

ROY S. CHUCK, M.D., PH.D.

CURRICULUM VITAE

[The Johns Hopkins University School of Medicine](#)

DEMOGRAPHIC INFORMATION

Appointments:

Tom Clancy Professorship of Ophthalmology, Department of Ophthalmology, Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD [2006-present]

Director, Refractive Surgery Service, Department of Ophthalmology, Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD [2005-present]

Associate Professor, Cornea and External Diseases and Refractive Surgery, Department of Ophthalmology, Wilmer Eye Institute, Johns Hopkins University, Baltimore, MD [2004-present]

Assistant Professor, Cornea and External Diseases and Refractive Surgery, Department of Ophthalmology, University of California, Irvine. [1999-2004]

Assistant Professor, Biomedical Engineering, School of Engineering, University of California, Irvine. [2002-2004]

Assistant Clinical Professor, Southern California College of Optometry, Fullerton, California. [2002-2004]

Research Lab:

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Education and Training:

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| 1986 | University of California, Berkeley | BS Engineering |
| 1986-1993 | Columbia University | MD, PhD |
| 1988-1989 | Cornell University Medical College North Shore University Hospital | Visiting Scientist |
| 1989-1991 | University of California, Berkeley Dept. of Molecular and Cell Biology | Exchange Scholar |
| 1988-1991 | Columbia University Integrated Program in Cellular, Molecular and Biophysical Studies | Graduate Research Assistant |
| 1993-1994 | St. Mary's Health Center, St. Louis, MO | PGY1, Intern in Internal Medicine |
| 1994-1997 | Washington University/Barnes Hospital | PGY2-4, Resident in Ophthalmology |
| 1997-1998 | Washington University/Barnes Hospital | Chief Resident in Ophthalmology |
| 1998-1999 | Doheny Eye Institute University of Southern California | Cornea and Refractive Surgery Fellow, Instructor |
| 1998-2000 | Laboratory For Laser Research and Technology Development, Cedars Sinai Medical Center, Los Angeles, CA | Visiting Scientist |

RESEARCH ACTIVITIES

Publications:

Peer-reviewed scientific articles

1. Chuck RS, Oz MC, Delohery TD, Johnson JP, Bass LS, Nowygrod R and Treat MR. Dye-enhanced laser tissue welding. *Lasers Surg Med* 9:471-477, 1989.
2. Oz MC, Chuck RS, Johnson JP, Parangi S, Bass LS, Nowygrod R and Treat MR. Indocyanine green dye-enhanced welding with a diode laser. *Surg Forum* 40:316-318, 1989.
3. Johnson JP, Oz MC, Chuck RS and Treat MR. Comparison of methods for transcatheter fragmentation of gallstones. *Surg Endosc* 3:7-10, 1989.
4. Popp HW, Oz MC, Bass LS, Chuck RS, Trokel SL and Treat MR. Welding of gallbladder tissue with a pulsed 2.15-micron thulium-holmium-chromium:YAG laser. *Lasers Surg Med* 9:155-159, 1989.
5. Johnson JP, Oz MC, Treat MR, Chuck RS and Trokel SL. Comparison of the thulium-holmium chromium:YAG laser to the ultrasonic lithotripter and the electrohydraulic lithotripter for the fragmentation of gallstones. *Proc SPIE*, 1989.
6. Oz MC, Bass LS, Popp HW, Chuck RS, Johnson JP, Trokel SL and Treat MR. In vitro comparison of the THC:YAG and argon ion lasers for gallbladder welding. *Lasers Surg Med* 9:248-253, 1989.
7. Chuck RS, Cantor CR and Tse DB. Dynamics of CD4-TCR complexes on human leukemic T cells. *Proc Nat Acad Sci USA* 87:5021-5025, 1990.
8. Oz MC, Johnson JP, Parangi S, Chuck RS, Marboe CC, Bass LS, Nowygrod R and Treat MR. Tissue soldering by use of indocyanine green dye-enhanced fibrinogen with the near infrared diode laser. *J Vasc Surg* 11:718-725, 1990.
9. Oz MC, Chuck RS, Johnson JP, Parangi S, Bass LS, Nowygrod R and Treat MR. Indocyanine green dye-enhanced vascular welding with the near infrared diode laser. *Vasc Surg* 24:564-570, 1990.
10. Oz MC, Bass LS, Chuck RS, Johnson JP, Nowygrod R and Treat MR. Strength of laser vascular fusion - preliminary observations on the role of thrombus. *Lasers Surg Med* 10:393-395, 1990.
11. Butenhoff TJ, Chuck RS, Limbach HH and Moore CB. The near-infrared photochemistry of porphine imbedded in an n-hexane matrix. *Spectrochim Acta Part A-Molec Spectrosc* 46:519-522, 1990.
12. Butenhoff TJ, Chuck RS, Limbach HH and Moore CB. Vibrational photochemistry of porphine imbedded in an n-hexane-d₁₄ Shpol'skii matrix. *J Phys Chem* 94:7847-7851, 1990.

13. Libutti SK, Oz MC, Chuck RS, Nowygrad R and Treat MR. Dye-enhanced selective laser ablation of venous varicosities. Proc SPIE, 1990.
14. Libutti SK, Oz MC, Chuck RS, Treat MR and Nowygrad R. Dye-enhanced tissue welding using fibrinogen and continuous wave argon lasers. Vasc Surg 24:671-676, 1991.
15. Libutti SK, Oz MC, Chuck RS, Auteri JS, Treat MR and Nowygrad R. A preliminary study of dye-enhanced laser photosclerosis. Surgery 109:163-168, 1991.
16. Libutti SK, Oz MC, Ashton RC, Chuck RS, Lontz JF, Treat MR, Lemole GM and Nowygrad R. Growth factor-enhanced laser tissue welding. Current Surg pp.449-451, September 1991.
17. Chuck RS, Cantor CR and Tse DB. Effect of CD4 engagement on CD4-T cell receptor complexes. Cellular Immunol 152:211-219, 1993.
18. Chuck RS, Williams JM, Goldberg MA and Lubniewski AJ. Recurrent corneal ulcerations associated with smokeable methamphetamine abuse. Am J Ophthalmol 121:571-572, 1996.
19. Chuck RS, Olk RJ, Weil GJ, Akduman L, Benenson IL, Smith ME and Kaplan HJ. Surgical removal of a subretinal cysticercus of *Taeniaformis crassiceps*. Arch Ophthalmol 115:562-563, 1997.
20. Lim-Bon-Siong R, Williams JM, Samapunphong S, Chuck RS and Pepose JS. Screening of myopic photorefractive keratectomy in eye bank eyes by computerized videokeratography. Arch Ophthalmol 116:617-623, 1998.
21. Vongthongsri A, Chuck RS and Pepose JS. Corneal iron deposits associated with LASIK. Am J Ophthalmol 127:85-86, 1999.
22. Quiros PA, Chuck RS, Smith RE, Irvine JA, Chao LC and McDonnell PJ. Infectious ulcerative keratitis after laser in situ keratomileusis. Arch Ophthalmol 117:1423-1427, 1999.
23. Chuck RS, Quiros PA, Perez AC and McDonnell PJ. Corneal sensation following laser in situ keratomileusis. J Cataract Refract Surg 26:337-339, 2000.
24. Read RW, Chuck RS, Rao NA and Smith RE. Traumatic *Acremonium atrogriseum* keratitis following laser-assisted in situ keratomileusis. Arch Ophthalmol 118:418-421, 2000.
25. Rao SN, Chuck RS, Chang AH, LaBree L and McDonnell PJ. The effect of age on the refractive outcome of myopic photorefractive keratectomy. J Cataract Refract Surg 26:543-546, 2000.

26. Fong YC, Chuck RS, Stark WA and McDonnell PJ. Phototherapeutic keratectomy for superficial corneal fibrosis after radial keratectomy. *J Cataract Refract Surg* 26:616-619, 2000.
27. Behrens A, Chuck RS and Bryant MR. Porcine eyes as an experimental model for wound healing. *J Refract Surg* 16:381, 2000.
28. Chuck RS, Behrens A and McDonnell PJ. Microkeratome-based limbal harvester for limbal stem cell transplantation: preliminary studies. *Am J Ophthalmol* 131:377-378, 2001.
29. Cohen D, Chuck RS, Bearman GH, McDonnell PJ and Grundfest WS. Ablation spectra of the human cornea. *J Biomed Optics* 6:339-343, 2001.
30. Chuck RS, Behrens A, Wellik SR, Liaw LH, Sweet PM, Osann KE, McDonnell PJ and Berns MW. Simple organ cornea culture model for re-epithelialization after *in vitro* excimer laser ablation. *Lasers Surg Med* 29:288-92, 2001.
31. Behrens A, Dolorico AMT, Kira DT, Novick LH, McDonnell PJ, Chao LC, Wellik SR and Chuck RS. Precision and accuracy of an artificial chamber system in obtaining corneal lenticules for lamellar keratoplasty. *J Cataract Refract Surg* 27:1679-87, 2001.
32. Chuck RS, Behrens A, Wellik S, Liaw LLH, Dolorico AMT, Sweet PM, Chao LC, Osann KE, McDonnell PJ and Berns MW. Re-epithelialization in cornea organ culture after chemical burns and excimer laser treatment. *Arch Ophthalmol* 119:1637-42, 2001.
33. Banik R, Novick LH, Smith RE and Chuck RS. Retrocorneal membrane with Descemet's detachment. *Cornea* 20: 763-4, 2001.
34. Chuck RS, Arnoldussen ME, Cohen D, Behrens A, Bearman GH, McDonnell PJ and Grundfest WS. 193-nm excimer laser-induced fluorescence from cadaveric rabbit corneas. *Rev Ophthalmol Venez* 57:2001.
35. Behrens A, Shah SB, Li L, Côté MA, Liaw LLH, Sweet PM, McDonnell PJ and Chuck RS. Evaluation of a microkeratome-based limbal harvester device for limbal stem cell transplantation. *Cornea* 21: 51-55, 2002.
36. Li L, Behrens A, Sweet PM, Osann KE, Chuck RS. Corneal lenticule harvest using a microkeratome and an artificial anterior chamber system at high intrachamber pressure. *J Cataract Refract Surg* 28: 860-865, 2002.
37. Li L, Ellis KR, Behrens A, Sweet PM and Chuck RS. A laboratory method for microkeratome-assisted posterior lamellar keratoplasty utilizing a running graft suture and a sutureless hinged flap. *Cornea* 21: 192-195, 2002.
38. Sarayba, MA, Li, L, Sweet PM and Chuck RS. A portable microkeratome-based anterior corneal surface harvesting device. *Cornea* 21: 589-591, 2002.

