

## ***CURRICULUM VITAE***

**C. Gail Summers, M.D.**  
**Citizenship: USA**

### **PROFESSIONAL ADDRESS**

University of Minnesota Medical School  
Departments of Ophthalmology & Visual Neurosciences and Pediatrics  
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### **IDENTIFYING INFORMATION**

#### **Education**

<b>Degree</b>	<b>Institution</b>	<b>Date Degree Granted</b>
B.A.E., High honors	University of Florida, Gainesville, FL	1971
M.Ed.	University of Florida, Gainesville, FL	1972
Pre-Med, 2 yrs med school	University of Miami, Miami, FL	1974-1977
M.D.	University of Minnesota, Minneapolis, MN	1979
Internal Medicine	Abbott-Northwestern Hospital	1979-1980
Internship	Minneapolis, MN	
Residency in Ophthalmology	University of Minnesota, Minneapolis, MN	1981-1983
Fellowship in Pediatric	Robert D. Letson, M.D.	1984
Ophthalmology and Strabismus	University of Minnesota, Minneapolis, MN	
Fellowship in Pediatric	Marshall M. Parks, MD	1984
Ophthalmology and Strabismus	Children's Hospital, Washington, D.C.	
AUPO Management Program	May-June	
	University of California, Los Angeles, CA	1993
Certificate Program In Management for Physicians	University of St. Thomas, Minneapolis, MN	1993

#### **Certifications, Licenses**

Minnesota DEA License	1982-present
Minnesota Medical and Surgery License	1982-present
Diplomate, American Board of Ophthalmology	1984
Florida Medical and Surgery License	1984
Diplomate, National Board of Medical Examiners	1980

**Academic Appointments**

## University of Minnesota Medical School

Professor, Departments of Ophthalmology & Visual Neurosciences and Pediatrics 1997-present

Associate Chair, Department of Ophthalmology 1992

Associate Professor, Pediatric Ophthalmology & Strabismus 1991-1997

Director, Pediatric Ophthalmology & Strabismus Service 1991-2000,  
2009-present

Assistant Professor, Pediatric Ophthalmology & Strabismus 1985-1991

## University of Miami Medical School

Teaching Assistant, Gross Anatomy 1976

## Miami Dade Community College

Instructor, Childhood Education 1974-1977

**Academic Administrative Appointments****Clinic/Hospital Appointments**

Director, Pigment Clinic 1995-present

Lecturer, Resident Basic and Clinical Science Course (Pediatric Ophthalmology and Strabismus) 1991, 1994-present

Medical Director, Orthoptic Training Program, Department of Ophthalmology, University of Minnesota 1987-1994,  
2000-2003,  
2008-present

Attending Surgeon/Active Staff, University of Minnesota Hospital/ Fairview-University Health System 1985-present

Pediatric Ophthalmology and Strabismus Clinics (weekly) 1984-present

Current Focus: Inherited eye disorders

Lead physician, Electrophysiology Lab, interpret ERGs, EOGs, VFs 2009-present

University Clinic - St. Louis Park 2005-2014

Staff Member, Phillips Eye Institute 2001-2005

Staff Member, Methodist Hospital 1997-2000

Course Director, Resident Basic and Clinical Science Course 1996-2000,

(Pediatric Ophthalmology and Strabismus) 2002-2003,

2010-2012

Residency Program Director, Department of Ophthalmology, University of Minnesota 1991-1992

Director, Pediatric Ophthalmology and Strabismus 1990-2000,

Fellowship Training Program 2002-2008

Coordinator, Pediatric Resident Rotation in Ophthalmology, University of Minnesota 1990-1991

Consultant, Veterans Administration Medical Center 1988-1990

Course Director and Lecturer, Resident Basic and Clinical Science Course 1988

(Pediatric Ophthalmology, Strabismus and Hereditary Eye Disorders)

Course Director, Department of Ophthalmology CME Course 1987

(Current Concepts in Pediatric Ophthalmology and Strabismus)

Consulting Staff Member, St. Paul Ramsey Hospital 1986-1995

Lecturer, Resident Basic and Clinical Science Course 1986, 1989-1992

(Orbit, Eyelids and Lacrimal System)

Advisor, University of Minnesota Medical School 1986

Attending Surgeon, Children's Health Care, Minneapolis 1985-2006

Coordinator, Pediatric Ophthalmology/Strabismus Consult Clinic 1985-2003

Courtesy Member, Metropolitan-Mount Sinai/Phillips Eye Institute 1985-1996

Courtesy Member, Hennepin County Medical Center 1985-1996

Director and Lecturer, First Year Resident Strabismus Management Course 1985-1990

Course Director, Phase D (3 <sup>rd</sup> and 4 <sup>th</sup> Year) Medical School	1985-1989
Rotation in Ophthalmology (OPH 5-180)	
Coordinator, Pediatric Ophthalmology, Orbit and Oculoplastics Conference	1985-1987
Course Director and Lecturer, Resident Basic and Clinical Science Course (Pediatric Ophthalmology, Strabismus and Hereditary Eye Disorders)	1985
Director, Genetics Eye Clinic	1984-present
Minnesota Lions Children's Eye Clinic, Amplatz Children's Hospital campus	2011-present

**Consulting Positions**

Clinical Consultant, McKesson Health Solutions LLC	2005-2012
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**Current Membership and Offices in Professional Organizations**

Gold Humanism Honor Society	2012-present
International Society for Electrophysiology of Vision	2011-present
Member, Preferred Practice Patterns Committee, American Academy of Ophthalmology	2011-present
Minneapolis Ambassadors Lions Club (Charter Member)	2004-present
American Ophthalmological Society	1996-present
Association for Research in Vision and Ophthalmology	1987-present
Minnesota Academy of Ophthalmology	1985-present
American Academy of Ophthalmology	1984-present
American Association for Pediatric Ophthalmology and Strabismus	1984-present
Research to Prevent Blindness Foundation (Ophthalmological Associate Member)	2005-present
Minnesota Medical Association	2000-present

**Past Membership and Offices in Professional Organizations**

Member, Nominating Committee, AAPOS	2013
Vice Chair, Long Range Task Force, American Association for Pediatric Ophthalmology and Strabismus	2012
Moderator, American Association for Pediatric Ophthalmology and Strabismus	2012
Chair, Preferred Practice Patterns Committee, American Academy of Ophthalmology	2010-2012
DROP-ROP Planning Committee	2010-2012
Past President, American Association for Pediatric Ophthalmology and Strabismus	2010-2011
Pediatric Vision Services Task Force, American Association for Pediatric Ophthalmology and Strabismus	2010-2011
American Society for Human Genetics	2009-2011
President, American Association for Pediatric Ophthalmology and Strabismus	2009-2010
Member, Inter-organizational Relations Committee, AAPOS	2009-2012
Member, American Orthoptics Council	2008-2013
Vice President, American Association for Pediatric Ophthalmology and Strabismus	2008-2009
Vice President-Elect, American Association for Pediatric Ophthalmology and Strabismus	2007-2008
Member, Finance Committee, American Association for Pediatric Ophthalmology and Strabismus	2006-2010
Member, Program Committee, American Ophthalmological Society (Chair, 2005)	2002-2005
Chair, Membership and Credentials Committee, American Association for Pediatric Ophthalmology and Strabismus	2001-2007
Member, Training and Accreditation Committee, American Association for Pediatric Ophthalmology and Strabismus	2000-2007
Member, Membership and Credentials Committee,	1996-2001

American Association for Pediatric Ophthalmology and Strabismus	1996-2001
Member, Nominating Committee, American Association for Pediatric Ophthalmology and Strabismus	1996-1997
Women in Ophthalmology	1987-2012

**Visiting Professorships or Visiting Scholar Positions**

Medical College of Wisconsin, Milwaukee, WI	August 6, 2014
Focus: Albinism.	
University of Manchester, Manchester, England	September 22, 2011
Focus: Mucopolysaccharidoses.	
St. Erik Eye Hospital, Stockholm, Sweden	September 16, 2010
Focus: Vision loss in children.	
Nebraska Academy of Eye Physicians and Surgeons, Omaha, NE	October 13, 2006
Focus: Pediatric Ophthalmology and Strabismus.	
Penn State University, Hershey, PA, Department of Ophthalmology	September 30, 2006
Focus: Pediatric Ophthalmology and Strabismus.	
Trinity Medical Group, Minot, ND, Department of Ophthalmology	April 12, 2003
Focus: Pediatric Ophthalmology and Strabismus.	
Long Island Jewish, Department of Ophthalmology	November 13, 2002
Focus: Pediatric Ophthalmology and Strabismus.	
Albany Medical College, Albany, NY, Department of Ophthalmology	June 7, 2001
Focus: Pediatric Ophthalmology & Strabismus	

**Other Professional Employment, Including Military Service**

Certified Speech Pathologist, Miami, FL	1972-1977
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**HONORS AND AWARDS FOR RESEARCH WORK, TEACHING, PUBLIC ENGAGEMENT, AND SERVICE****University of Minnesota**

Leonard Tow Faculty Humanism in Medicine Award,	2012
University of Minnesota Medical School and Minnesota Medical Foundation	2003
Alumni Recognition Award, University of Minnesota Medical School	
Alpha Omega Alpha Medical Honorary, University of Minnesota, Minneapolis, MN	1979

**External Sources**

Secretariat Award, American Academy of Ophthalmology	2013
Gold Humanism Honor Society	2012
Senior Achievement Award, American Academy of Ophthalmology	2012
Lifetime Achievement Award, American Association for Pediatric Ophthalmology and Strabismus	2011
Marshall M. Parks Bronze Medalist, American Association for Pediatric Ophthalmology and Strabismus	2011
AAO/AMA Lifelong Continuation Recognition Award	2010
Secretariat Award, American Academy of Ophthalmology	2010
Top Doctors for Women, Minnesota Monthly, May 2009	2009
Senior Honor Award, American Association for Pediatric Ophthalmology and Strabismus	2007
LEO Continuing Education Recognition Award,	2005
American Academy of Ophthalmology	
AMA Physician's Recognition Award	2005

America's Top Doctors	2002-2016
Achievement Award, American Academy of Ophthalmology	2001
National Registry of Who's Who (Registration #124535)	2000
Who's Who of American Women	2000
Honor Award, American Association for Pediatric Ophthalmology and Strabismus	1996
American Ophthalmological Society (Thesis: Vision in Albinism)	1996-present
Best Items of the Year (for Written Examination),	1995
Joint Commission on Allied Health Personnel in Ophthalmology	
Top Doctors, Minneapolis-St. Paul Magazine	1994, 1995, 1998-2006, 2009, 2012-2015
Associate Examiner, American Board of Ophthalmology	1992-present
Janet M. Glasgow Scholarship Achievement Citation	1979
President's Honor Roll, University of Miami, Coral Gables, FL	1974
Phi Kappa Phi Honorary, University of Florida, Gainesville, FL	1971
President's Honor Roll, University of Florida, Gainesville, FL	1970-1971
Alpha Lambda Delta Honorary, University of Florida, Gainesville, FL	1969
Valedictorian, Terry Parker High School, Jacksonville, FL	1968

## RESEARCH AND SCHOLARSHIP

### Grants and Contracts

#### External Sources

#### A. Principal Investigator or Program Director

##### Current

Source: National Institute of Mental Health

Title: Retinal Versus Cortical Contributions to Vision Loss in Albinism

Appointment: PI (Subrecipient)

Dates of Project: 12/2/14-11/30/18

Direct Costs: \$105,000

Description of Project: To use high-resolution retinal imaging tools to view the retina of persons with albinism with single-cell resolution and to combine that knowledge with standard health and genetic information to determine how therapy in these individuals should be directed.

