

Curriculum Vitae

Name: Danielle M. Robertson, O.D., Ph.D., FAAO, FBCLA
Diplomate, Cornea, Contact Lenses & Refractive Technologies

Title: Assistant Professor

Office Address: Department of Ophthalmology
UT Southwestern Medical Center at Dallas
5323 Harry Hines Blvd.
Dallas, TX 75390-9057

E-mail: Danielle.Robertson@utsouthwestern.edu

Education:

1996 B.S. (Zoology), Washington State University, Pullman, WA

2002 O.D., Magna Cum Laude, University of Houston College of Optometry, Houston, TX

2007 Ph.D. in Physiological Optics, University of Houston College of Optometry, Houston, TX
Thesis title: Molecular control of corneal epithelial homeostasis
Thesis advisors: Jan P.G. Bergmanson, O.D., Ph.D. and H. Dwight Cavanagh, M.D., Ph.D.

Professional License:

2002 Therapeutic Optometrist, Texas

2008 Optometric Glaucoma Specialist, Texas

Externship Training:

05/2001 – 08/2001 Neuro Eye Associates
University of Houston College of Optometry
Houston, Texas

08/2001 – 12/2001 Wuerzburg Optometry Clinic
USA MEDDAC
Wuerzburg, Germany

01/2002 – 04/2002 Barnet Dulaney Surgical Eye Center
Phoenix, Arizona

Professional Experience:

5/2000 – 5/2002 Research Associate
Texas Eye Research and Technology Center
University of Houston College of Optometry,
Houston, Texas.

10/2000 –10/2001 Student Liaison
Ocular Sciences, Inc.
San Francisco, California.

5/2002 - 8/2002 Junior Postdoctoral Researcher
Department of Ophthalmology
UT Southwestern Medical Center

8/2002 to 5/2003 Clinical Fellow
Cornea and Contact Lens Clinic
University of Houston College of Optometry

8/2002 to 5/2003 Clinical Investigator
Texas Eye Research and Technology Center,
University of Houston College of Optometry,
Houston, Texas.

5/2003 to 9/2003 Postdoctoral Research Fellow
Department of Ophthalmology
UT Southwestern Medical Center

10/2003 to 09/2004 Assistant Instructor
Department of Ophthalmology
UT Southwestern Medical Center

10/2004 to 09/2007 Instructor
Department of Ophthalmology
UT Southwestern Medical Center

10/2007 to present Assistant Professor
Department of Ophthalmology
UT Southwestern Medical Center

NIH Research Support:

Pending

Modulation of Corneal Wound Healing using Pre-Surgical Dietary Restriction

Principal Investigator: W. Matthew Petroll, Ph.D. (Danielle M. Robertson, co-investigator)

Agency: NIH/NEI

Effects of aging and diabetes on corneal epithelial pathophysiology

Principal Investigator: Danielle M. Robertson, O.D., Ph.D.

Agency: NIH/NEI

1 R01 EY024546-01

Active

Interactive effects of OSA and T2DM on corneal and ocular surface disease

Principal Investigator: Danielle M. Robertson, O.D., Ph.D.

Agency: NIH/NEI

1 R21 EY024433-01

Assessment of Corneal Fibroblast Biomechanical Behavior

Principal Investigator: W. Matthew Petroll, Ph.D. (Danielle M. Robertson, co-investigator)

Agency: NIH/NEI

2 R01 EY13322

Past

P63/IGFBP3/BCL2 Control of Corneal Epithelial Homeostasis

Principal Investigator: Danielle M. Robertson, O.D., Ph.D.

Agency: NIH/NEI

1 R01 EY018218

A Novel 3-dimensional Culture Model of the Anterior Cornea

Principal Investigator: W. Matthew Petroll, Ph.D. (Danielle M. Robertson, co-investigator).

Agency: NIH/NEI

R21 EY019817-01

The Role of BCL2 in Corneal Epithelial Cell Shedding

Principal Investigator: Danielle M. Robertson, O.D.