39. Chuck RS, Arnoldussen ME, Behrens A, Sweet PM, Cohen D, Bearman GH and Grundfest WS. Fluorescence-guided excimer laser removal of chemically damaged cornea. *J Cataract Refract Surg* 28:1847-1852, 2002.
40. Behrens A, Li L, Chuck RS. Obtaining lenticules for lamellar transplantation: Reply. *J Cataract Refract Surg* 29:6, 2003.
41. Wang Y, Nelson JS, Chen Z, Reiser BJ, Chuck RS, Windeler RS. Optimal wavelength for ultrahigh-resolution optical coherence tomography. *Optics Express* 11:1411-1417, 2003.
42. Tungsiripat T, Sarayba MA, Taban M, Sweet PM, Osann KE, Chuck RS. Viability of limbal epithelium after anterior lamellar harvesting using a microkeratome. *Ophthalmology* 111:469-75, 2004.
43. Sarayba M, Tungsiripat T, Sweet PM, Chuck RS. A portable microkeratome for harvesting the human anterior corneal surface. *Cornea* 23:443-6, 2004.
44. Memarzadeh F, Shamie N, Gaster RN, Chuck RS. Corneal and conjunctival toxicity from hydrogen peroxide. *Ophthalmology* 111:1546-9, 2004.
45. Memarzadeh F, Kandavel G, Chuck RS. Amniotic membrane transplantation for ocular surface disease. *Contemp Ophthalmol* 3:1-11 2004.
46. Erb MH, Taban M, Barsam CA, Sweet PM, Chuck RS. Mechanical stability of microkeratome-assisted intracorneal keratoprosthesis implantation. *Arch Ophthalmol* 122:1839-43, 2004.
47. Chuck RS, Shehada RE, McDonnell PJ, Grundfest WE. 193-nm excimer laser-induced fluorescence of fluoroquinolones in rabbit corneas. *Arch Ophthalmol* 122:1693-1699, 2004.
48. Lane SS, Kuppermann BD, Fine IH, Hamill MB, Gordon JF, Chuck RS, Hoffman RS, Packer M, Koch DD. A prospective multicenter clinical trial to evaluate the safety and effectiveness of the implantable miniature telescope. *Am J Ophthalmol* 137:993-1001, 2004.
49. Wong EK, Kinyamu RD, Graff JM, Chak G, Wong MN, Agnic H, Kang E, Lin S, Vinita Jain V, Chuck RS. Development of a rat model for neurotrophic keratopathy. *Exp Eye Res* 79:297-303, 2004.
50. Sarayba M, Ignacio T, Sweet PM, Kurtz RM, Jurhaz T, Chuck RS. Femtosecond laser posterior lamellar keratoplasty: A laboratory model. *Cornea* 24:328-333, 2005.
51. Chuck RS, Graff J, Bryant MR, Sweet PM. Biomechanical characterization of human amniotic membrane preparations for ocular surface reconstruction. *Ophthalmic Res* 36:341-8, 2004.

52. Reiser BJ, Ignacio T, Wang Y, Taban M, Graff J, Sweet PM, Chen Z, Chuck RS. In vitro measurement of rabbit corneal epithelial thickness using ultrahigh resolution optical coherence tomography. *Vet Ophthalmol* 8:85-88, 2005.
53. Sarayba MA, Li L, Tungsiripat T, Liu NH, Sweet PM, Patel AJ, Osann KE, Chittiboyina A, Benson SC, Pershadsingh HA, Chuck RS. Inhibition of corneal neovascularization by a peroxisome proliferator-activated receptor-gamma ligand. *Exp Eye Res* 80:435-42, 2005.
54. Chang MA, Chuck RS. Total anterior corneal surface and epithelial stem cell harvesting: Current microkeratomes and beyond. *Expert Rev Med Devices* 1:251-8, 2004.
55. Reyes JMG, Herretes S, Pirouzmanesh A, Wang D-A, Elisseeff JH, Jun AS, McDonnell PJ, Chuck RS, Behrens A. A modified chondroitin sulfate aldehyde adhesive for sealing corneal incisions. *Invest Ophthalmol Vis Sci* 46:1247-50, 2005.
56. Kandavel GR, Chuck RS. Staining properties of de-epithelialized human amniotic membrane. *Cornea* 24:853-6, 2005.
57. Vongthongstri A, Jakpawong W, Preechanon A, Lekhanont K, Chuck RS. Anterior Vitreous Tapping To Prevent Positive Vitreous Pressure During Triple Procedures. *Ophthalmology* 112:875-8, 2005.
58. Suwan-apichon O, Rizen M, Reyes JMG, Herretes S, Behrens A, Stark WJ, Chuck RS. A new donor cornea harvesting technique for posterior lamellar keratoplasty. *Brit J Ophthalmol* 89:1100-1, 2005.
59. Pirouzmanesh A, Herretes S, Reyes JM, Suwan-apichon O, Chuck RS, Wang DA, Elisseeff JH, Stark WJ, Behrens A. Modified microkeratome-assisted posterior lamellar keratoplasty using a tissue adhesive. *Arch Ophthalmol* 124:210-4, 2006.
60. Sarayba MA, Kurtz RM, Nguyen TTB, Ignacio T, Mansoori M, Sweet PM, Chuck RS. Femtosecond laser-assisted intracorneal keratoprosthesis implantation: a laboratory model. *Cornea* 24:1010-14, 2005.
61. Ignacio TS, Nguyen TB, Chuck RS, Kurtz RM, Sarayba MA. Top hat wound configuration for penetrating keratoplasty using the femtosecond laser: A laboratory model. *Cornea* 25:336-40, 2006.
62. Ignacio TS, Nguyen TT, Sarayba MA, Sweet PM, Piovanetti O, Chuck RS, Behrens A. A technique to harvest Descemet's membrane with viable endothelial cells for selective transplantation. *Am J Ophthalmol* 139:325-30, 2005.
63. Suwan-apichon O, Reyes JMG, Herretes S, Vedula SS, Chuck RS. Topical corticosteroids as adjunctive therapy for bacterial keratitis. *Cochrane Library* issue 3, 2005.

64. Sikder S, Reyes JMG, Moon CS, Suwan-apichon O, Elisseeff JH, Chuck RS. Non invasive mitochondrial imaging in live cell culture. *Photochem Photobiol* 81:1569-71, 2005.
65. Suwan-apichon O, Rizen M, Rangsin R, Herretes S, Reyes JMG, Lekhanont K, Chuck RS. Botulinum B induced mouse model of keratoconjunctivitis sicca. *Invest Ophthalmol Vis Sci* 47:133-9, 2006.
66. Reyes JMG, Fermanian S, Yang F, Zhou S-Y, Herretes S, Murphy DB, Elisseeff JH, Chuck RS. Metabolic changes in mesenchymal stem cells in osteogenic media measured by autofluorescence spectroscopy. *Stem Cells* 24:1213-7, 2006.
67. Suwan-Apichon O, Reyes JM, Griffin NB, Barker J, Gore P, Chuck RS. Microkeratome preparation of lamellar corneal grafts. *Eye Contact Lens* 32:248-9, 2006.
68. Suwan-Apichon O, Reyes JM, Griffin NB, Barker J, Gore P, Chuck RS. Microkeratome versus femtosecond laser predissection of corneal grafts for anterior and posterior lamellar keratoplasty. *Cornea* 25:966-968, 2006.
69. Memarzadeh F, Shamie N, Fahd A, Chuck RS. Comparison of de-epithelialized amniotic membrane transplantation and conjunctival autograft after primary pterygium excision. *Eye* 2006. [Epub ahead of print]
70. Park CY, Zhu Z, Zhang C, Moon CS, Chuck RS. Cellular redox state predicts in vitro corneal endothelial cell proliferation capacity. *Exp Eye Res* 83:903-10, 2006.
71. Lekhanont K, Leyngold IM, Suwan-apichon O, Rangsin R, Chuck RS. Comparison of topical dry eye medications for the treatment of keratoconjunctivitis sicca in a botulinum toxin B-induced mouse model. *Cornea* 26:84-9, 2007.
72. Lekhanont K, Rojanaporn D, Chuck RS, Vongthongsri A. Prevalence of dry eye in an adult Thai population. *Cornea* 25:1162-7, 2006.
73. Lekhanont K, Park CY, Smith JA, Castro Combs J, Pisit Preechawat P, Suwan-apichon O, Rangsin R, Chuck RS. Effects of Topical Anti-inflammatory Agents in a Botulinum Toxin B Induced Mouse Model of Keratoconjunctivitis Sicca. *J Ocular Pharm Ther* 23:27-34, 2007.
74. Lekhanont K, Park CY, Combs JC, Suwan-apichon O, Rangsin R, Chuck RS. Effect of topical olopatadine and epinastine in the botulinum toxin b-induced mouse model of dry eye. *J Ocular Pharm Ther* 23:83-8, 2007.
75. Luanratanakorn P, Ratanapakorn T, Suwan-Apichon O, Chuck RS. Randomised controlled study of conjunctival autograft versus amniotic membrane graft in pterygium excision. *Br J Ophthalmol*. 90:1476-80, 2006.