Source: National Institute of Mental Health

Title: The Eye: A Window on Schizophrenia (1 R21 MH100622-01)

Appointment: Co-PI

Dates of Project: 4/16/13-2/29/16

Direct Costs: \$258,934

Description of Project: Use electrophysiology of eye in schizophrenics and controls to determine a biomarker for schizophrenia

##### Past

Source: Vision for Tomorrow Foundation/Minnesota Lions/Heilmeier Foundation/NOAH

Title: Clinical Trial to Evaluate Levodopa as Treatment to Improve Vision in Individuals with Albinism

Appointment: Principal Investigator

Dates of Project: 2010-2012

Direct Costs: \$194,228.21

Description of Project: A randomized, placebo-controlled, double-masked clinical trial to evaluate the effect of two doses of levodopa/carbidopa on the visual acuity of individuals with albinism.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Correction of Refractive Error for Amblyopia (X01)

Appointment: Principal Investigator, 4% effort

Dates of Project: 1/24/07 to 12/31/10

Direct Costs: \$1,500

Description of Project: A study to provide the requisite spectacles when refractive error has not already been appropriately corrected prior to consideration for an enrolling amblyopia study.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 1 (ATS 1)

Appointment: Principal Investigator, 10% effort

Dates of Project: 1998 to 2010

Direct Costs: \$11,800

Description of Project: Randomized multicenter study to determine the efficacy of patching vs. atropine for the treatment of amblyopia in children.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 10 (ATS 10)

Appointment: Principal Investigator, 4% effort

Dates of Project: 10/1/07 to 6/30/09

Direct Costs: \$6,300

Description of Project: A randomized trial of full-time Bangerter filters versus part-time daily patching for the treatment of moderate amblyopia in children.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Nasolacrimal Duct Obstruction Study 2 (NLD 2)

Appointment: Principal Investigator, 5% effort

Dates of Project: 1/1/06 to 1/1/08

Direct Costs: \$3,500

Description of Project: A prospective study to compare three different surgical procedures in the treatment of persistent nasolacrimal duct obstruction in children less than 4 years of age.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 9 (ATS 9)

Appointment: Principal Investigator, 5% effort

Dates of Project: 10/10/05 to 12/31/07

Direct Costs: \$3,300

Description of Project: To compare patching versus weekend atropine for amblyopia in children 7 to <13 years of age.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 8 (ATS 8)

Appointment: Principal Investigator, 10% effort

Dates of Project: 3/1/05 to 12/31/07

Direct Costs: \$5,100

Description of Project: To compare the effect on visual acuity of atropine versus atropine plus a plano lens for the sound eye in treating amblyopia in children

3 to <7 years of age.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Nasolacrimal Duct Obstruction Study 1 (NLD 1)

Appointment: Principal Investigator, 5% effort

Dates of Project: 5/1/05 to 5/1/07

Direct Costs: \$2,700

Description of Project: A prospective study to compare three different surgical treatments of nasolacrimal duct obstruction in children less than 4 years of age.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 6 (ATS 6)

Appointment: Principal Investigator, 10% effort

Dates of Project: 3/1/05 to 3/1/07

Direct Costs: \$7,500

Description of Project: To compare the effect on visual acuity of performing distance versus performing near activities while patching for amblyopia in children 3 to <7 years of age.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 7 (ATS 7)

Appointment: Principal Investigator, 10% effort

Dates of Project: 10/1/04 to 9/30/06

Direct Costs: \$1,200

Description of Project: To determine the amount and time course of visual acuity improvement in children with bilateral refractive amblyopia treated with glasses.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 5 (ATS 5)

Appointment: Principal Investigator, 10% effort

Dates of Project: 9/1/03 to 9/1/05

Direct Costs: \$2,000

Description of Project: Randomized multicenter clinical trial to evaluate the efficacy of glasses wear plus 2 hours of daily patching vs. glasses wear alone in treating children 3 to <7 years old with moderate to severe amblyopia.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 3 (ATS 3)

Appointment: Principal Investigator, 10% effort

Dates of Project: 1/1/03 to 7/1/05

Direct Costs: \$4,200

Description of Project: To determine the efficacy of treatment of amblyopia in 7 to <18 year olds, and the recurrence of amblyopia after treatment is discontinued.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 4 (ATS 4)

Appointment: Principal Investigator, 10% effort

Dates of Project: 2002 to 2003

Direct Costs: \$5,000

Description of Project: Randomized multicenter clinical trial to determine the efficacy of daily atropine vs. weekend atropine for treatment of moderate amblyopia.

Source: National Eye Institute

Title: CRYO-ROP Participating Center - Phase IV

Appointment: Principal Investigator, 10% effort

Dates of Project: 6/1/99 to 5/31/03

Direct Costs: \$20,527

Description of Project: Examination of children with birth weights less than 1251 grams at age 15 years, to compare late sequelae of randomly untreated eyes and eyes treated with cryotherapy for threshold retinopathy of prematurity.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 2 (ATS 2)

Appointment: Principal Investigator, 10% effort

Dates of Project: 2001 to 2002

Direct Costs: \$28,000

Description of Project: Randomized multicenter study to determine the efficacy of full-time vs. part-time patching for severe amblyopia, part-time vs. minimal time patching for moderate amblyopia, and recurrence rate following amblyopia treatment.

Source: Merck Research Laboratories, Inc.

Title: Three-month, double-masked, active treatment controlled, multicenter study of 2% dorzolamide t.i.d. and of timolol maleate in gel-forming solution q.d. in pediatric patients age < 6 years with elevated intraocular pressure or glaucoma.

Appointment: Principal Investigator, 15% effort

Dates of Project: 11/28/00 to 11/28/02

Direct Costs: \$36,900

Description of Project: Randomized double-masked trial of safety and efficacy of dorzolamide vs timolol in children with increased intraocular pressure.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Appointment: Principal Investigator

Title: Congenital Esotropia Observational Study

Dates of Project: 1997 to 2000

Description of Project: To determine the natural history of esotropia developing between 2 and 4 months of age.

Source: National Eye Institute

Title: CRYO-ROP Follow-up Clinical Center (2UO1EYO6396)

Appointment: Principal Investigator

Dates of Project: 6/1/89 to 5/31/94

Direct Costs: \$543,974

Description of Project: Follow-up of natural history and randomized patients to evaluate the long term manifestations of treated and untreated ROP.

Source: National Eye Institute

Title: CRYO-ROP Participating Center – Phase III

Appointment: Principal Investigator

Dates of Project: 6/1/94 to 5/31/98

Direct Costs: \$41,547

Description of Project: Longitudinal follow-up of ocular structure and visual function in randomized patients with a birth weight less than 1251 grams in the CRYO-ROP Study.

Source: Allergan Pharmaceuticals

Title: Visiting Professor Program

Appointment: Principal Investigator



Dates of Project: 10/21/88 to 12/31/88

Direct Costs: \$1,200

Description of Project: Grant to support visiting professors to lecture for resident course in Pediatric Ophthalmology, Strabismus and Inherited Disorders.

## **B. Co-Investigator**

### **Current**

Source: National Eye Institute

Title: Retinal Versus Cortical Contributions to Vision Loss in Albinism

Appointment: Co-Investigator

Dates of Project: 12/2/14 to 11/30/18

Direct Costs: \$28,262 (Year 1)

Description of Project: The goal is to use noninvasive imaging to determine how macular structure and the central visual system interact in albinism to better understand visual function.

Source: Vertex Pharmaceuticals

Title: Cystic Fibrosis Clinical Trials VX-770-108, VX-770-109, VX-770-115

Appointment: Certified LOCSIII examiner

Dates of Project: 8/1/13 – 2/23/15

Description of Project: Multicenter clinical trials to evaluate whether ivacaftor can reverse the underlying defect in cystic fibrosis

### **Past**

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Intermittent Exotropia Study 1 (IXT 1)

Appointment: Co-Investigator

Dates of Project: 2/1/10-1/31/13

Direct Costs: \$14,076

Description of Project: A randomized trial comparing bilateral lateral rectus muscle recession to unilateral lateral rectus muscle recession and medial rectus muscle resection for intermittent exotropia in children 3 to less than 11 years old.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Intermittent Exotropia Study 2 (IXT 2)

Appointment: Co-Investigator

Dates of Project: 1/13/10-12/31/12

Direct Costs: \$14,083

Description of Project: A randomized trial comparing observation to occlusion therapy for intermittent exotropia in children 1 to less than 11 years old.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Levodopa for Residual Amblyopia Study (ATS 17)

Appointment: Co-Investigator

Dates of Project: 9/15/10-9/14/12

Direct Costs: \$11,500

Description of Project: A randomized trial evaluating the safety and efficacy of levodopa and patching vs. placebo and patching for treatment of residual amblyopia in children 7 to <13 years old.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Increasing Patching for Amblyopia Study (ATS 15)

Appointment: Co-Investigator

Dates of Project: 9/21/09-8/31/11

Direct Costs: \$ 5,600

Description of Project: A randomized trial comparing continuing patching at 2 hrs./day to increased patching at 42 hrs./week in children 3 to less than 8 years old with stable vision in the amblyopic eye with patching of 2 hrs./day.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Augmenting Atropine Treatment for Amblyopia Study (ATS 16)

Appointment: Co-Investigator

Dates of Project: 9/1/09-8/31/11

Direct Costs: \$7,000

Description of Project: A randomized trial comparing continuing weekend atropine in a Plano lens for the sound eye and weekend atropine in children 3 to less than 8 years old with stable vision in the amblyopic eye with weekend atropine.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Nasolacrimal Duct Obstruction Study 3 (NLD 3)

Appointment: Co-Investigator, 1% effort

Dates of Project: 12/1/08 to 12/31/10

Direct Costs: \$8,100

Description of Project: A randomized trial comparing immediate probing in an office setting with deferred probing in a facility setting for treatment of nasolacrimal duct obstruction in children six to less than 10 months old.

Source: Pfizer, Inc.

Title: A Phase 3, Prospective, Randomized, Double-Masked, 12-Week, Parallel, Group Study Evaluating the Efficacy and Safety of Latanoprost and Timolol in Pediatric Subjects with Glaucoma

Appointment: Co-Investigator, 2% effort

Dates of Project: 3/17/08 to 12/31/10

Direct Costs: \$16,795

Description of Project: The purpose of this study is to assess the relative effectiveness of latanoprost 0.005% ophthalmic solution dosed once daily and timolol (0.5% or optionally 0.25% for subjects younger than 3 years old) dosed twice daily in pediatric subjects less than 18 years of age who are diagnosed with pediatric glaucoma.

Source: Pfizer, Inc.

Title: A Phase 1, Open-Label Study of Latanoprost Acid Plasma Concentrations in Pediatric and Adult Glaucoma Patients Treated with Latanoprost 0.005%

Appointment: Co-Investigator, 1% effort

Dates of Project: 6/1/08 to 9/30/09

Direct Costs: \$11,275

Description of Project: The purpose of this study is to: 1) evaluate the steady-state systemic plasma concentrations of latanoprost acid following administration of 0.005% latanoprost in pediatric and adult subjects with glaucoma or ocular hypertension; and 2) assess the safety and tolerability of 0.005% latanoprost in pediatric subjects.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Central Corneal Thickness Study

Appointment: Co-Investigator, 1% effort

Dates of Project: 6/1/08 to 12/31/09

Direct Costs: \$4,300

Description of Project: A prospective study of central corneal thickness in children less than 18 years old.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 13 (ATS 13)

Appointment: Co-Investigator, 1% effort

Dates of Project: 6/1/08 to 12/31/09

Direct Costs: \$3,600

Description of Project: An observational study of optical correction for strabismic amblyopia in children 3 to <7 years old.

Source: National Eye Institute

Title: Early Treatment for Retinopathy of Prematurity (ETROP)

Appointment: Co-Investigator, 10% effort

Dates of Project: 6/30/00 to 12/31/09

Direct Costs: \$165,136

Description of Project: Randomized multicenter clinical trial to determine if early treatment of ROP in selected high risk cases will result in improved visual and structural outcomes over that of conventionally-timed treatment.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Amblyopia Treatment Study 11 (ATS 11)

Appointment: Principal Investigator, 4% effort

Dates of Project: 9/17/07 to 6/30/09

Direct Costs: \$1,800

Description of Project: A randomized trial to evaluate 8 hours of daily patching plus daily atropine for residual amblyopia in children 3 to <8 years old.

Source: Pediatric Eye Disease Investigator Group (PEDIG)/Jaeb Center for Health Research

Title: Esotropia Treatment Study 1 (ETS 1)

Appointment: Co-Investigator, 5% effort

Dates of Project: 7/1/04 to 12/31/08

Direct Costs: \$11,520

Description of Project: An observational study of infantile, acquired non-accommodative, and acquired partially-accommodative esotropia.

Source: Emory University/NEI

Title: Infant Aphakia Treatment Study (IATS)

Appointment: Co-Investigator, 5% effort

Dates of Project: 12/1/00 to 6/30/08

Direct Costs: \$6,000

Description of Project: To determine safety and efficacy of intraocular lens implantation vs. aphakia contact lens wear in the treatment of unilateral congenital cataracts in children less than 7 months old.

Source: National Eye Institute

Title: Genetic Regulation of Melanin Biosynthesis

Appointment: Co-Investigator, 5% effort

Dates of Project: 4/1/98 to 3/31/03

Direct Costs: \$960,826

Description of Project: To describe the molecular genotype of individuals with OCA1B, characterize the effects of OCA1B on tyrosinase function, and perform

structure: function studies of recombinant normal and mutant tyrosinase enzyme.

Source: Smith-Kettewell Eye Research Institute

Title: Genetics of Hereditary Strabismus Syndromes

Appointment: Collaborator

Dates of Project: 8/95 to 2000

Direct Costs: (patient participation fees only)

Description of Project: Linkage analysis of families with inherited strabismus.

Source: National Eye Institute

Title: High Oxygen Percentage-Retinopathy of Prematurity (HOPE-ROP) Study

Appointment: Co-Investigator

Dates of Project: 1/1/96 to 11/30/99

Direct Costs: (unfunded)

Description of Project: To study the outcome of patients with prethreshold retinopathy of prematurity who are ineligible for the STOP-ROP Study because their oxygen saturation is greater than 94% on room air.

Source: National Eye Institute

Title: Supplemental Oxygen for Prethreshold Retinopathy of Prematurity (STOP-ROP)

Participating Center

Appointment: Co-Investigator, 5%

Dates of Project: 1/1/96 to 11/30/99

Direct Costs: Negotiated, depending on enrollment

Description of Project: Randomized assignment of infants with prethreshold retinopathy of prematurity (ROP) to supplemental oxygen, to determine effect on natural history of ROP.

Source: Marion Merrell Dow

Title: Clinical Study of Anticonvulsant, vigabatrin (Clinical Protocol #071754PR0118)

Appointment: Co-Investigator, 5% effort

Dates of Project: 5/1/95 to 4/30/96

Direct Costs: \$14,880

Description of Project: Ophthalmologic, electroretinographic and photographic documentation of eye findings associated with use of the anticonvulsant, vigabatrin.

