

Date Prepared: October 29, 2018

Name: Cynthia Lee Grosskreutz

Education:

5/78 B.S. (Physics), Washington University, St. Louis
7/82 M.S. (Physics), U. Of Iowa
5/89 PH.D. (Pharmacology), U. of Iowa College of Medicine
5/89 M.D., U. Of Iowa College of Medicine

Postdoctoral Training:

06/89-06/90 Intern in Medicine, Carney Hospital
07/90-06/93 Resident, Ophthalmology, Massachusetts Eye and Ear Infirmary
07/93-07/94 Fellow, Glaucoma, Massachusetts Eye and Ear Infirmary
08/94-07/97 Fellow, Surgical Research, Children's Hospital/Harvard Medical School

Faculty Academic Appointments:

1994-1997 Research Fellow, Laboratory for Surgical Research, Children's Hospital/Harvard Medical School, Boston, MA.
1994-1999 Instructor in Ophthalmology, Harvard Medical School, Boston, MA.
1999-2006 Assistant Professor of Ophthalmology, Harvard Medical School, Boston, MA.
2006-2010 Associate Professor of Ophthalmology, Harvard Medical School, Boston, MA.
2010- Associate Professor of Ophthalmology (Part time), Massachusetts Eye and Ear Infirmary, Boston, MA.

Appointments at Hospitals/Affiliated Institutions:

01/94-01/99 Clinical Associate in Surgery, Massachusetts Eye and Ear Infirmary, Boston, MA.
01/94-12/99 Assistant in Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
01/99-12/01 Assistant Surgeon, Massachusetts Eye and Ear Infirmary, Boston, MA.

01/01-01/07 Associate Surgeon, Massachusetts Eye and Ear Infirmary, Boston, MA.
01/03- Clinical Assistant Scientist, Schepens Eye Research Institute, Boston, MA
02/07- Surgeon, Massachusetts Eye and Ear Infirmary, Boston, MA.

Other Professional Positions:

1994-1999 Adjunct Faculty, University of Massachusetts, Boston, MA.
2010-2017 Global Translational Medicine Head for Ophthalmology, Novartis Institutes for BioMedical Research, Cambridge, MA
2017- Global Head of Ophthalmology, Novartis Institutes for BioMedical Research, Cambridge, MA

Hospital and Health Care Organization Clinical Service Responsibilities:

1994- Attending Physician/Glaucoma Consultation Service, Massachusetts Eye and Ear Infirmary

Major Administrative Leadership Positions:

Local

1997-1998 Acting Co-Director/Glaucoma Consultation Service, Massachusetts Eye and Ear Infirmary
1998-2010 Co-Director/Glaucoma Consultation Service, Massachusetts Eye and Ear Infirmary
2004 President, Eye Staff/President-Elect, Medical Staff, Massachusetts Eye and Ear Infirmary
2005 President, Medical Staff, Massachusetts Eye and Ear Infirmary

Committee Service:

Local

HMS / HSDM
2004-2009 Selection Committee for HMS Eleanor and Miles Shore Scholars in Medicine Award, Harvard Medical School

Regional

1984-1985 College of Medicine Research Committee, U. of Iowa
1984-1985 Women in Medicine Task Force, U. of Iowa
1986-1987 University Council for the Status of Women, U. of Iowa
1987 University Affirmative Action Committee, U. of Iowa
1987 Search Committee for U. of Iowa Vice President for Finance and University Svcs., U. of Iowa
1991-1992 Residency Steering Committee, Massachusetts Eye and Ear Infirmary
1996-2010 Glaucoma Fellowship Selection Committee, Massachusetts Eye and Ear Infirmary
1998-2010 Practice Advisory Committee, Massachusetts Eye and Ear Infirmary