76. Memarzadeh F, Chuck RS, McCulley TJ. Fornix reconstruction with conjunctival inclusion cyst marsupialization in Stevens-Johnson Syndrome. *Ophthalm Plast Reconstr Surg.* 22:475-476, 2006.
77. Behrens A, Doyle JJ, Stern L, Chuck RS, McDonnell PJ, Azar DT, Dua HS, Hom M, Karpecki PM, Laibson PR, Lemp MA, Meisler DM, Castillo JM, O'brien TP, Pflugfelder SC, Rolando M, Schein OD, Seitz B, Tseng SC, Setten GV, Wilson SE, Yiu SC; and the Dysfunctional Tear Syndrome Study Group:. Dysfunctional Tear Syndrome: A Delphi approach to treatment recommendations. *Cornea* 25:900-907, 2006.
78. Noguera G, Lee WS, Castro-Combs J, Chuck RS, Soltz B, Soltz R, Behrens A. Novel laser-activated solder for sealing corneal wounds. *Invest Ophthalmol Vis Sci.* 48:1038-42, 2007.
79. Suh LH, Zhang C, Chuck RS, Stark WJ, Naylor S, Binley K, Chakravarti S, Jun AS. Cryopreservation and lentiviral-mediated genetic modification of human primary cultured corneal endothelial cells. *Invest Ophthalmol Vis Sci.* 48:3056-61, 2007.
80. Myrowitz E, Ren S, Chuck RS. Comparison of central corneal thickness measured by four different pachymeters. *Eye Contact Lens* 33:156-60, 2007.
81. Ramey N, Park CY, Gehlbach PL, Chuck RS. Imaging mitochondria in living corneal endothelial cells using autofluorescence microscopy. *Photochem Photobiol.* 83:1325-9, 2007.
82. Suwan-Apichon O, Reyes J, Herretes S, Vedula S, Chuck R. Topical corticosteroids as adjunctive therapy for bacterial keratitis. *Cochrane Database Syst Rev.* 4:CD005430, 2007.
83. Park CY, Zhuang W, Lekhanont K, Zhang C, Cano M, Lee WS, Gehlbach PL, Chuck RS. Lacrimal gland inflammatory cytokine gene expression in the botulinum toxin B-induced murine dry eye model. *Mol Vis.* 13:2222-32, 2007.
84. Park CY, Chuck RS, Cano M, Yew M, Nguyen V, Parker J, Mori K, Gehlbach PL. Periocular triamcinolone enhances intraocular gene expression after delivery by adenovirus. *Invest Ophthalmol Vis Sci.* 49:399-406, 2008.
85. Sirikul T, Prabripataloong T, Smathivat A, Chuck RS, Vongthongsri A. Predisposing factors and etiologic diagnosis of ulcerative keratitis. *Cornea.* 27:283-287, 2008.
86. Cano Mdel V, Reyes JM, Park CY, Gao X, Mori K, Chuck RS, Gehlbach PL. Demonstration by Redox Fluorometry that Sulforaphane Protects Retinal Pigment Epithelial Cells against Oxidative Stress. *Invest Ophthalmol Vis Sci.* 2008 Jun;49(6):2606-12.
87. Chuck RS. Refractive surgery and ectasia: what are we doing differently this year? *Current Opin. Ophthalmol.* 2008 Jul;19(4):307-8. No abstract available.

88. Kim A, Chuck RS. Wavefront-guided customized corneal ablation. *Curr Opin Ophthalmol*. 2008 Jul;19(4):314-20.

Cornea Donor Study (Multi-investigator, UC Irvine PI):

1. Beck RW, Gal RL, Mannis MJ, Holland EJ, Cavanagh, HD, Foulks, GN, Heck EL, Lindquist T, Macsai MS, Smith RE, Stark WJ, Stulting RD, Sugar J. Is Donor Age an Important Determinant of Graft Survival? *Cornea* 1999; 18(5):503-510.
2. Cornea Donor Study Group. Baseline Donor Characteristics in the Cornea Donor Study (CDS). *Cornea* 2005; 24(4):389-396.
3. Cornea Donor Study Group. An Evaluation of Image Quality and Accuracy of Eye Bank Measurement of Donor Cornea Endothelial Cell Density in the Specular Microscopy Ancillary Study. *Ophthalmology* 2005; 112:431-440.
4. Cornea Donor Study Group. Clinical Profile and Early Surgical Complications in the Cornea Donor Study (CDS). *Cornea* 2006; 25(2):164-170.
5. Benetz, BA, Gal, RL, Ruedy KJ, Rice C, Beck RW, Lass, JL for the Cornea Donor Study Group. Specular Microscopy Reading Center Methods in the Specular Microscopy Ancillary Study (SMAS). *Current Eye Research* 2006; 31:319-327.
6. Cornea Donor Study Investigator Group. The effect of donor age on corneal transplantation outcome: results of the cornea donor study. *Ophthalmology* 2008: Accepted for publication.
7. Cornea Donor Study Investigator Group. Donor age and corneal endothelial cell loss five years after successful cornea transplantation: specular microscopy ancillary study results. *Ophthalmology* 2008: Accepted for publication.

Non-peer reviewed articles

1. Chuck RS, Cohen D, McDonnell PJ, Grundfest WS. 193nm excimer laser-induced fluorescence spectroscopy during corneal ablative surgery. *IEEE Lasers and Electro-Optics Society Annual Meeting*, pp. 218-9, 1999.
2. Chuck RS. Limbal stem cell transplantation: New technology for an uncommon procedure. *Refractive Eyecare*. Volume 7, number 3, March 2003.
3. Chuck RS. First line agents for treatment of ocular dryness. *Refractive Eyecare*. Volume 10, number 4, April 2006.

Book Chapters

1. Chuck RS, Smith RE. Discussion of Hyperopic LASIK. *Trans Am Ophthalmol Soc* 1999.
2. Novick LH, Behrens A, Chao L, Chuck RS. VISX Star S2 excimer laser. Gimbel HV, Anderson Penno EE, editors. *LASIK complications, Prevention and Management*. 2nd Ed. Thorofare: SLACK Inc., p. 38-40, 2001.
3. Behrens A, Novick LH, Chao L, Chuck RS. Moria/Microtech Microkeratomes. Gimbel HV, Anderson Penno EE, editors. *LASIK Complications, Prevention and Management*. 2nd Ed. Thorofare: SLACK Inc., p. 28-31, 2001.
4. Shang B, Pirnazar JR, Chuck RS. The Economics of Refractive Surgery. *Ophthalmic Hyperguide (on-line)* Slack Publishing, Inc. 2001.
5. Ellis K, Pirnazar JR, Chuck RS. Corneal Topography. *Ophthalmic Hyperguide (on-line)* Slack Publishing, Inc. 2001.
6. Barsam CA, Chuck RS. Automated Lamellar Therapeutic Keratoplasty. *Ophthalmic Hyperguide (on-line)* Slack Publishing, Inc. 2003.
7. Sarayba MA, Kutzscher E, Chuck RS. Use of mechanical and femtosecond laser microkeratomes and an artificial anterior chamber for harvesting donor corneal lenticules. John T, editor. *Surgical techniques in anterior and posterior lamellar corneal surgery*. Slack Publishing, Inc. 2004.
8. Suh L, Chuck RS. Limbal Stem cell transplantation. Dunn JP, editor. *AAO Manual*, (in press).
9. Chuck RS, Suwan-apichon O, Herretes S, Reyes JMG. Limbal stem cell transplantation. Agarwal A, Editor. *Dry eye: a practical guide to ocular surface disorders*. Slack Publishing, Inc., 2006.
10. Leyngold I, Chuck RS. Conjunctiva and tear film. Brightbill FS, McDonnell PJ, McGhee CNJ, Editors, *Corneal Surgery, Theory, Technique and Tissue*. (in press)
11. Kim A, Chuck RS. Microkeratome-assisted keratoprosthesis surgery. Agarwal A, Editor. Slack Publishing, Inc. (in press).

Published Abstracts

1. Chuck RS, Cantor CR and Tse DB. CD4 and the T cell receptor: Molecular dynamics of association and dissociation. 7th International Congress of Immunology, Berlin, West Germany, August 1989.
2. Chuck RS, Cantor CR and Tse DB. Dynamics of CD4-T cell receptor complexes on human leukemic T cells. Mid-Winter Conference of Immunologists, Asilomar, CA, January 1990.

3. Wapner FJ, Eaton AM, Trokel SL, Schubert HD, Chuck RS and Treat MR. Dye-enhanced thermokeratoplasty. ARVO 1991 (Invest Ophthalmol Vis Sci 32:S995, 1991).
4. Chuck RS, Fischer H and Ravi VN. Iontophoretic delivery of drugs to tumors: Analysis of behavior at the tumor margin. ARVO 1995. (Invest Ophthalmol Vis Sci 36:S500, 1995).
5. Williams JM, Chuck RS, Lim-Bon-Siong R and Pepose JS. Examination of corneal topographic characteristics of eye bank globes using a vertically mounted videokeratoscope: Emphasis on screening of post-refractive surgery corneas. EBAA 1995.
6. Chuck RS, Fischer H, Po S and Lim-Bon-Siong R. Optimization of dye-enhanced ab interno laser sclerostomy. ARVO 1996. (Invest Ophthalmol Vis Sci 37:S262, 1996).
7. Po S, Lim-Bon-Siong R, Fischer H and Chuck RS. Dye-targeted non-contact diode laser photothermal keratoplasty for correction of hyperopia. ARVO 1996. (Invest Ophthalmol Vis Sci 37:S570, 1996).
8. Bart DJ, Lim-Bon-Siong R, Lubniewski AJ and Chuck RS. Diode laser-activated biological glue for sealing corneal lacerations. ARVO 1996. (Invest Ophthalmol Vis Sci 37:S569, 1996).
9. Ravi VN and Chuck RS. Development of an injectable intraocular lens for preservation of accommodation. ARVO 1996. (Invest Ophthalmol Vis Sci 37:S770, 1996).
10. Williams JM, Chuck RS, Lim-Bon-Siong R and Pepose JS. Detection of PRK on cadaveric globes by videokeratography. ARVO 1996. (Invest Ophthalmol Vis Sci 37:S19, 1996).
11. Chuck RS, Olk RJ, Weil GJ, Benenson IL, Smith ME and Kaplan HJ. Surgical removal of a subretinal cysticercus of *Taenia crassiceps*. AAO 1996. (Video presentation).
12. Druger RK, Chuck RS, Wax MB, Kolker AE and Lubniewski AJ. Infectious crystalline keratopathy associated with trabeculectomy with mitomycin C. AAO 1996. (oral presentation)
13. Conners MS, Lubniewski AJ, Curtis RS and Chuck RS. Morphology of the corneal endothelium after combination seton/PKP surgery. ARVO 1998. (Invest Ophthalmol Vis Sci 39:S80, 1998).
14. Vongthongsri A, Chuck RS and Pepose JS. Corneal iron deposits associated with LASIK. ARVO 1998. (Invest Ophthalmol Vis Sci 39:S750, 1998).
15. Quiros PA, Chuck RS, Smith RE, Irvine JA and McDonnell PJ. Ulcerative keratitis associated with laser in situ keratomileusis. ISRS 1998.