Agency: NIH/NEI

1 K08 EY015713-01

Other Research Support

Active

Research Grant, OneSight Research Foundation
Principal Investigator: Robertson 2013-2014
Development of a novel three-dimensional innervated organotypic corneal model for diabetic studies

Center for Alternatives to Animal Testing
Principal Investigator: Petroll; Co-investigator: Robertson 2013-2014
A novel anterior corneal construct for ocular toxicity testing in vitro

Past

Research to Prevent Blindness Career Development Award 2008-2012
Principal Investigator: Robertson NCE to 12/2013

Research Grant, OneSight Research Foundation
Principal Investigator: Robertson 2012-2013
Role of the Insulin-like Growth Factor Type I Receptor in Diabetic Eye Disease

Research Grant, OneSight Research Foundation
Principal Investigator: Robertson 2011-2012
Role of the Insulin-like Growth Factor Axis in Diabetic Keratopathy

Vistakon Research Grant, American Optometric Foundation
Principal Investigator: Robertson 2008-2009
The Role of the Post Lens Tear Film in Lipid Raft-mediated Pseudomonas Internalization

CLAO Education and Research Foundation Scientific Research Award
Principal Investigator: Robertson 2007-2008
CTL/IGFBP3 Regulation of Corneal Epithelial Apoptosis

Eye Bank Association of America Scientific Research Award
Principal Investigator: Robertson 2006-2007
Development of a Universal Donor Corneal Epithelium

Industry Sponsored Research

Pending

CR-5474 Johnson and Johnson Vision Care, Inc. (PI: Robertson)
Clinical Evaluation of Two Limbal Ring Cosmetic Lenses

CR-5598 Johnson and Johnson Vision Care, Inc. (PI: Robertson)
Cosmetic Fit Evaluation of New Limbal Ring Prototypes

Alcon Laboratories (PI: Robertson)

A comparison of the effects of Alcon DAILIES TOTAL1 and a control, standard oxygen permeable daily disposable hydrogel contact lens on the biology of the ocular surface and lid margin

Past

CR-5477 Johnson and Johnson Vision Care, Inc. 2014

A non-dispensing fit evaluation of etafilcon A investigational limbal ring contact lenses with polyvinylpyrrolidone (PVP) in an Asian population

CIBA Vision Corp. (PI: Cavanagh, Co-investigator: Robertson) 2003-2005

Testing of proprietary company polymers for bacterial binding and effects of lens wear

Fellowships and Awards

Wesley Jessen Award for Excellence in Anterior Segment Pathology, November 2000.

American Optometric Foundation Vistakon Student Travel Fellowship, December 2000, 2001, 2002.

Journal of the AOA – Contact Lens Section Honorable Mention Award for Anterior Segment Photography, August 2000.

Dean's Clinical Letter of Excellence, August 2000, Spring 2001.

RGP Lens Institute Clinical Excellence Award, April 2001.

National Eye Institute Summer Research Fellowship, May 2001.

Cornea and Contact Lens Clinical Excellence Award, May 2002

Eye Bank Association of America Travel Grant, May 2003.

National Eye Institute Clinical Scientist Career Developmental Award, October, 2004

American Optometric Foundation Student Travel Fellowship to ARVO, May 2005.

European Molecular Biology Organization Fellowship, June 2005.

William C. Ezell Fellowship, American Optometric Foundation, June 2005.

National Eye Institute Loan Repayment Program, July 2005 – June 2011.

International Society for Contact Lens Research Travel Fellowship, August 2005.

Eye Bank Association of America Scientific Research Award, *Development of a Universal Donor Corneal Epithelium*, July 2005.

William C. Ezell Fellowship, American Optometric Foundation, June 2006.

International Society for Contact Lens Research Travel Fellowship, August 2007.

CLAO Education and Research Foundation Scientific Research Award, July 2007.

Research to Prevent Blindness Career Development Award, June 2008.

*First award ever given by RPB to an optometrist

Fellow in the American Academy of Optometry, October 2008.

Vistakon Research Grant, American Optometric Foundation, October 2008.

Fellow in the British Contact Lens Association, May 2009.

Diplomate in the American Academy of Optometry, Section on Cornea, Contact Lenses and Refractive Technologies, November 2010.