Source: National Eye Institute/NINDS

Title: Control Study of Value of BMT for Storage Diseases (NIH5RO1N529099)

Appointment: Co-Investigator, 5% effort

Dates of Project: 7/1/91 to 6/30/96

Direct Costs: \$2,003,874

Description of Project: Controlled consortium study of safety and efficacy of bone marrow transplantation for patients with storage disease.

Source: Blue Cross Blue Shield of Minnesota Foundation

Title: Does Nystagmus Dampening Surgery Improve an Individual's Ability to See?

Appointment: Co-Investigator, 10% effort

Dates of Project: 2/1/94 to 1/31/95

Direct Costs: \$31,065

Description of Project: Clinical trial to document changes in reading ability, visual acuity and electronystagmography performed with a magnetic scleral search coil, in patients undergoing nystagmus dampening surgery.

Source: National Eye Institute

Title: Cryo-Retinopathy of Prematurity Cooperative Clinical Trial (1UO1EYO6396)  
Appointment: Co-Investigator  
Dates of Project: 9/30/85 to 5/31/89  
Direct Costs: \$355,369  
Description of Project: Multicenter clinical trial to study the natural history of retinopathy of prematurity in infants with birth weight less than 1251 grams, and to study the safety and efficacy of cryotherapy for those eyes with advanced retinopathy.

### **University Sources**

#### **Current**

Source: UMF 11233 Albinism and Inherited Disorders Fund  
Title: Outcome of Early Keratoplasty in Patients with Mucopolysaccharidoses: An International Perspective  
Appointment: Principal Investigator  
Dates of Project: 11/12/14  
Direct Costs: \$5,000  
Description of Project: To report the visual outcomes and co-morbidities when penetrating keratoplasty is performed for corneal clouding in patients with mucopolysaccharidoses

Source: UMF 11233 Albinism and Inherited Disorders Fund  
Title: A Cross-Sectional Examination of Visual Acuity by Specific Type of Albinism, Corrected for Age  
Appointment: Principal Investigator  
Dates of Project: 12/16/13-present  
Direct Costs: \$6,000  
Description of Project: To report best-corrected binocular acuity for specific types of albinism with unique phenotypes, or with gene mutations.

Source: UMF 11233 Albinism and Inherited Disorders Fund  
Title: Visual Development in Patients with Albinism during the Second Decade of Life  
Appointment: Principal Investigator  
Dates of Project: 11/7/14-present  
Direct Costs: \$4,000  
Description of Project: To report on change in best-corrected visual acuity from the beginning to the end of the second decade of life.

Source: Departmental research funds  
Title: Reliability of Automated Visual Fields in Children  
Appointment: Principal Investigator  
Dates of Project: 8/19/14-present  
Direct Costs: \$1300  
Description of Project: To determine whether automated visual fields can be performed reliably in children.

#### **Past**

Source: Minnesota Medical Foundation  
Title: Genetic Analysis of Autosomal Dominant Congenital Nystagmus (SMF-1040-97)  
Appointment: Principal Investigator  
Dates of Project: 3/1/97 to 8/31/99  
Direct Costs: \$10,000  
Description of Project: Linkage analysis from families with autosomal dominant congenital nystagmus.

Source: Minnesota Medical Foundation

Title: Experimental Studies of Extraocular Muscle Scarring

Appointment: Principal Investigator

Dates of Project: 7/1/92 to 8/30/94

Direct Costs: \$2,500

Description of Project: Development of an animal model of extraocular muscle scarring, for use in testing antimetabolites for their effect on fibroblastic proliferation, as determined by passive tension measurements and histopathology.

Source: Lions Clubs of Minnesota

Title: Raising a Visually Impaired Child

Appointment: Principal Investigator

Dates of Project: June 1989

Direct Costs: \$400

Description of Project: Grant to support participation by parents in resident program to discuss the educational, psychological, and social aspects of raising a visually impaired child.

Source: Minnesota Medical Foundation

Title: Evaluation of the reversibility of visual refractive errors induced by orbital masses.

Appointment: Principal Investigator

Dates of Project: 11/1/85 to 4/31/87

Direct Costs: \$6,000

Description of Project: Pilot study to determine the feasibility of using an implantation of silicone sponges in rabbits to produce refractive changes which are characteristic of orbital masses.

## Publications

### Peer-Reviewed Publications

1. McCafferty BK, **Summers CG**, King RA, Wilk MA, McAllister JT, Stepien KE, Dubis AM, Brilliant MH, Anderson JL, Carroll J. Clinical Insights Into Foveal Morphology in Albinism. *J Pediatr Ophthalmol Strabismus*, 52(3):167-72.
2. **Pediatric Eye Disease Investigator Group**. A Randomized Trial of Adding a Plano Lens to Atropine for Amblyopia. *J AAPOS*, Feb 2015;19(1):42-8.
3. **Pediatric Eye Disease Investigator Group**. A Randomized Trial of Levodopa as Treatment for Residual Amblyopia in Older Children. *Ophthalmology* 2015;122(5):874-81.
4. Heinmiller, LJ, Holleschau A, **Summers CG**. Concordance of visual and structural features between siblings with albinism. *J AAPOS* (in press).
5. **Pediatric Eye Disease Investigator Group**. A randomized trial of adding a plano lens to atropine for amblyopia. *J AAPOS*. Feb 2015;19(1):42-8.
6. **Pediatric Eye Disease Investigator Group**. Atropine versus patching for treatment of moderate amblyopia: follow-up at 15 years of age of a randomized clinical trial. *JAMA Ophthalmol* 2014; 132(7):799-805.
7. **Pediatric Eye Disease Investigator Group**. A randomized trial comparing part-time patching with observation for children 3 to 10 years of age with intermittent exotropia. *Ophthalmology*. 2014;121:2299-2310.
8. Wilk M, Dubra A, Curico C, Brilliant M, **Summers CG**, Carroll J. Author Response: Relationship Between Foveal Cone Specialization and Pit Morphology in Albinism, *IOVS*, 2014, 59:5923.
9. **Summers CG**, Connett JE, Holleschau AM, Anderson JL, DeBecker I, McKay BS, Brilliant MH. Does Levodopa improve vision in albinism? Results of a randomized, controlled clinical trial. *Clin Experiment Ophthalmol* 2014;42(8):713-21.
10. Wilk MA, McAllister JT, Cooper RF, Dubis, AM, Patitucci T, Summerfelt P, Anderson JL, Stepien KE, Costakos DM, Connor TB Jr, Wirostko WJ, Chiang P-W, Dubra A, Curcio CA, Brilliant MH, Dubra A,

- Summers CG**, Carroll J. Relationship between foveal cone specialization and pit morphology in albinism. *Invest Ophthalmol Vis Sci*. 2014; 55:4186-98.
11. Radke, P, Schimmenti, LA, Bothun, ED, **Summers, CG**. The unique association of iris heterochromia with Hermansky Pudlak syndrome. *J AAPOS*. 2013; 17: 542-4.
  12. Lee KA, Repka MX, Melia M, Foster N, Beck R, Frick K, **Summers CG**, Atkinson CS, Avallone J. A comparison of treatment approaches for bilateral congenital nasolacrimal duct obstruction. *Am J Ophthalmol*. 2013; 156: 1045-50.
  13. Ringeisen, A, Schimmenti, LA, White JG, Schoonveld C, **Summers, CG**. Hermansky-Pudlak syndrome (HPS5) in a nonagenarian. *J AAPOS*. 2013;17:334-336 (PMID 23607980)
  14. **Pediatric Eye Disease Investigator Group**. Effect of ocular alignment on emmetropization in children <10 years with amblyopia. *Am J Ophthalmol*. 2012; 154: 297-302.
  15. **Pediatric Eye Disease Investigator Group**. Intraobserver reliability of contact pachymetry in children. *J AAPOS*. 2012;17:144-8.
  16. Siatkowski RM, Good W, Quinn G, **Summers CG**, Tung B. Clinical characteristics of children with severe visual impairment but favorable retinal structural outcomes in the early treatment for retinopathy of prematurity (ETROP) study. *J AAPOS*. 2012;17:129-134 (PMID 23533948)
  17. **Pediatric Eye Disease Investigator Group**. A randomized trial comparing the cost-effectiveness of immediate office probing vs deferred facility probing for unilateral nasolacrimal duct obstruction: a randomized trial. *Arch Ophthalmol*. 2012;10:1525-33.
  18. Dijkstal JM, Cooley SS, Holleschau AM, King RA, **Summers CG**. Change in visual acuity in the early school years. *J Pediatr Ophthalmol Strabismus*. 2012;49:81-6.
  19. Hofman GM, **Summers CG**, Ward N, Bhargava E, Rakauskas ME, Holleschau AM: Use of a driving simulator to assess performance under adverse weather conditions in adults with albinism. *Percept Mot Skills*. 2012;114: 679-92.
  20. Wallace D, Bremer DL, Good WV, Fellows R, **Summers CG**, Tung B, Hardy RJ: Correlation of recognition visual acuity with posterior retinal structure in advanced retinopathy of prematurity. *Arch Ophthalmol*. 2012;130:1512-6 (PMID 22892757)
  21. Hendriksz C, Al-Jawad M, Berger KI, Hawley SM, Lawrence R, McArdle C, **Summers CG**, Wright E, Braunlin E. Clinical overview and treatment options for non-skeletal manifestations of mucopolysaccharidosis type IVA. *J Inher Metab Dis*. 2012;36(2):309-22. 2013 (PMID 22358740).
  22. Merrill, KS, **Summers, CG**: Positive angle kappa: a possible sign of aniridia. *Am Orthopt J*. 2012;62:70-6.
  23. **Pediatric Eye Disease Investigator Group**. Optical treatment of strabismic and combined strabismic–anisometropic amblyopia. *Ophthalmology*. 2012; 119(1):150–8.
  24. Chang P, **Summers CG**, Schimmenti LA, Grajewski A. Axenfeld-Rieger syndrome: new perspectives. *Brit J Ophthalmol*. 2012;96(3):318-22.
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  26. Good WV, Hardy RJ, Wallace D, Bremer D, Rogers DL, Siatkowski RM, De Becker I, **Summers CG**, Fellows R, Tung B, Palmer EA.  $\beta$ -blocking and racial variation in the severity of retinopathy of prematurity. *Arch Ophthalmol*. 2012;136(1):117-8.
  27. MacDonald JT, Kutzbach BR, Holleschau AM, Wyckoff S, **Summers CG**: Reading skills in children and adults with albinism—the role of visual impairment. *J Pediatr Ophthalmol Strabismus*. 2012, 49(3):184-8.
  28. **Early Treatment for Retinopathy of Prematurity Cooperative Group**. Astigmatism progression in the Early Treatment for Retinopathy of Prematurity Study to 6 years of age. *Ophthalmology*. 2011, 118(12): 2326-9.
  29. **Summers CG**, Ashworth JL. Ocular manifestations as key features for diagnosing mucopolysaccharidoses. *Rheumatology*. 2011;50:v34-40.
  30. **Pediatric Eye Disease Investigator Group**. Cost-effectiveness of two approaches to managing nasolacrimal duct obstruction in infants: the importance of the spontaneous resolution rate.

- Arch Ophthalmol. 2011;129(5):603-9.
31. **Pediatric Eye Disease Investigator Group.** Bangerter filters and patching for the treatment of moderate amblyopia (ATS10). J AAPOS. 2011;15(2):131-4.
  32. **Pediatric Eye Disease Investigator Group.** Effect of age on response to amblyopia treatment in children. Arch Ophthalmol. (First Online) July 11, 2011;129(11):1451-7.
  33. **Pediatric Eye Disease Investigator Group.** A randomized trial to evaluate combined patching and atropine for residual amblyopia. Arch Ophthalmol. 2011; 129:960-962.
  34. **Early Treatment for Retinopathy of Prematurity Study.** Prevalence and course of strabismus through age 6 years in participants in the Early Treatment for Retinopathy of Prematurity randomized trial. J AAPOS. 2011;15:536-40.
  35. **Pediatric Eye Disease Investigator Group.** Non-amblyopic eye visual acuity through Bangerter filters. J AAPOS. 2011;15:131-4.
  36. **Pediatric Eye Disease Investigator Group.** Distance versus near visual acuity. J AAPOS. 2011;15:342-4.
  37. **Early Treatment for Retinopathy of Prematurity Cooperative Group.** Grating acuity results in the Early Treatment for Retinopathy of Prematurity Study. Arch Ophthalmol. 2011;129:840-6.
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  50. **Pediatric Eye Disease Investigator Group.** A randomized trial comparing Bangerter filters and patching for the treatment of moderate amblyopia in children. Ophthalmology. 2010;117:998-1004.
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53. **The Early Treatment for Retinopathy of Prematurity Cooperative Group**. Final visual acuity results in the early treatment for retinopathy of prematurity study. Arch Ophthalmol. 2010;128:663-7.
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63. **Pediatric Eye Disease Investigator Group**: Pharmacologic plus optical penalization treatment for amblyopia: Results of a randomized trial. Arch Ophthalmol. 2009;127:22-30.
64. **Early Treatment for Retinopathy of Prematurity Cooperative Group**. Progression of myopia and high myopia in the Early Treatment for Retinopathy of Prematurity Study: Findings to 3 years of age. Ophthalmology. 2008;115:1058-64.
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#### Non-Peer Reviewed Publications

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2. Salman D, Bitrian E, Tokarev J, Grajewski A, Anderson JS, Bothun ED, **Summers CG.** Reliability of Automated visual fields in Children (ARVO 2014).
3. Milana BY, **Summers CG,** Maumenee IH. Mutation identification in the Family with Autosomal Recessive Encephalocele and Retinal Detachments Originally Described by Knobloch (ARVO 2014).
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#### Articles submitted for Publication

1. Lee S, Schimmenti LA, King RA, Brilliant M, Anderson JL, Schoonveld C, **Summers, CG**. Posterior staphyloma in oculocutaneous albinism: Another possible cause of reduced visual acuity (in press, J AAPOS).
1. **Pediatric Eye Disease Investigator Group**: A Randomized Trial of Levodopa as Treatment for Residual Amblyopia in Older Children (in press).
2. McCafferty B, **Summers CG**, King RA, Wilk MA, McAllister JT, Stepien KE, Dubis A, Brilliant M, Anderson JL, Carroll J. Clinical insights into foveal morphology in albinism (in press).
3. Engel WK, Ramsay RC, Ryan EH, King RA, **Summers CG**: Difficulties with treatment of threshold retinopathy of prematurity in oculocutaneous albinism.
4. Hielscher E, Holleschau AM, **Summers CG**: Photosensitivity in albinism.
5. Conley J, Harvey PS, Mancera AD, **Summers CG**. The optic disk in albinism.
6. Mancera AD, Harvey PS, Conley J, **Summers CG**. Analysis of visual acuity and foveal abnormalities in albinism using digital fundus imaging.
7. MacDonald JT, **Summers CG**, Kutzbach BR, Holleschau AM: Handedness in albinism.

