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OHSU

David J. Wilson, MD
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April 4, 2017

Hans E. Grossniklaus, MD, MBA
Executive Vice President
American Ophthalmological Society
655 Beach Street
San Francisco, CA 94109

Re: Jeffrey L. Goldberg, MD, PhD
Byers Eye Institute, 2452 Watson Ct, Palo Alto, California 94303
(650) 723-6137 (office), email: jlgoldbe@stanford.edu

Dear Hans,

I write this letter to propose Dr. Jeffrey Goldberg, Professor and Chair of Ophthalmology at the Byers Eye Institute at Stanford University, to membership in the American Ophthalmologic Society.

Dr. Goldberg has had a stellar career trajectory. A Yale undergraduate and a Stanford MD/PhD, he was recruited right out med school as an Assistant Professor at the Bascom Palmer Eye Institute, where he started an independent research program on retinal ganglion cell and optic nerve, while simultaneously entering the residency program. He was R01 funded during his second year of residency, in addition to competing for a number of other NIH and foundation grants. He continued to run a successful lab through his residency and then on through fellowship training in glaucoma, during which time he was promoted to associate professor and granted tenure. Soon thereafter he was recruited to the University of California San Diego as professor and research director, and after 3 years there he was recruited to return to Stanford as professor and department chair.

He has accomplished all of this while maintaining an excellent national and even international reputation. He is known as a caring doctor with excellent patient interactions. He shares patients in glaucoma with colleagues around the country, as many patients make an extra effort to specifically visit him. His reputation for clinical innovation is broadly known, as he is one of the few clinician-scientists in glaucoma bringing candidate therapies for neuroprotection into clinical trials.

His publication list is extensive, and I note his rapid rise in research is supported by an extensive portfolio of grants as well. He is much sought after as a lecturer and visiting professor. His research has been of high impact, and at the same time unusually broad, publishing papers in optic nerve research but also in retina, cornea, stem cell biology, and even in biomedical engineering, investigating novel nanoparticle approaches to delivering cell therapies to the eye (starting with corneal endothelial cells, a project he has moved into human clinical trials), and developing 3D bioengineered scaffolds for retinal tissue engineering.

I have personally see Dr. Goldberg excel at the annual Heed Resident Retreat, where we have been faculty together. The time and attention he gives residents, focusing on excellent advice for their own

career development, while at the same time putting them at ease with his kind demeanor, is a pleasure to observe. He brings insightful comments and is always a full contributor in whatever activity he participates. It is apparent from his record that he brings this prioritization of mentorship to his teaching as well. His CV notes over 20 postdoctoral fellows in the laboratory and in clinical research. Five of his former lab trainees are university professors, one has a Scientist position at a naval research institute in Texas, and one has a Scientist position at Regeneron. He has also mentored 12 graduate students; 9 have defended their theses and are continuing in research with postdoctoral fellowship training, two are now assistant professors. He has also mentored many residents, medical students, undergraduates and Master's thesis students, and many of his trainees have themselves successfully competed for student fellowships/awards, presented at meetings, and co-authored lab manuscripts.

Finally, observing Dr. Goldberg in his first two years as Chairman of Ophthalmology at Stanford, I note what a great job he is doing energizing that department. Bringing his vision and energy to building an academically strong program, he has recruited a dozen new faculty already, and is building out the laboratory vision science while expanding the educational programming as well.

In summary, based on my personal interactions and observations, I firmly believe that Dr. Goldberg is exactly the sort of accomplished, energetic, positive person we would do well to bring into the AOS.