Professional Memberships:

American Academy of Optometry, 2000

Association for Research and Vision in Ophthalmology, 2001

American Society for Cell Biology, 2005

Society for Experimental Biology and Medicine, 2005

British Contact Lens Association, 2008

International Society for Eye Research, 2009

International Society for Contact Lens Research, 2009

Contact Lens Association of Ophthalmologists, 2010

Professional Service Appointments:

UTSW service:

Interviewer – medical student applicants. 2012, 2013

Judge – medical student research forum. 2011, 2014

Judge – Department of Ophthalmology Alumni Day. 2010

External Committees:

Epidemiology Subcommittee Member. Tear Film and Ocular Surface Society Workshop on Contact Lens Discomfort. 2012 – 2013

Chair, Research Diplomate Committee, American Academy of Optometry, Section on Cornea, Contact Lenses, and Refractive Technologies. 2012 – present

Member, Research Committee, American Academy of Optometry. 2013 – present

Research Initiative Task Force, American Academy of Optometry. 2013

Chair, Career Development Award Review Committee, American Academy of Optometry. 2013 - present

Meeting Chair/Moderator Roles:

Moderator, American Academy of Optometry 2008: Papers: Cornea

Moderator, Contact Lens Association of Ophthalmologists/Education and Research Foundation 2010: Complications of contact lens wear: where are we?

Session co-Chair, International Society for Contact Lens Research 2011: Rapid fire presentations

Moderator, American Academy of Optometry 2012: Papers: Contact lens risk factors

Session co-chair International Society for Contact Lens Research 2013: The biological impact of contact lens wear

Grant Reviewer:

Italian Ministry of Health. 2010, 2011

American Optometric Foundation. 2012, 2013

Natural Sciences and Engineering Research Council of Canada. 2012

Editorial Boards:

Editorial Board Member: Eye and Contact Lens. 2005 – present

Contributing Reviewer:

Investigative Ophthalmology and Visual Science

Experimental Eye Research

Eye and Contact Lens

Expert Review of Medical Devices

Optometry and Vision Science

Clinical Ophthalmology

Cornea

The Ocular Surface

Ophthalmic and Physiological Optics

Clinical and Experimental Optometry

Toxicology in Vitro

Ophthalmology

Drug Design, Development and Therapy

Consulting:

Scientific Advisory Board for contact lens solutions-related research. Abbott Medical Optics, Inc. 2010

Publications:

1. Petroll WM, Kovoov T, Ladage PM, Cavanagh HD, Jester JV, and **Robertson DM**. Can Postlens Tear Thickness be Measured Using Three Dimensional In-Vivo Confocal Microscopy. *Eye & Contact Lens* 2003; 29(1S): S110 – S114.
2. Ladage PM, Yamamoto N, **Robertson DM**, Jester JV, Petroll WM, and Cavanagh HD. *Pseudomonas aeruginosa* corneal binding following 24 hour orthokeratology lens wear. *Eye & Contact Lens* 2004; 30(3):173-178.
3. **Robertson DM**, Li L, Fisher S, Pearce VP, Shay JW, Wright WE, Cavanagh HD, and Jester JV. Growth and Differentiation in a Telomerase-Immortalized Human Corneal Epithelial Cell Line. *Invest Ophthalmol & Vis Sci* 2005; 46: 470-478.
4. **Robertson DM** and Cavanagh HD. *Pseudomonas aeruginosa* Keratitis in an Atopic Silicone-Hydrogel Lens Wearer with Rosacea: Case Report. *Eye & Contact Lens* 2005; 21(6): 254-256.
5. **Robertson DM**, Ladage PM, Yamamoto N, Jester JV, Petroll WM, and Cavanagh HD. Bcl-2 and Bax Regulation of Corneal Epithelial Homeostasis: Preliminary Studies. *Eye & Contact Lens* 2006; 32(1): 3-7.
6. **Robertson DM**, WM Petroll, JV Jester, and HD Cavanagh. Current Concepts: Contact Lens Related *Pseudomonas* Keratitis. *Contact Lens & Anterior Eye* 2007; 30(2): 94-107.
7. **Robertson DM**, McCulley JP, and HD Cavanagh. Severe Acanthamoeba Keratitis Following Overnight Orthokeratology. *Eye & Contact Lens* 2007; 33(3): 121-123.
8. **Robertson DM**, Ho SI, Hansen BS, Petroll WM, and HD Cavanagh. Insulin-like Growth Factor Binding Protein-3 Expression and Apoptosis in the Corneal Epithelium. *Exp Eye Res* 2007; 85(4): 492-501.
9. **Robertson DM**, Petroll WM, and HD Cavanagh. The Effect of Non-preserved Care Solutions on 12 Months of de novo Daily and Extended Hyper Dk Silicone Hydrogel Lens Wear. *Invest Ophthalmol & Vis Sci* 2008; 49(1): 7-15.
10. **Robertson DM**, Petroll WM, Jester JV, and HD Cavanagh. The role of contact lens type, oxygen transmission and care-related solutions in mediating epithelial homeostasis and *Pseudomonas* binding to corneal cells: an overview. *Eye & Contact Lens* 2007; 33(6): 394-398.

