

CURRICULUM VITAE

SOPHIE XIAOHUI DENG

Professional address: Cornea and Uveitis Division
Jules Stein Eye Institute, UCLA
100 Stein Plaza
Los Angeles, CA 90095
Clinical Office: 310-206-7206
Clinical Practice e-mail: dengpatients@jsei.ucla.edu
Fax: 310-794-7906

Certification and Licensure

Diplomate, National Board of Medical Examination, 2002
Diplomate, American Board of Ophthalmology, 2007
State of California Medical License

Education:

1989-1991 The City College of New York, City University of New York
Bachelor of Science, Biochemistry, May 1991
1994-2001 University of Rochester, School of Medicine and Dentistry
Doctor of Medicine, May 2001
Doctor of Philosophy, Immunology and Microbiology, May 2001

Postgraduate Training

2001-2002 Internship, Internal medicine
Department of Medicine, University of Tennessee at Memphis
2002-2005 Residency in Ophthalmology
Department of Ophthalmology, University of Illinois, Chicago

Fellowship Training

2005-2006 Heed Fellow
Cornea, External Ocular Diseases and Refractive Surgery Fellowship Program
Jules Stein Eye Institute, Department of Ophthalmology, UCLA School of Medicine

Academic Appointments

2006-2007 Associate Physician Diplomate
Jules Stein Eye Institute, UCLA School of Medicine
2007- Assistant Professor of Ophthalmology in Residence
Jules Stein Eye Institute, UCLA School of Medicine

Honors and Awards:

- 1990 Heymann Scholarship.
- 1991 Arthur G. Levy Award.
- 1991 Seymour Mann Award.
- 1991 Francis Hochman Award.
- 1991 Marks Neidle Memorial Prize in Physical Chemistry.
- 1991 Dean's List.
- 1991 Research Honors.
- 1991 Bachelor of Science, magna cum laude.
- 1994 Fannie & Henry Rice Scholarship.
- 1994 Helen Kingsbury Medical Student Scholarship.
- 1995 John A. Hartford/AFAR Medical Student Geriatric Scholar.
- 2005 Beem-Fisher Award, First Place for Best Resident Scientific Paper.
 "Methotrexate Appeared to Reduce the Complications of Endophthalmitis from
 Intravitreal Injection Compared to Dexamethasone in a Rabbit Model."
 Chicago Ophthalmological Society.
- 2005 Excellence in Resident Research.
 Department of Ophthalmology, University of Illinois, Chicago.
- 2005 Heed Foundation Fellowship (July 2005 to June 2006).
- 2009 Best of Show in Anterior Segment Reconstruction
 "Analysis of the Corneal and Limbal Epithelial Changes in Limbal Stem Cell
 Deficiency" (Corresponding author)
 The America Society of Cataract and Refractive Surgery 2009 Annual Meeting.
 San Francisco, CA.
- 2010 Prevent Blindness America Investigator Award.

Honor Society Memberships

- 1989 Sigma XI Research Fellow.
- 1991 Phi Beta Kappa.

Professional Organization Memberships:

- Fellow, American Academy of Ophthalmology.
- Association for Research in Vision and Ophthalmology.
- California Academy of Ophthalmology.
- The Cornea Society.
- Los Angeles Society of Ophthalmology.
- Max Fine California Cornea Society.
- Women in Ophthalmology.

University Services:

- 2008 Ophthalmology Resident Selection Committee, UCLA Department of Ophthalmology
- 2007- Clinical Quality Assurance Committer, UCLA Department of Ophthalmology
- 2007- Jules Stein Eye Institute Noon Research Seminar Organizing Committee, UCLA
 Department of Ophthalmology

Community and Professional Services

- 2007-2009 Editorial Board Member, Ocular TRUST Program, Vistakon Pharmaceuticals, LLC.

2010- Ophthalmic Technology Assessment Committee, Cornea and Anterior Segment Disorders Panel, America Academy of Ophthalmology.