Sincerely,

David J. Wilson

David J. Wilson, MD

Bascom Palmer Eye Institute
UNIVERSITY OF MIAMI HEALTH SYSTEM

Eduardo C. Alfonso, M.D.
Professor of Ophthalmology
Kathleen and Stanley J. Glaser in Ophthalmology
Chairman, Bascom Palmer Eye Institute

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April 3, 2017

American Ophthalmological Society

Reference: Nomination for Membership Jeffrey Goldberg, M.D., PhD

Dear Colleagues:

It is my pleasure to second the nomination of Dr. Jeffrey Goldberg for membership in the AOS. Jeff is truly one of our young stars in academic ophthalmology, with demonstrated commitment to excellent clinical care, to basic, translational and clinical research of the highest caliber, and to teaching and mentorship of our next generation of trainees in clinical and research ophthalmology. I have been in a position to observe Jeff's career closely beginning with his training and first position in Miami. Throughout his career to date, he has espoused the highest ethical standards, reflected in all aspects of his work and in his tireless service to our community.

Jeff did his undergraduate BS at Yale and then the MD/PhD program at Stanford in the MSTP, with a PhD studying survival and regeneration of retinal ganglion cells (RGCs). He was then recruited as an Assistant Professor at the Bascom Palmer Eye Institute at the University of Miami to begin his independent research career, and to train in clinical ophthalmology, including his glaucoma fellowship as a prestigious Heed Fellow. In Miami he was promoted to tenured Associate Professor, and then moved to the Shiley Eye Center at the University of California San Diego (UCSD) as Professor and Director of Research. There he spent nearly 3 years building their research program further, before being recruited to Stanford University as tenured professor and chairman of Ophthalmology and director of the Byers Eye Institute.

Jeff has always maintained a "patient comes first" mantra in his clinical and surgical practice, which I got to observe first-hand as a preceptor during his residency at Bascom Palmer, through his two-year, combined clinical-research fellowship in glaucoma, and since then through his continued pre-eminence in the field. Even as a resident among a highly skilled class, he was noted by our faculty for his rapid acquisition of surgical skill and his facility with difficult cases. Since he was in Miami, he has always had patients fly from around the world specifically to see him and get his clinical opinion and contribution to their care. In part this stems from his clinical innovation and commitment to early phase research, which I discuss further below, but his clinical innovation includes initiating two of the only clinical trials in vision restoration in glaucoma and other diseases. Now at Stanford, he continues to see patients and operate, a reflection of his valuing clinical practice and patient care, as well as his commitment to teaching residents and fellows in the clinic and operating room.

Jeff further shines is his scientific productivity. He has consistently maintained an NIH-funded basic and translational research program focused on glaucoma and other eye diseases. His research is focused on regenerative ophthalmology, and he is widely considered one of the world leaders in

research in retinal ganglion cell survival and axon growth relevant to neuroprotection and regeneration. He regularly publishes high-impact papers, in journals in our field such as IOVS, but also in the journals that target a broader audience, such as *Science, Nature Communications, PNAS,* and the *Journal of Neuroscience*, among many others. These speak to the breadth of his research impact. Among his nearly 100 peer-reviewed manuscripts, he has detailed high-quality discoveries on molecular pathways studied in rodent models, such as finding a family of transcription factors (KLFs) that turn off regenerative ability during retinal development, and uncovering how electrical activity promotes RGC survival after optic nerve trauma. His recent work has turned towards stem cell therapy, discovering a molecular pathway for RGC differentiation from stem cells, and demonstrating for the first time that RGCs transplanted into the adult retina can grow down the optic nerve back to relevant targets in the brain.

His clinical research focuses on early phase trials for vision restoration. As a physician-scientist, he is constantly looking for opportunities to translate research findings (his own and others') into clinical approaches. He completed two FDA IND Phase I trials in neuroenhancement for glaucoma and for ischemic optic neuropathy at Bascom Palmer Eye Institute, having raised private and foundation funding support and recruiting patients from 2011-2013. At Stanford he initiated larger phase I and II trials in retinal neuroprotection for glaucoma, the only two currently listed on clinicaltrials.gov.