11. **Robertson DM**, Ho SI and HD Cavanagh. Characterization of Δ Np63 Isoforms in Normal and Telomerase-Immortalized Human Corneal Epithelial Cells. *Exp Eye Res*, April 2008; 86(4): 576-585.
12. **Robertson DM** and HD Cavanagh. The Clinical and Cellular Basis of Contact Lens-related Corneal Infections. *Clinical Ophthalmology* 2008; 2(4): 907-917.
13. **Robertson DM**. Orthokeratology: Proceed with Caution. *Contact Lens Spectrum* 2009.
14. Cavanagh HD, **Robertson DM**, Petroll WM and JV Jester. Castroviejo Lecture 2009: Forty years in search of the perfect contact lens. *Cornea* 2010; 29(10): 1075-1085.
15. **Robertson DM**, Ho SI and Cavanagh HD. C-terminal Cleavage of Δ Np63 α is Associated with TSA-induced Apoptosis in Immortalized Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci* 2010; 51(8): 3977-3985.
16. Bui TH, Cavanagh HD and **DM Robertson**. Patient compliance during contact lens wear: perceptions, awareness and behavior. *Eye & Contact Lens* 2010; 36(6): 334-339.
17. **Robertson DM**, Kalangara JP, Baucom RB, Petroll WM and HD Cavanagh. A Reconstituted Telomerase-Immortalized Human Corneal Epithelium In Vivo: A Pilot Study. *Current Eye Res*, 2011; 36(8): 706-712.
18. **Robertson DM**, Parks QM, Young RL, Kret J, Poch KR, Malcolm KC, Nichols DP, Nichols M, Zhu M, Cavanagh HD and JA Nick. Disruption of contact lens-associated *Pseudomonas aeruginosa* biofilms formed in the presence of neutrophils. *Invest Ophthalmol & Vis Sci* 2011; 52(5):2844-50.
19. **Robertson DM** and HD Cavanagh. Non-compliance with contact lens wear and care practices: a comparative analysis. *Optom Vision Sci* 2011; 88(12): 1402-1408.
20. Burnham GW, Cavanagh HD, and **DM Robertson**. The impact of cellular debris on *Pseudomonas aeruginosa* adherence to silicone hydrogel contact lenses and contact lens storage cases. *Eye & Contact Lens* 2011; 38(1): 7-15.
21. **Robertson DM**, Zhu M, and Y-C Wu. Cellular distribution of the IGF-1R in corneal epithelial cells. *Exp Eye Res* 2012; 94(1): 179-186.
22. **Robertson DM**, Zhu M, Wu Y-C, and HD Cavanagh. Hypoxia-induced downregulation of Δ Np63 α in the corneal epithelium. *Eye & Contact Lens* 2012; 38(4): 214-221.