16. Rao SN, Chuck RS, Chang AH, LaBree L and McDonnell PJ. The effect of age on the refractive outcome of myopic photorefractive keratectomy. ASCRS 1999.
17. Behrens A, Ellis K, Li L, McDonnell PJ, Chuck RS. Queratoplastia lamelar posterior como alternativa a queratoplastia penetrante para disfuncion endothelial. Resumen Congreso 2000.
18. Behrens A, Chuck RS, Shah SB, McDonnell PJ. Nuevo disector mecanico de celulas madre limbales basado en un microqueratomo manual. Resumen Congreso 2000.
19. Behrens A, Chuck RS, Kira DT, Dolorico AM, McDonnell PJ. Precision-exactitud de un sistema de camara artificial anterior para obtener lenticulos en queratoplastia lamelar. Resumen Congreso 2000.
20. Meallet M, Affeldt J, Roberts M, Appukuttan B, Read R, Reiser B, Chuck RS, Stout T and Rao N. Bleb disorder of the cornea. ARVO 2000. (Invest Ophthalmol Vis Sci 41:S267, 2000).
21. Banik R, Novick LH and Chuck RS. Retrocorneal membrane with a large Descemet's detachment. ARVO 2000. (Invest Ophthalmol Vis Sci 41:S444, 2000).
22. McDonnell PJ, Chuck RS, Arnoldussen ME, Behrens A, Cohen D, Bearman GH and Grundfest WS. 193-nm excimer laser-induced fluorescence in fresh cadaveric rabbit and human eye bank corneas: Spectral component analyses. ARVO 2000. (Invest Ophthalmol Vis Sci 41:S459, 2000).
23. Chuck RS, Arnoldussen ME, Behrens A, Liaw, L-H, Cohen D, Bearman GH, McDonnell PJ, Berns MW and Grundfest WS. Laser-induced fluorescence during 193-nm excimer laser ablation of rabbit cornea damaged by hydrochloric acid. ARVO 2000. (Invest Ophthalmol Vis Sci 41:S459, 2000).
24. Arnoldussen ME, Chuck RS, Behrens A, Cohen D, Bearman GH, McDonnell PJ and Grundfest WS. 193-nm laser-induced fluorescence in diabetic human eye bank corneas. ARVO 2000. (Invest Ophthalmol Vis Sci 41:S460, 2000).
25. Behrens A, Chuck RS, Wellik SR, Dolorico A, Chao LC, Abedi P and McDonnell PJ. Precision and accuracy of lamellar corneal disc dimensions obtained with an artificial anterior chamber and a manual microkeratome. ARVO 2000. (Invest Ophthalmol Vis Sci 41:S530, 2000).
26. Wong CG, Dean N, Sioulis C, Kuppermann BD, Chuck RS, Grundfest WS, Ho M, Cohen D and Papaioannu T. Anti-sense oligonucleotides block angiogenesis in newly developed model of retinal neovascularization presenting with hemorrhage and subsequent fibrovascular membrane formation. ARVO 2000. (Invest Ophthalmol Vis Sci 41:S641, 2000)

27. Liaw L-H, Chuck RS, Behrens A, Dolorico A, Wellik SR, Chao LC, McDonnell PJ and Berns MW. Re-epithelialization in a whole organ cornea culture model after acidic and basic chemical burns and subsequent treatment with excimer laser ablation. *ARVO 2000*. (*Invest Ophthalmol Vis Sci* 41:S681, 2000).
28. Wellik SR, Chuck RS, Behrens A, Liaw L-H, Sun C-H, McDonnell PJ and Berns MW. Re-epithelialization in a whole organ rabbit cornea culture model after *in vitro* excimer laser ablation. *ARVO 2000*. (*Invest Ophthalmol Vis Sci* 41:S682, 2000).
29. Novick LH, Behrens A, Chuck RS, Torres F, McDonnell PJ and Suarez E. Evaluation of LASIK outcomes in a Hispanic population. *ARVO 2000*. (*Invest Ophthalmol Vis Sci* 41:S686, 2000).
30. Behrens A, Chuck RS, Wellik SR, Dolorico A, Chao LC, Abedi P and McDonnell PJ. Precision and accuracy of an artificial anterior chamber system in obtaining corneal lenticules for lamellar keratoplasty. *AAO 2000*.
31. Shah SB, Behrens A, Li L, Sweet PM, McDonnell PJ and Chuck RS. A new large diameter microkeratome system for harvest of human limbal stem cell allografts. *EBAA 2000*.
32. Chuck RS, Li L, Behrens A, Sweet PM and McDonnell PJ. Harvesting corneal lenticules with a microkeratome and an artificial anterior chamber system. *ARVO 2001*. (*Invest Ophthalmol Vis Sci* 42:S26, 2001).
33. Li L, Behrens A, Sweet PM, Sanchez J, McDonnell PJ and Chuck RS. A laboratory model for microkeratome-assisted posterior lamellar keratoplasty utilizing a running graft suture and a sutureless hinged flap. *ARVO 2001*. (*Invest Ophthalmol Vis Sci* 42:S29, 2001).
34. Pirnazar JR, Shamie N, Behrens A, McDonnell PJ, Suarez E, Vongthongsri A and Chuck RS. Evaluation of LASIK outcomes in a Hispanic and Thai population. *ARVO 2001*. (*Invest Ophthalmol Vis Sci* 42:S489, 2001).
35. Ellis KR, Behrens A, Li L, Sweet PM, McDonnell PJ and Chuck RS. Posterior lamellar keratoplasty: Experimental approach to a new technique. *ARVO 2001*. (*Invest Ophthalmol Vis Sci* 42:S529, 2001).
36. Graff JM, Wong, Jr EK, Chuck RS, Wong M, Tran A, Lee C and McDonnell P. A ventral stereotactic approach for denervation of the sensory nerves to the cornea of the rat. *ARVO 2001*. (*Invest Ophthalmol Vis Sci* 42:S904, 2001).
37. Lin SS, Wong, Jr EK, Graff J, Chuck RS, Agnic H, Hoang N, Cho M, Hatch MS, Kostamaa H, McDonnell PJ. Neurotrophic keratitis: A rat model demonstrating a new observation in epithelial loss after lesion of V1. *ARVO 2002* [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2002.

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39. Tungsiripat T, Sarayba MA, Li L, Sweet PM, Chuck RS. A portable anterior corneal harvesting device. *ARVO 2002* [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2002.
40. Reiser BJ, Wang Y, Taban M, Graff J, Chen ZP, Chuck RS. A portable anterior cornea harvesting device. ASCRS 2003.
41. Shamie N, Taban M, Ohanessian R, Chuck RS. Keratopigmentation: a surgical technique with improved cosmetic results for the removal of limbal dermoids. ASCRS 2003.
42. Reiser BJ, Chuck RS. Detection of Fluoroquinolone Antibiotic Penetration in to Rabbit Cornea by Confocal Microscopy. *ARVO 2003* [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2003.
43. Baerveldt G, Chuck RS, See RF, Rao N, Gerg J, Schauer R. Novel glaucoma surgical treatment-Goniectomy with histology. *ARVO 2003* [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2003.
44. Chuck RS. Amniotic membrane transplant for ocular surface disorders". American Society for Ophthalmic Registered Nurses, AAO 2003.
45. Chuck RS. Mechanical and laser microkeratome-assisted keratoprosthesis implantation". Asia Pacific Academy of Ophthalmology [APAO] 2003.
46. Sarayba M, Almeda T, Nguyen BT, Mansouri M, Sweet PM, Kurtz RM, Chuck RS. Femtosecond laser-assisted posterior lamellar keratoplasty. Castroviejo Society – Eye Bank Association of America Federated Scientific Session 2003.
47. Memarzadeh F, Fahd A, Shamie N, Chuck RS. Comparison of de-epithelialized amniotic membrane transplantation and conjunctival autograft after primary pterygium excision in a Hispanic population. Castroviejo Society – Eye Bank Association of America Federated Scientific Session 2003.
48. Shamie N, Chuck RS, McCulley T. Systemic AL amyloidosis and bilateral neurotrophic keratopathy. AAO 2003.
49. Shamie N, Chuck RS, Kurtz R. Corneal sensation after LASIK flap creation by a femtosecond laser versus a microkeratome. AAO 2003.
50. Almeda TI, NguyenTT, Sarayba MA, Sweet PM, Chuck RS, Behrens A.

- A surgical technique to harvest Descemet's membrane with viable endothelial cells for selective transplantation. ARVO 2004 [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2004.
51. Sarayba MA, Juhasz T, Chuck RS, Almeda TI, Nguyen TT, Sweet PM, Kurtz RM. Femtosecond laser application in therapeutic keratoplasty. ARVO 2004 [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2004.
 52. King JA, Affeldt JC, Aldave AJ, Kutzscher E, Chuck RS. Spermatic corneal degeneration. ARVO 2004 [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2004.
 53. Chu CW, Wong EK, Brown D, Kenney MC, Kinyamu R, Chak G, Srour L, Punt N, Untalan P, Chuck RS. Changes in corneal RNA levels after denervation of the trigeminal nerve. ARVO 2004 [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2004. Ophthalmology, Inc.: Rockville, MD, 2004.
 54. Kandavel G, Chuck RS. Staining properties of de-epithelialized human amniotic membrane. ARVO 2004 [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2004. Ophthalmology, Inc.: Rockville, MD, 2004.
 55. Memarzadeh F, Shamie N, Chuck RS, Erb MH, McCulley TJ. A novel surgical approach to fornix reconstruction in Stevens Johnsons Syndrome. ARVO 2004 [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2004. Ophthalmology, Inc.: Rockville, MD, 2004.
 56. Nguyen TT, Sarayba MA, Kurtz RM, Almeda TI, Sweet PM, Chuck RS. Intracorneal keratoprosthesis implantation using femtosecond laser: A laboratory model. ARVO 2004 [CD-ROM]; The Association for Research in Vision and Ophthalmology, Inc.: Rockville, MD, 2004. Ophthalmology, Inc.: Rockville, MD, 2004.
 57. Nguyen TT, Sarayba MA, Almeda TI, Sweet PM, Chuck RS. Top hat femtosecond laser-assisted penetrating keratoplasty. ASCRS 2004.
 58. Almeda TI, Sarayba MA, Nguyen TT, Sweet PM, Chuck RS. Femtosecond laser-assisted keratoprosthesis implantation: video presentation. ASCRS 2004.
 59. Erb MH, Taban M, Barsam CA, Sweet PM, Chuck RS. Mechanical stability of microkeratome-assisted intracorneal keratoprosthesis implantation. ASCRS 2004.
 60. Sarayba MA, Almeda TI, Nguyen TT, Sweet PM, Chuck RS. Effect of corneal opacity on femtosecond laser microkeratome accuracy. ASCRS 2004.
 61. Behrens A, Doyle J, Stern L, Chuck RS, McDonnell PJ and the Dysfunctional Tear Syndrome Group. Dysfunctional Tear Syndrome: A Delphi approach to treatment recommendations. AAO 2004.