Recognition of his research contributions are also reflected in his grants, continuously NIH funded for the last decade (always with 2-3 grants at a time), funded by the Glaucoma Research Foundation's flagship "Catalyst for a Cure" biomarker initiative, and PI of a grant awarded through the National Eye Institute's Audacious Goals Initiative. He is regularly invited to speak at our national meetings, giving symposia or similar lectures at ARVO nearly every year, at AAO glaucoma subspecialty day, at the AGS annual meeting, etc. He chaired one of the NEI's AGI workshops and co-authored their white paper on optic nerve regeneration. For 3 years he served as associate editor at Archives of Ophthalmology/JAMA Ophthalmology. Throughout all of this he also maintains an emphasis on high ethical standards. For example, his recent paper in the *New England Journal of Medicine* on patients blinded by a dubious "stem cell clinic" has already been widely hailed as a call to action for ethics and regulatory oversight in the interest of patient protections. Together these paint a picture of the broad, innovative, collaborative and multi-faceted research for which he was recognized with the ARVO Cogan Award (2012) and the Cless "Best of the Best" Award (2013), for example.

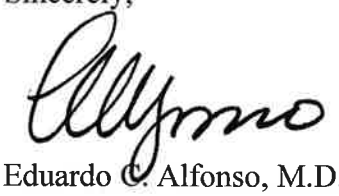
Jeff's teaching contribution has spanned three main domains: resident/fellow teaching, graduate student teaching, and laboratory mentorship. He teaches residents and glaucoma fellows in the classroom, in the clinic, and in the operating room. He lectures graduate and medical students on eye development, axon growth and regeneration, and participates in and has chaired thesis committees and preliminary exam committees. He helped write UCSD's successful K12

clinician-scientist career development program, he is a regular faculty mentor at the Heed Resident Retreat, and he has published on the importance and approach to clinician-scientist mentorship. All of this points to his commitment to teaching and mentorship.

Jeff's service to the field has been apparent through the years. As research director at Shiley/UCSD and chair at Stanford, his administrative leadership and willingness to take responsibility is always at the fore. In his first two years as chair at Stanford he has already significantly grown that department's faculty on the clinical and research side, and his vision for Stanford earned the department a Challenge Grant from Research to Prevent Blindness, Stanford's first. He donates his time to grant review for the NIH and for vision-specific foundation boards, and is always quick to volunteer for such service activities. Bringing a strong, patient-first, ethical approach to everything he does makes him a powerful advocate for our field.

With all of this in mind, it is my pleasure to give my strongest recommendation in nominating him to the AOS.

Sincerely,



Eduardo C. Alfonso, M.D.

Curriculum Vitae

April 6, 2017

I. PERSONAL

Name: **JEFFREY L. GOLDBERG, M.D., Ph.D.**
Professor and Chair of Ophthalmology
Director, Byers Eye Institute
Stanford University
2452 Watson Court
Palo Alto, CA 94303
Jeffrey.Goldberg@Stanford.edu
Current Rank: Professor (with tenure)
Primary Dept: Ophthalmology
Citizenship: USA

II. HIGHER EDUCATION

Degree-Granting:

Yale University, Dept of Biology, New Haven, CT	B.S.	Conferred May 1994
Stanford University Medical School, Stanford, CA	M.D.	Conferred June 2003
Stanford University, Neurosciences Program, Stanford, CA	Ph.D.	Conferred June 2003

Additional:

Transitional Intern	Santa Clara Valley Medical Center, San Jose, CA	June 2003-June 2004
Neurobiology Postdoc	Stanford University, Stanford, CA	June 2003-June 2004
Ophthalmology Resident	Bascom Palmer Eye Institute, Miami, FL	July 2005-June 2008
Glaucoma Fellow	Bascom Palmer Eye Institute, Miami, FL	Jan 2009-Dec 2010

Certification/Licensure:

Medical license, Florida Board of Medicine, Training License	7/1/05-6/30/08
Medical license, Florida Board of Medicine, Unrestricted License	7/2/08-1/21/14
Diplomate of the American Board of Ophthalmology	11/15/09-
American Glaucoma Society, Active member	12/15/10-
Medical license, Medical Board of California	12/21/12-

III. EXPERIENCE

14. Academic

University of Miami, Dept of Ophthalmology, Miami, FL	Assistant Professor	July 2004-May 2010
Secondary Appointments to the Graduate Faculty in Neuroscience; in Mol, Cell, Dev Biol; and in Mol, Cell Pharm programs		July 2004-Sept 2013
University of Miami, Dept of Ophthalmology, Miami, FL	Assoc. Prof. (tenured)	June 2010-Nov 2012
Walter G. Ross Distinguished Chair in Ophthalmic Research		August 2011-Dec 2012
Adjunct courtesy appointment during transition to UCSD		Nov 2012-Sept 2013
University of California, San Diego, Shiley Eye Center	Professor (with tenure)	Nov 2012-July 2015
Director of Research, Shiley Eye Center		Nov 2012-July 2015
Faculty, Neurosciences Graduate Program		Feb 2013-
VA San Diego Healthcare System, La Jolla, CA	Staff Physician	Mar 2014-July 2015
Stanford University, Stanford, CA	Professor (UTL, tenured)	July 2015-
Chair of Ophthalmology		July 2015-
Director, Byers Eye Institute		July 2015-
Faculty, Stanford Neurosciences Institute; Bio-X		Oct 2015-
Faculty, Neuroscience Graduate Program		Aug 2015-
Palo Alto VA Healthcare System, Palo Alto, CA	Staff Physician	July 26, 2015-

15. Hospital Appointments

Jackson Memorial Hospital, Miami, FL/Bascom Palmer Eye Inst.	Resident	July 2005-June 2008
Jackson Memorial Hospital, Miami, FL	Medical Staff	July 2008-Jan 2014
University of Miami/Bascom Palmer Eye Institute	UMMG Faculty	July 2008-Jan 2014
Shiley Eye Center, UC San Diego	Medical Staff	Nov 2012-Nov 2015
VA San Diego Healthcare System, La Jolla, CA	Staff Physician	Mar 2014-July 2015
Palo Alto VA Healthcare System, Palo Alto, CA	Staff Physician	July 2015-
Byers Eye Institute, Stanford University	Director and Staff	Aug 2015-
Lucille Packard Children's Hospital	Medical Staff	Oct 2015-

IV. PUBLICATIONS

Books and monographs published:

1. **J. L. Goldberg** (2007). Signals regulating growth and regeneration of retinal ganglion cells. In, *Eye, Retina and Visual System of the Mouse*, MIT Press, Chalupa & Williams, Eds.
2. **J.L. Goldberg** (2011). The Optic Nerve. In, *Adlers Physiology of the Eye*, Elsevier; L. Levin et al, Eds.
3. S.T. Wester and **J.L. Goldberg** (2012). Stem Cells In Ophthalmology. In, *Stem Cell Transplantation*, InTech Press; T. Demirer, Ed.
4. **J.L. Goldberg** (2012). Physiology of the Optic Nerve. In, *Duane's Ophthalmology*, Lippincott Williams & Wilkins; William Tasman and Edward Jaeger, Eds.
5. E.F. Trakhtenberg and **J.L. Goldberg** (2012). The Role of Serotonin in Axon and Dendrite Growth. In, *Axon Growth and Regeneration*, Part II. International Review of Neurobiology Vol 106 pp105-126. Elsevier Press (London); E.F. Trakhtenberg and **J.L. Goldberg**, eds.
6. M.B. Steketee and **J.L. Goldberg** (2012). Signaling Endosomes and Growth Cone Motility in Axon Regeneration. In, *Axon Growth and Regeneration*, Part II. International Review of Neurobiology Vol 106 pp35-74. Elsevier Press (London); E.F. Trakhtenberg and **J.L. Goldberg**, eds.
7. E.F. Trakhtenberg and **J.L. Goldberg**, eds (2012). *Axon Growth and Regeneration*, Part I. International Review of Neurobiology Vol 105. Elsevier Press (London).
8. E.F. Trakhtenberg and **J.L. Goldberg**, eds (2012). *Axon Growth and Regeneration*, Part II. International Review of Neurobiology Vol 106. Elsevier Press (London).
9. J. Hertz and **J.L. Goldberg** (2013). Stem Cells and Glaucoma. In, *Stem Cell Biology and Regenerative Medicine in Ophthalmology*, pp 75-98. Humana Press (New York); S.H. Tsang, ed.
10. L. Bei and **J.L. Goldberg** (2015). Neurologic Changes in Glaucoma Patients. In, *Glaucoma Suspect: The Frontier*, pp 53-62. Elsevier; J. Jimenez-Roman and V.P. Costa, eds.
11. **J.L. Goldberg** (2017, in production). Mechanisms of Glaucoma. In, *Ophthalmology 5th edition*. Elsevier; Myron Yanoff & Jay S. Duker, eds.