23. Wu Y-C, Buckner BR, Zhu M, Cavanagh HD, and **DM Robertson**. Elevated IGFBP3 levels in diabetic tears: a negative regulator of IGF-1 signaling in the corneal epithelium. *The Ocular Surface* 2012; 10(2): 100-107.
24. Wu Y-C, Zhu M, and **DM Robertson**. Novel nuclear localization and potential function of Insulin-Like Growth Factor-1 Receptor/Insulin Receptor Hybrid in corneal epithelial cells *PLoS ONE* 2012; 7(8): e42483.
25. **Robertson DM**. The Effects of Silicone Hydrogel Lens Wear on the Corneal Epithelium and Risk for Microbial Keratitis. *Eye & Contact Lens* 2013; 39(1): 66-71.
26. Dumbleton K, Caffery B, Dogru M, Hickson-Curran S, Kern J, Kojima T, Morgan PB, Purslow C, **Robertson DM**, and J Nelson. The International Workshop on Contact Lens Discomfort: Report of the Subcommittee on Epidemiology. *Invest Ophthalmol & Vis Sci*, 2013; 54(11): 20-36.
27. Cai D, Zhu M, Petroll WP, Koppaka V and **DM Robertson**. Effects of age and diabetes on corneal epithelial nerve loss and the corneal epithelium in a Streptozotocin-induced Type 1 diabetic mouse model. *In review, American Journal of Pathology; AJP14-0092*.
28. **Robertson DM**, Alexander L, Bonanno J, Fleiszig S, and N McNamara. Cornea and Ocular Surface Disease: Application of Cutting Edge Optometric Research. *Optometry and Vision Science*, 2014; 91(4 Suppl 1):S3-S16.
29. Wei C, Zhu M, Petroll WM and **DM Robertson**. *Pseudomonas aeruginosa* infectious keratitis in a high oxygen transmissible rigid contact lens model. *In review, Investigative Ophthalmology and Visual Science, IOVS-14-14235*.
30. Posch LR, Zhu M and **DM Robertson**. *Multipurpose solution-induced corneal surface disruption and Pseudomonas aeruginosa internalization in the rabbit corneal epithelium*. *In review, Investigative Ophthalmology and Visual Science, IOVS-14-14513*.
31. Paunicka KJ, Mellon J, **Robertson DM**, Petroll WM and JY Niederkorn. *Severing corneal nerves in one eye elicits sympathetic loss of immune privilege and provokes corneal transplant rejection in the opposite eye*. *In review, Science, MS# 1254823*.

Book Chapters:

1. **Robertson DM** and HD Cavanagh. Contact Lens Applications in Corneal Disease. In Krachmer, Mannis, and Holland, *The Cornea* 3rd Edition; Elsevier, 2010.

Published Abstracts:

1. **Robertson DM**, Leach NE, Tran A, Dabney BW, Narayanan S, Bergmanson JPG and JE Walsh. The Spatially Resolved Refractometer: A New Approach to Refractive Measurement. *Optom Vis Sci* 2000; 77(12s): 193.
2. Dabney BW, **Robertson DM**, Tran A, Leach NE and JPG Bergmanson. Tear Analysis in Contact Lens Wearers Assessing Osmolality and Volume. *Optom Vis Sci* 2000; 77(12s): 165.
3. Leach NE, Dabney BW, **Robertson DM**, Narayanan S, Miller WM and JPG Bergmanson. Tear film characteristics in contact lens wearers. *Invest Ophthalmol & Vis Sci* 2001; 42.
4. **Robertson DM**, Leach NE, Tran A, Narayanan S, Bergmanson JPG, and JE Walsh. Clinical Accuracy of Ray Tracing Technology as a Method of Refraction. *Ophthalmic Research* 2001 Sept; 33(S1): 137.
5. **Robertson DM**, Leach NE, Perrigin J, Perrigin D, and Bergmanson JPG. Visual Performance of Ciba Focus Progressive Versus Acuvue Bifocal Contact Lenses. *Optom Vis Sci* 2001; 78(12s): 231.
6. **Robertson DM**, Leach NE, Perrigin J, Perrigin D, and Bergmanson JPG. Hydrogel Multifocal Contact Lens Induced Aberrations. *Optom Vis Sci* 2001; 78(12s): 49.
7. **Robertson DM**, Leach NE, Perrigin JA, Perrigin DM and JPG Bergmanson. In Vivo Wavefront Analysis of a Disposable Hydrogel Multifocal Contact Lens. *Invest Ophthalmol & Vis Sci* 2002; E-abstract 3101.
8. **Danielle M. Robertson**, Patrick M. Ladage, Takashi Yamamoto, James V. Jester, W. Matthew Petroll, Jan P.G. Bergmanson, and H. Dwight Cavanagh. Characterization of Bax knockout murine corneas. *Optom Vis Sci* 2002; 79(12s): 243.
9. P.M. Ladage, **D.M. Robertson**, T. Yamamoto, JW.M. Petroll, J.V. Jester, and H.D. Cavanagh. The effect of Bcl-2 over-expression on corneal epithelial homeostasis in transgenic mice. *Invest Ophthalmol & Vis Sci* 2003; E-abstract 1372.
10. **D.M. Robertson**, P.M. Ladage, T. Yamamoto, J.V. Jester, W.M. Petroll, J.P.G. Bergmanson, and H.D. Cavanagh. The role of Bax as a regulator of corneal epithelial homeostasis. *Invest Ophthalmol & Vis Sci* 2003; E-abstract 1371.