62. Behrens A, Pirouzmanesh A, Ignacio T, Nguyen T, Chuck RS, McDonnell PJ. Dysfunctional Tear Syndrome therapy: A systematic review of the literature. AAO 2004.
63. Reyes JMG, Herretes S, Suwan-apichon O, Wang DA, Chuck RS, Behrens A, Ellisseeff JH. Chondroitin sulfate tissue adhesive for sealing corneal wounds. World Cornea Congress, 2005.
64. Suwan-apichon O, Reyes JMG, Herretes S, Chuck RS. Pterygium and tear function tests. World Cornea Congress, 2005.
65. Suwan-apichon O, Rizen M, Reyes JMG, Herretes S, Behrens A, Stark WJ, Chuck RS. A New Donor Cornea Harvesting Technique for Posterior Lamellar Keratoplasty. ARVO 2005.
66. Pirouzmanesh A, Herretes S, Reyes JMG, Suwan-Apichon O, Chuck RS, Wang DA, Elisseeff JH, Stark WJ, Behrens A. Modified Microkeratome-Assisted Posterior Lamellar Keratoplasty Using a Tissue Adhesive as Sealant. ARVO 2005 (and modified, PACO 2005).
67. Rizen M, Suwan-apichon O, Reyes JMG, Herretes S, Chuck RS. Botulinum toxin B induced mouse model of keratoconjunctivitis sicca. ARVO 2005.
68. Herretes SP, Suwan-apichon O, Reyes JMG, Pirouzmanesh A, Cano M, Yu Y, Gehlbach P, Chuck RS, Behrens A, Duh EJ. Pigment epithelium-derived factor inhibits bFGF-induced corneal neovascularization in mice. ARVO 2005.
69. Wang D, Reyes J, Herretes S, Pirouzmanesh A, Jun A, McDonnell P, Chuck R, Behrens A, Elisseeff J. Novel biological tissue adhesives for corneal surgery and repair. ARVO 2005.
70. Reyes JG, Herretes S, Pirouzmanesh A, Wang DA, Elisseeff J, Jun A, McDonnell PJ, Chuck RS, Behrens A. A modified chondroitin sulfate aldehyde adhesive for sealing corneal incisions. ARVO 2005.
71. Suwan-apichon O, Reyes JMG, Griffin NB, Barker J, Gore PN, Chuck RS. Microkeratome-assisted harvest and storage of posterior lamellar corneal allografts. AAO 2005.
72. Reyes JMG, Suwan-apichon O, Griffin NB, Barker J, Gore PN, Chuck RS. Microkeratome preparation of lamellar corneal grafts. Cornea Society 2005.
73. Lekhanont K, Leyngold IM, Suwan-apichon O, Rangsin R, Chuck RS. Comparison of topical dry eye medications for the treatment of keratoconjunctivitis sicca in a botulinum toxin B-induced mouse model. ARVO 2006.

74. Kim A, Myrowitz EH, Stark WJ, Chuck RS. Appearance of Gas Bubbles in the Anterior Chamber After Femtosecond Laser Flap Creation. ARVO 20006.
75. Suh LH, Zhang C, Naylor S, Binley K, Behrens A, Chuck RS, Chakravarti S, Jun AS. Genetic modification of *in vitro* primary cultured human corneal endothelial cells with equine infectious anemia virus. ARVO 2006.
76. Cano MD, Reyes J, Chuck RS, Rosenzweig JM, Wu T, Mori K, Gao X, Talalay P, Gehlbach PL. Sulforaphane inhibits redox fluorometry shifts in retinal pigment epithelium cells following oxidative challenge. ARVO 20006.
77. Noguera GE, Lee W, Castro J, Soltz B, Soltz R, A.Kim¹, Chuck RS, Behrens A. A Novel Photoactivated Biological Adhesive for Sealing Corneal Incisions.
78. Castro JM, Lee W, Noguera GE, Soltz B, Soltz R, Kim A, Chuck RS, Behrens A. A novel photoactivated biological tissue adhesive patch for sealing central corneal wounds. ARVO 2006.
79. Park CY, Lekhanont K, Lee WS, Chuck RS. Inflammatory cytokine gene expression of lacrimal gland of botulinum toxin-b induced mouse dry eye model. ARVO 2006.
80. Myrowitz E, Ren S, Chuck RS. Comparison of central corneal thickness measured by four different pachymeters. ARVO 2007.
81. Schmidt GW, Chuck RS. A novel suture-guided posterior lamellar keratoplasty technique for insertion of thin posterior lamellar grafts. ARVO 2007.
82. Zhuang W, Park CY, Cano M, Nguyen V, Mori K, Chuck RS, Gehlbach PL. Periocular triamcinolone increased vector traffic to liver following adenovirus mediated ocular gene delivery. ARVO 2007.
83. Kim A, Lopez MA, Rojas V, Broman AT, Chuck RS, Battle JF. Comparison of preserved amniotic membrane and dehydrated amniotic membrane allografting using fibrin glue or sutures for attachment after excision of primary pterygium. ARVO 2007.
84. Zhu L, Park CY, Chuck RS. Immunosuppressive property of dried amniotic membrane. ARVO 2007.

Cornea Donor Study (Multi-investigator, PI-University of California Irvine):

1. Ellis K, Gal R, Lester L, Moke P, Beck RW. A Web-Based Procedure for the Assignment of Donor Corneas in the Cornea Donor Study. Society of Clinical Trials Annual Meeting, 2001; Poster Presentation
2. Lass JH, Edwards SR, Beck RW, Gal RL, Ellis KJ, CDS Study Group. Quality Assessment and Cell Density Accuracy in the Cornea Donor Study: A Preliminary Analysis. EBAA Scientific Meeting, 2001; Podium Presentation
3. Mark J. Mannis, M.D. and the CDS Group: The Cornea Donor Study: Will it increase the supply of donor tissue? Cornea Society Meeting, October 2002; Podium Presentation
4. Jonathan H. Lass, MD, Shannon R. Edwards, Robin L. Gal, MSPH, Katrina J. Ruedy, MSPH, Mark J. Mannis, MD, Edward J. Holland, MD, Carmella L. Rice, and the CDS Group: Image Quality and Accuracy of Eye Bank Measurement of Donor Cornea Endothelial Cell Density in the Cornea Donor Study. ARVO Annual Meeting, April 2003; Poster Presentation
5. Jonathan H. Lass, MD and the CDS Group: Cornea Donor Study (CDS) Post-Enrollment Update. EBAA Annual Meeting, June 18-21; 2003; Podium Presentation
6. Lass JH, Gal RL, Benetz BA, Beck RW, Ruedy KJ, Mannis MJ, Holland EJ, Edwards SR, Rice C, Cornea Donor Study Group. Comparison of Eye Bank and Reading Center Central Endothelial Cell Density Measurements in the Cornea Donor Study (CDS). American Academy of Ophthalmology Combined Scientific Session, 2004; Poster Presentation
7. Benetz, BA, Gal, RL, Ruedy, KJ, Beck RW, Rice, C, Lass, JH for the Cornea Donor Study Group. Specular Microscopy Reading Center Methods in the Specular Microscopy Ancillary Study (SMAS). Ophthalmic Photographer's Society Scientific Session, 2004; Podium Presentation

Doctoral Thesis

Characterization of a multimolecular assembly on the T-cell surface: The association of the T-cell antigen receptor with the CD4 molecule. (copyright 1992)

Inventions, Patents, Copyrights:

- 1989 Oz MC and Chuck RS. Laser tissue welding with dye-enhanced biologically compatible solders. (provisional). [licensed]
- 1990 Libutti SK, Oz MC, Chuck RS and Bass LS. Dye-enhanced laser photosclerosis of venous varicosities and other vascular malformations. (provisional).
- 1997 Cantor CR, Chuck RS and Tse DB. Design and synthesis of bispecific DNA-antibody conjugates. (June 3, 1997; 5,635,602)
- 1998 Cantor CR, Chuck RS and Tse DB. Design and synthesis of bispecific reagents: use of double stranded DNAs as chemically and spatially defined cross-linkers. (December 15, 1998; 5,849,878)
- 2001 Chuck RS, Cohen D, Bearman GH, McDonnell PJ, Grundfest WS. Fluorescence-guided excimer laser ablation of corneal tissue. (provisional). [licensed]
- 2004 Chuck RS. Devices and methods for harvesting limbal stem cells. (January 20, 2004; 6,679,898; addended application 20040167556, August 26, 2004) [licensed]
- 2004 Chuck RS, Chou JS, Baerveldt G. Implantable devices and methods for measuring intraocular, subconjunctival or subdermal pressure and/or analyte concentration. (application 20040254438, December 16, 2004) [licensed]
- 2004 Chuck RS. Isolation of live stem cells by fluorescence spectroscopy. (provisional/converted 2005) [licensed]
- 2004 Chuck RS, Shehada RE, McDonnell PJ. System and method for quantitative and qualitative measurement of exogenous substances in tissue and other materials using laser-induced fluorescence spectroscopy. (application 20040199079, October 7, 2004. Issued February 26, 2008, 7,336,989)
- 2005 Baerveldt G, Chuck RS. Minimally invasive glaucoma surgical instrument and method. (December 27, 2005, 6,979,328). [510K, licensed and in production for clinical use]
- 2005 Chuck RS, Suwan-apichon O. Small animal model of dry eye for high throughput testing of therapeutics and drug absorption. (provisional).
- 2006 Chuck RS. Optimized topical drug formulation for the treatment of dry eye disease. (provisional)