8. De Becker I, Ahlquist A, Pribila J, Berry S, **Summers CG**: Macular dystrophy in a nine-year-old boy with terminal 6q25.3 deletion.

#### Electronic Publications

1. Summers, CG. Orphanet (online): X-linked recessive ocular albinism, 2013.
2. Summers, CG. Orphanet (online): Disability questionnaire: X-linked recessive ocular albinism, 2013.

#### Educational Videos – Physician Education Material

Amblyopia – VIDEOMED

Esotropia – VIDEOMED

Exotropia - VIDEOMED

#### Books

None

#### Chapters in Books

1. King RA, **Summers CG**: Albinism: Ocular and Oculocutaneous Albinism and Hermansky-Pudlak Syndrome. In Cassidy SB and Allanson JE (eds): *Management of Genetic Syndromes*, 3rd ed., Wiley-Blackwell, New York, NY, 2010.
2. King RA, Oetting WS, **Summers CG**, Creel DJ, Hearing VJ. Abnormalities of Pigmentation. In: Rimoin DL, Connor JM, Pyeritz RE, Korf BR, eds: *Emery and Rimoin's Principles and Practice of Medical Genetics*, 5<sup>th</sup> ed., New York: Churchill Livingstone Elsevier, 2007; v. 3: pp. 3380-427.
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8. Stewart SA, **Summers CG**, Lavoie JD, Egbert JE: Prism adaptation in variable esotropia. In Lennerstrand G (ed): *Update on Strabismus and Pediatric Ophthalmology*, CRC Press, Boca Raton, FL, 1995; pp 217-219.
9. **Summers CG**, Davis LK, Egbert JE: Using an occluder contact lens for amblyopia management. In Lennerstrand G (ed): *Update on Strabismus Pediatric Ophthalmology*, CRC Press, Boca Raton, FL, 1995; pp 63-66.
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12. Metz HS, **Summers CG**: Vertical strabismus. In Lindstrom RL and Lindquist TD (eds): *Ophthalmic Surgery: A Looseleaf Workbook and Update Service*, Year Book Medical Publishers, 1990.
13. **Summers CG**, Metz HS: Problems in strabismus surgery. In Lindstrom RL and Lindquist TD (eds): *Ophthalmic Surgery: A Looseleaf Workbook and Update Service*, Year Book Medical Publishers, 1990.
14. **Summers CG**, Metz HS: Esodeviations. In Lindstrom RL and Lindquist TD (eds): *Ophthalmic Surgery: A Looseleaf Workbook and Update Service*, Year Book Medical Publishers, 1990.
15. **Summers CG**, Metz HS: Exodeviations. In Lindstrom RL and Lindquist TD (eds): *Ophthalmic Surgery: A Looseleaf Workbook and Update Service*, Year Book Medical Publishers, 1990.
16. **Summers CG**, Metz HS: Fundamentals of strabismus surgery. In Lindstrom RL and Lindquist TD (eds): *Ophthalmic Surgery: A Looseleaf Workbook and Update Service*, Year Book Medical Publishers, 1990.

**Software Development**

None

**Patents**

None

**Websites**

None

**Presentations****Invited Oral Presentations at International Professional Meetings, Conferences, etc.**

1. *New Developments in Albinism*, Albinism Fellowship of UK and Ireland, Derbyshire, England, October 24, 2015.
2. *Basics of Albinism*, Albinism Fellowship of UK and Ireland, Derbyshire, England, October 23, 2015.
3. *Top Ten Things I've Learned About Albinism*, Montreal, Quebec, Canada, October 16, 2016.
4. *Abnormal Head Postures - What Do They Mean?* Montreal, Quebec, Canada, October 16, 2015.
5. Research update, Mini-NOAH conference, Milwaukee, WI, August 1, 2015.
6. Research update, Mini-NOAH conference, Austin, TX, May 2, 2015.
7. Research update, National Organization for Albinism and Hypopigmentation, July 2014, San Diego, CA.
8. *Why People with Albinism See Differently*, National Organization for Albinism and Hypopigmentation, July 9, 2014, San Diego, CA.
9. Research update, Mini-NOAH conference, July 9, 2014, San Diego, CA.
10. Research update. Albinism Fellowship of Australia Biennial Conference, Sydney, Australia, October 12, 2013.
11. *What is Albinism?* Albinism Fellowship of Australia Seminar for Health Professionals, Sydney, Australia, October 11, 2013.
12. Albinism 101 Workshop. Albinism Fellowship of Australia Biennial Conference, Sydney, Australia, October 11, 2013.
13. *MPS IVA and the Eye*, 12<sup>th</sup> International Symposium on MPS and Related Diseases, Noordwijkerhout, The Netherlands, June 30, 2012.
14. *Morquio Syndrome: A Synopsis of the Summit*, MPS Study Group Meeting, Manchester, England, September 22, 2011.
15. *Keratoplasty in MPS: A Collective Experience*, MPS Study Group Meeting, Manchester, England, September 22, 2011.

16. *Ocular Findings in Mucopolysaccharidosis Patients After Bone Marrow Transplantation. Mucopolysaccharidosis and The Eye*, Algarve, Portugal, November 6, 2010.
17. *Doctor, Why Can't My Baby See?* St. Erik Eye Hospital, Stockholm, Sweden, Sept. 16, 2010. Mucopolysaccharidoses and the Eye. BioMarin Technical Group Meeting, South Hampton, Bermuda, April 28, 2010.
18. *Oculocutaneous Albinism: Molecular Studies of a Complex Phenotype* (King RA, Summers CG, Oetting WS). XVI International Congress of Eye Research, Sydney, Australia, August 2004.
19. *High Injection Pressures during Intralesional Injection of Corticosteroids into Capillary Hemangiomas*. American Association for Pediatric Ophthalmology and Strabismus, Toronto, ON, CAN, April 17, 1999.
20. *Anterior Transposition of the Superior Oblique Tendon for Oculomotor Palsy*. American Association for Pediatric Ophthalmology and Strabismus, Toronto, ON, CAN, April 18, 1999.
21. Discussion: *Rehabilitation in Children with Cataracts*. American Ophthalmological Society, Hot Springs, VA, May 20, 1998.
22. *Prism Adaptation in Variable Strabismus*. American Association for Pediatric Ophthalmology and Strabismus/International Strabismological Association, Vancouver, BC, CAN, June 19, 1994.
23. *Ocular Ischemia Associated with Neurofibromatosis*. American Association for Pediatric Ophthalmology and Strabismus/International Strabismological Association, Vancouver, BC, CAN, June 20, 1994.
24. *Nystagmus Dampening Surgery: Cosmetic or Functional Effects?* Association for Pediatric Ophthalmology and Strabismus/International Strabismological Association, Vancouver, BC, CAN, June 20, 1994.
25. *Using an Occluder Contact Lens for Amblyopia Management*. American Association for Pediatric Ophthalmology and Strabismus/International Strabismological Association, Vancouver, BC, June 22, 1994.
26. *The Effect of Nystagmus on Grating Acuity*. American Association for Pediatric Ophthalmology and Strabismus, Montreal, QC, May 15, 1991.
27. *Is the Phakic Eye Normal in Monocular Pediatric Aphakia?* American Association for Pediatric Ophthalmology and Strabismus, Montreal, QC, May 16, 1991.

#### **Invited Oral Presentations at National Professional Meetings**

1. *Noonan Syndrome – Ophthalmic Issues*. Noonan Syndrome Foundation Meeting, Minneapolis, MN, July 21-23, 2016.
2. *Ocular outcomes of combination enzyme replacement therapy with hematopoietic cell transplantation in Hurler Syndrome*. The Association for Research in Vision and Ophthalmology, Denver, CO, May 3, 2015.
3. *Function vs. Structure in Albinism*, NOAH mini-conference, Austin, TX, May 2, 2015.
4. *Management of the Apparently Blind Child*, AACO-AAPOS Symposium, Chicago, IL, October 20, 2014.
5. *Vision Rehabilitation Services for Children; The Pediatric Ophthalmologist Perspective*. American Academy of Ophthalmology, October 20, 2014, Chicago, IL.
6. *A Cross Sectional Examination of Visual Acuity by Specific Type of Albinism*. American Ophthalmological Society, New York, NY, May 17, 2014.
7. *Mutation Identification in the Family with Autosomal Recessive Encephalocele and Retinal Detachments Originally Described by Knobloch*. American Ophthalmological Society, New York, NY, May 17, 2014.
8. *A Cross Sectional Examination of BCVA by Specific Type of Albinism*. Association for Research in Vision and Ophthalmology, Orlando, FL, May 8, 2014.
9. *Reliability of Automated Visual Fields in Children*. Association for Research in Vision and Ophthalmology, Orlando, FL, May 7, 2014.

10. *Latest Vision Research in Albinism*. National Organization for Albinism and Hypopigmentation, New York. May 4, 2013.
11. *The Optic Nerve and Retinal Vasculature in Albinism: Normal or Abnormal?* American Association for Pediatric Ophthalmology and Strabismus, Boston, MA, April 6, 2013.
12. *Congenital Myotonic Dystrophy*, Genetics Workshop, American Association for Pediatric Ophthalmology and Strabismus, Boston, MA, April 5, 2013.
13. *Corneal Manifestations of Genetic Diseases*, **Marshall M. Parks Lecture**, American Academy of Ophthalmology, Chicago, Nov. 12, 2012.
14. *Highlights of the Esotropia and Exotropia PPP*, American Academy of Ophthalmology, Chicago, Nov. 11, 2012.
15. *Highlights of the Pediatric Eye Evaluations PPP*, American Academy of Ophthalmology, Chicago, Nov. 11, 2012.
16. *Highlights of the Amblyopia PPP*, American Academy of Ophthalmology, Chicago, Nov. 11, 2012.
17. *The Eye-A Window Into the Brain: Looking for Retinal Biomarkers of Psychopathology*, Society for Neuroscience, New Orleans, October 15, 2012.
18. *What's New in Research?* National Organization of Albinism and Hypopigmentation, St. Louis, MO, July 2012.
19. *How Individuals with Albinism See*. National Organization of Albinism and Hypopigmentation, St. Louis, MO, July 2012.
20. *Changes in Refractive Error in Patients with Albinism*, Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 6, 2012.
21. *Genetic and Metabolic Cases You Don't Want to Miss!* American Association for Pediatric Ophthalmology and Strabismus, San Antonio, TX, March 27, 2012.
22. *Analysis of Visual Acuity and Foveal Abnormalities in Albinism Using Digital Fundus Images*, American Association for Pediatric Ophthalmology and Strabismus, San Antonio, TX, March 26, 2012.
23. *Eye Findings in Morquio Syndrome*. Morquio Summit, Sausalito, CA, May 8-9, 2011.
24. *Spotlight on Pediatric Ophthalmology*, American Academy of Ophthalmology, Orlando, FL, October 23, 2011.
25. *Vision and Spatial Awareness in Albinism*, Association for Research in Vision and Ophthalmology, May 5, 2011, Ft. Lauderdale, FL.
26. *Variability in Foveal Morphology in Albinism Assessed with SD-OCT*, Association for Research in Vision and Ophthalmology, Sarasota, FL, May 2, 2011.
27. *Genetic and Metabolic Cases You Don't Want to Miss!* American Association for Pediatric Ophthalmology and Strabismus, San Diego, FL, April 1, 2011.
28. *Change in Visual Acuity in Albinism in the Early School Years*. American Society of Human Genetics, Washington, DC, November 4, 2010.
29. *When the Eyes Don't Move Where They Should: Making Sense of Limited Motility*, American Academy of Ophthalmology, Chicago, IL, October 19, 2010.
30. *Why People with Albinism See Differently*. National Organization for Albinism and Hypopigmentation, Washington, DC, July 17, 2010.
31. *Vision Research in Albinism—The Latest*. National Organization for Albinism and hypopigmentation, Washington, DC, July 16, 2010.
32. *New Insights Into the Spectrum of Foveal Development in Albinism*, Association for Research in Vision and Ophthalmology, Fr. Lauderdale, FL, May 5, 2010.
33. *Insight into the Spectrum of Foveal Immaturity in Albinism*, Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, April 18, 2010.
34. *Retinal Disease Presenting as Nystagmus*. American Academy of Ophthalmology – American Association for Pediatric Ophthalmology and Strabismus symposium, American Academy of Ophthalmology, San Francisco, CA, October 2009.
35. *Photosensitivity in Albinism*. American Association for Pediatric Ophthalmology and Strabismus, San Francisco, CA, April 20, 2009.