1998-2010 CPR Committee, Massachusetts Eye and Ear Infirmary
1999-2010 Residence Selection Committee, Massachusetts Eye and Ear Infirmary
2000-2004 MEEI/SERI Joint Clinical Research Center Joint Governance Committee, Massachusetts Eye and Ear Infirmary
2003-2010 Core Vision Research Grant - Advisory Committee, Massachusetts Eye and Ear Infirmary
2004 Search Committee for Chief Information Officer, Massachusetts Eye and Ear Infirmary
2004-2005 Glaucoma Search Committee, Massachusetts Eye and Ear Infirmary
2004-2010 Executive Research Committee, Massachusetts Eye and Ear Infirmary
2007-2010 Research Strategy Committee, Massachusetts Eye and Ear Infirmary
2008 Glaucoma Search Committee [Chairperson], Massachusetts Eye and Ear Infirmary
2008-2010 Medical Staff Bylaws Committee, Massachusetts Eye and Ear Infirmary
2008-2010 Molecular Basis of Eye Disease Training Grant - Steering Committee, Schepens Eye Research Institute

National

1999-2003 Fight for Sight Grant Review Committee, Fight for Sight Foundation
2000 NIH Study Section Panel on Bioengineering Research, National Institutes of Health
2002 Glaucoma Foundation Grant Review Committee, Glaucoma Foundation
2002-2004 NIH Anterior Eye Disease Study Section (AED), National Institutes of Health
2004-2007 NIH Anterior Eye Disease Study Section (AED), National Institutes of Health
2016- Grant Review Committee, Edward N. & Della L. Thome Memorial Foundation Awards Program in Age-Related Macular Degeneration

International

2008-2010 ARVO Annual Meeting Program Committee - Glaucoma, Association for Research in Vision and Ophthalmology

Professional Societies:

1984-2001 American Medical Association, Member
1990- American Academy of Ophthalmology, Member
1990- Association for Research in Vision and Ophthalmology, Member
1993- Women in Ophthalmology, Member
1994- Chandler-Grant Society, Member
1997-2010 Society for Neuroscience, Member
1998- New England Ophthalmological Society, Member
2001- American Glaucoma Society, Member

Grant Review Activities:

1999-2003 Fight for Sight Grant Review Committee, Fight for Sight Foundation
2000 NIH Study Section Panel on Bioengineering Research, National Institutes of Health
2002 Glaucoma Foundation Grant Review Committee, Glaucoma Foundation

2002-2004	NIH Anterior Eye Disease Study Section (AED), National Institutes of Health
2004-2007	NIH Anterior Eye Disease Study Section (AED), National Institutes of Health
2016-	Grant Review Committee, Edward N. & Della L. Thome Memorial Foundation Awards Program in Age-Related Macular Degeneration

Editorial Activities:

Ad hoc Reviewer

Ad-Hoc Reviewer, Archives of Ophthalmology
Ad-Hoc Reviewer, Ophthalmic Surgery and Lasers
Ad-Hoc Reviewer, Current Eye Research
Ad-Hoc Reviewer, Investigative Ophthalmology and Visual Science
Guest Editorial Board Member, Investigative Ophthalmology and Visual Science

Honors and Prizes:

1984	Research Club Student Research Award, U. of Iowa
1984	Summer Research Fellowship, U. of Iowa College of Medicine
1985	American Heart Association Medical Student Research Fellowship, American Heart Association
1986	Borts Award for Student Medical Research, U. of Iowa
1986	American Heart Association Medical Student Research Fellowship, American Heart Association
1988	Berlex Laboratories Predoctoral Fellowship, Berlex Laboratories
1990	Carney Hospital Achievement Award, Carney Hospital, Boston, MA.
1994	NIH K11 Physician Scientist Award (1994-2000), NIH
1999	Brookdale National Leadership Program in Aging-Fellow(1999-2001), Brookdale Foundation
1999	Graduation Speaker/Visiting Professor, Medical College of Georgia
2000	Career Development Award (2000-2004), Research to Prevent Blindness
2001	50th Anniversary Scholars in Medicine Fellowship, Harvard Medical School
2001	S. Elizabeth O'Brien Award for Research in Glaucoma, Massachusetts Eye & Ear Infirmary
2002	Harvard University Milton Award, Harvard University
2005	Friends of the MEEI Research Award, Massachusetts Eye & Ear Infirmary
2006	Rudin Glaucoma Prize, New York Academy of Medicine
2013	Mariana Mead Lectureship, Massachusetts Eye & Ear Infirmary/Harvard Medical School

Report of Funded and Unfunded Projects

Funding Information:

Past

1984	P.I., U. of Iowa, Summer Research Fellowship
1985-1987	P.I., American Heart Association, Medical Study Research Fellowship