Extramural Sponsorship

1. Office of Naval Research Medical Free Electron Laser Program. Beckman Laser Institute Institutional Grant, Cornea Section. (Sub-investigator) 1999.
2. JAEB Center for Health Research. National Corneal Donor Eye Study. (UCI PI, 1%) August 1, 1999 through July 31, 2004.
3. Nidek, Inc. Excimer laser spectroscopy of the cornea: fluorescence-guided ablation of diseased cornea tissue. (PI, 5%) July 1, 2001-December 31, 2001.
4. Santen Inc. Evaluation of levofloxacin for infectious keratitis. (UCI PI, 1%) August 1, 2000 through August 31, 2005.
5. Kern County Research Foundation. A rat cornea model for angiogenesis. (PI, 5%) October 1, 2000 through June 30, 2001.
6. NIH/NEI - K08 EY00412-01A1. Laser spectroscopy of the cornea. (PI, 80%) May 1, 2001 through April 30, 2006.
7. UC Irvine College of Medicine Computer Desktop Initiative Grant For Laboratory Development. (PI, 1%) 2000.
8. UC Irvine College of Medicine Research Grant. Development of a whole organ rabbit cornea culture model to monitor healing after laser refractive surgery. (PI, 1%) 2000.
9. Health Sciences Partners Research Award. Fluorescence-guided excimer laser ablation of diseased corneal tissue. (PI, 1%) 2000.
10. Photogenesis, Inc. Amelioration of retinal diseases with a novel drug delivery system. (PI, 1%) 2000.
11. Allergan, Inc. Multi-center, double-masked, randomized, parallel-group study to compare the effectiveness and safety of restasis of Cyclosporine 0.05% ophthalmic emulsion vs. Refresh Plus™ used twice daily for up to 12-months in patients with moderate to severe keratoconjunctivitis sicca. (UCI PI, 1%) June 2000-June 2001.
12. Allergan, Inc. Multi-center, randomized double-masked, vehicle controlled parallel group study evaluating the safety and analgesic efficacy of ketorolac tromethamine 0.4% ophthalmic solution in post photorefractive keratectomy patients. (UCI PI, 1%) November 2001-January 2002.
13. Allergan, Inc. A multicenter, double masked, randomized, vehicle controlled, parallel group study to compare the efficacy & safety of cyclosporine 0.05% ophthalmic emulsion used twice daily for six months in patients with moderate to severe keratoconjunctivitis sicca (KCS) (UCI sub-investigator) April 2002-October 2003.

14. LASIK Institute, Inc. LASIK-driven endothelial lamellar keratoplasty. (PI, 1%) April 12, 2001 through April 11, 2002.
15. LASIK Institute, Inc. procurement and eye bank storage of the anterior corneal surface for LASIK flap exchange. (PI, 1%) May 1, 2001 through April 30, 2002.
16. NIH UCI General Clinical Research Center. Automated microkeratome harvest of human limbal cornea for lamellar keratoplasty. (PI, 1%) January 1, 2002-December 31, 2002.
17. Multi-investigator faculty research grant, UC Irvine. Femtosecond laser vitreous photodisruption. (Co-PI, 1%, with Peter J. McDonnell and Peter M. Rentzepis) (CORCLR) June 2002-June 2003.
18. Intralase, Inc. Unrestricted gift to UCI. (PI) 2003.
19. UCI Foundation Research Associates. Unrestricted gift. (PI) 2003.
20. Allergan, Inc. A peptide antibiotic for corneal infection. (PI) 2003.
21. Ista Pharmaceuticals, Inc. Bromfenac for post-cataract extraction inflammation. (UCI sub-investigator) 2003.
22. Allergan, Inc. Unrestricted gift for dry eye research (PI) 2004.
23. IOP, Inc. Unrestricted gift for ocular surface research (PI) 2004.
24. Alpha Omega Alpha. Unrestricted gift for medical student research (Christina Moon, Dartmouth Medical College).
25. Allergan, Inc. Unrestricted gift for dry eye research (PI) 2005.
26. Alcon, Inc. Unrestricted gift for dry eye research (PI) 2005.
27. VISX/AMO. Refractive surgery trials (PI) 2005-2006.
28. Chakshu, Inc. Phase I/II trial: topical inhibitor of cataract progression (PI) 2006.
29. Allergan, Inc. Unrestricted gift for dry eye research (PI) 2006.
30. Ista Pharmaceuticals, Inc. Unrestricted gift for clinical NSAID research (PI) 2006.
31. Allergan, Inc. Unrestricted gift for dry eye research (PI) 2006. \$17,000.
32. Marriott Foundation. Unrestricted gift for mitochondria research (PI) 2006.
33. IOP, Inc. Unrestricted gift for support of Wilmer education meetings (PI) 2007.
34. Allergan, Inc. Horizon fellowship education award for support of refractive surgery education (PI) 2007.
35. Allergan, Inc. Unrestricted gift for dry eye contact lens research (co-PI) 2007.

36. Alcon, Inc. Unrestricted gift for dry eye testing research (co-PI) 2007.
37. Alcon, Inc. Unrestricted gift for allergy research (co-PI) 2007.
38. Alcon, Inc. Unrestricted gift for dry eye research (co-PI) 2007.
39. Hess Foundation. Unrestricted gift for dry eye research (PI) 2007.
40. Marriott Foundation. Unrestricted gift for mitochondria research (PI) 2007.
41. Chroma Pharma, Inc. Unrestricted gift for dry eye research (PI) 2008.

EDUCATIONAL ACTIVITIES

Teaching:

Graduate Courses

- July 2002 - 2004 Lecturer, *BME 1: Introduction to Biomedical Engineering*. The Henry Samueli School of Engineering, Department of Biomedical Engineering, UC Irvine.
- July 2000- 2004 Lecturer and Clinical Preceptor, *BME 240: Introduction to Clinical Medicine for Engineers*. The Henry Samueli School of Engineering, Department of Biomedical Engineering, UC Irvine.
- July 2000 - 2004 Clinical Preceptor, Cornea and Contact Lens Residency, Southern California College of Optometry.
- July 1999 - 2004 Director and Preceptor, Cornea and Refractive Surgery Fellowship, Department of Ophthalmology, UC Irvine.
- July 1999 - 2004 “Ophthalmic Physical Diagnosis for Medical Students II.” Department of Ophthalmology, UC Irvine.
- July 1999 – 2004 Resident Clinic and Surgery Attending, Department of Ophthalmology, UC Irvine.

Research Advisees:

Undergraduates: Jose Gonzalez (UC Riverside, 2000-2001), Matthew Nobe (UCLA, 2002-2003, 2005), Mona Mansouri (U. London, UK, 2003), Jack Parker (U. Alabama, 2006, 2007).

Medical students: Sarah Wellik (UCI, 1999-2000), Nancy Kim (UCI, 1999-2000), David Kira (U. Pittsburgh, 1999-2000), Paristou Abedi (UCI, 1999-2000), Melanie Ho (UCI, 2000-2001), Anup Patel (NY Medical College, 2001), Bibiana Reiser (USC, 2001-2002), Mehran Taban (UCI, 2001-2003), Jordan Graff (UCI, 2001-2003), Shameema Sikder (U. of Arizona, 2005), Christina Moon (Dartmouth/Brown, 2005, 2007), Ilya Leyngold (Johns Hopkins, 2005), Nicholas Ramey (Johns Hopkins, 2005-2006), Margaret Yew (Johns Hopkins, 2006), Sahar Kohanim (Johns Hopkins, 2006), Matthew Nobe (UC Irvine, 2006, 2007), Joo Y. Cho (Dartmouth, 2007), Ambereen Kurwa (Georgetown, 2007).

Residents: Kenneth Ellis (UCI, 2000-2002), Barbara Shang (UCI, 2001-2002), Samir Shah (UCI, 2001-2002), Rudrani Banik (UCI, 2001-2002), Melanie Erb (2001-2004), Charles Barsam (2002-2003), Farnaz Memarzadeh (2003-2004), Ganesha Kandavel (2003-2004), Margaret Chang (2004), Michael Rizen (2004-2005), Leejee Suh (2004-present), Greg Schmidt (2006-7), Shameema Sikder (2007-).

Laboratory Post-doctoral Fellows: Ashley Behrens (Venezuela, 1999-2001), Li Li (China, 2000-2001), Melvin Sarayba (Philippines, 2002-2004), Tulaya Tungsiripat (Thailand, 2001-2002), Tes Almeda-Ignacio (Philippines, 2003-2004), Bibiana Reiser (UCI, 2002-2003), Thao Nguyen (U. of Laval, Ontario, Canada, 2003-2004), Samantha Herretes (Venezuela, 2004-2005), Johann M. G. Reyes (Philippines, 2004-2005), Olan Suwan-apichon (Thailand, 2004-2005), Shi-You Zhou (China, 2005-2006), Kaevelin Lekhanont (Thailand, 2005-2006), Choul-Yong Park (South Korea, 2005-2007), Zeijin Zhu (China/Doheny, 2005), Woo-Seok Lee (South Korea, 2005-2006), Zhu Lei (China, 2006-7), Wenjuan Zhuang (China, 2006-7), Teravee Hongyok (Thailand, 2007-2008), Young Shin (South Korea, 2007-2008), Dae Ro Na (South Korea, 2007-2008), Jeremy Chae (South Korea, 2008-2010).

UCI Clinical Fellows: Lee Novick (Tulane U., 1999-2000), Jonathan R. Pirnazar (Washington U., 2000-2001), Norman Liu (USC, 2000-2001), Matthew Kaufman (Baylor U., 2001-2002), Neda Shamie (UCI, 2002-2003), Ethan Kutzscher (Cal Pacific Medical Center, 2003-2004).

Wilmer Eye Institute Clinical Cornea Fellows:

2004-5: Richard Adler, Timothy Blake, Paul Botelho, Clement Cheng, Alisa Kim.

2005-6: Julie Gutmark, Linda Rose, Melvin Wagner, Sheel Patel, Vasudha Panday.

2006-7: Jung Lee, Bairn (Mike) Walker, Laura Green, Samir Shah, Ava Huchun.

2007-8: Jimmy Lee, Philip Stanley, Sachin Kalyani, Neel Desai, Melanie Bennett, Gregory Schmidt.