36. *Doctor, Why Can't My Child See?* American Academy of Ophthalmology course, Atlanta, GA, November 10, 2008.
37. *Does Age Matter? Treating Exotropia.* American Association for Pediatric Ophthalmology and Strabismus, American Orthoptic Council, American Association of Certified Orthoptists symposium at the American Academy of Ophthalmology, Atlanta, GA, November 9, 2008.
38. *Vision in Albinism - Structure and Function.* National Organization for Albinism and Hypopigmentation, Las Vegas, NV, July 12, 2008.
39. *Current Albinism Research.* National Organization for Albinism and Hypopigmentation, Las Vegas, NV, July 11, 2008.
40. *Outcome of Angle Surgery in Children with Aphakic Glaucoma.* American Association for Pediatric Ophthalmology and Strabismus, Washington, DC, April 2008.
41. *Neurodevelopment in Children with Albinism.* American Academy of Ophthalmology, New Orleans, LA, November 10, 2007.
42. *Predictive Value of Preoperative Central Corneal Thickness for Aphakic Glaucoma in Congenital Cataract.* American Association for Pediatric Ophthalmology and Strabismus, Seattle, WA, April, 2007.
43. *Evaluation of Vision-Specific Quality of Life in Albinism.* American Association for Pediatric Ophthalmology and Strabismus, Seattle, WA, April, 2007.
44. *Reading Acuity in Albinism: Evaluation Using MN READ Charts.* American Association for Pediatric Ophthalmology and Strabismus, Seattle, WA, April, 2007.
45. *Pre-Op Decision Making: How the Orthoptist Can Help.* American Association of Certified Orthoptists, Las Vegas, NV, November 11, 2006.
46. *Win-Win Strategies with Children.* Nebraska Academy of Eye Physicians and Surgeons, Omaha, NE, October 13, 2006.
47. *Top Ten Teaching Cases.* Nebraska Academy of Eye Physicians and Surgeons, Omaha, NE, October 13, 2006.
48. *Win-Win Strategies with Children.* Penn State University, Hershey, PA, September 20, 2006.
49. *Top Ten Teaching Cases.* Penn State University, Hershey, PA, September 20, 2006.
50. *Causes of Abnormal Refractive Errors in Children.* American Association of Certified Orthoptists, Chicago, IL, October 17, 2005.
51. *Noonan Syndrome: Ophthalmologic Issues,* National Noonan Syndrome Meeting, Minneapolis, MN, July 15, 2005.
52. *Glaucoma Following Pediatric Cataract Extraction: Rate and Risk Factors,* (Lawrence MG, Kramarevsky N, Christiansen SP, Wright MM, Summers CG). American Ophthalmological Society, Sea Island, GA, May 23-25, 2005.
53. *Strabismus and Visual Outcome in Bilateral Peters' Anomaly.* American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 2005.
54. *Optical Coherence Tomography in Albinism.* American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 2005.
55. *Surgical Approaches: Point/Counterpoint* (workshop). American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 2005.
56. *Ominous Harbingers in the Pediatric Eye Exam.* American Academy of Ophthalmology, New Orleans, LA, October 26, 2004; Chicago, IL, October 15, 2005; Las Vegas, NV, November 13, 2006.
57. *Change in Visual Acuity in Albinism in the Early School Years.* American Academy of Ophthalmology, New Orleans, LA, October 26, 2004.
58. *Amblyopia: Pearls and Pitfalls.* American Academy of Ophthalmology, New Orleans, LA, October 26, 2004; Chicago, IL, October 15, 2005.
59. *Change in Refractive Error in Preschoolers with Albinism.* American Academy of Ophthalmology, New Orleans, LA, October 25, 2004.
60. *Vision in Albinism.* National Organization of Albinism and Hypopigmentation, Atlanta, GA, July 9, 2004.
61. *Functional and Structural Outcome Following Lensectomy for Ectopia Lentis.* American Association for Pediatric Ophthalmology and Strabismus, Washington, DC, March 28, 2004.

62. *Strabismus Reoperation: A Second Chance*. American Association for Pediatric Ophthalmology and Strabismus, Washington, DC, March 29, 2004.
63. *Health Related Quality of Life at Age 10 Years in Very-Low-Birth-Weight Children with and without Severe Retinopathy of Prematurity*. Third International Symposium on ROP, Anaheim, CA, November 13, 2003.
64. *Win-Win Strategies for Kids*. American Academy of Ophthalmology, Anaheim, CA, November 16, 2003.
65. *Win-Win Strategies for Kids*. American Association of Certified Orthoptists course, Anaheim, CA, November 15, 2003.
66. *Win-Win Strategies for Kids*. Trinity Eye Symposium, Minot, ND, April 12, 2003.
67. *What's New in Pediatric Eye Care*. Trinity Eye Symposium, Minot ND, April 12, 2003.
68. *Pediatric Ophthalmology and Strabismus: Top Ten Teaching Cases*. Trinity Eye Symposium, Minot, ND, April 12, 2003.
69. *Angle Kappa in Albinism*. American Association for Pediatric Ophthalmology and Strabismus, Waikoloa, HI, March 29, 2003.
70. *Health-Related Quality of Life at Age 10 Years in Low-Birth-Weight Children with and without Retinopathy of Prematurity*. American Association for Pediatric Ophthalmology and Strabismus, Waikoloa, HI, March 29, 2003.
71. *Natural History of Glaucoma and Ocular Hypertension following Congenital Cataract Surgery*. American Association for Pediatric Ophthalmology and Strabismus, Waikoloa HI, March 26, 2003.
72. *Ophthalmic Manifestations of Wolf-Hirshhorn Syndrome*. American Association for Pediatric Ophthalmology and Strabismus, Waikoloa, HI, March 26, 2003.
73. *Glasses Wear in Patients with Albinism*. American Association for Pediatric Ophthalmology and Strabismus, Waikoloa, HI, March 26, 2003.
74. *Albinism: Current Concepts*. Visiting Professor, Long Island Jewish North Shore University Hospital, November 13, 2002.
75. *Win-Win Strategies with Kids*. Visiting Professor, Long Island Jewish North Shore University Hospital, November 13, 2002.
76. *Refraction and Spectacles in Children*. Visiting Professor, Long Island Jewish North Shore University Hospital, November 13, 2002.
77. *Win-Win Strategies with Children*. American Academy of Ophthalmology, Orlando FL, October 22, 2002; Anaheim, CA, November 16, 2003.
78. *Positive Angle Kappa in Albinism*. American Association of Certified Orthoptists, October 21, 2002, Orlando, FL.
79. *Educational and Social Competencies at 8 Years for <1251 Grams at Birth who Developed Threshold ROP*. Pediatric Academic Society, May 6, 2002, Baltimore, MD.
80. *Referral Patterns for Common Amblyogenic Conditions*. American Association of Pediatric Ophthalmology and Strabismus, Seattle, WA, March 23, 2002.
81. *The Effect of Inferior Oblique Transposition on Measurement of Intraocular Pressure*, American Association of Pediatric Ophthalmology and Strabismus, Seattle, WA, March 23, 2002.
82. *Unilateral Inferior Oblique Anterior Transposition for DVD*. American Association of Pediatric Ophthalmology and Strabismus, Seattle, WA, March 21, 2002.
83. *Albinism: Current Concepts*. American Association of Certified Orthoptists, New Orleans, LA, November 12, 2001.
84. *Prisms in the Perioperative Care of the Strabismus Patient*. 2001 Albany Ophthalmology Update, Albany, NY, June 8, 2001.
85. *Strabismus Reoperations: A Second Chance*. 2001 Albany Ophthalmology Update, Albany, NY, June 8, 2001.
86. *Win-Win Strategies with Kids*. 2001 Albany Ophthalmology Update, Albany, NY, June 7, 2001.
87. *Ophthalmic Expression of Albinism Between Siblings*. American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 24, 2001.
88. *Correlation of Grating Acuity with Recognition Acuity in Children with Albinism*. American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 24, 2001.



89. *Change in Refractive Error after Unilateral Levator Resection for Congenital Ptosis.* American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 24, 2001.
90. *Visual Development in Albinism.* American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, March 24, 2001.
91. *Changes in Refractive Error after Unilateral Levator Resection for Congenital Ptosis.* American Association for Pediatric Ophthalmology and Strabismus, San Diego, CA, April, 2000.
92. *Discussion: The Outcome of ROP: Screening for ROP Employing an Outcome Predicted Program.* American Academy of Ophthalmology, Orlando, FL, October 27, 1999.
93. *Albinism: Current Clinical Research and Implications for the Future.* VISION '99, Lighthouse International, New York, NY, July 14, 1999.
94. *Discussion: Achieving Success with the Silicone Expander for Overacting Superior Obliques.* American Ophthalmological Society, Santa Barbara, CA, May 26, 1999.
95. *More Severe Retinopathy of Prematurity Associated with Post-natal Systemic Steroid Administration.* Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 12, 1999.
96. *Horizontal Ocular Misalignment in Fourth Cranial Nerve Palsy.* Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 11, 1999.
97. *Corneal Thickness in Eyes with Congenital Cataracts.* American Association of Pediatric Ophthalmology and Strabismus, Palm Springs, CA, April 7, 1998.
98. *Discussion: Outcomes following Surgery for Persistent Hyperplastic Primary Vitreous.* American Academy of Ophthalmology, San Francisco, CA, October 29, 1997.
99. *Corneal Microcysts in Incontinentia Pigmenti.* Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, May 11, 1997.
100. *Progressive Ocular Abnormalities in Mucopolysaccharidosis following Bone Marrow Transplantation.* American Academy of Ophthalmology, Chicago, IL, October 27, 1996.
101. *Association of Melanin Pigment with Improved Visual Acuity in Albinism.* American Academy of Ophthalmology, Chicago, IL, October 29, 1996.
102. *Office Probing of Congenital Nasolacrimal Obstruction.* American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, April 8, 1995.
103. *Comparison of Two Methods for Calculation of Aphakic Contact Lens Power.* American Association for Pediatric Ophthalmology and Strabismus, Orlando, FL, April 8, 1995.
104. *Regression Formula vs. Retinoscopy Calculation of Aphakic Contact Lens Power in Children.* Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 15, 1995.
105. *Use of Tissue Adhesive for Extraocular Muscle Fixation in Rabbits.* Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May 18, 1995.
106. *Tyrosinase Mutations Show that Patients with Ocular Albinism have Oculocutaneous Albinism.* American Academy of Ophthalmology, Atlanta, GA, October 31, 1995.
107. *Surgical Management of Ectopia Lentis.* American Association for Pediatric Ophthalmology and Strabismus Symposium at American Academy of Ophthalmology, San Francisco, CA, October 31, 1994.
108. *Efficacy of Prism Adaptation in Variable Strabismus.* Association for Research in Vision and Ophthalmology, May 6, 1994, Sarasota, FL.
109. *The Effect of Contact Lens Correction of Pediatric Monocular Aphakia on Strabismus.* American Academy of Ophthalmology, Chicago, IL, November 14-15, 1993.
110. *The High Prevalence of Ocular Hypertension and Glaucoma following Surgical Treatment of Congenital Cataracts.* American Academy of Ophthalmology, Chicago, IL, November, 1993.
111. *Predicting Visual Acuity in Children with Optic Nerve Colobomas.* American Academy of Ophthalmology, Chicago, IL, November, 1993.
112. *Development of Grating Acuity Between Ages 1 and 4 1/2 Years as a Function of Acute Phase Retinopathy of Prematurity (ROP).* Association for Research in Vision and Ophthalmology, Sarasota, FL, May 7, 1993.
113. *Retinal Degeneration in Mucopolysaccharidoses following Bone Marrow Transplantation.* Association for Research in Vision and Ophthalmology, Sarasota, FL, May 4, 1993.

