

UNIVERSITY OF IOWA COLLEGE OF MEDICINE CURRICULUM VITAE

Young H. Kwon, M.D, Ph.D.

Updated: January 1, 2010

I. EDUCATIONAL AND PROFESSIONAL HISTORY

A. Institutions Attended

1980-1984	B.S.	Biology Massachusetts Institute of Technology Cambridge MA
1984-1991	M.D.	Medicine Yale University School of Medicine New Haven CT
1987-1991	Ph.D.	Neuroscience Advisor: M Sur, PhD Massachusetts Institute of Technology Cambridge MA

Post-Graduate Medical Education

1991-1992	Internship	Internal Medicine Mt. Auburn Hospital Harvard Medical School Cambridge MA
1992-1995	Residency	Ophthalmology Massachusetts Eye & Ear Infirmary Harvard Medical School Boston MA
1995-1996	Fellowship	Glaucoma Preceptor: J Caprioli, MD Department of Ophthalmology and Visual Sciences Yale University School of Medicine New Haven CT

Certification

National Board of Medical Examiners (#358844)	1992
American Board of Ophthalmology	1997, 2007 (re-certified for 10 years)

Medical Licensure

Massachusetts	temporary	1991-inactive
Connecticut	permanent (#034363)	1995-inactive
Iowa	permanent (#31305)	1996-2010

B. Academic Appointments

1995-1996	Clinical Instructor Department of Ophthalmology and Visual Sciences Yale University School of Medicine New Haven CT
1996-2000	Assistant Professor of Ophthalmology Department of Ophthalmology and Visual Sciences College of Medicine University of Iowa Iowa City IA

2000-2002	Assistant Professor of Clinical Ophthalmology Department of Ophthalmology and Visual Sciences College of Medicine University of Iowa Iowa City IA
2002-2007	Associate Professor of Clinical Ophthalmology Department of Ophthalmology and Visual Sciences College of Medicine University of Iowa Iowa City IA
2007-2008	Associate Professor of Ophthalmology Department of Ophthalmology and Visual Sciences College of Medicine University of Iowa Iowa City IA
2007-2008	Clifford M. and Ruth M. Altermatt Associate Professor Department of Ophthalmology and Visual Sciences College of Medicine University of Iowa Iowa City IA
2008-	Clifford M. and Ruth M. Altermatt Professor Department of Ophthalmology and Visual Sciences College of Medicine University of Iowa Iowa City IA

Professional Appointments

1996-present	Consulting Ophthalmologist Veterans Administration Hospital Iowa City IA
2000-2002	Collaborator College of Veterinary Medicine Iowa State University Ames IA

C. Honors and Awards

1983	John L. Asinari Award for Outstanding Undergraduate Research in Life Sciences Massachusetts Institute of Technology
1984	Medical Scientist Training Program Fellowship Award Yale University School of Medicine
1987	National Institute of General Medicine Sciences Graduate Fellowship Award Massachusetts Institute of Technology
1997	College of Medicine Research Award University of Iowa
1998	Otsuka Research Award American Glaucoma Society
1999	Shaffer International Fellowship Award Awarded to CS Kim, MD and University of Iowa Glaucoma Research Foundation
2001	Above and Beyond the Call of Duty Award Nominated by Ms. Huff University of Iowa Hospital and Clinics
2002	Above and Beyond the Call of Duty Award Nominated by Ms. Berry University of Iowa Hospital and Clinics
2004-8	Listed in "Guide to America's Top Ophthalmologists" Consumers' Research Council of America Washington, DC

- 2004-7 Listed in "Who's who in Medicine and Healthcare," "Who's who in the World"
Marquis Who's Who, New Providence, NJ
Nominated in "Who's who among Executives and Professionals in healthcare"
Cambridge Who's Who, Uniondale, NY
- 2005 Achievement Award
American Academy of Ophthalmology
- 2005 Charles D. Phelps Memorial Award
Dept of Ophthalmology and Visual Sciences
University of Iowa
- 2006 -8 Inaugural member of the "Leading Health Professionals of the World 2006"
Nominated for "International Health Professional of the Year"
Nominated for "Top 100 Health Professionals 2008"
International Biographical Center
Cambridge, England
- 2006 Teacher of the Year Award
Presented by the residents at the University of Iowa Dept of Ophthalmology to a faculty member exhibiting a leadership, dedication to resident education, and friendship.
- 2007 Clifford M. and Ruth M. Altermatt Endowed Professorship in Glaucoma
Dept of Ophthalmology & Visual Sciences
Univ of Iowa
- 2007-10 Listed in "Best Doctors in America"
Best Doctors
Boston, MA

II. TEACHING AT THE UNIVERSITY OF IOWA

A. Classroom, Seminar, or Teaching Laboratory

- 1996-present Glaucoma basic science lecture series for ophthalmology residents
Series of 8 (1-hour) lectures on Sat AM once every 3 years
- 1997-present *Glaucoma*, Introduction to Clinical Disciplines: ophthalmology lecture to second year medical students
- 1996-2001 Case study presentations in glaucoma to third and fourth year medical students
- 2001-present Glaucoma overview lecture to third and fourth year medical students on ophthalmology rotation
- 1996-present Informal "chart" rounds on various topics on glaucoma with fellows, residents, and medical students

Clinical Teaching

I teach medical students through hands-on exam course (M1), formal lecture (M2), and exam skills sessions (M3-M4). I teach medical students during their 2-week ophthalmology rotation in the clinic. I help review glaucoma topics and with residents during after-clinic hours. I review the chart of patients at the end of the clinic. I teach glaucoma surgical techniques in the operating room to the senior resident and fellow. I participate in morning rounds and clinical conferences.

Research Supervision

I supervise glaucoma research fellows and scientists. They are full-time researchers working on clinical and basic glaucoma research.

B. Students / Fellows Supervised, Faculty mentor

Cheryl L. Khanna, MD	Clinical Fellow	8/96-6/97	
Yaffa K. Weaver, MD	Clinical Fellow	7/97-6/98	
Robert A. Honkanen, MD	Clinical Fellow	8/98-6/99	
Jeffrey M. Taylor, BS	Medical Student Research	6/98-5/99	
Sungpyo Hong, MD, PhD	Research Fellow	9/98-6/99	
Chang-sik Kim, MD	Research Fellow	7/99-6/2000	
Thomas A. Graul, MD	Clinical Fellow	7/99-6/2000	
Mary Lucy M. Pereira, MD	Research Fellow	7/2000-6/2002	
Christina Bruno, MD	Clinical Fellow	7/2000-6/2001	
Sinisa Grozdanic, DVM	Graduate Student	10/2000-7/2002	
Young Il Kim, MD	Research Fellow	6/2001-5/2002	
Edward Langlow, MD	Clinical Fellow	7/2001-6/2002	
Emily Greenlee, MD	Clinical Fellow	7/2002-6/2003	
Markus Kuehn, PhD	Research Scientist	4/2003-9/2006	
Edward Sung, MD	Clinical Fellow	7/2003-6/2004	
Michael Abramoff, MD PhD	Post-doctoral Fellow	7/2003-6/2004	
Michael Abramoff, MD PhD	Assistant Professor (K-12 faculty mentor)	7/2004-6/2005	
Michael Maley, MD	Clinical Fellow	7/2004-6/2005	
John Fingert, MD PhD	Research Fellow	7/2004-6/2005	
John Fingert, MD PhD	Clinical Fellow	7/2005-6/2006	
Chan Y. Kim, MD, PhD	Research Fellow	7/2004-5/2006	
Lesya Shuba, MD PhD	Clinical Fellow	7/2005-6/2006	
Michael Adix, BS	Medical Student Research	5/2006-9/2006	
Paul Abrams, BS	Medical Student Research	5/2006-9/2006	
Scott D. Piette, DO	Clinical Fellow	7/2206-6/2007	
Bing Jiang, MD	Research Fellow	9/2006-9/2007	
Drew Nelson, BS	Medical Student Research	5/2007-8/2007	
Reid Longmuir, MD	Clinical Fellow	7/2007-6/2008	
Mansi Parikh, MD	Clinical Fellow	7/2008-6/2009	
Li Tang, PhD	Research Fellow	9/2008-	
Kirk Sturridge, MD	Clinical Fellow	7/2009-	

C. Other Contributions to Institutional Programs

National Education Related Presentations

- 1996-present *Glaucoma Filtration Surgery* Skills Transfer Course
Instructor, American Academy of Ophthalmology
- 1997-2001 *Trabeculectomy: the Art and the Science* Instruction Course
Instructor, American Academy of Ophthalmology

Conferences, Grand Rounds, Journal Clubs, Etc.