Juried or refereed journal articles or exhibitions:

1. **J. L. Goldberg** and B. A. Barres (1998). Neural Regeneration: Extending Axons from Bench to Brain. *Current Biology* 8(9): R310-2.
2. **J. L. Goldberg** and B. A. Barres (2000). The Relationship Between Neuronal Survival and Regeneration. *Annual Reviews of Neuroscience* 23: 579-612.
3. **J. L. Goldberg** and B. A. Barres (2000). Nogo in Nerve Regeneration. *Nature* 403: 369-370.
4. S.M. Shamah, M.Z. Lin, **J. L. Goldberg**, S. Estrach, M. Sahin, L. Hu, M. Bazalakova, R.L. Neve, G. Corfas, A. Debant and M.E. Greenberg (2001). EphA Receptors Regulate Growth Cone Dynamics Through the Novel Guanine Nucleotide Exchange Factor Ephexin. *Cell* 105: 233-244.
5. **J. L. Goldberg** (2001). The Lost Cord: Solving the Mystery of Spinal Regeneration (Book Review). *Nature Medicine* 7: 1275.
6. **J. L. Goldberg**, J. Espinosa, Y. Xu, N. Davidson, G.T.A. Kovacs and B. A. Barres (2002). CNS Neurons Do Not Extend Axons by Default: Promotion by Neurotrophic Signaling and Electrical Activity. *Neuron* 33(5):689-702.
7. **J. L. Goldberg**, M.P. Klassen, Y. Hua and B. A. Barres (2002). Amacrine-Signaled Loss of Intrinsic Axon Growth Ability by Retinal Ganglion Cells. *Science* 296: 1860-1864.
8. **J. L. Goldberg** (2003). How Does An Axon Grow? *Genes & Development* 17(8): 941-58.
9. **J. L. Goldberg**, M. E. Vargas, J. T. Wang, W. Mandemakers, S. F. Oster, D. W. Sretavan and B. A. Barres (2004). An Oligodendrocyte Lineage-Specific Semaphorin, Sema5A, Inhibits Axon Growth by Retinal Ganglion Cells. *J Neuroscience* 24(21):4989-4999.