Editorial Services to Scholarly Publications

2008- Reviewer, Molecular Vision
2009- Reviewer, Cornea
2010- Reviewer, Investigational Ophthalmologic Vision Sciences
2010- Reviewer, Survey of Ophthalmology
2010- Reviewer, Eye
2010- Reviewer, Cell Transplantation
2011- Reviewer, American Journal of Ophthalmology

Publications

Peer-Reviewed papers:

1. Muller W.A., Weigl S.A., **Deng X.**, Phillips D.M. PECAM-1 is required for transendothelial migration of leukocytes. *J of Exp Med.* 178(2):449-60, 1993
2. Bogen, S., Pak J., Garifallou M., **Deng X.**, Muller W.A. Monoclonal antibody to murine PECAM-1 (CD31) blocks acute inflammation in vivo. *J of Exp Med.* 179(3):1059-64, 1994.
3. **Deng S.**, Panahian N., James H., Gelbard H.A., Federoff H.J., Dewhurst S., Epstein L.G. Luciferase: a sensitive and quantitative probe for blood-brain barrier disruption. *J of Neurosci Methods.* 83(2):159-64, 1998.
4. **Deng, S.**, Hanson, E., Sanz, I. *In vivo* Cell Penetration and Intracellular Transport of Anti-Smith and Anti-La Monoclonal Autoantibodies. *Int Immunol*, 12 (4): 415, 2000.
5. **Deng, S.**, Pendland, S., Gupta, S., Fiscella, R., Edward, D., Tessler, H., Goldstein, D., Methotrexate reduces the complications of endophthalmitis resulting from intravitreal injection compared with dexamethasone in a rabbit model, *Invest Ophthalmol Vis Sci.* Apr;47(4):1516-21, 2006.
6. Ding, Z., Dong, J., Liu, J., **Deng, S.**, Preferential Gene Expression of the Limbus in Vervet Monkey, *Mol Vis.*;14:2031-41, 2008.
7. Asbell, P., Colby, K., **Deng, S.**, et al. Ocular TRUST: Nationwide Antimicrobial Susceptibility Patterns in Ocular Isolates, *Am J Ophthalmol.* 145(6):951-8, 2008.
8. **Deng, S.**, Hollander, D., *Nocardia farcinica* Infection of a Baerveldt Implant in a Patient with a Boston Type I Keratoprosthesis, *J Ocul Pharmacol Ther.* Apr;25(2):175-7, 2009.
9. Tsui, I., Uslan, D., Hubschman, J., **Deng, S.**, *Nocardia farcinica* Infection of a Baerveldt Implant in a Patient with a Boston Type I Keratoprosthesis, *J Glaucoma.* Jun-Jul 19(5): 339-40, 2010.
10. Hong, J., Zheng, T., Xu, J., **Deng, S.**, Chen, L., Sun, X, Le, Q., Pan, Z., Assessment of Keratolimbic Allograft Survival Using *In Vivo* Laser Scanning Confocal Microscopy, an Observational Study, *Graefes Arch Clin Exp Ophthalmol.* May: 249(5):701-8, 2011
11. Nakatsu, M., Ding, Z., Ng, M., Truong, T., **Deng, S.**, Wnt/ β -catenin Signaling in the Regulation of Human Corneal Epithelial Progenitor Cell Proliferation, *IOVS*, 2011 Feb 25. [Epub ahead of print]

12. Wiaux, C., Baghdasaryan, E., Lee, O., Bourges, J., **Deng, S.**, Yu, F., Aldave, A., Outcomes Following Descemet Stripping Endothelial Keratoplasty in Glaucoma Patients with Previous Trabeculectomy and Tube Shunt Implantation, *Cornea* (In press).
13. Zarei-Ghanavati, S., Baghdasaryan, E., Ramirez-Miranda, A., Nugyen, M., Yu, F., **Deng, S.**, Intraocular Pressure Elevation is a Common Complication During Active Infectious Keratitis, *Am J. Ophthalmol.* (In Press).
14. Truong T., Huynh, K., Nakatsu, M, **Deng, S.**, SSEA-4 is a Potential Negative Marker for Human Limbal Stem/Progenitor Cells, *IOVS* (in press).
15. Kurbanyan, K., Sejpal, K., Aldave, A., **Deng S.**, *In Vivo* Confocal Microscopic Findings in Lisch Corneal Dystrophy, *Cornea* (in press).
16. Ramirez-Miranda, A., Zarei-Ghanavati, S., Nakatsu, M., Nguyen, C., **Deng, S.**, Keratin 13 is a More Specific Marker of Human Conjunctival Epithelium Than Keratin 19, *Mol Vis.* (in press).
17. **Deng, S.**, Sejpal, K., Tang, Q., Lee, O., Aldave, A., Yu, F., Characterization of Limbal Stem Cell Deficiency Using *in vivo* Confocal Microscopy, a Microstructural Approach (submitted).
18. Zarei-Ghanavati, S., Ramirez-Miranda, A., **Deng, S.**, Limbal Lacunae, A New Limbal Structure Detected by *in vivo* Confocal Microscopy (submitted).