11. Patrick M. Ladage, **Danielle M. Robertson**, and H.Dwight Cavanagh. The effect of prolonged eyelid closure on Bcl-2 expression in the rabbit cornea. *Optom Vis Sci* 2003; 80(12s): 96.
12. **Danielle M. Robertson**, Patrick M. Ladage, H. Dwight Cavanagh, Jan PG Bergmanson, James V. Jester. Bcl-2 Expression in Telomerized Human Corneal Epithelial Cells. *Optom Vis Sci* 2003; 80(12s): 96.
13. **DM Robertson**, HD Cavanagh, JW Shay, JV Jester. BCL-2 alpha in Human Telomerized Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci*. 2004; E-abstract 1463.
14. **DM Robertson**, WM Petroll, JV Jester, HD Cavanagh. Caspase activation in human corneal epithelial cells using FRET. *Invest Ophthalmol & Vis Sci*. 2005; E-abstract 2102.
15. SR Fisher, **DM Robertson**, HD Cavanagh. p63 expression in hTERT-immortalized corneal epithelial cells. *Invest Ophthalmol & Vis Sci* 2005; E-abstract 2123.
16. **Danielle M. Robertson, O.D.**, W. Matthew Petroll, Ph.D., H. Dwight Cavanagh, M.D., Ph.D. A New Tissue-engineered Human Corneal Epithelium: Differentiative and Regenerative Potential. The International Society for Contact Lenses, Coolum, Australia, 2005.
17. **Danielle M. Robertson**, Su-Inn Ho, W. Matthew Petroll, H. Dwight Cavanagh. FRAP/FLIP Analysis of BCL2-Mediated Apoptosis in Human Corneal Epithelial Cells. *Optom Vis Sci* 2005; 82(12s):11
18. **DM Robertson**, WM Petroll, HD Cavanagh. The Role of p63 in Human Corneal Epithelial Cell Proliferation. *Mol Biol Cell* 2005; 16: abstract #1545.
19. HD Cavanagh, N Yamamoto, **DM Robertson**, WM Petroll. Lipid Membrane Rafts Mediate *Pseudomonas aeruginosa* Internalization in Corneal Epithelium Following CTL Wear In Vivo and In Vitro. *Mol Biol Cell* 2005; 16: abstract #2171.
20. HD Cavanagh, **DM Robertson**, SI Ho, J Mei, KC Dimiceli, WM Petroll. Characterization of IGFBP3 in Telomerase-Immortalized Human Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci* 2006; E-abstract 4922.
21. **DM Robertson**, SI Ho, P Parmar, BS Hansen, WM Petroll, and HD Cavanagh. Assessment of Apoptotic Protein Dynamics in Human Corneal Epithelial Cells Using FRAP and FLIP. *Invest Ophthalmol & Vis Sci* 2006; E-abstract 4927.