114. *Discussion of paper: Incidence of Primary Monofixation Syndrome in Parents of Children with Congenital Esotropia.* American Association for Pediatric Ophthalmology and Strabismus, Palm Springs, CA, April 20, 1993.
115. *Incidence of Primary Monofixation Syndrome in Parents of Children with Congenital Esotropia.* American Association for Pediatric Ophthalmology and Strabismus, Palm Springs, CA, April 20, 1993.
116. *Ophthalmic Features of Minimal Pigment Oculocutaneous Albinism.* American Academy of Ophthalmology, Dallas, TX, November 10, 1992.
117. *Visual Development in Albinism.* Association for Research in Vision and Ophthalmology, Sarasota, FL, May 3, 1992.
118. *Ocular Cosmesis in ROP.* Association for Research in Vision and Ophthalmology, Sarasota, FL, May 2, 1991.
119. *Neodymium-YAG Pupilloplasty in Pediatric Aphakia.* American Association for Pediatric Ophthalmology and Strabismus, Bolton Landing, NY, July 31, 1990.
120. *Unexpected Good Results following Therapy for Anisometropic Amblyopia Associated with Unilateral Peripapillary Myelinated Nerve Fibers.* American Association for Pediatric Ophthalmology and Strabismus, Bolton Landing, NY, July 30, 1990.
121. *Electroretinography following Bone Marrow Transplantation in the Mucopolysaccharidoses.* Association for Research in Vision and Ophthalmology, Sarasota, FL, May 3, 1990.
122. *Ocular Changes in the Mucopolysaccharidoses following Bone Marrow Transplantation.* American Academy of Ophthalmology, Las Vegas, NV, October 12, 1988.
123. *Use of the Acuity Card Procedure to Assess Vision in Albinos.* American Association for Pediatric Ophthalmology and Strabismus, Boston, MA, May 18, 1988.
124. *Retinal Function in the Mucopolysaccharidoses following Bone Marrow Transplantation.* Association for Research in Vision and Ophthalmology, Sarasota, FL, May 5, 1988.
125. *Hermansky-Pudlak Syndrome.* American Academy of Ophthalmology, Dallas, TX, November 8, 1987.
126. *Treatment of Uveal Juvenile Xanthogranuloma.* American Academy of Ophthalmology, Dallas, TX, November 8, 1987.
127. *Oculomotor Apraxia Associated with Intracranial Lipoma.* American Association for Pediatric Ophthalmology and Strabismus, Scottsdale, AZ, March 18, 1987.
128. *Familial Aniridia - Wilms' Tumor Syndrome.* American Association for Pediatric Ophthalmology and Strabismus, Scottsdale, AZ, March 16, 1987.
129. *Use of a Modified Binocular Visual Field to Assess Cyclodiplopia.* American Academy of Ophthalmology, New Orleans, LA, November 9, 1986.
130. *A New Method in the Assessment of Cyclodiplopia.* American Academy of Ophthalmology, New Orleans, LA, November 9, 1986.
131. *Use of a Modified Single Binocular Visual Field in Evaluation of Cyclodiplopia.* American Association for Pediatric Ophthalmology and Strabismus, January 19, 1986, Maui, HI.
132. *Ghost Cell Glaucoma following Lens Implantation.* 6<sup>th</sup> Annual AIOLS Symposium, New Orleans, LA, March 24, 1983.
133. *Brain Stem Morphology in Sudden Infant Death Syndrome.* 4<sup>th</sup> Annual Eastern Student Research Forum, Miami, FL, February 7, 1978.

**Invited Oral Presentations at Local and Regional Professional Meetings, Conferences, etc.**

1. *Variable Phenotype in Retinal Dystrophies*, University of Minnesota Letson Lectureship, October 10, 2015.
2. Lecture to Dept. OVNS faculty: Clinical Research, September 11, 2015.
3. *Discoveries in Pediatric Ophthalmology*, University of Minnesota, Minneapolis, MN, June 18, 2011.
4. Ophthalmology Workshop, University of Minnesota Year II Medical School, Minneapolis, MN, March 5, 2010.

5. *Pediatric Ophthalmology*. Health Careers Investigators Program. University of Minnesota, Minneapolis, MN, June 11, 2008.
6. *Albinism Research Update*. National Organization of Albinism and Hypopigmentation. Bloomington, MN, July 21, 2006.
7. *Albinism: All About the Eye*. National Organization of Albinism and Hypopigmentation. Bloomington, MN, July 22, 2006.
8. *Recent Results of the Amblyopia Treatment Studies*. Twin Cities Eye Meeting, Minneapolis, MN, March 13, 2004.
9. *Top Ten Pearls in Pediatric Ophthalmology and Strabismus*. Twin Cities Eye Meeting, Minneapolis, MN, March 10, 2006.
10. *Win-Win Strategies for Kids*. ETROP Study Center Coordinators, Minneapolis, MN, August 8, 2003.
11. *Lid and Lacrimal Disorders in Children*. Department of Pediatrics, University of Minnesota, April 21, 1998; August 7, 2001; March 25, 2002.
12. *Strabismus Reoperation: A Second Chance*. Eye Meeting of the Twin Cities, Minneapolis, MN, February 10, 2000.
13. *Win-Win Strategies for Kids*. Annual CME course, Department of Ophthalmology, University of Minnesota, Minneapolis, MN, March 12, 1999.
14. *Good Omens - or Ominous Harbingers - in the Pediatric Eye Exam*. Annual CME course, Department of Ophthalmology, University of Minnesota, Minneapolis, MN, April 12, 1997.
15. *Research in Albinism: Opportunity, Challenge and Evolution*. Historical Celebration of the Department of Ophthalmology, University of Minnesota, Minneapolis, MN, February 21, 1997.
16. *A Study of Parental Satisfaction with Office Probing of Nasolacrimal Obstruction*. Northwestern Pediatric Society, St. Paul, MN, October 11, 1996.
17. *Prisms in the Perioperative Care of the Strabismus Patient*. Annual CME course, Department of Ophthalmology, University of Minnesota, Minneapolis, MN, April 12, 1996.
18. *Amblyopia: Pearls and Pitfalls*. Annual CME Course, Department of Ophthalmology, University of Minnesota, Minneapolis, MN, May 5, 1995.
19. *Efficacy of an Opaque Contact Lens in Treating the Noncompliant Amblyope*. Northwestern Pediatric Society, St. Paul, MN, September 30, 1994.
20. *Efficacy of Ophthalmologic Results after Bone Marrow Transplantation for Hurler's Disease*. Storage Disease Collaborative Study Group, Minneapolis, MN, August 20, 1994.
21. *Amblyopia Case Management*. Northern Summer Eye Symposium, Brainerd, MN, July 17, 1993.
22. *Strabismus Case Management*. Northern Summer Eye Symposium, Brainerd, MN, July 17, 1993.
23. *Pearls in Pediatric Ophthalmology*. Northern Summer Eye Symposium, Brainerd, MN, July 17, 1993.
24. *Ocular Trauma and Child Abuse*. Pediatric Ophthalmology for Primary Care Practitioners, Minneapolis, MN, June 19, 1993.
25. *Children at High Risk for Developing Eye Disease and Blindness*. Pediatric Ophthalmology for Primary Care Practitioners, Minneapolis, MN, June 19, 1993.
26. *Use of an Occluder Contact Lens in Amblyopia Management*. Midwest Orthoptic (AAO) Meeting, Minneapolis, MN, June 11, 1993.
27. Panel discussion: *Amblyopia: Diagnosis and Treatment*. Midwest Orthoptics (AAO) Meeting, Minneapolis, MN, June 11, 1993.
28. *Strabismus Surgery*. Continuing Education Program for Ophthalmology Medical Personnel, Minneapolis, MN, May 21, 1993.
29. *Adverse Cosmetic Outcome Associated with Retinopathy of Prematurity*. Northwestern Pediatric Society, Bloomington, MN, September 18, 1992.
30. *Strabismus following Cataract Extraction*. Northern Summer Eye Symposium, Brainerd, MN, July 18, 1992.
31. *Pediatric Ophthalmology: Clinical Vignettes*. Northern Summer Eye Symposium, Brainerd, MN, July 18, 1992.
32. *Eye Injuries in Infants and Children*. Pediatric Ophthalmology for Primary Care Practitioners Course, Minneapolis, MN, May 30, 1992.

33. *Symptoms and Signs of Blinding Diseases in Infants and Children*. Pediatric Ophthalmology for Primary Care Practitioners Course, Minneapolis, MN, May 30, 1992.
34. *Is the Unoperated Eye Normal in Children Undergoing Monocular Cataract Surgery?* Northwestern Pediatric Society, Minneapolis, MN, October 4, 1991.
35. *Retinopathy of Prematurity Update*. Department of Ophthalmology Annual Continuation Course, Minneapolis, MN, April 15, 1991.
36. *Recent Advances in Pediatric Ophthalmology*. Grand Rounds, Minneapolis Children's Medical Center, Minneapolis, MN, November 21, 1989.
37. *Cryo-ROP Study: New Developments in Treatment of Blinding Eye Disease*. Conference, Minneapolis, MN, October 21, 1989.
38. *Cryo-ROP Follow-up Study*. Research Grand Rounds, University of Minnesota, Minneapolis, MN, June 30, 1989.
39. *Workshop: Retinopathy of Prematurity*. Great Plains Organization for Perinatal Health Care, Minneapolis, MN, May 8, 1989.
40. *Common Eye Conditions of Childhood*. Pediatric Nurse Practitioners Program, College of St. Catherine, St. Paul, MN, February 18, 1987; February 17, 1988; February 15, 1989.
41. *Current Topics in Pediatric Ophthalmology*. Twin Cities Pediatric Nurse Practitioners, St. Paul, MN, November 10, 1988.
42. *Genetic Eye Disorders*. Minneapolis Ophthalmological Society, Minneapolis, MN, November 7, 1988.
43. *Ocular Trauma*. CME Course for Nurses, Minneapolis, MN, April 22, 1986; June 1, 1988.
44. *Abnormal Head Postures: Ocular Causes*. Mayo Clinic, Rochester, MN, May 25, 1988.
45. *Visual Function in the Mucopolysaccharidoses following Bone Marrow Transplantation*. First International Congress on Mucopolysaccharidoses, Minneapolis, MN, May 22, 1988.
46. *Assessment of Vision in Children*. Minnesota Lions, Minneapolis, MN, April 16, 1988.
47. *Cataracts in Children*. Minneapolis Ophthalmological Society, Minneapolis, MN, October 5, 1987.
48. *Use of Chemodenervation (Botulinum A Toxin) to Treat Strabismus in Children*. Northwestern Pediatric Society, Minneapolis, MN, September 18, 1987.
49. *Intralesional Steroid Injection of Periocular Hemangiomas*. Northwestern Pediatric Society, Minneapolis, MN, September 18, 1987.
50. *Cataracts and Glaucoma in Children*. Grand Rounds, St. Paul Children's Hospital, St. Paul, MN, January 8, 1987.
51. *Visual Outcome following Cataract Surgery in Children*. Northwestern Pediatric Society, Bloomington, MN, September 26, 1986.
52. *Strabismus Surgery*. CME Course for Technicians, St. Paul, MN, June 1, 1986.
53. *Pediatric Ophthalmology: Current Concepts*. CME Course for Nurses, Minneapolis, MN, April 22, 1986.
54. *Orbital Tumors in Children*. Grand Rounds, Department of Ophthalmology, University of Minnesota Hospitals, Minneapolis, MN, February 22, 1985.
55. *Trauma of the Orbit and Lids*. Practical Ophthalmology in Primary Care, University of Minnesota Continuing Medical Education Course, October 18, 1985.
56. *Cyclodeviations: Diagnosis and Treatment*. Grand Rounds, Department of Ophthalmology, University of Minnesota Hospitals, Minneapolis, MN, May 24, 1985.
57. *Visual Outcome following Cataract Surgery in Children*. Minnesota Academy of Ophthalmology, Minneapolis, MN, December 14, 1984.
58. *Secondary IOL Power Calculations*. 5<sup>th</sup> Annual Anterior Segment Surgery Workshop, University of Minnesota, Minneapolis, MN, July 7, 1984.
59. *Ocular Motility Disorders in Children*. Department of Neurology, University of Minnesota Hospitals, Minneapolis, MN, February 22, 1984.
60. *Ghost Cell Glaucoma following ICCE and Lens Implantation*. Minnesota Academy of Ophthalmology, Minneapolis, MN, December 10, 1982.
61. *Tonic Cholinergic Pupillary Responses in Sympathectomized Cats*. Minnesota Academy of Ophthalmology, Minneapolis, MN, December 8, 1978.