Major Review and Book Chapter:

1. **Deng, S.**, Aldave, A., Bourla, N., Hovanesian, J., Pleyer, U., Mondino, B., Bullous Diseases of the Skin and Mucosal Membrane, Chapter 12, Duane's *Clinical Ophthalmology*, 2008
2. **Deng, S.**, Corneal Epithelial Stem Cell Deficiency and Disease, Past, Present and Future, *European Ophthalmic Review*, Dec; 3(2):82-6, 2009

Lectures and Presentations

- | | |
|-----------|---|
| 7 Jun 05 | “Intravitreal Methotrexate, Effective and Safe?” Department of Ophthalmology Alumni Research Day Chicago, Illinois |
| 19 May 06 | “Uveitis in Children: Infliximab Treatment of Chronic, Non-Infectious Anterior Uveitis.” The 40 th JSEI Annual Clinical and Research Seminar. |
| 09 Sep 07 | “Limbal Stem Cell Deficiency, Approach an Old Problem at a New Angle.” JSEI Vision Conference Lake Arrowhead, California |
| 30 Nov 07 | “Intravitreal Methotrexate as a Local Therapy for Uveitis.” First Chinese Conference on Uveitis. Guangzhou, Guangdong, China. |
| 30 Nov 07 | “Boston Type I Keratoprosthesis, Patient Selection and Post-Operative Management.” Zhongshan Ophthalmic Center, Guangdong, China. |
| 23 May 08 | “Red Eye and Collagen Vascular Diseases.” |

Rheumatology Division Grand Rounds, Department of Medicine, UCLA David Geffen School of Medicine.

- 3 Feb 09 “Ex Vivo Expansion of Limbal Stem Cells.”
The Brasel Basic Science Conference.
Los Angeles Biomedical Research Institute at UCLA-Harbor Medical Center.
- 3 May 09 “Analysis of the Corneal and Limbal Epithelial Changes in Limbal Stem Cell Deficiency Using *in vivo* Confocal Microscopy.”
18th Vista Scientific Conference
Fort Lauderdale, Florida
- 11 Jun 09 “Activation of Wnt/ β -catenin Promotes Self-Renewal of Human Limbal Stem Cells.”
Gordon Research Conferences on Tissue Repair and Regeneration.
New London, New Hampshire.
- 9 Jan 10 “Selective Keratoplasty, the Future of Corneal Transplantation?”
Cornea and Retina Symposium, Southern California College of Optometry.
Los Angeles, California.
- 8 Apr 10 “Analysis of Cellular Abnormalities in Limbal Stem Cell Deficiency by *in vivo* Confocal Microscopy.”
World Cornea Congress VI.
Boston, Massachusetts
- 4 May 10 “Evaluation of Structural Changes in Limbal Stem Cell Deficiency Using *in vivo* Confocal Microscopy.”
The Association for Research in Vision and Ophthalmology (ARVO) 2010 annual meeting.
Fort Lauderdale, Florida
- 17 Sep 10 “Descemet Stripping Automated Endothelial Keratoplasty in Endothelial Dysfunction.”
The 25th Asian Pacific Association of Ophthalmology Congress.
Beijing, China.
- 22 Oct 10 “Corneal Epithelial Stem Cells, In Sickness and In Health.”
Embryology Club
UCLA Department of Biological Sciences
- 3 Dec 10 “DSEK in Glaucoma Patients.”
The 2nd Asian Cornea Society Biennial Scientific Meeting.
Kyoto, Japan.
- 18 Mar 11 “Scleritis, Diagnosis and Management.”
Rheumatology Grand Rounds.
Department of Medicine, UCLA
- 3 May 11 “Comparative Analysis of Biological Processes and Molecular Functions in the Human Ocular Epithelium: Preferential Gene Expression in the Human Limbus” (senior author).