1988 P.I., Berlex Laboratories, Predoctoral Fellowship
1994-2000 P.I., N.I.H., K11EY00342, Hypoxic Regulation of Vascular Growth In Vitro
1997-1998 P.I., Massachusetts Lions, Laser-Induced Model of Glaucoma
1998-1999 Co-P.I., Massachusetts Lions, Screening Rodent Models of Genetic Hypertension for Glaucoma (Louis R. Pasquale, M.D. - P.I.)
1998-1999 P.I., Massachusetts Lions, Optic Nerve Crush as a Model of Glaucomatous Optic Neuropathy
1999 P.I., Glaucoma Foundation, Do Apoptosis Inhibitors Confer Neuroprotection in a Rat Model of Glaucoma?
1999-2000 P.I., Fight for Sight Award, Role of Immunophilins in Retinal Ganglion Cell Death
1999-2001 P.I., Brookdale Foundation Fellowship, Apoptosis in Retinal Ganglion Cells in Experimental Glaucoma
1999-2000 P.I., Massachusetts Lions, Apoptosis and Retinal Ganglion Cell Death
2000-2004 P.I., Research to Prevent Blindness, Career Development Award
2000-2001 P.I., Massachusetts Lions, Role of Nitric Oxide Synthase Inhibition in Retinal Ganglion Cell Neuroprotection in a Spontaneous Mouse Model of Glaucoma
2001 P.I., S. Elizabeth O'Brien Award, Glaucoma Research
2001-2002 P.I., Harvard Medical School, 50th Anniversary Scholars in Medicine Fellowship
2001-2002 P.I., Massachusetts Lions, Role of Bcl2 family members in retinal ganglion cells following acute glaucoma
2002-2003 P.I., Harvard Medical School, Milton Award
2002-2011 P.I., N.I.H., R01EY013399, Neuroprotection and Retinal Ganglion Cell Death
2002-2003 P.I., Massachusetts Lions, Partial optic nerve crush as a model of secondary degeneration of retinal ganglion cells
2003-2004 P.I., Massachusetts Lions, Is Erythropoietin neuroprotective in a rat model of optic nerve injury?
2004-2005 P.I., Massachusetts Lions, Calcineurin activation in an animal model of experimental glaucoma
2005 P.I., The Glaucoma Foundation, The role of Stromal-cell derived factor-1 (SDF-1) in experimental glaucoma
2005-2007 P.I., American Health Assistance Foundation, Heat Shock Proteins in Experimental Glaucoma
2005-2006 P.I., Massachusetts Lions, Heat shock protein 27 is protective to retinal ganglion cells in a mouse model of experimental glaucoma
2006-2007 P.I., Massachusetts Lions, Calcineurin inhibition in a mouse model of experimental glaucoma
2007-2008 P.I., Massachusetts Lions, The Role Of VEGF-165b, A Recently Identified Inhibitory VEGF Isoform, In Experimental Glaucoma

Current - none

Projects Submitted for Funding - none

Unfunded Current Projects - none

Report of Local Teaching and Training

Teaching of Students in Courses:

a. Medical School Courses

1994-	<u>HMS Ophthalmology Rotation (OP501 M.8 & OP502 M.8)</u>			<i>contact time</i>	<i>prep time</i>
	Visiting/Attending	12 Medical Students		6 hours/week for 8 week(s)	none reported

b. Graduate Medical Courses

1995-	<u>Glaucoma Lecture Series</u>			<i>contact time</i>	<i>prep time</i>
	Lecturer	21 Residents 10 Other Students		8 hours/year for 1 year(s)	1 hours/year for 1 year(s)

1996	<u>Grand Rounds Attending Lecturer</u>			<i>contact time</i>	<i>prep time</i>
	Attending	21 Residents 20 Other Students 21 Residents 20 Other Students		8 hours/year for 1 year(s) none reported	none reported 1 hours/year for 1 year(s)

1996-2004	<u>Introduction to Ophthalmology/Introduction to Glaucoma</u>			<i>contact time</i>	<i>prep time</i>
	Lecturer	8 Residents 2 Other Students		4 hours/year for 1 year(s)	1 hours/year for 1 year(s)

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

Clinical Supervisory and Training Responsibilities:

Training Duration Name

Current Position

1996-1997	Abha Amin, M.D.	Private Practice
1996-1997	Jill Smith, M.D.	Private Practice
1997-1998	Ed Leuenberger, M.D.	Private Practice
1997-1998	Teresa Chen, M.D.	Associate Professor, Harvard Medical School
1998-1999	Anabelle Costa, M.D.	Private Practice
1998-1999	Robert Ang, M.D.	Private Practice
1998-1999	Alice Gasch, M.D.	Private Practice
1999-2000	Nicholas Faberowski, M.D.	Associate Professor, University of Colorado
2000-2002	Virve Hänninen, M.D., Ph.D.	Helsinki University Central Hospital, Helsinki, Finland
2000-2001	Prithvi S. Sankar, M.D.	Professor of Ophthalmology, University of Pennsylvania
2001-2002	D. Lynn Halpern, M.D., Ph.D.	Private Practice
2001-2002	Lillian C. Lee, M.D.	Private Practice
2002-2003	Laura C. Fine, M.D.	Private Practice
2002-2003	Jason Swanner, M.D.	Professor of Ophthalmology, University of Alabama, Birmingham
2003-2004	Douglas Kohl, M.D.	Private Practice
2003-2004	Jing Zhao, M.D.	Assistant Professor
2004-2005	Zarmeena Vendal, M.D.	Private Practice
2004-2005	Jason Wanner, D.O.	Private Practice
2005-2006	Jeffrey Wentzloff, M.D.	Private Practice
2005-2006	Relief Jones, III, M.D.	Private Practice
2006	Katie Luo, MD, PhD	Instructor, Harvard Medical School
2006-2007	Stacey C. Brauner, M.D.	Instructor, Harvard Medical School
2006-2007	Thomas Patrianakos, D.O.	Division Chair, Ophthalmology, John H. Stroger, Jr. Hospital, Chicago, IL
2007-2009	Theodoros Filipopoulous, MD	Private Practice
2008-2009	Anupama Anchala, MD	Private Practice
2008-2009	Andrea Jue, MD	Private Practice
2009-2010	Angela Turalba, MD	Private Practice
2009-2010	Shuchi Patel, MD	Assistant Professor of Ophthalmology, Loyola University, Chicago
2010-2011	Michael Horsley, MD	Private Practice
2010-2011	Julie Kim, MD	FDA
2012-2013	Sean Hanks, M.A. (Thesis director)	NIBR Ophthalmology

Laboratory and Other Research Supervisory and Training Responsibilities:

1998-2000	Ellen E. Freeman, Ph.D.	Associate Professor of Ophthalmology, University of Montreal
2002-2003	Mina B. Pantcheva, M.D.	Associate Professor of Ophthalmology, The University of Colorado, Denver
2003-2006	Wei Huang, M.D., Ph.D.	Private Practice
2003-2004	Theodoros Filippopoulos, M.D.	Private Practice
2009-2010	Juan Qu, O.D., PhD	Private Practice

Formally Mentored Harvard Medical, Dental and Graduate Students:

2012-2013	Shawn Hanks, MS (Thesis director)	Industry
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Local Invited Presentations:

No presentations below were sponsored by outside entities

Grand Rounds

2006-	Combined Neurology & Neurosurgery Grand Rounds, Massachusetts General Hospital
2009	Neuroprotection and Retinal Ganglion Cell Death in Glaucoma, Massachusetts Eye and Ear Infirmary

Invited speaker

2015	Going to the Dark Side or Seeing the Light? Career Progression in Vision Research from Academia to Industry, Association for Research in Vision and Ophthalmology 2015 Annual Meeting, Denver, CO
2017	New Directions in Glaucoma Medical Treatment, New England Ophthalmological Society, Boston, MA

Invited symposium speaker

2014	Drug Development in Dry AMD: From Target to Therapy, National Academy of Sciences, Institute of Medicine, Washington, DC
2015	Challenges of Drug Development in Dry AMD, Beckman Initiative for Macular Research, Irvine, CA
2016	Future Directions in the Development of Ophthalmic Therapies, Royal College of Ophthalmologists Annual Meeting Retina Subspecialty Day, Birmingham, England