10. R. H. Farkas, J. Qian, **J. L. Goldberg**, H. A. Quigley, and D. J. Zack (2004). Gene Expression Profiling of Purified Rat Retinal Ganglion Cells. *Investigative Ophthalmology & Visual Science* 45(8):2503-2513.
11. **J. L. Goldberg** (2004). Intrinsic Neuronal Regulation of Axon and Dendrite Growth. *Current Opinion in Neurobiology* 14(5):551-557.
12. Sahin M, Greer PL, Lin MZ, Poucher H, Eberhart J, Schmidt S, Wright TM, Shamah SM, O'connell S, Cowan CW, Hu L, **Goldberg JL**, Debant A, Corfas G, Krull CE, Greenberg ME (2005). Eph-dependent tyrosine phosphorylation of ephexin1 modulates growth cone collapse. *Neuron* 46(2):191-204
13. B.L. Lam, **J. L. Goldberg**, K. L. Hartley, E. M. Stone, M. Liu (2007). Atypical Mild Enhanced S-Cone Syndrome with Novel Compound Heterozygosity of the *NR2E3* Gene. *American Journal of Ophthalmology* 144(1):157-159.
14. JT Wang, NJ Kunzevitzky, JC Dugas, M Cameron, BA Barres, **JL Goldberg** (2007). Disease Gene Candidates Revealed by Expression Profiling of Retinal Ganglion Cell Development. *J Neurosci* Aug 8;27(32):8593-603. PMC2885852
15. A. Ries, **J. L. Goldberg**, B. Grimpe (2007). A novel biological function for CD44 in axon growth of retinal ganglion cells identified by a bioinformatics approach. *J Neurochem* 103(4):1491-505. PMC2901540
16. H. Raju, **J. L. Goldberg** (2008). Nanotechnology for Ophthalmic Therapeutics and Tissue Repair. *Expert Rev. Ophthalmology*, 3(4):431-36.Surgucheva, A. D. Weisman, **J. L. Goldberg**, A. Shnyra, A. Surguchov (2008). γ-Synuclein as a marker of retinal ganglion cells. *Mol. Vision*, 14:1540-8. PMC2518532
17. R. G. Corredor and **J. L. Goldberg** (2009). Electrical Activity Enhances Neuronal Survival and Regeneration. *J. Neural Engineering*, 6(5):55001.
18. R. G. Corredor and **J. L. Goldberg** (2009). Retinal Ganglion Cell Life and Death: Mechanisms and Implications for Ophthalmology. *European Ophthalmic Rvw*, 3(2):109-112.
19. D. L. Moore, M. G. Blackmore, Y. Hu, K. H. Kaestner, J. L. Bixby, V. P. Lemmon, and **J. L. Goldberg** (2009). KLF Family Members Regulate Intrinsic Axon Regeneration Ability. *Science*, 326:298-301. PMC2882032
20. M. Aihara, D. Calkins, R. Casson, **J. L. Goldberg**, K. Martin, N. Osborne (2009). Glaucoma Dialogue: Comment on, Effect of brimonidine on retinal ganglion cell survival in an optic nerve crush model. *International Glaucoma Review*, 11(1):10-12.
21. M. Aihara, **J. L. Goldberg**, L. Levin, K. Martin, B. Lorber, J. Morgan, M. Vidal Sanz (2009). Glaucoma Dialogue: Comment on, Axonal regeneration induced by repetitive electrical stimulation of crushed optic nerve in adult rats. *International Glaucoma Review*, 11(2).
22. M. Aihara, **J. L. Goldberg**, L. Levin, J. Morgan, N. Osborne, H. Quigley (2009). Glaucoma Dialogue: Comment on, Experimental and clinical evidence of neuroprotection by nerve growth factor eye drops: Implications for Glaucoma. *International Glaucoma Review*, 11(3).
23. **J. L. Goldberg** (2010). RGC Survival After Optic Nerve Crush. *International Glaucoma Review*, 11(4).