**Peer-Reviewed Oral Presentations at Professional Meetings, Conferences, etc.**  
**None**

**Poster Abstract Presentations at Professional Meetings, Conferences, etc.**

1. Wilk MA, McAllister JR, Patitucci T, Dubis AM, Stepien KE, Wirostko WJ, Costakos DM, **Summers CG**, Brilliant MH, Carroll J. Characterizing foveal specialization in albinism using AOSLO and SD-OCT (ARVO 2013).
2. Harvey PS, King RA, **Summers CG**: Foveal depression in albinism. *Ophthalmology* 2008;115:756.
3. **Summers CG**, Kutzbach BR, Merrill K, Hogue K, Downes S, Holleschau AM: Evaluation of vision-specific quality of life in albinism. *J AAPOS* 2007;11:102.
4. Merrill KS, Hogue K, Downes S, Kutzbach B, MacDonald JT, **Summers CG**: Reading acuity in albinism: Evaluation using MNREAD. *J AAPOS* 2007;11:97.
5. Wu-Chen WY, Letson RD, **Summers CG**: Functional and structural outcome following lensectomy for ectopia lentis. *J Am Assoc Pediatr Ophthalmol Strabismus* 2004;8:102.
6. Quinn GE, Dobson V, Hardy RJ, Kivlin J, Palmer EA, Phelps DL, Repka MX, Siatkowski RM, **Summers CG**, Tung B: Does cryotherapy affect refractive error? Results from treated vs control eyes in the multicenter trial of cryotherapy for retinopathy of prematurity (CRYO-ROP). *Invest Ophthalmol Vis Sci* 1998;39:5898.
7. Harrison AR, **Summers CG**: Corneal microcysts in incontinentia pigmenti. *Inv Ophthalmol Vis Sci* (suppl) 1997;38:132.
8. Quinn GE, Dobson V, Barr CC, Davis BR, Palmer EA, Robertson J, **Summers CG**, Trese MT, Tung B: Visual acuity after vitrectomy for ROP: Follow-up at 5-1/2 years. *Invest Ophthalmol Vis Sci* 1996;37:S126.
9. Gullingsrud EO, **Summers CG**: Progressive ocular abnormalities following bone marrow transplantation. *Ophthalmology* 1996;103:157.
10. **Summers CG**: Association of melanin pigment with improved visual acuity in albinism. *Ophthalmology* 1996;103:187.
11. Philip DA, **Summers CG**, Davis LK, Egbert JE, Letson RD: Regression formula vs. retinoscopy calculation of aphakic contact lens power in children. *Invest Ophthalmol Vis Sci* 1995;36:8312.
12. **Summers CG**, Cameron JD, Mindrup EA: Use of a tissue adhesive for extraocular muscle fixation in rabbits. *Invest Ophthalmol Vis Sci* 1995;36:8956.
13. **Summers CG**, Fryer JT, Oetting WS, King RA: Tyrosinase mutations show that patients with ocular albinism have oculocutaneous albinism. *Ophthalmology* 1995;102:174.
14. **Summers CG**, Stewart SA, Lavoie JD, Egbert JE: Efficacy of prism adaptation in variable esotropia. *Invest Ophthalmol Vis Sci* 1994;35:2203.
15. Gullingsrud EO, Purple RL, Krivit W, Whitley CB, **Summers CG**: Retinal degeneration in mucopolysaccharidoses following bone marrow transplantation. *Invest Ophthalmol Vis Sci* 1993;34:1078.
16. Kodsi SR, **Summers CG**, Lavoie J: The effect of contact lens correction of pediatric monocular aphakia. *Ophthalmology* 1993;100:119.
17. Olsen TW, **Summers CG**, Knobloch WH: Predicting visual acuities in children with optic nerve colobomas. *Ophthalmology* 1993;100:123.
18. Dahlhauser KF, Egbert J, Keithahn MA, Letson RD, **Summers CG**: The high prevalence of ocular hypertension and glaucoma following surgical treatment of congenital cataracts. *Ophthalmology* 1993;100:141.
19. **Summers CG**: Visual development in albinism. *Invest Ophthalmol Vis Sci* 1992;33:718.
20. Quinn GE, Dobson V, Palmer DL, Phelps DL, Saunders RA, **Summers CG**, Tung B: Development of grating acuity between ages 1 and 4½ years as a function of severity of acute-phase retinopathy of prematurity. *Invest Ophthalmol Vis Sci* 1992;34:1446.
21. **Summers CG**, Phelps DL, Palmer EA: Ocular cosmesis in retinopathy of prematurity. *Invest Ophthalmol Vis Sci* 1991;32:1145.

22. **Summers CG**, MacDonald JT: Vision despite tomographic absence of the occipital cortex (Abstract). *Am J Ophthalmol* 1991;111:529.
23. **Summers CG**, Purple RL, Krivit W, Ramsay NKD, Kersey JH, Whitley CB: Electroretinography following bone marrow transplantation in the mucopolysaccharidoses (Abstract). *Invest Ophthalmol Vis Sci* 1990;31:415.
24. **Summers CG**, Letson RD: Use of chemodenervation (Botulinum A toxin) to treat strabismus in children (Abstract). *Minn Med* 1988;71:158.
25. **Summers CG**, Letson RD: Intralesional steroid injection of periocular hemangiomas (Abstract). *Minn Med* 1988;71:159.
26. **Summers CG**, Purple RL, Pineda R, Whitley CB, Krivit W, Ramsay NKC, Kersey JH: Retinal function in the mucopolysaccharidoses following bone marrow transplantation (Abstract). *Invest Ophthalmol Vis Sci* 1988;29:334.
27. **Summers CG**, Purple RL, Whitley CB, Pineda R, Ramsay NKC, Kersey JH, Krivit W: Ocular changes in the mucopolysaccharidoses following bone marrow transplantation (Abstract). *Ophthalmology* 1988;95:149.
28. **Summers CG**, King RA, Knobloch WH, Witkop CJ: Hermansky-Pudlak syndrome: Ophthalmic findings (Abstract). *Ophthalmology* (Suppl) 1987;94:117.
29. Treacy KW, **Summers CG**, Letson RD, Pederson JE: Periocular and topical steroids in the treatment of uveal juvenile xanthogranuloma (Abstract). *Ophthalmology* (Suppl) 1987;94:13.
30. **Summers CG**, Parker JC, Valdes-Dapena M: Brain stem morphology in sudden infant death syndrome (Abstract). *Clin Research* 1978; 26:641A.

### Other Key Activities and Accomplishments

Panel for writing questions for PORT and DOCK, American Board of Ophthalmology, 2012.

Pediatric Eye Disease Investigator Group, 1997-Present.

University of Minnesota Principal Site Investigator 1997-present.

Participating Center, Pilot Study for Contrast Sensitivity Testing, CRYO-ROP

Multicenter Trial, 1996.

Participating Center, Pilot Study for Goldman Perimetry, CRYO-ROP Multicenter Trial, 1994-95.

Member, Executive Committee, Phases III and IV, CRYO-ROP Multicenter Trial, 1993-2002.

AUPO Commissioner to Joint Commission on Allied Health Personnel in Ophthalmology (1992-96):

Member, Long Range Planning Committee, 1992-93.

Member, Regional Continuing Education Committee, 1992-93.

Member, Communications Committee, 1992-93.

Member, Certification Committee, 1994-95.

Member, Performance Test Committee, 1994-95.

Member, Executive Committee, STOP-ROP Clinical Trial, 1991-93.

Planning Committee, Phase III, Cryotherapy for Retinopathy of Prematurity Follow-up Study, 1991-92.

Member, Long Range Planning Committee, American Association for Pediatric Ophthalmology and Strabismus, 1990-93.

Member, Executive Committee, Phase II CRYO-ROP Multicenter Trial, 1989-94.

### TEACHING AND CURRICULUM DEVELOPMENT

#### University of Minnesota

##### Course/Lecture List

*Inherited Retinal Disorders and Electroretinography*, Department of OVNS, November 13, 2015.

*Amblyopia*, Department of OVNS, November 13, 2015.

*Abnormal Head Postures*, University of Minnesota, Minneapolis, MN, April 19, 2013.

*Introduction to Pediatric Ophthalmology*, University of Minnesota, Minneapolis, MN, August 5, 2011.

*Nasolacrimal Disorders in Children.* Department of Pediatrics, University of Minnesota, Minneapolis, MN, September 29, 2004.

*Strabismus Surgery: Indications, Techniques and Consequences.* Department of Ophthalmology, University of Minnesota, Minneapolis, MN, April 8, 1996; January 3, 1997; June 12, 1998; March 5, 1999; May 28, 1999.

*Pediatric Eye Infections.* Annual CME course, Department of Pediatrics, University of Minnesota, Minneapolis, MN, June 19, 1997.

*Childhood Lens Disorders.* BCSC, Department of Ophthalmology, University of Minnesota, Minneapolis, MN, January 20, 1995; December 20, 1996.

*Incomitant Strabismus.* BCSC, Department of Ophthalmology, University of Minnesota, Minneapolis, MN, March 10, 1995.

*Pediatric Orbital Tumors.* BCSC, Department of Ophthalmology, University of Minnesota, Minneapolis, MN, February 17, 1995.

*Congenital Orbital Disorders.* University of Minnesota, Minneapolis, MN, September 29, 1989.

*Inflammations of the Nasolacrimal System.* BCSC Course, University of Minnesota, Minneapolis, MN, March 4, 1988.

*Ocular Manifestations of the Craniofacial Malformations.* Department of Ophthalmology, University of Minnesota Hospitals, Minneapolis, MN, November 15, 1985; August 13, 1987.

### **Curriculum Development**

*Strabismus and Amblyopia.* Phase B Medical Students, University of Minnesota, Minneapolis, Minnesota, April 24, 1985; April 23, 1986; April 20, 1987; April 21, 1988; April 27, 1989; April 27, 1990; May 7, 1991; April 21, 1992.

*Visual Development: Current Research.* Phase B Medical Students, University of Minnesota, Minneapolis, MN, February 18, 1986; February 17, 1987.

*Pediatric Ophthalmology: Clinical Problems.* Department of Pediatrics, University of Minnesota, Minneapolis, MN, June 18, 1991.

*Congenital Cataract and Other Pediatric Lens Abnormalities.* BCSC in Pediatric Ophthalmology, Minneapolis, MN, October 11, 1991.

### **Collaborative Efforts and Activities**

Coordinator and Moderator, Difficult Problems in Pediatric Ophthalmology, American Association for Pediatric Ophthalmology and Strabismus, 1996-98.

### **Faculty Development Activities Regarding Teaching**

None

### **Continuing Medical Education**

Co-Director and Moderator, Pediatric Ophthalmology Subspecialty Day, American Academy of Ophthalmology, November 10, 2012.

## **ADVISING AND MENTORING**

### **Undergraduate Student Activities**

Senior Honors project, Caitlin Nosanov, Hamline University, St. Paul, MN, 2014  
Research, Johanna Diskstal, Carleton College, Northfield, MN, 2008.

### **Graduate Student Activities**

Master's Theses Directed  
None

Master's Student Advisees  
None

Doctoral Dissertations Directed  
None

Doctoral Students Advised  
None

Doctoral Committees Served on  
Member, Thesis Committee for Melissa Wilk, Department of Cell Biology, Neurobiology, & Anatomy, Medical College of Wisconsin, 2013-present.

### **Medical Student Advisees**

Research Mentor, Salman Dar 2013-present.  
Mentor, Ophthalmology residency, Anne Semmer Abel 2010-13.  
Advisor, Medical School, Johanna Dijkstal 2009-2013.  
Research Mentor, Curt Louwagie, 2005-06.

Supervision of Medical Student Research Project: Electroretinography in the Mucopolysaccharidoses Following Bone Marrow Transplantation, Gene Gullingsrud 1992-1993.  
Robert Pineda, 1988, Visual Function in Metabolic Disorders Following Bone Marrow Transplantation.

### **Professional Student Activities**

#### **Professional students supervised**

Orthoptists trained:  
Madison Kincade 2015-2017  
Jessica Harder 2014-16  
Laura Lenius, 2013-15  
Jamie Dykstra, 2012-14  
Andrea Kramer, 2011-2013  
Angela Jirak, CO, 2010-12  
Laura Lieberman, CO, 2010-11  
Brenda Boden, CO, 2009-11  
Kati Ostvig, CO, 2008-10  
Rebecca Foote, CO, 2007-09  
Heath Barto, CO, 2006-08  
Kelley Bechtold, CO, 2005-07  
Elexandria Dietz, CO, 2004-06  
Ryan McMurtrey, CO, 2003-05  
Kristine Nelson, CO, 2000-02  
Alex Christoff, COT, CO, 2000-01  
Kimberly Merrill, CO, 1997-99  
Cortney Campbell, COMT, CO, 1993-94  
Michelle Neva, COMT, CO, 1992-94  
Tracy Martin, COMT, CO, 1990-91  
Lisa Romig, COMT, CO, 1989-90  
Lisa Rovick, COMT, CO, 1988-89



**Post-doctoral fellows supervised**

Michael Nolan, MD 2015-16  
Laura Heinmiller, MD, 2013-14  
Ahmed Soliman, MD, 2012-13  
Alejandra Decanini, MD, 2011-12  
Emilie Goodyear, M.D., 2010-11  
Jonathan Pribila, M.D., 2009-10  
Geoffrey M. Tufty, M.D., 2008-09  
Yan Guo, M.D., Ph.D., 2007-08  
Shannon Cabrera, M.D., 2006-07  
Seth Silbert, M.D., Ph.D., 2005-06  
Dany Najjar, M.D., 2004-05  
Jill Anderson, M.D., 2003-04  
Wen Ying Wu-Chen, M.D., 2002-03  
Mrunalini Parvataneni, M.D., 2001-02  
Allison Jensen, M.D., 2000-01  
Erika Levin, M.D., 1999-2000  
Katherine Lee, M.D., 1998-99  
Todd Watanabe, M.D., 1997-98  
Aldo Fantin, M.D., 1996-97  
Bradley V. Davitt, M.D., 1995-96  
Todd A. Goldblum, M.D., 1994-95  
Janet Barrall, M.D., 1993-94  
Sylvia Kodsi, M.D., 1992-93  
Alfredo Chu, M.D., 1987-88

**Residents Supervised**

Clinic (and surgery-to 2004) supervision, 1<sup>st</sup> and 2<sup>nd</sup> year ophthalmology residents, Pediatric Ophthalmology clinic, 1985-present.