2008-9: Lamees Ashker, Stacy Bang, Erica Edell, Kalliopi Stasi, Bradford Tannen

Editorial Activities:

Editorial Board Member: Current Opinion in Ophthalmology, [2008]

Editorial Board Member: Journal of Refractive Surgery (ISRS/AAO) [2005-present]

Editorial Board Member: Lasers in Surgery and Medicine (ASLMS) [2005-present]

Guest Editor: PPAR Research, special issue on PPARs and RXRs in Eye Biology and Disease [2008]

Section Editor for Refractive Surgery: Current Opinion in Ophthalmology [2008]

Refractive Surgery Editor: eOphthalmology Review [2008].

Journal Peer Review:

| | |
|--------------|---|
| 2006-Present | New England Journal of Medicine |
| 2003 | IEEE Transactions in Biomedical Engineering |
| 2003 | Journal of Biomedical Optics |
| 2003 | Journal of Clinical Virology |
| 1998-present | Archives of Ophthalmology |
| 1998-present | Cornea |
| 1998-present | Journal of Cataract and Refractive Surgery |
| 1998-present | Ophthalmology |
| 2002 | Guest Editorial Board Member , Investigative Ophthalmology and Visual Sciences |
| 1999-present | Journal of Refractive Surgery |
| 1999 | Transactions of the American Ophthalmology Society |
| 1998-present | Lasers in Surgery and Medicine |
| 1998-present | Investigative Ophthalmology and Visual Sciences |

CLINICAL ACTIVITIES

Certification:

Licensure

State of Maryland #D0061169

State of California #G084571

Board Certification, American Board of Ophthalmology (Diplomate, 1999)

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments:

| | |
|--------------|--|
| 2008 | Medical School Council, Johns Hopkins Hospital |
| 2007-8 | Wilmer Retreat Planning Committee |
| 2007-8 | Wilmer Biostatistics Committee |
| 2006 | Wilmer Physician Compensation Group |
| 2006-7 | Wilmer 2010 Committee |
| 2006 | Johns Hopkins Medicine Leadership Development Program |
| 2006-2008 | Co-Director, Friday Afternoon Research Meeting (FARM) Committee |
| 2006-present | Member, Associate Professor Promotion Committee |
| 2006-present | Member, Wilmer Research Meeting Committee |
| 2005-present | Member, Wilmer Long Range Planning Committee |
| 2005-present | Member, Wilmer Finance Committee |
| 2005-present | Member, Wilmer Annual Research Meeting Planning Committee |
| 2005-present | Program Director, Wilmer Resident Association Annual Meetings |
| 2005-present | Member, Johns Hopkins Green Spring Station Board of Governors |
| 2005-present | Director of Refractive Surgery |
| 2005-present | Co-medical Director Wilmer at Greenspring Station |
| 2004 | Member, Department of Ophthalmology Search Committee for Cornea faculty position. |
| 2002-2003 | Chair, Department of Ophthalmology Search Committee for Low Vision faculty position. |
| 2002 | Interviewer, College of Medicine Search Committee for Dermatology Chair. |
| 2002 | Member, Department of Ophthalmology Search Committee for research faculty. |
| 2001 | Member, Department of Ophthalmology Search Committee for Oculoplastics faculty position |
| 2001 | Chair, Department of Ophthalmology search committee for Optometry and Cornea faculty positions. |
| 2000-2002 | University of California, Irvine, College of Medicine Representative Assembly. |
| 1999 | University of California, Irvine. COM Health Sciences Strategic Planning Retreat IV |
| 1999-2004 | University of California, Irvine. College of Medicine Institutional Review Board (3-year term, renewed 2002). |
| 1999-2004 | University of California Irvine, Department of Ophthalmology, Cornea and Refractive Surgery Fellowship Director. |
| 1999-2004 | Residency Education Committee |

1999-2004 Residency Selection Committee
1999-2002 Department of Ophthalmology Strategic Planning Retreat.
1986 Engineering Science Steering Committee, College of Engineering,
UC Berkeley [committee to develop bioengineering curriculum]

Professional Societies:

Local:

Orange County Ophthalmology Society (1999-present)

National:

Castroviejo Cornea Society (2002-present)
Paton Society (Eye Bank Association of America) (2002-present)
Tear Film and Ocular Surface Society (2002-present)
Chinese American Ophthalmological Society (2002-lifetime)
[elected Secretary/Treasurer, President 2006-2008]
American Academy of Ophthalmology (AAO) (1994-present)
American Medical Association (AMA) (1986-1993)
American Society for Lasers in Medicine and Surgery (ASLMS)
(1987-1993, 2001)
Association for Research in Vision and Ophthalmology (ARVO)
(1994-present)
Society of the Engineering Sciences (SES) (1982-1986)
Tau Beta Pi National Engineering Society (1985-lifetime)
Alpha Omega Alpha National Medical Honor Society (1998-lifetime)
American Society for Laser Medicine and Surgery (2003-present)

International:

International Society for Optical Engineering (SPIE) (1987-1993)
International Society of Refractive Surgery (ISRS) (2004-present)

Conference Session Chair:

Sept. 2003 Bioinformatics, Gene Arrays and Proteomics, Western Eye
Research Conference, Laguna Beach, CA.
Nov. 2003 Dry Eye Treatment and Diagnosis: A New Understanding,
American Academy of Ophthalmology, Anaheim, CA.

- June 2004 Afro-Asian Congress of Ophthalmology: Cornea Section, Istanbul, Turkey.
- Oct. 2004 Treatment Recommendations for the Dysfunctional Tear Syndrome (Dry Eye): A Consensus Opinion From a Panel of Experts. American Academy of Ophthalmology, New Orleans, LA.
- Sept. 2005 Development of artificial corneas and retinas. ARVO Western Eye Research Conference, Laguna Beach, CA.
- Oct. 2005-6 Moderator, Cornea Free Paper Session. American Academy of Ophthalmology, Chicago, IL; Las Vegas, NV.
- Dec. 2005-p Chair, Refractive Surgery Session, Current Concepts in Ophthalmology, Baltimore, MD.
- Feb/Mar. 2006-p Chair, Refractive Surgery Session, Current Concepts in Ophthalmology, Dorado, PR; Vail, CO, MD.
- 2006-present Director/organizer, Annual Wilmer Residents Association Meeting
- Nov. 2007 Chair, Enhancing treatment in long-term management of dry eye, AAO, New Orleans, LA

Review Groups:

- July 2003 National Institutes of Health, National Eye Institute, Center for Scientific Review Special Emphasis Panel, “Keratoplasty Applications”.
- Nov. 2003 National Institutes of Health, National Eye Institute, Center for Scientific Review Special Emphasis Panel, VISA Study Section, “Anterior Eye Diseases”
- Aug. 2005-6 Chair, Tissue Banks International Advisory Committee on Specialty Allografts
- 2006-2008 American Academy of Ophthalmology Refractive Errors Preferred Practice Patterns (PPP) panel

Consultantships:

- 2007-present Medical Advisory Board, WRM Biomedical [surgical]
- 2005-present Speakers Bureau and consultant, Alcon Inc., Ft. Worth, TX. [pharmaceutical]
- 2007 Consultant, Vistakon [pharmaceutical]
- 2006 Consultant, Bausch and Lomb [pharmaceutical]
- 2003-2006 Speakers Bureau and consultant, Allergan Inc., Irvine, CA. [pharmaceutical]

- 2005-2007 Speakers Bureau and consultant, Ista Pharmaceuticals, Inc., Irvine, CA. [pharmaceutical]
- 2001-2003 Speakers Bureau, Santen, Inc., Napa, CA. [pharmaceutical]
- 2002-present Consultant, Neomedix, Inc., San Juan Capistrano, CA. [development of UC-owned IP]
- 2002-2004 Consultant, Tekia, Inc., Irvine, CA. [development of UC-owned IP]
- 2002-present Medical Advisory Board, Okto Ophtho and IOP, Inc., Costa Mesa, CA. [surgical]
- 2000-2002 Consultant, MTL, Inc., La Mirada, CA. [surgical]
- 2001 Consultant, Nidek, Inc., Pasadena, CA. [surgical]
- 2001 Ophthalmology consultant, California Police Officers Safety Training Manual.
- 1999-2004 Ophthalmology Consultant, ABC News, New York City, NY.

RECOGNITION

Awards, honors

California Honor Society Golden Seal Bearer (1982-lifetime)
 Academic Achievement Scholar for the City of Berkeley, CA (1982)
 American Savings and Loan Mathematics Scholar (1982)
 Home Savings of America Collegiate Business Scholar (1982-1986)
 University of California at Berkeley Chancellor's Scholar (1982-1986)
 University of California at Berkeley Dean's List (1982-1986)
 Tau Beta Pi National Engineering Honor Society (1985-lifetime)
 ARCS Foundation/Lawrence Berkeley Laboratory Collegiate Research Fellow (1984-1986)
 NIH Medical Scientist Training Program (MSTP) (1986-1993)
 Alpha Omega Alpha (1994-present)
 Rosenbaum Research Award (1996)
 Heed Ophthalmic Foundation Fellowship (1998)
 National Eye Institute ARVO Travel Grant (2000)
 UC Irvine College of Medicine Research Award (2000)
 Health Sciences Partners Research Award (2000)
 UCI College of Medicine Outstanding Clinician-Scientist Award (2003)
 American Academy of Ophthalmology Achievement Award (2005)
 Named to Best Doctors in America
 Named to Best Doctors in Baltimore
 Qualified and listed at [Trusted LASIK Surgeons](#), an online LASIK directory that screens surgeons based on experience, premier patient care, and professional credentials.