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28. L. C. Usher, et al (17 authors; list truncated) (2010). A Chemical Screen Identifies Novel Compounds That Overcome Glial-Mediated Inhibition of Neuronal Regeneration. *J. Neuroscience*, 30(13):4693-4706. PMC2855497
29. N.J. Kunzevitzky, M. V. Almeida, Y. Duan, S. Li, M. Xiang and **J. L. Goldberg** (2011). Foxn4 Is Required for Normal Retinal Ganglion Cell Axon Projection to the Superior Colliculus. *Molec. Cell. Neurosci*, 46 (4):731-741. PMC3081519
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36. M.B. Steketee, S.N. Moysidis, X.-L. Jin, J.E. Weinstein, W. Pita-Thomas, H.B. Raju, S. Iqbal and **J.L. Goldberg** (2011). Nanoparticle-Mediated Signaling Endosome Localization Regulates Growth Cone Motility and Neurite Growth. *PNAS*, 108(47):19042-7. PMC3223462
37. A.L. Johnstone, GW Reierson, R.P. Smith, **J.L. Goldberg**, V.P. Lemmon, J.L. Bixby (2012). A chemical genetic approach identifies piperazine antipsychotics as promoters of CNS neurite growth on inhibitory substrates. *Mol Cell Neurosci*. 50(2):125-135. PMC3383383
38. E.E. Chang, **J.L. Goldberg** (2012). Glaucoma 2.0: Neuroprotection, Neuroregeneration, Neuroenhancement. *Ophthalmology*, 119(5):979-86. PMC3343191
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43. R.G. Corredor, W. Pita-Thomas, E.F. Trakhtenberg, Y. Hu, and **J.L. Goldberg** (2012). Soluble adenylyl cyclase activity is necessary for retinal ganglion cell survival and axon growth. *J Neuroscience* 32(22):7734-44. PMC3372574
44. A.C. Santos, R.G. Corredor, B.A. Obeso, E.F. Trakhtenberg, Y.W., J. Ponmattam, G. Dvoriantchikova, D. Ivanov, V.I. Shestopalov, **J.L. Goldberg**, M.E. Fini, M.L. Bajenaru (2012). β1 integrin-focal adhesion kinase (FAK) signaling modulates retinal ganglion cell (RGC) survival. *PLoS One*, 7(10):e48332. PMC3485184
45. K.E. Kador and **J.L. Goldberg** (2012). Scaffolds and Stem Cells: Delivery of Cell Transplants for Retinal Degenerations. *Exp. Rev. of Ophthalmology*, 7(5):459-470. PMC3622368
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48. K.E. Kador, R.B. Montero, P. Venugopalan, J. Hertz, A.N. Zindell, D.A. Valenzuela, M.S. Uddin, E.B. Lavik, K.J. Muller, F.M. Andreopoulos, **J.L. Goldberg** (2013). Tissue Engineering the Retinal Ganglion Cell Nerve Fiber Layer. *Biomaterials*, 34(17):4242–4250. PMC3608715
49. D.W. Pita-Thomas, **J.L. Goldberg** (2013). Nanotechnology and Glaucoma: Little Particles for a Big Disease. *Current Opinion in Ophthalmology*, 24(2):130-135.
50. G. Kamei, T. Kobayashi, S. Ohkawa, W. Kongcharoensombat, N. Adachi, K. Takazawa, H. Shibuya, M. Deie, K. Hattori, J.L. Goldberg, M. Ochi. (2013). Articular cartilage repair with magnetic mesenchymal stem cells. *Am J Sports Med*. 41(6):1255-64.
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J.L. Goldberg, Y. Duan, W. Kong, B. Watson, Y. Hu (2010). Studying Ischemic Optic Neuropathy in Animal Models. *ISER*, Montreal, Canada, #602.