22. SI Ho, **DM Robertson**, BS Hansen, AM Allam, P Parmar, WM Petroll and HD Cavanagh. The Role of p63 as a Regulator of Proliferation in Human Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci* 2006; E-abstract 3035.
23. HD Cavanagh, **DM Robertson**, SI Ho, BS Hansen, and WM Petroll. Transcriptional Activity of Δ Np63 Isoforms in Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci* 2007; E-abstract 2744.
24. **DM Robertson**, BS Hansen, SI Ho, WM Petroll, and HD Cavanagh. Δ Np63 Modulates IGFBP3 Activity in Human Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci* 2007; E-abstract 2743.
25. **DM Robertson** & HD Cavanagh. Molecular Mediators of Corneal Epithelial Homeostasis. The International Society for Contact Lens Research, Whistler, BC. August, 2007.
26. **DM Robertson** & HD Cavanagh. IGFBP3-mediated growth down-regulation and apoptosis. *Optom Vis Sci* 2007; E-abstract 075280.
27. **DM Robertson** & HD Cavanagh. A 12-Month Clinical Trial Comparing the Effects of Wearing Modality of Hyper-Dk Silicone Hydrogel Contact Lenses on Human Corneal Epithelium. *Optom Vis Sci* 2007; E-abstract 070033.
28. **DM Robertson**, SI Ho, and HD Cavanagh. Interactive Regulation of Cell Survival in Corneal Epithelial Cells by Δ Np63 α/β : Δ Np63 γ . *Invest Ophthalmol & Vis Sci* 2008; E-abstract 4300.
29. HD Cavanagh and **DM Robertson**. The Effect of Contact Lens Care Solutions on Pseudomonas Binding Following Hyper-Dk Silicone Hydrogel Contact Lens Wear. *Invest Ophthalmol & Vis Sci* 2008; E-abstract 4867.
30. Kalangara JP, **DM Robertson**, RB Baucom, SI Ho, and HD Cavanagh. Reconstitution of a Multi-Layered Differentiated Cornea by hTERT-Immortalized Corneal Epithelial Cells Transduced with Thymidine Kinase onto Denuded Mouse Cornea. *Invest Ophthalmol & Vis Sci* 2008; E-abstract 5751.
31. **Robertson DM**, Kalangara JP, Baucom RB, and HD Cavanagh. A Tissue Engineered Universal Artificial Corneal Epithelium. *Optom Vis Sci* 2008; E-abstract.
32. **Robertson DM**, SI Ho and HD Cavanagh. BCL2 Regulation by Δ Np63/p53 Interactions in Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci* 2009; E-abstract 4601.

33. **DM Robertson.** A Novel-genetically Engineered Corneal Epithelium. Presented at the 15th Scientific Meeting of the International Society for Contact Lens Research 2009.
34. **Robertson DM, SI Ho and HD Cavanagh.** Oxygen-mediated Down-regulation of $\Delta Np63$ in the Corneal Epithelium. *Invest Ophthalmol & Vis Sci* 2010; E-abstract 1518.
35. Bui TH, Cavanagh HD and **DM Robertson.** Compliance, Perception and Awareness of Risk in an Established Contact Lens Wearing Population. *Invest Ophthalmol & Vis Sci* 2010; E-abstract 1514.
36. Petroll WM, Ma L, and **DM Robertson.** Development of an In Vitro Model for Studying Corneal Epithelial-Stromal Interactions. Presented at The Biomedical Engineering Society, 2010.
37. **Robertson DM** and HD Cavanagh. Contact lens risk awareness does not correspond with compliant behavior. *Optom Vis Sci* 2010; E-abstract:
38. **Robertson DM** and HD Cavanagh. Regulation of corneal epithelial homeostasis by peptide growth factors and associated binding proteins: the IGF system. *Optom Vis Sci* 2010; E-abstract:
39. **Robertson DM, Ho SI, and HD Cavanagh.** Oxygen-mediated expression of $\Delta Np63$ in the corneal epithelium. *Mol Biol Cell* 2011; 22: abstract #631.
40. Burnham GW, Cavanagh HD, and **DM Robertson.** Neutrophil-enhanced *Pseudomonas aeruginosa* biofilms on silicone hydrogel contact lenses. *Invest Ophthalmol & Vis Sci* 2011; E-abstract 6506.
41. **Robertson DM** and HD Cavanagh. Nuclear localization of IGFBP3 and IGF-1R in proliferating corneal epithelial cells. *Invest Ophthalmol & Vis Sci* 2011; E-abstract 308.
42. **Robertson DM, Wu YC, Buckner BR, and M Zhu.** Increased extracellular IGFBP3 in human diabetic tears and corneal epithelial cells following hyperglycemic challenge in vitro. *Invest Ophthalmol & Vis Sci* 2012: E-abstract 1857.
43. Wu YC, Zhu M and **DM Robertson.** IGF-1R/INSR Hybrid in Proliferating Corneal Epithelial Cells. *Invest Ophthalmol & Vis Sci* 2012: E-abstract 1826.
44. Petroll WM, Hagenasr DB, Cavanagh HD and **DM Robertson.** 3-Dimensional Assessment of In Vivo Corneal Wound Healing using a Modified HRT-RCM Confocal Microscope. *Invest Ophthalmol & Vis Sci* 2013: E-abstract 3222.