ARVO 2011 Annual Meeting.
Fort Lauderdale, Florida

- 4 May 11 “Wnt/ β -catenin Signaling Regulates Proliferation of Human Cornea Epithelial Stem/Progenitor Cells.”
ARVO 2011 Annual Meeting.
Fort Lauderdale, Florida

Abstracts and Poster Presentations

1. **Deng, S.**, Hanson, E., Sanz, I. Penetration of viable cells by anti-La and Anti-Smith autoantibodies. *Scandinavian Journal of Immunology* 50:105, 1999.
2. **Deng, S.**, Hanson, E., Sanz, I. In vivo intracellular properties of anti-Smith and anti-La monoclonal autoantibodies. *Arthritis and Rheumatism*, 42: S109, 1999.
3. Civelek, L., Narayana, K., **Deng, S.**, Tessler, H., Goldstein, D. Effects of Intravitreal Methotrexate in a Retinal S-Antigen Induced-Experimental Uveitis Model. *ARVO 2004 Annual Meeting*
4. **Deng, S.**, Goldstein, D., Pendland, S., Fiscella, R., Gupta, S., Edward, D., Tessler, H., Antimicrobial Activity of Methotrexate in an Experimental Model of Endophthalmitis, *ARVO 2005 Annual Meeting*
5. **Deng, S.**, Goldstein, D., Pendland, S., Fiscella, R., Edward, D., Tessler, H., Methotrexate Appeared to Reduce the Complications of Endophthalmitis from Intravitreal Injection Compared to Dexamethasone in a Rabbit Model, *Chicago Ophthalmologic Society 2005 annual meeting*
6. Ding, Z., Dong, J., Liu, J., **Deng, S.**, Unique Gene Expression in Limbus Compared to That in Cornea and Conjunctiva (senior author), *ARVO 2008 annual meeting*
7. Nguyen, M., Yu, F., **Deng, S.**, Infectious Keratitis: A 5-Year Review of Cases at a Tertiary Referral Center in Southern California (senior author), *ARVO 2008 annual meeting*
8. **Deng, S.**, Mohd Kamal, K., Study of Three-dimensional Architecture of Human Limbus in Whole- Mount Tissue by Confocal Microscopy, *ARVO 2008 annual meeting*
9. **Deng, S.**, Ding, Z., Dong, J., Liu, J., Unique Gene Expression in Limbus Compared to That in Cornea and Conjunctiva, *World Ophthalmology Congress, Hongkong, China, July 2008*
10. Ding, Z., **Deng, S.**, Differential expression pattern of Wnt signaling molecules in the human limbus (senior author), *ARVO 2009 annual meeting*
11. **Deng, S.**, Ding, Z., Differential Gene Expression and Wnt Signaling in the Human Limbus and Cornea, *Gordon Research Conferences on Biology and Pathobiology of the Cornea, Ventura, California, March 2010*
12. Tang, Q., Ng, M., Ding, Z., Truong, T., Vu, D., **Deng, S.**, Expression of Human Embryonic Stem Cell Markers in the Limbal and Corneal Epithelial Cells (senior author), *ARVO 2009 annual meeting*
13. Baghdasaryan, E., Yu, F., Lee, G., **Deng, S.**, Characteristics of infectious Keratitis associated with high intraocular pressure (senior author), *World Cornea Congress VI, Boston, Massachusetts, March 2010*