Named Lecture

2007	The Louis & Rachel Rudin Glaucoma Lecture. Calcineurin, Neuroprotection and Glaucoma, New York University
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- 2007 The H. Talmage Dobbs Lectureship in Ophthalmology. Molecular Mechanisms of Retinal Ganglion Cell Death in Glaucoma, Emory University
- 2009 The David Worthen Memorial Lecture. Glaucoma after Keratoprosthesis, The Johns Hopkins Wilmer Eye
- 2013 The Marianna Mead Lecture. Target to Therapy: The Challenge of Translational Medicine, Massachusetts Eye and Ear Infirmary

Seminar

- 1996- Surgical Research Seminar, Children's Hospital
- 1998- Glaucoma and the Retinal Ganglion Cell, Massachusetts Eye and Ear Infirmary
- 1999 Neuroprotective Strategies in Glaucoma, Biennial Ophthalmology Research Retreat
- 1999- Massachusetts Lions Annual Dinner Research Presentation, Massachusetts Eye and Ear Infirmary
- 2002- Glaucoma Research, Massachusetts Lions Eye Research Meeting
- 2002 Mechanisms of retinal ganglion cell death, MEEI/SERI Optic Nerve Interest Group
- 2003 IOP & Neuroprotection, Massachusetts Eye and Ear Infirmary
- 2004 Mechanisms of Neuronal Death in the Retina, Massachusetts Eye and Ear Infirmary
- 2004 Neuroprotection, Boston Area Glaucoma Specialists Forum
- 2004 Retinal Ganglion Cell Death in Glaucoma, Annual HMS Ophthalmology Research Retreat
- 2005 Mechanisms of Retinal Ganglion Cell Death in Glaucoma, Boston University Department of Ophthalmology
- 2005 Ocular Neuroprotection, Massachusetts Eye and Ear Infirmary
- 2005 Upstream Signaling of Retinal Ganglion Cell Death in Experimental Glaucoma, Schepens Eye Research Institute
- 2005 Calcineurin Activation in Experimental Glaucoma, Boston Area Glaucoma Research Meeting

- 2008 Neuroprotection and Glaucoma, Massachusetts Eye and Ear Infirmary
- 2009 Does hypoxia contribute to retinal ganglion cell death in glaucoma?, Schepens Eye Research Institute
- 2009 VEGF and VEGFb in experimental glaucoma, Massachusetts Eye and Ear Infirmary
- 2009 Global Gene Expression Changes in Retinal Ganglion Cells in Experimental Glaucoma, Massachusetts Eye and Ear Infirmary
- 2010 Low Tension Glaucoma, New England Medical Center - Tufts

Report of Regional, National and International Invited Teaching and Presentations

No presentations below were sponsored by outside entities

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

a. Invited Presentations

Regional

- 1994-2002 Glaucoma Section of Visual Function Course, University of Massachusetts
- 2000-2007 Neuroprotection in Glaucoma, Tufts University, Boston, MA.
- 2001 Are Today's Glaucoma Drugs Neuroprotective?, New England Ophthalmological Society
- 2002- What is glaucoma and who are we treating?, New England Ophthalmological Society
- 2003- Mechanisms of retinal ganglion cell death -- a new direction in glaucoma research in the Chandler-Grant tradition, Chandler-Grant Glaucoma Society

- 2006 Understanding Selective Laser Trabeculoplasty, New England Ophthalmological Society
- 2007 Avenues of Neuroprotection in Glaucoma, New England Ophthalmological Society
- 2007 Overview of Retinal Degenerations, Neurorestoration Symposium, Harvard Medical School
- 2010 33rd Annual Midwest Glaucoma Conference, University of Michigan

National

- 1996 Ohio State University, Department of Ophthalmology Grand Rounds, Ohio State University
- 1999 Medical College of Georgia, Visiting Professorship, Medical College of Georgia, Augusta, GA.
- 2000 University of Minnesota Ophthalmology Update (3 Lectures), University of Minnesota, Minneapolis, MN.
- 2000 Invited Symposium Discussant, Neuroprotection and the Eye, San Antonio, TX.
- 2000 Neuroprotective Strategies in Glaucoma, University of Iowa, Iowa City, IA.
- 2001 The Role of Apoptosis in Retinal Ganglion Cell Death in Glaucoma, Brookdale foundation
- 2005- Upstream mechanisms of retinal ganglion cell death in experimental glaucoma, University of Texas Health Science Center
- 2006 Neuroprotective Strategies in Degenerative Eye Disease Symposium - invited speaker, Vanderbilt University
- 2007 Grand Rounds: Avenues of Neuroprotection in Glaucoma. Research Seminar: Calcineurin and Retinal Ganglion Cell Death in Glaucoma.,