- 10/1997 Combined glaucoma and cataract surgery
Grand Rounds
- 1/1998 Glaucoma case presentations
Clinical Conference
- 2/1998 Cyclodialysis cleft / hypotony
Grand Rounds
- 2/2000 Glaucoma case presentations/conference moderator
Clinical Conference
- 4/2000 Heidelberg Retina Tomograph and visual field correlation
Grand Rounds
- 9/2000 ORBIS mission to Uzbekistan
Grand Rounds
- 4/2001 Glaucoma case presentation
Clinical Conference
- 7/2001 ORBIS mission to Trinidad
Grand Rounds
- 8/2002 Optic nerve head analyzers in glaucoma
Grand Rounds
- 9/2002 Case presentation (Optic nerve hypoplasia)
Glaucoma Clinical Conference
- 9/2002 Rate of visual field progression in glaucoma
Grand Rounds
- 5/2004 Glaucoma
Foundations in Clinical Practice IV
M2 lecture, College of Medicine, Univ of Iowa
- 10/2004 Congenital glaucoma
Grand Rounds
- 2/2005 Orbital cellulitis associated with glaucoma seton implant by *Serratia marcescens*
by Judy Liu, MD and Young H. Kwon, MD PhD
EyeRounds, Dept of Ophthalmology and Visual Sciences, Univ of Iowa
- 4/2007 Toxic anterior segment syndrome
Glaucoma Clinical Conference
- 7/12/07 TVT Study: How should we approach the patient who needs glaucoma surgery?
Grand Rounds
- 7/20/07 Glaucoma
Med Student Lecture
- 2/8/08 Case presentations (myocilin+ OHT, trabectome)
Glaucoma Clinical Conference
- 5/22/08 ORBIS mission to Vietnam
Grand Rounds

Teaching Committees:

- 2000-2002 Ph.D. Thesis Committee Member
College of Veterinary Medicine
Iowa State University
Ames, IA

Student Counseling:Formal Study to Improve Teaching Abilities:Current Research Concerning Teaching

D. Other

2001-2008 Volunteer faculty for surgical teaching
ORBIS medical mission for ophthalmology to the third world
Uzbekistan (2000)
Trinidad (2001)
Vietnam (2008)

III. SCHOLARSHIP

A. Publications or Creative Works

Peer-Reviewed Papers

1. Nordheim A, Tesser P, Azorin F, **Kwon YH**, Möller A, Rich A: Isolation of Drosophila proteins that bind selectively to left-handed Z-DNA. *Proc. Natl. Acad. Sci. USA*; 79:7729-7733, 1982
2. **Kwon YH**, Esguerra M, Sur M: N-methyl-D-aspartate and non-NMDA receptors mediate visual responses of neurons in the cat dorsal lateral geniculate nucleus. *J. Neurophysiol.*; 66:414-428, 1991
3. **Kwon YH**, Nelson SB, Toth LJ, Sur M: Effect of stimulus contrast and size on NMDA receptor activity in the cat lateral geniculate nucleus. *J. Neurophysiol.*; 68:182-196, 1992
4. Esguerra M, **Kwon YH**, Sur M: Retinogeniculate EPSPs recorded intracellularly in the ferret lateral geniculate nucleus in vitro: role of NMDA receptors. *Vis. Neurosci.*; 8:545-555, 1992
5. Roe AW, Pallas SL, **Kwon YH**, Sur M: Visual projections routed to the auditory pathway in ferrets: receptive fields of visual neurons in primary auditory cortex. *J. Neurosci.*; 12:3651-3664, 1992
6. Christie DB, **Kwon YH**, Choi I, Jakobiec FA, Woog JJ: Sequential embolization and excision of an orbital arteriovenous malformation. *Arch. Ophthalmol.*; 112:1377-1379, 1994
7. Park HJ, **Kwon YH**, Weitzman M, Caprioli J: Temporal corneal phacoemulsification in patients with filtered glaucoma. *Arch. Ophthalmol.*, 115:1375-1380, 1997
8. Caprioli J, Park HJ, **Kwon YH**, Weitzman M: Temporal corneal phacoemulsification in patients with filtered glaucoma. *Trans. Am. Ophthal. Soc.* 95:153-170, 1997
9. **Kwon YH**, Park HJ, Jap A, Ugurlu S, Caprioli J. Test re-test variability of blue-on-yellow perimetry is greater than white-on-white perimetry in normal subjects. *Am. J. Ophthalmol.* 126:29-36, 1998
10. Fezza J, Chaudhry IA, **Kwon YH**, Grannum EE, Sinard J, Wolfley DE. Orbital melanoma presenting as orbital cellulitis: a clinicopathologic report. *Ophthal Plast Reconstr Surg* 14(4):286-289, 1998
11. Carlsen JO, Zabriskie NA, **Kwon YH**, Barbe ME, Scott WE. Apparent central nervous system depression in infants after the use of topical brimonidine. *Am. J. Ophthalmol.* 128:255-256, 1999
12. **Kwon YH**, Hong S, Honkanen RA, Alward WLM. Correlation of automated visual field parameters and peripapillary nerve fiber layer thickness as measured by scanning laser polarimetry. *J. Glaucoma* 9:281-288, 2000
13. **Kwon YH**, Taylor JM, Hong S, Honkanen RA, Zimmerman MB, Alward WLM, Sutphin JE. Long-term results of eyes with penetrating keratoplasty and glaucoma drainage tube implant. *Ophthalmology* 108:272-278, 2001
14. Jacobson N, Andrews M, Shepard AR, Nishimura D, Searby C, Fingert JH, Hageman G, Mullins R, Davidson BL, **Kwon YH**, Alward WLM, Stone EM, Clark AF, Sheffield VC. Non-secretion of mutant proteins of the glaucoma gene Myocilin in cultured trabecular meshwork cells and in aqueous humor. *Hum Mol Genetics* 10:117-125, 2001
15. Allen RC, Kherani A, Russell SR, **Kwon YH**, Oetting TA. Cryptophacolytic glaucoma in two patients with ectopia lentis et pupillae. *Middle East Journal of Ophthalmology* 9:81-82, 2001
16. **Kwon YH**, Kim C, Zimmerman MB, Alward WLM, Hayreh SS. Rate of visual field loss and long-term visual outcome in primary open angle glaucoma. *Am. J. Ophthalmology* 132:47-56, 2001 – *Picked for "Editors Selection" by International Glaucoma Review, Senior Ed: Shields MB, Kitazawa Y, 2002, and Reviewed by Ocular Surgery News 20:41, 2002*
17. Clark AF, Kawase K, English-Wright S, Lane D, Steely HT, Yamamoto T, Kitazawa Y, **Kwon YH**, Fingert JH, Swiderski RE, Mullins RF, Hageman GS, Alward WLM, Sheffield VC, Stone EM. Expression of the glaucoma gene myocilin (MYOC) in the human optic nerve head. *The FASEB Journal* 15: 1251-1253, 2001
18. Graul TA, Kim C-S, Alward WLM, **Kwon YH**. Progressive axial myopia in a juvenile patient with traumatic glaucoma. *Am J Ophthalmol.*, 133:700-702, 2002.
- 19.. Kardon R, **Kwon YH**, Truit P, Nemeth SC, Ts'o D, Soliz P. Optical Imaging Device of Retinal Function. *Proceedings of SPIE, Vol 4611: 230-238, 2002.*
20. Honkanen RA, Baruah S, Zimmerman MB, Khanna CL, Weaver YK, Narkiewicz J, Waziri R, Gehrs KM, Weingeist TA, Boldt HC, Folk JC, Russell SR, **Kwon YH**. Vitreous amino acid