14. Lee, O., Yu, F., **Deng, S.**, Aldave, A., Outcomes of Descemet Stripping Endothelial Keratoplasty in Glaucoma Patients, *World Cornea Congress VI*, Boston, Massachusetts, March 2010
15. Truong, T., Vu, D., Ha, D., **Deng, S.**, The Effects of Different Culture Media on the Long-term Preservation of Limbal Epithelial Progenitor Cells (senior author), *ARVO 2010 annual meeting*
16. Baghdasaryan, E., Yu, F., Lee, G., Aldave, A., Casey, R., **Deng, S.**, Elevated Intraocular Pressure is a common complication during severe infectious keratitis (senior author), *ARVO 2010 annual meeting*
17. Lee, G., Baghdasaryan, E., Yu, F., **Deng, S.**, Review of Eye Pathogens at a Tertiary Referral Center in Southern California Over a 7-Year Period (senior author), *ARVO 2010 annual meeting*
18. **Deng, S.**, Nakatsu, M., Ding, Z., Ng, M., Truong, T., Yu, F., Wnt/ β -catenin Signaling Regulates Proliferation of Human Cornea Epithelial Stem/Progenitor Cells (senior author), *ARVO annual meeting 2011*
19. Nakatsu, M., Vu, D., Eskin, A., **Deng, S.**, Comparative Analysis of Biological Processes And Molecular Functions In The Human Ocular Epithelium: Preferential Gene Expression In The Human Limbus (senior author), *ARVO annual meeting 2011*
20. Ramirez-Miranda, A., Zarei-Ghanavati, S., Nakatsu, M., Nguyen, C., **Deng, S.**, Cytokeratin 13 is a Marker for Human Conjunctival Epithelium (senior author), *ARVO annual meeting 2011*
21. Mei, H., Nakatsu, M., Ng, M., Truong, T., Lee, G., **Deng, S.**, Differential Expression Of Frizzled 7 in Human Corneal Epithelial Stem Cells (senior author), *ARVO annual meeting 2011*
22. Kurbanyan, K., Deng, S., *In Vivo* Confocal Microscopy Study of Dendritic Cell Counts in Corneal Limbal Stem Cell Deficiency (senior author), *ARVO annual meeting 2011*
23. Truong, T., Huynh, K., Nakatsu, M., Deng, S., Use of SSEA-4 To Enrich The Isolation Of Human Corneal Stem/Progenitor Cells (senior author), *ARVO annual meeting 2011*
24. Bhat, S., Gangalum, R., Jing, Z., Deng, S., Lee J., Recreation of Human Lamellar/Marner's cataract in Mice Employing Bacterial Artificial Chromosome (BAC) Transgenesis (collaborator), *ARVO annual meeting 2011*

Course Instruction and Symposia

- | | |
|------|--|
| 2010 | “Selective Keratoplasty, the Future of Corneal Transplantation?” Cornea and Retina Symposium, Southern California College of Optometry. Los Angeles, California. |
| 2010 | “DALK and DSEK, Patient Selection and Surgical Techniques.” Moderator, Breakfast with the Experts. America Academy of Ophthalmology 2010 Annual Meeting. |

- 2011 “Stem Cell and Regenerative Medicine”
Moderator, Cornea Paper Section
ARVO 2011 Annual Meeting
- 2011 “DALK and DSEK, Patient Selection and Surgical Techniques.”
Moderator, Breakfast with the Experts.
America Academy of Ophthalmology 2011 Annual Meeting.

Research Support:

Ongoing Research Support

TR2-01768 01/01/11-12/31/14

California Institute for Regenerative Medicine (CIRM)
Regeneration of Functional Human Corneal Epithelial Progenitor Cells
Role: PI

T32 EY007026-35 Travis (PI) 5/30/05-9/30/11

NIH/NEI
Jules Stein Eye Institute Training Grant for Vision Research
Role: Preceptor

Investigator Award 07/25/10-07/24/11

Prevent Blindness of America
Characterization and Staging of Limbal Stem Cell Deficiency using *in vivo* Confocal Laser
Scanning Microscopy
Role: PI

Pending Research Support

R01 EY021797-01
NIH/NEI
Ex Vivo Expansion of Limbal Stem Cells for Transplantation
Role: PI

R01 Grundfest (PI)
NIH
Non-Contact, THz Sensing of Corneal Hydration
Role: co-Investigator

Past Research Support:

Faculty Research Grant 07/01/09 – 6/30/10

UCLA
Regeneration of limbal stem cells from epidermal epithelial stem cells
Role: PI

Oppenheimer Translational Research Seed Grant 07/01/08-6/30/09

UCLA
Isolation of human epidermal epithelial progenitor cells
Role: PI

Research Grant
Abraham J. & Phyllis Katz Foundation
Antimicrobial Effects of Methotrexate
Role: PI

07/01/05-06/30/05

Research Grant Goldstein (PI)
Illinois Society for the Prevention of Blindness
Use of Methotrexate in Ocular Inflammation
Role: co-PI

07/07/04-06/30/05