University of Wisconsin

- 2007 2 Seminars: The Course of Glaucoma During Pregnancy. Are Today's Glaucoma Drugs Neuroprotective? University of Pennsylvania
- 2007 The Louis & Rachel Rudin Glaucoma Lecture. Calcineurin, Neuroprotection and Glaucoma., New York University
- 2007 Neuroprotection and the Eye Symposium. Two stories in neuroprotection: Calcineurin & VEGF., Duke University
- 2007 The H. Talmage Dobbs Lectureship in Ophthalmology: Molecular Mechanisms of Retinal Ganglion Cell Death in Glaucoma, Emory University
- 2008 ARVO/Pfizer Ophthalmics Research Institute Fourth Annual Conference: The Role of Glia, Mitochondria, and the Immune System in Glaucoma. Title: Cellular Pathways Leading to Mitochondrial Dysfunction in Glaucoma, Association for Research in Vision and Ophthalmology
- 2008 ARVO Special Interest Group: Keratoprotheses and Glaucoma. Title: Glaucoma after Keratoprosthesis - Incidence and treatment options, Association for Research in Vision and Ophthalmology
- 2008 Does hypoxia contribute to retinal ganglion cell death in glaucoma? Vanderbilt Eye Institute
- 2008 Clinical Update from Multicenter RCT's: Early Manifest Glaucoma Trial (EMGT), American Academy of Ophthalmology Glaucoma Subspecialty Day
- 2008 New Ideas in Glaucoma, American Academy of Ophthalmology
- 2008 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of Ophthalmology
- 2008 Neuroprotection and Retinal Ganglion Cell Death in Glaucoma, Washington University
- 2009 Avenues of Neuroprotection in Glaucoma, University of Missouri - Kansas City, Department of Ophthalmology

- 2009 ECP: Scientific Evidence and Commentary, American Glaucoma Society
- 2009 Keratoprosthesis and Glaucoma Management, American Glaucoma Society
- 2009 Mechanisms of Retinal Ganglion Cell injury and Defense in Glaucoma , Association for Research in Vision and Ophthalmology
- 2009 Neuroprotection and Retinal Ganglion Cell Death in Glaucoma , Department of Ophthalmology, Oregon Health and Sciences University
- 2009 New Surgical Alternatives to Trabeculectomy, Oregon Ophthalmological Alumni Association
- 2009 Glaucoma after Cornea Surgery, Oregon Ophthalmological Alumni Association
- 2009 Invited to organize and participate in a Point-Counter-Point session entitled: Trabeculectomy vs. newer glaucoma surgical procedures., Women in Ophthalmology Summer Symposium
- 2009 Do Retinal Astrocytes and Müller Glia Play an Endogenous Protective Role in Glaucomatous Neurodegeneration? Lasker/IRRF Initiative for Innovation in Vision Science

International

- 2009 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of Ophthalmology Annual Meeting
- 2009 The mitochondria in glaucoma - how to protect them from elevated IOP? World Glaucoma Association
- 2010 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of Ophthalmology Annual Meeting
- 2011 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of

Ophthalmology Annual Meeting

- 2012 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of Ophthalmology Annual Meeting
- 2013 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of Ophthalmology Annual Meeting
- 2014 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of Ophthalmology Annual Meeting
- 2016 What's Your Next Step? Case Studies in Glaucoma Management, American Academy of Ophthalmology Annual Meeting

b. Professional Leadership Roles related to Teaching

- 2005 National Chandler-Grant Glaucoma Society
Organized the Chandler-Grant Glaucoma Society Scientific Symposium. 15 speakers with topics from clinical presentations to scientific updates.
- 2006 National Chandler-Grant Glaucoma Society
Organized the Chandler-Grant Glaucoma Society Scientific Symposium. 15 speakers with topics from clinical presentations to scientific updates.