**Visiting Scholars Hosted**

Monte Del Monte, MD, University of Michigan, 2015  
Stephen Christiansen, MD, Boston University, 2014  
Burton Kusherm, MD, University of Wisconsin, 2013  
R. Michael Siatkowski, MD, Dean McGee Eye Institute, University of OK, 2012  
Sharon Freedman, MD, Duke University, 2011  
Stephen Kraft, MD, University of Toronto, 2011  
M. Edward Wilson, MD, Medical University of South Carolina, 2010  
Susan Day, MD, California Pacific Medical School, 2009  
Michael Repka, MD, Wilmer Eye Institute, Johns Hopkins, 2008  
Eugene Helveston, MD, Indiana University, 2007  
Joseph Calhoun, MD, Wills Eye Hospital, 2006  
Henry Metz, MD, Smith-Kettlewell Foundation, 2005

**Other Mentoring Activities**

Research Mentor, Julie Conley, MD, 2012-2013.  
Faculty liaison with Student Sight Savers (Ophthalmology medical student interest group), 2011-2013.  
Anne Semmer Abel, MD Ophthalmology residency, 2010-2013.

**CLINICAL SERVICE**

**Clinical Leadership Accomplishments**

Director, International Albinism Center, 1989-present.  
Director, Pediatric Ophthalmology and Strabismus Service, 1991-present.  
Director, Genetics Eye Clinic. 1984-present.  
Medical Director, Orthoptic Training Program 1987-1994, 2000-2003, 2008-present.

**Quality Improvement Projects**

None

**Clinical Service Responsibilities**

Lead Interpreter of electroretinograms, electro-oculograms, and Goldmann Visual Fields, 2009-present.  
Director, Minnesota Lions Children's Eye Clinic, University of Minnesota, Minneapolis, MN 1991-2000, 2009-11.

**PROFESSIONAL SERVICE AND PUBLIC OUTREACH****Service To The Discipline/Profession/Interdisciplinary Area(s)****Editorships/Journal Reviewer Experience**

Scientific reviewer, *British Journal of Ophthalmology*, 2015.  
Scientific reviewer, *Molecular Genetics and Metabolism*, 2013.  
Scientific reviewer, *Ophthalmology*, 2013.  
Scientific reviewer, *Journal of AAPOS*, 2012-2013.  
Chair, Pediatric Ophthalmology and Strabismus Publications, Panel, American Academy of Ophthalmology, 2011-present.  
Editor, Preferred Practice Patterns in Pediatric Ophthalmology (Comprehensive Pediatric Exam; Esotropia and Exotropia; Amblyopia); Editorial Board, *Preferred Practice Patterns*, American Academy of Ophthalmology, 2010-present.  
Editorial Committee, Early Treatment-Retinopathy of Prematurity (ETROP) Study, 2010-2012.  
Associate Editor, *Journal of the American Association for Pediatric Ophthalmology and Strabismus*, 2007-2008, 2014-present.  
Editorial Board, *Focal Points*, American Academy of Ophthalmology 2006-2014.  
Scientific Reviewer, *Archives of Ophthalmology*, 2006-2012.  
Scientific Reviewer, *Survey of Ophthalmology*, 2002.  
Scientific Reviewer, *Neuro-Ophthalmology*, 2002.  
Editorial Board for *Journal of the American Association for Pediatric Ophthalmology and Strabismus*, 2001-2010, 2014-present.  
Scientific Reviewer for *Experimental Eye Research*, 2000.  
Scientific Reviewer for *Ophthalmology*, 1999-present.  
Copyeditor for *Eyes on Ophthalmology*, Minnesota Academy of Ophthalmology newsletter, 1998-2011.  
Scientific Reviewer for *American Journal of Ophthalmology*, 1998-2002.  
Scientific Reviewer for *Archives of Ophthalmology*, 1997-2004.  
Scientific Reviewer for *Clinical Pediatrics*, 1997.  
Scientific Reviewer for *Journal of the American Association for Pediatric Ophthalmology and Strabismus*, 1997-present.  
Scientific Reviewer for *Journal of Pediatric Ophthalmology and Strabismus*, 1995-2004.  
Scientific Reviewer for *American Journal of Medical Genetics*, 1995.  
Scientific Reviewer for *Binocular Vision*, 1994.

Editorial Committee, CRYO-ROP Multicenter Trial, 1993-2003.  
Scientific Reviewer for *American Journal of Ophthalmology*, 1993-1995.  
Scientific Reviewer for *Ophthalmology*, 1992-1995.  
Editor, CRYO-ROP Newsletter - Minnesota Center, 1990-1993.  
Scientific Reviewer for *Ophthalmology*, 1989.  
Scientific Reviewer, *General Ophthalmology* (text) by Vaughan and Asbury, Appleton-Century Crofts, 1987.

**Review panels for external funding agencies, foundations, etc.**

**None.**

**Program review experience**

**None.**

**Organization of conferences, workshops, panels, symposia**

Program Planning Committee, Vignettes in Pediatric Ophthalmology & Strabismus, University of Minnesota, Dec. 8, 2012.  
Program Planning Committee, Ethics in Ophthalmology—A Case-Based Approach, University of Minnesota, June 9, 2012.  
Program Planning Committee, Discoveries in Ophthalmology, University of Minnesota, June 18, 2011.  
Course Director, Department of Ophthalmology CME Course, (Retinopathy of Prematurity Update), 1988.

**Committee memberships**

American Academy of Pediatrics (Specialty Fellow, Section on Ophthalmology, 1991):  
Nominations Committee.

**Public Advocacy**

Mid-Year Forum, American Academy of Ophthalmology, Washington, DC, 2010-2011  
Consultant to Senator Barrett re: Eye exercises in public schools, state of MN, 2010.

**Service To The University/Medical School/Department**

**University of Minnesota**

**University-wide Service**

Promotions and Tenure Committee, University of Minnesota Medical School, 2004-2005.  
Member, Medical School Leadership Team, Women in Science and Engineering, University of Minnesota, 1993-1994.  
Member, Short Stay Unit Management Advisory Committee, University of Minnesota Hospital, 1993-1994.  
Member, Cost Reduction Task Force, University of Minnesota Hospital, 1992.  
Member, Same Day Admissions Work Group, Service Quality Task Force, University of Minnesota Hospital, 1992.  
Panel Member, Planning Your Academic Advancement, Women's Advisory Committee to the Dean, 1992.  
Department Representative, Health Sciences Policy and Review Council, Graduate School, University of Minnesota, 1990-1991.  
Member, Task Force for Faculty Recruitment and Retention, University of Minnesota Hospital, 1990.

Member, Variety Club Children's Hospital Advisory Committee, University of Minnesota Hospital and Clinic, 1989-1990.

Member, Resource Utilization Task Force, Operating Room, University Hospital, 1989.

Member, Search Committee, Instructor of Ophthalmology (St. Paul Ramsey Medical Center), 1988.

### **Medical School Service and Intercollegiate Service**

Faculty liaison, Sightsavers medical student volunteer group, 2007-2104.

Member, Elective Review Subcommittee of EPC, University of Minnesota Medical School, 1989.

Coordinator of phase B (year II) medical student curriculum, 1985-1987.

Member, Search Committee, Chair, Department of Pediatrics, 1986.

### **Department/Unit Service**

Chair, Search Committee, Pediatric Ophthalmology and Strabismus, 2015-

Member, Promotion and Tenure Committee, Department of Ophthalmology & Visual Neurosciences, 2015

Member, Search Committee for Administrator, Department of Ophthalmology & Visual Neurosciences, 2014.

Member, Compensation Committee, Department of Ophthalmology & Visual Neurosciences, 2013-Present.

Member, Search committee for Administrator, Dept. of Ophthalmology & Visual Neurosciences, 2013.

Chair, Search Committee, Pediatric Ophthalmologist, University of Minnesota, Minneapolis, MN, 2012.

Copy Editor for Monthly Newsletter for Department of Ophthalmology and Visual Neurosciences, 2012-Present.

Record minutes for meetings for Department of Ophthalmology and Visual Neurosciences, 2012-Present.

Chair, Search Committee, faculty position (Pediatric Ophthalmology), 2012-2013.

Member, Website Committee, Department of Ophthalmology & Visual Neurosciences, 2012-2013.

Member, Search committee for Administrator, Dept. of Ophthalmology & Visual Neurosciences, 2012.

Member, Steering Committee for Dept. of Ophthalmology, 2011-2012.

Member, CSU Governing Body for Ophthalmology, 2010-present.

Governing Board, Clinical Services Unit (Ophthalmology), University of Minnesota, 2010-2011.

Co-Chair, Search Committee for Head, Ophthalmology, 2010-2011.

Chair, Search Committee, faculty position (Pediatric Ophthalmology), 2009.

Member, Search Committee, Clinical Scholar faculty position (Glaucoma), 2006.

Member, Search Committee, Tenured faculty position (Pediatric Ophthalmology), 2000.

Member, Search Committee, Tenured faculty position (Retina and Vitreous), 1998.

Chair, Search Committee, Tenured faculty position (Pediatric Ophthalmology), 1997.

Chair, Search Committee, Tenured faculty position (Pediatric Ophthalmology), 1994.

Member, Search Committee, Tenured faculty position (Retina and Vitreous), 1993-1995.

Member, Search Committee, Molecular Biologist, Department of Ophthalmology, 1993-1994.

Strategic Planning, Department of Ophthalmology, 1992.

Chair, Residency Committee, 1992.

Chair, Intra- and Extra-Departmental Communications Committee, 1992.

Member, Photography Committee, 1992.

Member, Search Committee, Tenured faculty position (Glaucoma), 1992-1994.

Member, Search Committee, Chair, Department of Ophthalmology, 1990-1992.

Chair, Search Committee, Assistant Professor in Ophthalmology (Anterior Segment), 1989.

Chair, Search Committee, Tenured faculty position (Pediatric Ophthalmology), 1989.

Member, Committee for Research Training, Vision Research Council, Department of

Ophthalmology, University of Minnesota, 1989.  
Member, Search Committee, Lyon Professorship in Ophthalmology (Glaucoma), 1988.  
Member, Search Committee, Associate Professor in Ophthalmology (Retina), 1988.  
Member, Search Committee, Assistant Professor in Ophthalmology (Retina), 1987.  
Member, Search Committee, Administrator, Department of Ophthalmology, 1986-1987.  
Member, Search Committee, Assistant Professor in Ophthalmology (Anterior Segment), 1986.

### **Community Outreach Activities**

Member, Scientific Advisory Board, National Organization for Albinism and Hypopigmentation, 1990-present.  
"Rein in Sarcoma" Benefit, Event Chair, 2005-2006  
"Rein in Sarcoma" Benefit, Planning Committee, 2003-2008.  
Eye Care America volunteer, 2001-present.  
Member, Medical Advisory Committee, National Children's Eye Care Foundation, 1999.  
Performance Test Examiner, Joint Commission on Allied Health Personnel in Ophthalmology, 1993.  
Member, Board of Directors, Vision Foundation, University of Minnesota, 1992-2000.  
Member, Public Relations Committee  
Member, University of Minnesota Eye Association  
Participant, "Health Talk and You," 1990. Minneapolis.  
CRYO-ROP Follow-up Clinic at Minneapolis Children's Medical Center, 1989-1994.  
Consultant for Videomed, Inc: Videotapes for Parent Education in the Areas of Strabismus and Amblyopia, and Pediatric Cataracts, 1988-1989.  
Consultant for International Adoptions, Children's Home Society of Minnesota, 1986-present.  
Member, Task Force on Developing Educational Information for Children and Parents (Minnesota Society for Prevention of Blindness), 1987.  
Member, Task Force on Pre-School Vision Screening (Minnesota Society for Prevention of Blindness), 1986.  
Consultant, Veterans Administration Hospital, Minneapolis, MN, 1988-1989.

### **Community Education Lectures**

A New Era in Pediatric Ophthalmology, Thanksgiving for Vision, Minneapolis, MN, October 29, 2011.  
Pediatric Ophthalmology Update. Minnesota Association of Optometrists and Opticians, Minneapolis, MN, October 29, 2000.  
Pediatric Ophthalmology Potpourri. Courage Center Pediatric Therapy Department, Minneapolis, MN, December 19, 1994.  
Introduction to Genetic Eye Disease. Continuing Education Program for Ophthalmology Medical Personnel, Minneapolis, MN, May 15, 1992, May 21, 1993.  
Advances in Pediatric Ophthalmology. District #287 Vision Consultants, Minneapolis, MN, April 16, 1990.  
Ocular Manifestations of Child Abuse and Other Traumatic Injuries to the Child's Eye. National Association of Vision Program Consultants, Minneapolis, MN, August 8, 1985.  
Pediatric Ophthalmology Update. Thanksgiving for Vision, Brooklyn Center, MN, October 28, 2006.  
Children's Eye Care. Eagan and Lakeville Lioness Clubs, Eagan, MN, October 26, 1989.  
Assessment of Vision in Children. The Adopted Child From Abroad Conference, University of Minnesota, Minneapolis, MN, June 19, 1987.  
Retinopathy of Prematurity. Association for Education and Rehabilitation of the Blind and Visually Impaired, Minneapolis, MN, April 15, 1987.  
Lectures in Pediatric Ophthalmology, Nurse Training Program, St. Catherine University, St. Paul, MN, 1985-88.  
Cataracts in Children. Downtown Lions Club, Minneapolis, MN, May 29, 1985.