- concentrations in patients with glaucoma undergoing vitrectomy. *Arch Ophthalmol*, 121: 183-188, 2003.
21. Pereira MLM, Kim CS, Zimmerman MB, Alward WLM, Hayreh SS, **Kwon YH**. Rate and pattern of visual field decline in primary open-angle glaucoma. *Ophthalmology* 109: 2232-2240, 2002. – *Reviewed by Ophthalmology Times 27: 27, 2001*.
 22. Alward WLM, **Kwon YH**, Khanna CL, Johnson AT, Hayreh SS, Zimmerman MB, Narkiewicz J, Andorf, JL, Moore PA, Fingert JH, Sheffield VC, Stone EM. Variations in the Myocilin Gene in Patients with Open Angle Glaucoma. *Arch Ophthalmol* 120:1189-1197, 2002.
 23. Corona E, Mitra S, Wilson M, Krile T, **Kwon YH**, Soliz P. Digital stereo image analyzer for generating automated 3-D measures of optic disc deformation in glaucoma. *IEEE Transactions on Medical Imaging Vol 21, No10: 1244-1253, 2002*.
 24. Graul TA, **Kwon YH**, Zimmerman MB, Kim CS, Sheffield VC, Stone EM, Alward WLM. A Case-Control Comparison of the Clinical Characteristics of Glaucoma and Ocular Hypertensive Patients With and Without the Myocilin Gln368 Stop Mutation. *Am J Ophthalmol*, 134: 884-90, 2002.
 25. Grozdanic SD, Sakaguchi DS, **Kwon YH**, Kardon RH, Sonea IM. Characterization of the pupil light reflex, electroretinogram and tonometric parameters in healthy rat eyes. *Current Eye Research* 25(2): 69-78, 2002.
 26. Grozdanic SD, Sakaguchi DS, **Kwon YH**, Kardon RH, Sonea IM. Functional characterization of retina and optic nerve after acute ocular ischemia in rats. *Invest Ophthalmol Vis Sci*, 44: 2597-2605, 2003.
 27. Honkanen RA, Nishimura DY, Swiderski RE, Bennett SR, Hong S, **Kwon YH**, Stone EM, Sheffield VC, Alward WLM. A family with Axenfeld-Rieger syndrome and Peters anomaly caused by a point mutation (Phe112Ser) in the FOXC1 gene. *Am J Ophthalmol* , 135: 368- 375, 2003.
 28. Grozdanic SD, Betts DM, Sakaguchi DS, **Kwon YH**, Kardon RH, Sonea IM. Temporary elevation of the intraocular pressure by cauterization of vortex and episcleral veins in rats causes functional deficits in the retina and optic nerve. *Exp Eye Res*, 77(1): 27-33, 2003
 29. Grozdanic SD, Betts, DM, Allbaugh RA, Sakaguchi DS, **Kwon YH**, Kardon RH, Sonea IM. Characterization of the pupil light reflex, electroretinogram and tonometric parameters in healthy mouse eyes. *Curr Eye Res* 26(6): 371-378, 2003.
 30. **Kwon YH**, Kim YI, Pereira MLM, Montague PR, Zimmerman MB, Alward WLM. Rate of optic disc cup progression in treated primary open-angle glaucoma. *J Glaucoma*, 12:409-416, 2003.
 31. Alward WLM, **Kwon YH**, Kawase K, Craig JE, Hayreh SS, Johnson AT, Khanna CL, Yamamoto T, Mackey DA, Roos BR, Affatigato LM, Sheffield VC, Stone EM. Evaluation of Optineurin Sequence Variations in 1048 Individuals with Open Angle Glaucoma, *Am J Ophthalmology*, 136: 904-910, 2003.
 32. Grozdanic SD, Betts DM, Sakaguchi DS, Allbaugh RA, **Kwon YH**, Kardon RH. Laser-induced mouse model of chronic ocular hypertension. *Invest Ophthalmol Vis Sci*, 44: 4337-4346, 2003.
 33. **Kwon YH**, Pereira MLM. Rate of visual field progression in a patient untreated for primary open-angle glaucoma. *Middle East J Ophthalmol*, 11:52-54, 2003.
 34. Grassi MA, Verdick RE, Langlow EP, Alward WLM, **Kwon YH**. Pigment dispersion syndrome in an 8-year old boy. *Am J Ophthalmol*, 137:753-756, 2004.
 35. Abramoff MD, **Kwon YH**, Ts'o D, Barriga S, Soliz P, Kardon R. A spatial truncation approach to the analysis of optic imaging of the retina in humans and cats. *IEEE International Symposium on Biomedical Imaging: 1115-1118, 2004*.
 36. Grozdanic SD, **Kwon YH**, Sakaguchi DS, Kardon RH, Sonea IM. Functional evaluation of retina and optic nerve in the rat model of chronic ocular hypertension. *Exp Eye Res*, 79:75-83, 2004.
 37. **Kwon YH**. Memantine and Progressive Glaucoma. *Cases in Controversy Commentary, J Glaucoma*, 14:84-86, 2005.
 38. **Kwon YH**, Pereira MLM, Anderson SC, Kim YI, Kardon RH. Quantitative correlation of elevated intraocular pressure with relative afferent pupillary defect change in unilateral glaucoma. *Acta Ophthalmol Scand*, 83(1): 127, 2005.
 39. **Kwon YH**, Rickman DW, Baruah S, Zimmerman MB, Kim CS, Boldt HC, Russell SR, Hayreh SS. Vitreous and retinal amino acid concentrations in experimental central retinal artery occlusion in the primate. *Eye*, 19: 455-463, 2005 (with accompanying editorial on the article by Lotery AJ, *Eye* 19: 369-370, 2005).
 40. Reistad CE, Shields MB, Campbell DG, Ritch R, Wang JC, Wand M, and **AGS Pigmentary Glaucoma Iridotomy Study Group**. The Influence of Peripheral Iridotomy on the Intraocular Pressure Course in Patients with Pigmentary Glaucoma. *J Glaucoma*. 14:255-259, 2005.