Current Licensure and Certification:

- 1989 Federal Licensure Examination (FLEX)
- 1993 Massachusetts Registered Physician
- 1995 American Board of Ophthalmology (recertified 2015)

Practice Activities:

- 1994-2010 Ophthalmology, Glaucoma Massachusetts Eye and Ear Infirmary
Clinical Activity Description: Tertiary referral medical and surgical glaucoma practice. High complexity of patients with many advanced and unusual conditions. Residents and fellows actively involved in management and treatment of patients.
Patient Load: 60 Patient Visits/week; 10 Surgical Cases/Month; High
Clinical Contributions: 1) In collaboration with Dr. Claes Dohlman, I diagnosed, managed and treated patients with coexisting keratoprotheses and glaucoma. This treatment takes the form of medical, laser and surgical intervention. We pioneered the new surgical technique of diverting aqueous humor from the anterior chamber to the

maxillary sinus or inferior fornix. 2) We were the first to describe and report the effects of topamax on the eye in causing uveal effusion and angle closure glaucoma. Our report resulted in the pharmaceutical industry changing the package insert for topamax to include its effects on the eye. 3) I have also had an interest in glaucoma in young adults and have described the incidence of cataract formation following trabeculectomy and 4) I have studied the effects of pregnancy on the course of preexisting glaucoma.

2010-

Ophthalmology, Glaucoma Massachusetts Eye and Ear Infirmary

Clinical Activity Description: My practice is primarily medical management of glaucoma. I also teach residents and clinical glaucoma fellows.

Patient Load: 10/week; Moderate to high

Report of Technological and Other Scientific Innovations

Patents

WO 2007019427 A3 Methods and compositions for preserving the viability of photoreceptor cells

US 8829050 B2 Compositions and methods for reducing body fat (XAF5 in Phase 2b/3)

Recognition:

2007 Best Doctors, Boston Magazine

Original Articles

1. Van Allen JA, Thomsen MF, Randall BA, Rairden RL, Grosskreutz CL. Saturn's Magnetosphere, Rings, and Inner Satellites. *Science*. 1980;207(4429):415-421.
2. Grosskreutz, C.L. An Estimate of the Synchrotron Radiation from Saturn. University of Iowa Research Report. 1980;(80):37.
3. Florentine, M.S., Grosskreutz, C.L., Chang, W., Hartnett, J.A., Dunn, V.D., Ehrhardt, J.C., Fleagle, S.R., Collins, S.M., Marcus, M.L., Skorton, D.J. Measurement of Left Ventricular Mass In Vivo Using Gated Nuclear Magnetic Resonance Imaging. *Journal of the American College of Cardiology*. 1986;8(1):107-12.
4. Grosskreutz, C.L., Brody, M.J. Regional Hemodynamic Responses to Central Administration of Corticotropin-Releasing Factor (CRF). *Brain Research*. 1988;442(2):363-7.
5. Varner, K.J., Grosskreutz, C.L., Cox, B.F., Brody, M.J. Differential Regulation of Sympathetic Nerve Activity by Lateral and Medial Subregions of the Rostral Ventral Medulla. *Prog Brain Res*. 1989;81:99-103.
6. Van Allen, J.A., Grosskreutz, C.L. Relativistic Electrons in Saturn's Inner Magnetosphere and an Estimate of their Synchrotron Emission. *Journal of Geophysical Research*. 1989;94(A7):8731 - 8738.