45. **Robertson DM**, Cai D, Petroll WP, Zhu M and V Koppaka. Effects of age and diabetes on corneal epithelial nerve loss and the corneal epithelium in a Streptozotocin-induced Type-I diabetic mouse model, accepted for presentation at ARVO 2014.
46. Petroll WM and **DM Robertson**. 3-Dimensional Assessment of the Corneal Response to Injury and Disease In Vivo using a Modified HRT-RCM Confocal Microscope. International Society for Eye Research, 2014.

Research Seminars and Invited Talks:

The Ohio State University College of Optometry, “Contact lenses and the corneal epithelium: cellular mechanisms and clinical phenotypes.” August 5, 2004.

The University of Houston College of Optometry, “The role of BCL2 in corneal epithelial cell differentiation and shedding.” August 3, 2005.

The University of New South Wales, “Contact lenses and the corneal epithelium.” August 24, 2005.

The University of New South Wales, “The corneal epithelium: renewal and reconstruction.” November 27, 2007.

CLAO ERF Scientific Symposium, “IGFBP3 regulation of corneal epithelial differentiation and apoptosis.” September 11, 2008.

ISCLR Fifteenth Scientific Meeting, “The corneal epithelium, contact lenses and the MPS: an affair to remember.” August 21, 2009.

The Ohio State University College of Optometry, “P63 regulation of corneal epithelial homeostasis: implications for contact lens wear.” July 13, 2010.

CLAO ERF Scientific Symposium. “Characteristics of the ideal multipurpose solution.” September 25, 2010.

CLAO ERF Scientific Symposium. “Contact lens compliance: risk awareness and patient behavior.” September 25, 2010.

The Fifteenth Symposium on the Material Science and Chemistry of Contact Lenses. “Contact lenses, care solutions and the in vivo response.” March 17, 2011.

CLAO Symposium: Silicone Hydrogel Lenses – 10 Years Later. May 4, 2012.

The American Academy of Optometry Annual Meeting. Cornea and Ocular Surface Disease: Application of Cutting Edge Optometric Research. “Mechanisms of corneal epithelial maintenance: understanding the effects of systemic disease and contact lens wear.” October, 26, 2012.

The International Congress of Endocrinology/American Endocrinology Society: “Nuclear translocation and function of insulin/IGF-I receptor hybrids.” June 24, 2013.

Professional Education Seminars:

1. Continuing Medical Education (CME) course: Ophthalmology at the Crossroads: “Ocular Surface Transplantation: When, How, Why?” December 3, 2005, UT Southwestern Medical Center, Dallas, Texas.
2. Diplomate Preparatory Course for the Cornea, Contact Lenses and Refractive Technologies Section, The American Academy of Optometry: Current Research Topics. October 22, 2013, Seattle, Washington.

Media Appearances:

1. Why Contact Lens Hygiene Is Important To Eye Safety. National Public Radio, Jan 9, 2012.

Pre-doctoral Trainees:

Judith Mei, O.D. 2004-2005
Lingo Lai, M.D. 2009
Geoffrey Burnham, M.D. 2010-2011
Yann-Fuu Kou, M.D. 2011

Post-doctoral Trainees:

Yu-Chieh Wu, Ph.D. 2011 – 2012

Medical Student Research Program:

Rebecca Baucom, 2006

*Jerry Kalangara, 2007-2009

*selected for oral presentation at 2009 medical student research forum

*best poster award at 2009 medical student research forum

Josh Hubregson, 2008

Ifeoma Achebe, 2008

Thai Bui, 2009

Winnie Wang, 2010

Benjamin Buckner, 2011

Leila Posch, 2011

Haibi Daniel Cai, 2013

*best poster award at 2014 medical student research forum

*Cynthia Wei, 2013

*selected for oral presentation at 2014 medical student research forum

Naiya Patel, 2014

Roshni Patel, 2014

Jorge Hinojosa, 2014

Medical Student Research Committees (For MD degree with Distinction in Research):

Jerry Kalangara. Thesis: Reconstitution of a Multi-layered, Differentiated Cornea by hTERT-Immortalized Corneal Epithelial Cells Transduced with Thymidine Kinase Transplanted onto Denuded Mouse Cornea. May 10, 2010.