41. **Kwon YH**, Rickman DW, Baruah S, Zimmerman MB, Kim CS, Boldt HC, Russell SR, Hayreh SS. Reply to: Glutamate excitotoxicity in glaucoma: throwing the baby out with the bathwater? *Eye*, 20: 731-732, 2006.
42. Sakaguchi DS, Van Hoffelen SJ, Grozdanic SD, **Kwon YH**, Kardon RH and Young MJ. Neural Progenitor Cell Transplants into the Developing and Mature CNS. *Proceedings of Annals of the New York Academy of Sciences*, 1049:118-134, 2005.
43. Grozdanic SD, Ast AM, Lazik T, **Kwon YH**, Kardon RH, Sonea IM, Sakaguchi DS. Morphologic integration and functional assessment of transplanted neural progenitor cells in healthy and acute ischemic rat eyes. *Exp Eye Res* 82:597-607, 2006.
44. Xiaoqing J, **Kwon YH**, Alward LM, Abramoff MD. Robust Optic Disc Segmentation, *Proceedings of the SIGGRAPH 2005*, IEEE Press, 2005 (Won Best Student Paper Award).
45. Abramoff MD, **Kwon YH**, Ts'o D, Soliz P, Pokorny J, Kardon RH. Functional Imaging of the Intrinsic Signal in the Retina of Awake Humans, *Invest Ophthalmol Vis Sci*, 47:715-721, 2006.
46. Ostojic J, Sakaguchi DS, de Lathouder Y, Hargrove MS, Trent III JH, **Kwon YH**, Kardon RH, Kuehn MH, Betts DM, and Grozdanic SD. Neuroglobin and Cytochrome b5: Oxygen Binding Proteins in Retinal Neurons, *Invest Ophthalmol Vis Sci*, 47:1016-1023, 2006.
47. Fingert, JH, **Kwon YH**, Moore PA, Johnston RM, Kim KY, Sheffield VC, Alward WLM, Stone EM. The C677T variant in the methylenetetrahydrofolate reductase gene is not associated with disease in cohorts of pseudoexfoliation glaucoma and primary open-angle glaucoma patients from Iowa. *Ophthalmic Genetics*, 27(2): 39-41, 2006.
48. Kuehn MH, Kim CY, Ostojic J, Bellin M, Alward WLM, Stone EM, Sakaguchi DS, Grozdanic SD, **Kwon YH**. Retinal Synthesis and Deposition of Complement Components induced by ocular hypertension. *Exp Eye Res*, 83:620-628, 2006.
49. Fingert JH, Alward WLM, **Kwon YH**, Shankar SP, Andorf JL, Mackey DA, Sheffield VC, Stone EM. No association between variations in the WDR-36 gene and primary open-angle glaucoma. *Arch Ophthalmol*, 125:434-6, 2007.
50. Kim CY, Kuehn MH, Anderson MG, **Kwon YH**. Intraocular pressure measurement in mice: A comparison between Goldmann and rebound tonometry. *Eye* 21: 1202-1209, 2007
51. Kim CY, Kuehn MH, Clark AF, **Kwon YH**. Gene Expression Profile of the Adult Human Retinal Ganglion Cell Layer. *Molecular Vision*, 12:1640-1648, 2006.
<<http://www.molvis.org/molvis/v12/a188/>>
52. Shuba, LM, Doan AP, Maley MK, Zimmerman MB, Dinn RB, Greenlee EC, Alward WLM, **Kwon YH**. Diurnal Fluctuation and Concordance of Intraocular Pressure in Glaucoma Suspects and Normal Tension Glaucoma Patients. *J Glaucoma*, 16:307-312, 2007.
53. Abramoff MD, Alward WLM, Greenlee EC, Shuba L, Kim CY, Fingert JH, **Kwon YH**. Automated segmentation of the optic nerve head from stereo color photographs using biologically plausible feature detectors. *Invest Ophthalmol Vis Sci*, 48:1665-1673, 2007.
54. Dinn RB, Zimmerman MB, Shuba LM, Doan AP, Maley MK, Greenlee EC, Alward WLM, **Kwon YH**. Concordance of Diurnal Intraocular Pressure between Fellow Eyes in Primary Open Angle Glaucoma. *Ophthalmol*, 114:915-920, 2007. (Selected for Editor's Choice Symposium for AAO Annual Meeting in New Orleans 2007)
55. Greenlee EC, **Kwon YH**. Graft Failure: III. Glaucoma escalation after keratoplasty. *International Ophthalmology*, 28: 191-207, 2008.
56. Barriga ES, Pattichis M, Ts'o D, Abramoff M, Kardon R, **Kwon YH**, Soliz P. Spatiotemporal independent component analysis for the detection of functional responses in cat retinal images. *IEEE Transactions on Medical Imaging*, 26(8): 1035-1045, 2007.
57. Fingert JH, Alward WLM, **Kwon YH**, Wang K, Streb LM, Sheffield VC, Stone EM. LOXL1 mutations are associated with exfoliation syndrome in patients from Iowa. *Am J Ophthalmology*, 144(6):974-5, 2007.
58. Ostojic J, Sakaguchi DS, Syed NA, Hargrove MS, Trent III JT, Kuehn MH, **Kwon YH**, Kardon RH, and Grozdanic SD. Pattern of distribution of the oxygen-binding globins, neuroglobin and cytochrome b5 in the human retina. *Arch Ophthalmol* 126(11): 1530-1536, 2008.
59. Kuehn MH, Kim CY, Jiang B, Dumitrescu AV, **Kwon YH**. Disruption of the complement cascade delays retinal ganglion cell death following retinal ischemia-reperfusion. *Exp Eye Res*, 87(2):89-95, 2008.
60. **Kwon YH**, Adix M, Zimmerman MB, Piette S, Greenlee EC, Alward WLM, Abramoff MD. Variance owing to observer, repeat imaging, and fundus camera type on cup-to-disc ratio estimates by stereo planimetry. *J Glaucoma*, 18:305-310, 2009

61. Ostojic J, Grozdanic S, Syed NA, Hargrove MS, Trent III JT, Kuehn MH, Kardon RH, **Kwon YH**, Sakaguchi DS. Neuroglobin and cytoglobin distribution in the anterior eye segment: a comparative immunohistochemical study. *J Histochemistry & Cytochemistry*, 56(9): 863-72, 2008.
62. Rauen M, Oetting TA, Boldt HC, **Kwon YH**. Two noninfectious forms of endophthalmitis after intravitreal triamcinolone and cataract extraction. *Eye* 23: 1611-1622, 2009.
63. Francis BA, Minckler D, Dustin L, Kawji S, Yeh J, Sit A, Mosaed S, Johnston M and the **Trabectome Study Group**. Combined cataract extraction and trabeculotomy by the internal approach for coexisting cataract and open-angle glaucoma: Initial results. *J Cataract Refract Surg* 34:1096-1103, 2008.
64. **Kwon YH**, Fingert JH, Kuehn MH, Alward WLM. Mechanisms of Disease: Primary Open-Angle Glaucoma. *New Engl J Med*, 360:1113-24, 2009.
65. Greenlee EC, **Kwon YH**. Direct Ophthalmoscopy, Supplement video to Mechanisms of Disease: Primary Open-Angle Glaucoma, *New Engl J Med*, <http://content.nejm.org/cgi/content/full/360/11/1113/DC1>, 2009.
66. Schallek J, Li H, Kardon RH, **Kwon YH**, Abramoff M, Soliz P, Ts'o D. Stimulus-evoked intrinsic optical signals in the retina: Spatial and temporal characteristics. *Invest Ophthalmol Vis Sci*, 50(10): 4865-72, 2009.
67. Schallek J, Kardon RH, **Kwon YH**, Abramoff M, Soliz P, Ts'o D. Stimulus-evoked intrinsic optical signals in the retina: Pharmacologic dissection reveals outer retinal origins. *Invest Ophthalmol Vis Sci*, 50(10): 4873-80, 2009.
68. **Kwon YH**, Fingert JH, Kuehn MH. Correspondence, Primary Open-Angle Glaucoma. *New Engl J Med* 360 (25); 2679-2680, 2009.
69. Abramoff MD, Lee K, Niemeijer M, Alward WLM, Greenlee EC, Garvin MK, Sonka M, **Kwon YH**. Automated segmentation of the cup and rim from spectral domain OCT of the optic nerve head. *Invest Ophthalmol Vis Sci*, 50:5778-5784, 2009.
70. Parikh, M, **Kwon, YH**. Vision loss after inadvertent corneal perforation during lid anesthesia. *Ophthalmic Plastic and Reconstructive Surgery*, 2009 in press.
71. Lee K, Niemeijer M, Garvin MK, **Kwon YH**, Sonka M, Abramoff MD. Segmentation of the optic disc in 3D-OCT scans of the optic nerve head. *IEEE Transactions on Medical Imaging*, 2009 in press.
72. Wandling GR, Parikh M, Robinson C, Pramanik S, Goins KM, Sutphin JE, Alward WLM, Greenlee EC, **Kwon YH**, Wagoner MD. Escalation of glaucoma therapy after deep lamellar endothelial keratoplasty, *Cornea*, in press.

