ophthalmology and Visual Science Supplement. 2007.
  40. Cogan SF, Ehrlich J, Plante TD, Shire DB, Rizzo JF. Sputtered Iridium Oxide Films (SIROFS) for Retinal Stimulation Electrodes. Investigative Ophthalmology and Visual Science Supplement. 2007.
  41. Chen J, Kim S, Brookman J, Snebold L, Kenney M, Shire D, Rizzo JF. Surgical Methods for Large Sub-Retinal Prosthetic Implantation. Investigative Ophthalmology and Visual Science Supplement. 2007.