7. Barrés, C.P., Lewis, S.J., Grosskreutz, C.L., Varner, K.J., Brody, M.J. Role of Renal Nerves in Experimental Hypertension: Evaluation of Neurogenic Mechanisms. *Clin Exp Hypertens A*. 1989;11 Suppl 1:117-24.
8. Jacob, H.J., Alper, R.H., Grosskreutz, C.L., Lewis, S.J., Brody, M.J. Vascular Tone Influences Arterial Pressure Lability After Sinoaortic Deafferentation. *Am J Physiol*. 1991;260(2 Pt 2):R359-67.
9. Netland, P.A., Grosskreutz, C.L., Feke, G.T., Hart, L.J. Color doppler Ultrasound Anaylsis of Ocular Circulation After Topical Calcium Channel Blocker. *Am J Ophthalmol*. 1995;119(6):694-700.
10. Dreyer, E.B., Grosskreutz, C.L. Excitatory Mechanisms in Retinal Ganglion Cell Death in Primary Open Angle Glaucoma. *Clin Neurosci*. 1997;4(5):270-3.
11. Zurakowski, D., Vorwerk, C.K., Gorla, M., Kanellopoulos, A.J., Chaturvedi, N., Grosskreutz, C.L., Lipton, S.A., Dreyer, E.B. Nitrate Therapy May Retard Glaucomatous Optic Neuropathy, Perhaps Through Modulation of Glutamate Receptors. *Vision Res*. 1998;38(10):1489-94.
12. Heng, J.E., Zurakowski, D., Vorwerk, C.K., Grosskreutz, C.L., Dreyer, E.B. Cation Channel Control of Neurite Morphology. *Brain Res Dev Brain Res*. 1999;113(1-2):67-73.
13. Grosskreutz, C.L., Katowitz, W.R., Freeman, E.E., Dreyer, E.B. Lidocaine Toxicity to Rat Retinal Ganglion Cells. *Curr Eye Res*. 1999;18(5):363-7.
14. Grosskreutz, C.L., Anand-Apte, B., Dupláa, C., Quinn, T.P., Terman, B.I., Zetter, B., D'Amore, P.A. Vascular Endothelial Growth Factor (VEGF) - Induce Migration of Vascular Smooth Muscle Cells In Vitro. *Microvasc Res*. 1999;58(2):128-36.
15. Simon, P.D., McConnell, J., Zurakowski, D., Vorwerk, C.K., Naskar, R., Grosskreutz, C.L., Dreyer, E.B. Thy-1 is Critical for Normal Retinal Development. *Brain Res Dev Brain Res*. 1999;117(2):219-23.
16. Freeman, E.E., Grosskreutz, C.L. The Effects of FK506 on Retinal Ganglion Cells After Optic Nerve Crush. *Invest Ophthalmol Vis Sci*. 2000;41(5):1111-5.
17. Dohlman, C.H., Grosskreutz, C.L., Dudenhofer, E.J., and Rubin, P.A.D. Can a Glaucoma Shunt Tube be Safely Extended to the Lacrimal Sac or the Ethmoid Sinus in Keratoprosthesis Patients? *Dig J Ophthalmology*. 2001;7(3).
18. Chen, T.C., Ang, R.T., Grosskreutz, C.L., Pasquale, L.R., Fan, J.T. Brimonidine 0.2% Versus Apraclonidine 0.5% to Prevent IOP Elevation After Anterior Segment Laser Surgery. *Ophthalmology*. 2001;108(6):1033-8.
19. Sankar, P.S., Pasquale, L.R., Grosskreutz, C.L. Uveal Effusion and Secondary Angle Closure Glaucoma Associated With Topiramate Use. *Arch Ophthalmol*. 2001;119(8):1210-1.
20. Hänninen, V.A., Pantcheva, M.B., Freeman, E.E., Poulin, N.R., Grosskreutz, C.L. Activation of Caspase 9 in a Rat Model of Experimental Glaucoma. *Curr Eye Res*. 2002;25(6):389-95.
21. Zacks, D.N., Hänninen, V., Pantcheva, M., Ezra, E., Grosskreutz, C.L., Miller, J.W. Caspase Activation in an Experimental Model of Retinal Detachment. *Invest Ophthalmol Vis Sci*. 2003;44(3):1262-7.
22. Adelman, R.A., Brauner, S.C., Afshari, N.A., Grosskreutz, C.L. Cataract Formation After Initial Trabeculectomy in Young Patients. *Ophthalmology*. 2003;110(3):625-9.

23. Zhao JC, Grosskreutz CL, Pasquale LR. Argon versus selective laser trabeculoplasty in the treatment of open angle glaucoma. *Int Ophthalmol Clin*. 2005;45(4):97-106.
24. Grosskreutz CL, Hänninen VA, Pantcheva MB, Huang W, Poulin NR, Dobberfuhr AP. FK506 blocks activation of the intrinsic caspase cascade after optic nerve crush. *Exp Eye Res*. 2005;80(5):681-6.
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