Non-peer Reviewed Papers / Publications

1. **Kwon YH**, Hong S, Honkanen RA, Alward WLM. Correlation of automated visual field parameters and peripapillary nerve fiber layer thickness as measured by scanning laser polarimetry. *Excerpta Medica*, 2001
2. Barriga ES, Truit PW, Pattichis MS, Ts'o D, **Kwon YH**, Kardon R, Soliz P. Blind source separation in retinal videos. *Proceedings of SPIE*, 2003.
3. Graul TA, Kim C-S, Alward WLM, **Kwon YH**. Progressive axial myopia in a juvenile patient with traumatic glaucoma. *Excerpta Medica*, 2003.
4. Grassi MA, Verdick RE, Langlow EP, Alward WLM, **Kwon YH**. Pigment dispersion syndrome in an 8-year old boy. *London Dysmorphology and Neurogenetics Database: GENE EYE*, Institute of Child Health and Great Ormond Street Hospital for Children NHS Trust, University College London, 2004.
5. Doan A, **Kwon YH**. Pseudoexfoliation Glaucoma. *EyeRounds* (<http://webeye.ophth.uiowa.edu/eyeforum/case8>), Dept of Ophthalmology and Visual Sciences, Univ of Iowa, 2004.
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98. Piette SD, Adix M, Abramoff MD, Greenlee EC, Alward WLM, **Kwon YH**. Comparison of computer aided-planimetry between simultaneous and non-simultaneous stereo optic disc photographs. Resident/fellow Research Day, Dept of Ophthalmology and Visual Sciences, Univ of Iowa, May 2007.
99. Nelson D, Abramoff MD, **Kwon YH**, Johnson CA. The enigma of the structure-function relationship in glaucoma progression. Research Day, College of Medicine, Univ of Iowa, Sept 2007.
100. Dinn RB, Zimmerman MB, Shuba LM, Doan AP, Maley MK, Greenlee EC, Alward WLM, **Kwon YH**. Concordance of Diurnal Intraocular Pressure between Fellow Eyes in Primary Open Angle Glaucoma. Editor's Choice Symposium, AAO Annual Meeting, New Orleans, Nov 10, 2007.
101. Nelson D, Abramoff MD, **Kwon YH**, Greenlee EC, Alward WLM, Johnson CA. Correlation between structure and function of progression in early glaucoma. Invest Ophthalmol Vis Sci Abstr, 2008.
102. Lavik EB, Bertram J, Saluja S, McKain J, Jiang B, Kuehn M, **Kwon YH**. Sustained delivery of timolol maleate from poly(lactic-co-glycolic acid)/poly(lactic acid) microspheres. Invest Ophthalmol Vis Sci Abstr, 2008.
103. Yang EB, Jones YH, Alward WLM, Greenlee EC, **Kwon YH**, Abramoff MD. Comparing resident and fellow performance on evaluation of stereoscopic optic disc images. Invest Ophthalmol Vis Sci Abstr, 2008.
104. Garvin MK, Sonka M, Kardon RH, Wu X, **Kwon YH**, Russell SR, Abramoff MD. 3-Dimensional analysis of SD OCT: Thickness assessment of 6 macular layers in normal subjects. Invest Ophthalmol Vis Sci Abstr, 2008.
105. Longmuir R, Wall M, Alward WLM, **Kwon YH**. Visual field improvement from the Variability in Perimetry (VIP) study. Resident/fellow Research Day, Dept of Ophthalmology and Visual Sciences, Univ of Iowa, May 2008.
106. Yang B, Abramoff MD, Alward WLM, Jones YJ, **Kwon YH**. Comparing resident and fellow optic disc cup and rim segmentation from stereo photographs using computer-aided planimetry. Resident/fellow Research Day, Dept of Ophthalmology and Visual Sciences, Univ of Iowa, May 2008.
107. Lee K, Niemeijer M, Garvin MK, **Kwon YH**, Sonka M, Abramoff MD. 3-D segmentation of the rim and cup in spectral-domain optic coherence tomography volumes of the optic nerve head. The International Society of Optical Engineering, SPIE 2009.
108. Harper MM, Sakaguchi DS, Kuehn MH, **Kwon YH**, Kardon RH, Bemelmans A, Kostic C, Arsenijevic Y, Grozdanic S. Comparison of visual preservation after transplantation of BDNF or GDNF secreting mesenchymal stem cells in glaucomatous rat eyes. Invest Ophthalmol Vis Sci Abstr, 2009.
109. Fingert JH, Roos BR, Daggett HT, Alward WLM, **Kwon YH**, Sheffield VC, Stone EM, Scheetz TE. Association study of pigment dispersion syndrome. Invest Ophthalmol Vis Sci Abstr, 2009.
110. Ts'o DY, Schallek JB, Kardon R, **Kwon YH**, Abramoff M, Soliz P. Hemodynamic components contribute to intrinsic signals of the retina and optic nerve. Invest Ophthalmol Vis Sci Abstr, 2009.
111. Lee K, Niemeijer M, Garvin MK, **Kwon YH**, Sonka M, Abramoff MD. Automated optic disc segmentation from 3D SD-OCT of the optic nerve head (ONH). Invest Ophthalmol Vis Sci Abstr, 2009.
112. Kuehn MK, Ryan RJ, Dumitrescu AV, **Kwon YH**. Accumulation of complement components in the glaucomatous human optic nerve. Invest Ophthalmol Vis Sci Abstr, 2009.
113. Dumitrescu AV, **Kwon YH**, Kuehn MH. Sustained-release timolol maleate microspheres: a new treatment approach for glaucoma. Resident/fellow Research Day, Dept of Ophthalmology and Visual Sciences, Univ of Iowa, May 2009.

114. Wandling GR, Parikh M, Robinson C, Pramanik S, Goins KM, Sutphin JE, Alward WLM, Greenlee EC, **Kwon YH**, Wagoner MD. Escalation of glaucoma therapy after deep lamellar endothelial keratoplasty. Am Acad Ophthalmology Annual Meeting, San Francisco, CA 2009.
115. Echegaray S, Lou W, Soliz P, **Kwon YH**, Abramoff MD. Automatic initialization of level set segmentation for application to optic disc margin identification. Computer-Based Medical Systems, IEEE symposium proceedings, 2009.
116. Parikh, M, **Kwon YH**. Our experience with Trabectome. Resident/fellow Research Day, Dept of Ophthalmology and Visual Sciences, Univ of Iowa, May 2009.
117. **Kwon YH**, Hu Z, Abramoff MD, Lee K, Garvin MK. Automated segmentation of neural canal opening and optic cup in SD-OCT images. Annual Am Glaucoma Soc Meeting, March 2010.
118. Circularity comparison of the clinical optic disc and automatically segmented neural canal opening in SD-OCT images. Hu Z, Abramoff MD, **Kwon YH**, Lee K, Garvin MK. Invest Ophthalmol Vis Sci Abstr, 2010.
119. Comparison of the shape estimate from stereo color photographs with the SD-OCT measurement of the optic nerve head. Tang L, **Kwon YH**, Alward WLM, Lee K, Garvin MK, Abramoff MD. Invest Ophthalmol Vis Sci Abstr, 2010.

Reviews

1. **Kwon YH**. Clinical guide to glaucoma management. Ed. EJ Higginbotham and DA Lee, Butterworth/Heinemann, Woburn, MA, 2004. Arch Ophthalmol 123: 585, 2005.

Surgical Teaching Video

1. Dinn R, **Kwon YH**. Diode Cyclophotocoagulation. Surgical Digital Video, MedRounds Publications Inc. Coralville, IA, 2006.
2. **Kwon YH**. Master Technique in Glaucoma Surgery: Series 1: Trabeculectomy, Post-trabeculectomy management, Combined trabeculectomy & cataract surgery. MedRounds Publications Inc. Coralville, IA, 2006-7.
3. **Kwon YH**. Master Technique in Glaucoma Surgery: Series 2: Glaucoma drainage tube implants, Pediatric glaucoma surgery, Special procedures. MedRounds Publications Inc. Coralville, IA, 2006-7.

B. Current Research

- 1996- *Functional imaging of the retina*
University of Iowa, and SUNY Syracuse
Co-investigators: R Kardon, P Soliz, D Ts'o, M Abramoff
- 2000- *Neuroprotection of the optic nerve with engineered stem cells in glaucoma*
University of Iowa and College of Veterinary Medicine, Iowa State University
Co-investigators: R Kardon, S Grozdanic, D Betts, D Sakaguchi
- 2002- *Cell biology of the optic nerve in the rat and human glaucoma*
University of Iowa, Co-investigators: M Kuehn, E Stone, T Braun
- 2006- Digital Automated Planimetry (DAP) of Optic Disc Stereo Photographs using a Computer Algorithm, and Automated segmentation of the optic nerve head on SD-OCT
University of Iowa, Co-investigators: M Abramoff, CA Johnson, WLM Alward, EC Greenlee

C. Published Reviews of Scholarship and Exemplary Clinical Care

1. DuBosar R. With more meds, slower rate of visual field loss. Ocular Surgery News. 20: 40, 2002.
2. Realini T. Measuring IOP variability: New thoughts on diurnal curves. EyeWorld 2005.
3. Dinn RB, Zimmerman MB, Shuba LM, Doan AP, Maley MK, Greenlee EC, Alward WLM, **Kwon YH**. Concordance of Diurnal Intraocular Pressure between Fellow Eyes in Primary Open Angle Glaucoma. Reviewed by M. Karmel, Supplement to EyeNet, p.10, Am Acad Ophthalmol, Jan 2008.
4. **Kwon YH**, Hayreh SS, Gehrs K. "Three Miracles" by M. Sondergard. A featured story on a patient care at UIHC. Pacemaker Magazine, UIHC 2008.
5. Carter K, Nerad J, **Kwon YH**. UI part of ORBIS Flying Eye Hospital team. A featured story of international surgical care and teaching on ORBIS International. UI Carver College of Medicine, Faculty & Staff News. May 14, 2008, and also noted in Pacemaker Magazine, UIHC 35(3), Fall 2008.