Invited talks

- Oct. 1999 “Surgical reconstruction of the ocular surface.” Southern California College of Optometry, Fullerton, California.
- Nov. 1999 “Laser spectroscopy of the cornea.” IEEE/LEOS, San Francisco, California.
- Jan. 2000 “Ocular surface reconstruction.” Ophthalmology Grand Rounds. Long Beach Memorial Medical Center, Long Beach, California.
- Feb. 2000 “Ocular surface reconstruction.” Visiting Professor, Grand Rounds, Department of Ophthalmology, Loma Linda University.
- June 2000 “New techniques for ocular surface reconstruction.” Doheny Days Research Conference, Doheny Eye Institute, University of Southern California.
- July 2000 “Cataracts, dry eyes and other vision problems in the elderly.” Irvine Senior Center.
- Nov. 2000 “Cataracts, dry eyes and other vision problems in the elderly.” Orange Senior Center.
- Nov. 2000 “New developments in complex corneal transplantation.” Monarch Health Care Ophthalmology Update.
- Dec. 2000 “New developments in ocular surface reconstruction.” UC Irvine Ophthalmology Grand Rounds.
- Feb. 2001 “Ocular surface reconstruction: historical perspective & future predictions.” Research Study Club Midwinter Conference, University City, CA, 2001.
- Apr. 2001 “Thermokeratoplasty: collagen contraction in ophthalmology.” American Society for Laser Medicine and Surgery, Inc. Workshop, New Orleans, Louisiana.
- May 2001 “Classification of limbal stem cell deficiency.” Management of Ocular Surface Disorders Workshop, Los Angeles, CA.
- Aug. 2001 “Advances in corneal transplantation.” Orange County Optometric Society Annual Ocular Pathology Conference, Southern California College of Optometry, Fullerton, CA.
- August 2001-2002 “Advances and controversies in ocular fluoroquinolone therapy”, International Center for Post-graduate Medical Education (CME), San Diego, CA; Universal City, CA; Troy, MI; Napa, CA; Downey, CA; Williamstown, MA; Denver, CO; Dallas, TX;

Memphis, TN; Los Angeles, CA; Costa Mesa, CA; San Francisco, CA; Dana Point, CA, Portland, OR.

- Sept. 2001 “The Application of LASIK techniques to corneal transplantation”, Harvard University, The Massachusetts General Hospital/Wellman Labs, Photomedicine and Photobiology Seminar Series, Boston, MA. (re-scheduled due to national disaster).
- Oct. 2001 “Microsurgery course instructor”, Alcon Surgical, Inc., Irvine, CA.
- Nov 2001-p “Phacoemulsification course instructor”, American Academy of Ophthalmology, New Orleans, LA.
- Nov 2001 “Microkeratome-assisted limbal stem cell transplantation”, ALTK Symposium, American Academy of Ophthalmology, New Orleans, LA.
- Nov. 2001 “Update on corneal research at UC Irvine”, Department of Ophthalmology Grand Rounds, Irvine, CA.
- Nov. 2001 “The next generation of ocular fluoroquinolone therapy-controversies in treatment”, Stanford Peninsula Ophthalmologic Society meeting, Palo Alto, CA.
- Feb. 2002 “Advances in Corneal Transplantation and Research”, “The Eternal Flame of Life”, Lifesharing Community Organ and Tissue Donation, California Center for the Arts, Escondido, CA.
- Feb. 2002 “Controversies in treatment of bacterial keratitis”, Phoenix Ophthalmological Society meeting, Phoenix, AZ.
- Feb 2002 “The Application of LASIK techniques to the treatment of corneal disease”, Harvard University, The Massachusetts General Hospital/Wellman Labs, Photomedicine and Photobiology Lecture Series, Boston, MA.
- Feb. 2002 “The next generation of ocular fluoroquinolone therapy-controversies in treatment”, Volusia County/Daytona Beach Ophthalmologic Society meeting, Ormond Beach, FL.
- Mar. 2002 “The next generation of ocular fluoroquinolone therapy-controversies in treatment”, Tucson Ophthalmologic Society meeting, Tucson, AZ.
- May 2002 “The next generation of ocular fluoroquinolone therapy-controversies in treatment”, Hawaii Ophthalmologic Society meeting, Honolulu, HI.
- May 2002 Judge, Twenty-third annual student research symposium, Southern California College of Optometry, Fullerton, CA.
- Sept. 2003 Session Chair, Bioinformatics, Gene Arrays and Proteomics, Western Eye Research Conference, Laguna Beach, CA.

- Apr. 2003-2006 “Anti-infectives for modern cataract and LASIK surgery” and “New treatments for dry eye”. Access Communications (CME), Newport Beach, CA; El Segundo, CA; San Diego, CA; Pasadena, CA; Loma Linda, CA; San Francisco, CA; Riverside, CA; Palm Springs, CA; Sacramento, CA; Cerritos, CA; Temecula, CA; Indian Wells, CA; Hollywood, CA; Fresno, CA.
- Mar. 2003 “Amniotic membrane grafts for pterygium surgery”. Annual Post-graduate Convention, Loma Linda University, Loma Linda, CA.
- May 2003 “Topical cyclosporine A treatment of inflammatory dry eye”. Research Day, Department of Ophthalmology, Loma Linda University, Loma Linda, CA.
- May 2003 “The Application of LASIK techniques to corneal transplantation”. Visiting Professor Rounds, Cal Pacific Medical Center, San Francisco, CA.
- July 2003 “New techniques in ocular surface reconstruction”. Visiting Professor Rounds, Wilmer Eye Institute, Johns Hopkins University, Baltimore, Maryland.
- Nov. 2003 “Pathways for advancement for young clinician-scientists”. Annual meeting American Chinese Medical Association, Jules Stein Eye Institute, University of California, Los Angeles.
- Nov. 2003 “Amniotic membrane transplant for ocular surface disorders”. American Society for Ophthalmic Registered Nurses, American Academy of Ophthalmology, Anaheim, CA.
- Dec. 2003 “Mechanical and laser microkeratome-assisted keratoprosthesis implantation”. Asia Pacific Academy of Ophthalmology, Bangkok, Thailand.
- Feb. 2004 “Advances in pterygium surgery” and “IOL calculations after refractive surgery”. Ocular Drug and Surgical Therapy Update, Dana Point, CA.
- May 2004 “Microkeratome-assisted keratoprosthesis implantation” and “Amniotic membrane for pterygium surgery”. Wilmer Resident Association and Wilmer Nursing Association Meetings, Baltimore, MD.
- June 2004 “Microkeratome-assisted keratoprosthesis implantation” and “Amniotic membrane for pterygium surgery”. Afro-Asian Congress of Ophthalmology Annual Meeting, Istanbul, Turkey.

- Dec. 2004 “Limbal stem cell transplantation: Present and future”, and “Femtosecond laser posterior lamellar keratoplasty”. Current Concepts in Ophthalmology Meeting, Baltimore, MD.
- Jan. 2005 “Amniotic membrane transplantation”, SUNY Annual Ophthalmology Update, Brooklyn, NY.
- April 2005 Ocular surface reconstruction. Visiting Professor, U. of Louisville, KY.
- May 2005 NSAIDS for ocular surgery. Academy of Managed Care Pharmacy Meeting, Dever, CO.
- Amniotic membrane grafting for pterygium surgery. Wilmer Resident Association Meeting, Baltimore, MD.
- Advances in corneal surgery, Annual Kaiser Ophthalmology Meeting, Anaheim, CA
- Sept 2005-06 Teleconference on New Advances in Topical NSAIDS [Bromfenac].
- New Advances in Topical NSAIDS [Napafanec] Greensboro, NC, Columbia, SC, Falls Church, VA, York, PA, Philadelphia, PA.
- New Advances in Topical NSAIDS [Bromfenac]. Philadelphia, PA, Maui, Hawaii
- Oct. 2005 “Update on ocular stem cell research at the Wilmer Eye Institute.” Wilmer Advisory Committee Meeting.
- Dec. 2005 “Advances in refractive keratoplasty”. Current Concepts in Ophthalmology, Baltimore, MD.
- Jan. 2006 “Update on corneal epithelial stem cell transplantation”, Institute for Cell Engineering and Neuroscience Seminar, JHU.
- Feb/Mar. 2006 Femtosecond laser-assisted keratoplasty; Advances in pterygium surgery; Laboratory animal testing of dry eye therapeutics. Current Concepts in Ophthalmology, Dorado, PR and Vail, CO.
- Oct. 2006 Femtosecond laser keratoplasty. Visiting Professor, University of California San Francisco.
- Dec. 2006 LASIK update. Current Concepts in Ophthalmology, Baltimore, MD.
- Jan. 2007 Pterygium surgery and eye banking updates. Hawaiian Eye Meeting, Kauai, HI.
- Feb/Mar. 2007 LASIK, Pterygium and eye banking updates. Current Concepts in Ophthalmology, Montego Bay, Jamaica and Vail, CO.
- Apr. 2007 Femtosecond laser keratoplasty. National cornea and anterior segment symposium [optometry continuing education], Baltimore MD.

- June 2007 Femtosecond laser LASIK update. Air Force Annual Ophthalmology Symposium, San Francisco, CA.
- August 2007 Update on current research on dry eye disease. Chicago, IL.
- Sept. 2007 LASIK, Pterygium and keratoplasty updates. St. Luke's Inaugural International Ophthalmology Symposium, Manila, Philippines.
- Oct. 2007 Ocular surface reconstruction, University of California San Francisco.
- Nov. 2007 Dry eye update, AAO Late Breakers Session (invited), AAO, New Orleans, LA
- Dec. 2007 Refractive surgery and cornea updates. Wilmer Current Concepts in Ophthalmology, Baltimore, MD; Carribean, and Vail, CO.
- Dec. 2007 Refractive surgery and dry eye updates, Al Tawam Hospital, Al Ain, Abu Dhabi, UAE.
- Jan. 2008 Femtosecond laser keratoplasty, and Ocular surface reconstruction: Visiting Professor, University of Pennsylvania and Scheie Eye Institute, Philadelphia, PA
- Feb. 2008 Clinical cornea update, Alcon Continuing Physician Education for residents. Ft. Worth, TX
- May 2008 Ocular Surgery News and Italian Society of Ophthalmology, Naples, Italy
- May 2008 Visiting Professor, Boston University, Boston, MA.
- June 2008 Refractive Surgery. World Congress of Ophthalmology, Hong Kong, China.
- June 2008 Femtosecond laser-assisted keratoplasty. Presidential Visiting Professor, Sun Yat-sen Eye Center, Guangzhou University, China.
- June 2008 Femtosecond laser-assisted keratoplasty, and Trabecular removal (Trabectome) surgery. Visiting Professor, Beijing Eye Center, China.
- June 2008 Femtosecond laser-assisted keratoplasty. Visiting Professor, Henan Eye Institute, China.
- Oct. 2008 Femtosecond laser keratoplasty, and Ocular surface reconstruction: Fall Update Meeting, Visiting Professor and Distinguished Alumnus Lecture, Washington University, St. Louis, MO
- Oct. 2008 Cornea update. Visiting Professor and plenary speaker, Indiana University Eye Center 100th Anniversary and new building dedication, and Indiana Academy of Ophthalmology, Indianapolis, Indiana.