D. Grants Received

- | | | |
|---------------|-------------|--|
| 1. 1997-1998 | \$15,000 | <i>Neuro-protection through glutamate receptor blockade in experimental central retinal artery occlusion</i>
College of Medicine Research Award, University of Iowa
Principal Investigator: YH Kwon
Co-Investigator: SS Hayreh |
| 2. 1998-1999 | \$30,000 | <i>Assessment of alterations in gene expression in the trabecular meshwork and ciliary body of donors with glaucoma</i>
Otsuka Research Fellowship in Glaucoma
American Glaucoma Society |
| 3. 1999-2000 | \$25,000 | <i>Shaffer International Fellowship</i>
Awarded to CS Kim, MD and University of Iowa
Glaucoma Research Foundation |
| 4. 2000-2001 | \$100,000 | <i>Optical Imaging Device of the Retinal Function</i>
Small Business Innovation Research Grant (Phase I)
National Eye Institute
Principal Investigator: P Soliz, Kestrel Corp.
Co-investigators: YH Kwon , R Kardon, D Ts'o |
| 5. 2000-2001 | \$43,305 | <i>Regeneration of the optic nerve with stem cells in glaucoma</i>
Inter-institutional grant
Iowa State University and University of Iowa
Principal investigators: D. Betts, I. Sonea, Y Niyo
Co-investigators: YH Kwon and R Kardon |
| 6. 2001-2002 | \$35,000 | <i>Neural stem cell transplants: A novel strategy for the treatment of glaucoma</i>
Glaucoma Foundation
Principal investigator: D. Sakaguchi (Iowa State Univ)
Co-investigators: YH Kwon , R Kardon, and I Sonea |
| 7. 2002-2003 | \$100,008 | <i>Depth Maps from Stereo Images of the Optic Disc</i>
Small Business Innovation Research Grant (Phase I)
National Eye Institute
Principal Investigator: M. Wilson, Kestrel Corp.
Co-investigators: YH Kwon , P Soliz, W Sponsel |
| 8. 2002-2004 | \$750,000 | <i>Optical Imaging Device of the Retinal Function</i>
Small Business Innovation Research Grant (Phase II)
National Eye Institute
Principal Investigator: P Soliz, Kestrel Corp.
Co-investigators: YH Kwon , R Kardon, D Ts'o |
| 9. 2002-2004 | \$50,000 | <i>Neural stem cell transplants: New strategies for the treatment of glaucoma</i>
Glaucoma Foundation
Principal investigator: D. Sakaguchi (Iowa State Univ)
Co-investigators: YH Kwon , R Kardon |
| 10. 2003-2004 | \$30,000 | Characterization of gene expression patterns in the retina associated with the development of enhanced S-cone syndrome and identification of candidate genes for Leber's Congenital Amaurosis
The Knights Templar Foundation
Principal investigator: M Kuehn (Univ of Iowa)
Senior investigator: YH Kwon
Co-investigators: WLM Alward, EM Stone, VC Sheffield, RF Mullins |
| 11. 2003-2008 | \$1,250,000 | Non-invasive measurement of retinal function
R01 National Institute of Health
Principal investigator: DY Ts'o (Upstate Medical Center, Syracuse)
Co-investigators: R Barlow, YH Kwon , R Kardon, P Soliz |
| 12. 2004-2005 | \$100,000 | <i>Optic Nerve Head Analysis for Glaucoma</i>
Small Business Innovation Research Grant (Phase I)
National Eye Institute
Principal Investigator: G Zamora, Kestrel Corp. |

13. 2004-2006 \$69,334 Co-investigators: **YH Kwon**, P Soliz
Molecular mechanisms of steroid-induced glaucoma
American Health Assistance Foundation
National Glaucoma Research
Principal investigator: YH Kwon
14. 2004-2007 \$360,000 Co-investigators: M Kuehn, A Clark, EM Stone
University of Iowa Mentored Clinical Research Scholar Program (K-12 Award) for Michael Abramoff, MD PhD
Lead mentor: R Kardon
Co-Mentors: **YH Kwon**, M Sonka
15. 2005-2006 \$30,000 Genetic and Functional Characterization of a Novel, Spontaneously Occurring Animal Model of Congenital Glaucoma.
Glaucoma Research Foundation
Principal Investigator: M Kuehn
Co-I: **YH Kwon**, G McLellan, S Grozdanic
16. 2005-2006 \$10,000 Computerized classification of the optic nerve head
Clinical Research Grant Proposal for
College of Medicine, Univ of Iowa
Principal investigator: M Abramoff
Co-I: **YH Kwon**, WLM Alward
17. 2005-2008 \$750,000 Treatment of Visual Loss in Glaucoma and Ischemia with Neurotrophic Growth Factors
Veteran's Administration Merit Review Grant
PI: RH Kardon
Co-PI: SD Grozdanic
Collaborator: **YH Kwon**, D Sakaguchi, D Betts, M Kuehn
18. 2006-2010 Anecortave acetate for treatment of steroid-induced IOP elevation (part of multi-center clinical trial)
Alcon Research Inc.
PI: A. Clark (Alcon)
Co-PI: WLM Alward (UIHC)
Co-I: **YH Kwon**, JH Fingert
19. 2006-2008 \$200,000 Sustained delivery of timolol maleate for management of elevated intraocular pressure in glaucoma.
Wallace H. Coulter Foundation, Phase I
PI: E Lavik (Yale U), YH Kwon (UI)
Co-PI: MH Kuehn
20. 2007-2008 \$100,000 Functional Retina Imaging Device
SBIR Phase I
PI: P Soliz, D Ts'o
Consultants: **YH Kwon**, MD Abramoff, RH Kardon
21. 2008-2009 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
Pfizer multi-center phase 3 study
PI (Iowa): YH Kwon
Co-I (Iowa): JH Fingert, R Olson, WLM Alward, A Drake, S Longmuir
22. 2008-9 \$80,000 Development of algorithm to identify the borders of the optic nerve head into disc and cup from SD- OCT images
Grant contract with Carl Zeiss Meditec
PI: MD Abramoff
Co-I: **YH Kwon**
23. 2008-10 \$260,000 Sustained delivery of timolol maleate for management of elevated intraocular pressure in glaucoma.
Wallace H. Coulter Foundation, Phase 2
PI: E Lavik (Yale U), YH Kwon (UI)
Co-PI: MH Kuehn
24. 2008-13 \$1,250,000 The Role of the Complement System in Glaucoma

- RO1, National Eye Institute
 PI: M. Kuehn
 Consultant: **YH Kwon**
25. 2008-13 \$1,000,000 Focal Structure-Function relationships in macular layers from 3D Spectral OCT
 National Eye Institute R01
 PI: M Sonka
 Co-PI: MD Abramoff, RH Kardon
 Co-I: **YH Kwon**
26. 2009-10 \$40,000
 Automated, objective, and reproducible method to determine cup and disc boundaries in 3D OCT images of optic nerve head in glaucoma subjects.
 Mid-Career Physician Scientist Award
 American Glaucoma Society
 PI: **YH Kwon**, Co-PI: MD Abramoff
27. 2009-2014 \$4,748,142
 Center for Excellence for Prevention and Treatment of Visual Loss
 Veteran's Administration Rehabilitation Center of Excellence Grant
 PI: RH Kardon and MD Abramoff
 Collaborators: **YH Kwon**, M. Sonka, M Garvin, D. Sakaguchi, S Grozdanic, M Wall, CA Johnson

E. Patents

1. Device and method for optical imaging of retinal function. US Patent 7,118,217. Inventors: RH Kardon, **YH Kwon**, P Soliz, D Ts'o. Issued Oct 10, 2006.
2. System and Method for Optical Imaging of Human Retinal Function. Inventors: D Ts'o, **YH Kwon**, RH Kardon, MD Abramoff. Applied for US Patent Continuation-In-Part, 2007.
3. Methods and systems for optic nerve head segmentation. Inventors: MD Abramoff, **YH Kwon**. Applied for US and International Patents, 2007.
4. Sustained delivery of timolol maleate for management of elevated IOP for glaucoma. Inventors: E Lavik, S Saluja, J Bertram, M Kuehn, **YH Kwon**. US Patent filed 6/08.

F. Visiting Professorships / Invited Lectures

1. *Intravitreal kynurenic acid in central retinal artery occlusion: a novel treatment modality*
 Department of Ophthalmology, University of Iowa
 Iowa City IA 1996
2. *Intravitreal kynurenic acid in central retinal artery occlusion: a novel treatment modality*
 Department of Ophthalmology, University of North Carolina
 Chapel Hill NC 1996
3. *Intravitreal kynurenic acid in central retinal artery occlusion: a novel treatment modality*
 Department of Ophthalmology, Albany Medical Center
 Albany NY 1996
4. *Intravitreal kynurenic acid in central retinal artery occlusion: a novel treatment modality*
 Department of Ophthalmology, University of Colorado
 Denver CO 1996
5. *Neuroprotection and optic nerve rescue*
 Invited Discussant
 Glaucoma Foundation Think Tank Meeting
 New York, NY, May 1996
6. *How early can we diagnose glaucoma?*
 Iowa Eye Association Alumni Meeting
 Iowa City IA, September 20, 1996
7. *Clinical Applications and Efficacy of New Glaucoma Drugs*
 Illinois Association of Ophthalmology Annual Meeting
 Lisle, IL, March 1, 1997
8. *Detection of Optic Neuropathy*
 Invited Discussant

- Glaucoma Research Foundation Catalyst Meeting
Los Angeles CA, September 25-26, 1997
9. *Glaucoma topics of interest to the primary care physician*
College of Medicine Visiting Professor
North Iowa Mercy Health Center
Mason City IA, March 25, 1998
 10. National Ophthalmology Consultant's Meeting
Invited Discussant
Colorado Springs CO, June 12-14, 1998
 11. *A pilot study of kynurenic acid in CRAO*
Kwon YH, and Loewenstein JI
Nantucket Retina Meeting
Nantucket MA, July 1998
 12. *A new treatment strategy for central retinal artery occlusion*
Department of Neurology, University of Iowa
Iowa City IA, September 24, 1998
 13. *Advances in glaucoma: Guiding the way to the future*
Health for your lifetime: A seminar in celebration of the 100th anniversary of the
University of Iowa Hospitals and Clinics
Hampton Inn Conference Center
Coralville, IA, January 26, 1999
 14. *Combined surgery for glaucoma and cataract: techniques*
Neuroprotection in glaucoma: a review and critical analysis
Annual Postgraduate Seminar
Jules Stein Eye Institute, University of California
Los Angeles, CA, April 9-10, 1999
 15. *Update on the medical management of glaucoma*
First Annual Optometric Conference
Department of Ophthalmology and Visual Sciences
University of Iowa College of Medicine
Iowa City, IA, May 7, 1999
 16. *Medical management of glaucoma*
Clinical Updates in Eye Care
1999 Hawkeye Optometric Institute
Iowa Optometric Association Annual Meeting
Cedar Rapids, IA, October 21, 1999
 17. *Automated perimetry for glaucoma assessment/management*
Second Annual Optometric Conference
Department of Ophthalmology and Visual Sciences
University of Iowa College of Medicine
Iowa City, IA, May 12, 2000
 18. *Combined cataract and glaucoma surgery*
Iowa Eye Association Annual Meeting
Department of Ophthalmology and Visual Sciences, University of Iowa
Iowa City IA, June 17, 2000
 19. *Demonstration of glaucoma surgical techniques.*
Lectures on glaucoma medical treatment and surgical procedures
Glaucoma Visiting Faculty
ORBIS Medical Mission
Tashkent, Uzbekistan, July 31-August 4, 2000
 20. *Management of normal tension glaucoma*
Third Annual Optometric Conference
Department of Ophthalmology and Visual Sciences
University of Iowa College of Medicine
Iowa City, IA, May 11, 2001
 21. *Demonstration of glaucoma surgical techniques.*
Lectures on glaucoma medical treatment and surgical procedures
Glaucoma Visiting Faculty
ORBIS Medical Mission

- Port of Spain, Trinidad, May 26 – June 2, 2001
22. *Stem cell transplantation: safety and efficacy*
The Glaucoma Foundation 9th Annual Think Tank: Stem cells and glaucoma
Chicago, IL. July 26-27, 2002
 23. *Use of optic nerve head analyzers in glaucoma*
Rate of visual field progression in glaucoma
Nebraska Academy of Eye Physicians and Surgeons Fall Scientific Meeting
Omaha, NE. September 13-14, 2002
 24. *Rate of visual field progression in treated glaucoma*
Iowa Optometric Association Clinical Updates in Eyecare
Cedar Rapids, IA. October 10, 2002
 25. *Management of normal tension glaucoma*
Rate of visual field loss in glaucoma
Optic nerve analysis in glaucoma I and II
53rd Annual Post-graduate review course in Ophthalmology
Upstate Medical University
SUNY
Syracuse, NY. December 6-7, 2002
 26. *Optic nerve analyzers in glaucoma management*
Fifth Annual Optometric Conference
Department of Ophthalmology and Visual Sciences
University of Iowa College of Medicine
Iowa City, IA, April 25, 2003
 27. *Primary open angle glaucoma: Review and Update*
Iowa Eye
Continuing ophthalmic Health Care Education
Department of Ophthalmology and Visual Sciences
University of Iowa College of Medicine
Iowa City, IA, December 5, 2003
 28. *Long-term Visual Outcome in Glaucoma*
Annual Joint Clinical Conference
Iowa Academy of Ophthalmology and Univ of Iowa, Dept of Ophthalmology and Visual
Sciences
Des Moines, IA April 16, 2004
 29. *Primary Congenital Glaucoma*
Operating Room Nurse Inservice Lecture
College of Medicine
University of Iowa
Iowa City, IA, May 17, 2004
 30. *Non-intraocular pressure related treatment considerations in glaucoma*
Rate of visual field loss in primary open-angle glaucoma
Management of infantile glaucoma
The 20th Annual Meeting of Korean Glaucoma Society
Seoul National University
Seoul, Korea, November 20, 2004
 31. *Management of infantile glaucoma*
Rate of visual loss and blindness in glaucoma
Ophthalmology Update: From Front to Back
Punta Cana, Dominican Republic, March 31 – April 1, 2005
 32. *Normal Tension Glaucoma: Management Considerations*
Seventh Annual Optometric Conference
Department of Ophthalmology and Visual Sciences
University of Iowa College of Medicine
Iowa City, IA, May 13, 2005
 33. *Medical Management of Glaucoma*
Annual Meeting
American Society of Ophthalmic Registered Nurses
Chicago, IL, Oct 15, 2005
 34. *Glaucoma and the Patient with a Penetrating Keratoplasty*

- Spotlight Session
Annual Meeting
American Academy of Ophthalmology
Chicago, IL, Oct 17, 2005
35. *Non-Intraocular Pressure Related Treatment Considerations in Glaucoma*
Ophthalmology Update: From Front to Back
Cancun, Mexico, Feb. 9-11, 2006
 36. *Automatic cup-to-disc segmentation from stereo color fundus photographs using pixel feature classification algorithm*
Glaucoma Society of International Congress of Ophthalmology Meeting
Vancouver, Canada, June 28 – July 1, 2006.
 37. *Tube vs. Trabeculectomy Study: How should we approach the patient who needs glaucoma surgery?*
National Medical Association, Annual convention & scientific assembly
Ophthalmology Section, Glaucoma Symposium
Honolulu, HI, Aug 4-9, 2007.
 38. *Surgical management of glaucoma*
Continuing Professional Education: Ophthalmology Program
The Dulaney Eye Foundation
Fort Worth, TX, Aug 17 -18, 2007
 39. *Glaucoma for Primary Care Physicians*
Carver College of Medicine Visiting Professor
Broadlawns Medical Center
Des Moines IA, Dec 6, 2007
 40. *Demonstration of glaucoma surgical techniques & Lectures on trabeculectomy, combined cataract and filtering procedures, cyclophotocoagulation, gonioscopy, and traumatic glaucoma*
Glaucoma Visiting Faculty
ORBIS Medical Mission
Da Nang, Vietnam March 31 – April 4, 2008.
 41. *Update on Glaucoma Imaging Technology: OCT*
Tenth Annual Optometric Conference
Department of Ophthalmology and Visual Sciences
University of Iowa College of Medicine
Iowa City, IA, May 9, 2008
 42. *Update on Glaucoma Imaging Technology: OCT*
31st Midwest Glaucoma Symposium
University of Nebraska Medical Center
Omaha, NE, May 16-17, 2008
 43. *Update on Glaucoma Imaging Technology: OCT*
Iowa Eye Association Alumni Annual Meeting
Iowa City IA, June 12, 2008
 44. *Rate of Visual Field Loss in Glaucoma Genetic Insights in Neuroprotection*
International Glaucoma Think Tank II
Florence, Italy, July 24-27, 2008
 45. *Point-Counterpoint: Central Corneal Thickness adjustment is necessary in the management of an established glaucoma patient*
Moderator
Glaucoma 2008 Subspecialty Day: The Pendulum Swings
Annual Meeting, American Academy of Ophthalmology
Atlanta, GA, Nov 8, 2008
 46. *Surgical techniques for valve implantation*
Ahmed Valve Breakfast
Annual Meeting, American Academy of Ophthalmology
Atlanta, GA, Nov 9, 2008
 47. *Congenital glaucoma*
Continuing Ophthalmic Health Care Education
Dept of Ophthalmology & Visual Sciences

48. Coralville, IA, Feb. 6, 2009
Risk factors for glaucoma
IOP reduction and neuroprotection
 IOP Modulation Advisory Panel Meeting
 Seattle, WA, Sep 25, 2009
49. *Glaucoma for Primary Care Physicians*
 Noon Conference Series
 Dept of Family Medicine
 Carver College of Medicine
 University of Iowa Health Care
 Iowa City IA, Oct 9, 2009

G. Pending Decisions
Grant Proposals

- | | | |
|-----------|-------------|--|
| 2008-2013 | \$3,750,000 | Quantitative Analysis of 3-D OCT Images of the Retina and ONH
Bioengineering Research Partnerships
National Institute of Health
PI: M Sonka, MD, Abramoff MD
Co-I: YH Kwon , RH Kardon, CA Johnson, S Russell, J Reinhart, C Burgoyne |
| 2008-2013 | \$1,250,000 | Real-Time Assessment of Retinal Function via Non-Invasive Imaging
RO1, National Institute of Health
PI: D Ts'o (Upstate Medical Center, Syracuse, NY)
Co-I: YH Kwon , RH Kardon, M Abramoff, P Soliz |
| 2008-2013 | | Neurotrophic growth factor producing stem cells for treatment of glaucoma
RO1, National Institute of Health
PI: S Grazdanic (Iowa State U)
Collaborator: YH Kwon , RH Kardon, M Kuehn, D Sakaguchi |
| 2009-2010 | \$441,448 | Sustained delivery of prostaglandin analogue drugs using biodegradable microspheres, Challenge Grant, National Institute of Health.
PI: M Kuehn (UIHC)
Co-I: YH Kwon
Consultant: E Lavik |

Book Contracts

Manuscripts

1. Grozdanic SD, Lazic T, Harper M, Kardon RH, Kuehn MH, Lavik E, **Kwon YH**, Sakaguchi DS. Exogenous modulation of intrinsic optic nerve neuroprotective activity. Graefes Archive for Clin and Exp Ophthalmol, Submitted 2008.
2. Barriga ES, Pattichis M, Ts'o D, Abramoff M, Kardon R, **Kwon YH** and Soliz P. Independent component analysis using prior information for signal detection in a new functional imaging system of the retina. Medical Image Analysis, Submitted 2008.
3. Ts'o, D, Schallek J, Zarella M, **Kwon YH**, Kardon R, Abramoff M, Soliz P. Non-invasive functional imaging of the retina reveals outer retinal and hemodynamic intrinsic signal origins. Japan J Ophthalmol, submitted 2009.
4. Tang L, Kwon YH, Alward WLM, Greenlee EC, Lee K, Garvin MK, Abramoff MD. Robust stereo matching of noisy images of smoothly varying scenes, with an application to 3D reconstruction of the optic disc. IEEE Transactions on pattern analysis and machine intelligence. Submitted 2009.
5. Hu Z, Abramoff MD, **Kwon YH**, Lee K, Garvin M. Automated segmentation of neural canal opening and optic cup in 3-D spectral optical coherence tomography images of the optic nerve head. Invest Ophthalmol Vis Sci, submitted 2009.

6. Tang L, Mackey D, Hewitt AW, Fingert JH, **Kwon YH**, Reinhardt JM, Scheetz TE, Abramoff MD. Automated quantification of optic nerve head phenotypes from color images: a twin study of the variability of the optic nerve head shape. *Am J Human Genetics*, Planned to submit in 2010.

IV. SERVICE

A. Memberships in Professional Organizations

1987-91	Sigma Xi, the Scientific Research Society
1987-91	Society for Neuroscience
1988-present	Association for Research in Vision and Ophthalmology
1991-present	American Medical Association
1992-present	American Academy of Ophthalmology
1996-present	Iowa Medical Society
1996-present	Iowa Academy of Ophthalmology
1996-97	Association of University Professors
1997-present	Instruction course monitor, American Academy of Ophthalmology
1998-present	Poster session moderator, Association for Research in Vision and Ophthalmology
1998-present	American Glaucoma Society
2001-present	SPIE The International Society for Optical Engineering
2006	Participant in Third global AIGS (Association of International Glaucoma Societies) Consensus Meeting on "Angle Closure Glaucoma", Hollywood, FL, 5/3/06
2007	Participant in Fourth global AIGS (Association of International Glaucoma Societies) Consensus Meeting on "Target Intraocular Pressure in Clinical Practice", Ft. Lauderdale, FL, 5/5/07

Offices Held in Professional Organizations

2002-present	Preferred Practice Patterns Glaucoma Panel American Academy of Ophthalmology
2007-present	Examiner & Special Examiner Oral Board Examination American Board of Ophthalmology

Editorships

2006-2008	Greenlee EC, Fingert JH, and Kwon YH. Patient's Guide to Glaucoma. Editor: YH Kwon , Free Educational Publications International. Coralville, IA 2006
2006-2007	Glaucoma Section Editor & Editorial Board Member, <i>Eye</i> , The Scientific Journal of the Royal College of Ophthalmologists, UK
2008-2009	Associate Editor, <i>Eye</i> , The Scientific Journal of the Royal College of Ophthalmologists, UK

Review Panels

1996 - present	Reviewer, Ophthalmology
1996 - present	Reviewer, Archives of Ophthalmology
1997 - present	Reviewer, Journal of Glaucoma
1998 - present	Reviewer, Investigative Ophthalmology and Visual Science
2000 - present	Reviewer, Anesthesiology
2000 - present	Reviewer, Ophthalmic Surgery and Lasers
2002 - present	Reviewer, American Journal of Ophthalmology
2003 - present	Reviewer, British Journal of Ophthalmology
2004 - present	Reviewer, Acta Ophthalmologica
2004	Reviewer/editor, ProVision: A Self-assessment Program Questions for Glaucoma American Academy of Ophthalmology
2005 - 2009	Ophthalmic Devices Panel Committee Member, Food and Drug Administration, Dept of Health & Human Services, Rockville, MD
2006 - present	Reviewer, New England Journal of Medicine

Departmental, Collegiate, University and National Committees

1997-2003	Billing and coding committee
1999-2001	Search committee for director of photography
2002	Reviewer for Major Project Grant Proposals International Programs, Univ of Iowa
2000-2001	Conscious sedation committee
2004	Ad hoc committee for 5-year review of Dept of Neurology, Univ of Iowa

2000-present Clinical research committee
2005-present Chair, Clinical Research Committee
2004 Dept Task Force on Resident Competencies
2005-present Dept Faculty Search Committee (permanent)
2007 Chair, Search Committee for Grants Contracts Administrator

Departmental, Collegiate, University and National Service Positions

2004- Medical Monitor for Morcher Aniridia lens IDE (for FDA)
PI: KM Goins (UI)
2001-2007 Director of Ophthalmology Fellowship Programs
2009- Director of Ophthalmology Fellowship Programs

Relevant Community Involvement

2001 "University of Iowa Health Care Today," Radio interview on WMT
for Glaucoma Awareness Month

B. Clinical Assignments Since Last Promotion

I see glaucoma patients 2 full days per week and operate 1 full day per week. Most of my patients are referred from the area ophthalmologists and optometrists.

In 8/07 I performed the first Trabectome surgery at UIHC, a new glaucoma outflow procedure approved by the FDA. It is considered less invasive with faster recovery compared to the traditional filtering surgery (trabeculectomy).