Y. Hu, S. Cho, **J.L. Goldberg** (2010). Novel Approaches to Neurotrophic Activation. *ISER*, Montreal, Canada, #34.

D.L. Moore, M. Blackmore, Y. Hu, J. Bixby, V. Lemmon, **J.L. Goldberg** (2010). KLF Transcription Factors and Their Role In Axon Regeneration. *ISER*, Montreal, Canada, #627.

J.L. Goldberg, R.G. Corredor (2010). Electrical Activity Promotes Neuronal Survival and Regeneration. *Biomedical Engineering Society (BMES)*, Austin, TX.

J. Hertz, E. Lavik, **J.L. Goldberg** (2010). Retinal Scaffolds: Synaptic and Stem Cell Integration. *Biomedical Engineering Society (BMES)*, Austin, TX.

M. Steketee, **J.L. Goldberg** (2010). Mitochondrial functions and dynamics underlie axon outgrowth ability. *SFN* 132.10/C4

E.C. Trakhtenberg, D.L. Moore, N. Sharifai, A.P. Amaral, M.S. Matthes, **J.L. Goldberg** (2010). Developmentally regulated genes regulate retinal ganglion cell axon growth. *SFN* 235.3/D10.

Apara, M. Blackmore, S. Bhattacharya, **J.L. Goldberg** (2010). Identifying KLF binding partners in primary retinal ganglion cells. *SFN* 235.6/D13.

M.G. Blackmore, D.L. Moore, D. Motti, J.L. Bixby, V.P. Lemmon, **J.L. Goldberg** (2010). Regulation of axon growth by Krüppel-like transcription factors: Target identification and structure/function analysis. *SFN* 235.15/D22

K.E. Kador, R. Montero, B. Yungher, J. Hertz, E.B. Lavik, F.M. Andreopoulos, **J.L. Goldberg** (2011). Radial Scaffold Design For Proper Ganglion Cell Orientation. *ARVO* 6656/D1143

E.C. Trakhtenberg, S. Yang, Y. Wang, **J.L. Goldberg** (2011). Set-β Modulates Neurite Growth In Retinal Ganglion Cells In Opposite Ways, Depending On Its Subcellular Localization. *ARVO* 434/D1081.

B.A. Obeso, A.R. Santos, J.P. Ponmattam, M. Manzur, **J.L. Goldberg**, M.L. Bajenaru (2011). Focal Adhesion Kinase (FAK) Is An Important Regulator Of RGC Survival. *ARVO* 2690/A171.

J.L. Goldberg, M. Nunez, S. Raza & M. Parra (2011). The SALT Trial: Randomized Controlled Trial Design and Initial Patient Enrollment Characteristics. *World Glaucoma Conference, Paris*

K.E. Kad or, R. Montero, J. Hertz, E. Lav ik, F. Andreopoulos, and **J.L. Goldberg** (2011). Tissue Engineered Model of the Inner Neural Retina. *Biomedical Engineering Society (BMES)*, Hartford, CT.

W. Pita-Thomas, M. B. Steketee, S. Moysidis, X.-L. Jin, J.E. Weinstein, H.B. Raju, **J.L. Goldberg** (2011). Manipulating signaling endosomes with functionalized magnetic nanoparticles regulates axon growth in retinal ganglion cells. *SFN* 862.18/B31

J. Hertz, J. Li, V. Lefebvre, **J.L. Goldberg** (2011). Regulation of retinal ganglion cell differentiation. *SFN* 756.02/A50

E.C. Trakhtenberg, Y. Wang, A. Lapins, S. Yang**, J.L. Goldberg** (2011). Set-β regulation of axon growth in central nervous system neurons. *SFN* 438.16/B27

Apara, Y. Wang, D. Moore, **J.L. Goldberg** (2011). Targeting klfs to enhance retinal ganglion cell regeneration. *SFN* 438.01/B12

M.L. Bajenaru, A.R.C. Santos, B.A. Obeso, E. Trakhtenberg, D. Ivanov, E. Hernandez, **J.L. Goldberg** (2011). Focal adhesion kinase regulates retinal ganglion cells survival and neurite growth. *SFN* 251.05/V10

A.C. Santos, R. Corredor, J. Ponmattam, E. Hernandez, **J.L. Goldberg**, L. Bajenaru (2011). β1-integrin agonist antibody, HUTS-21, promotes retinal ganglion cell (RGC) survival after retinal ischemia-reperfusion injury (RIRI). *SFN* 39.25/D57

J.E. Weinstein, M.B. Steketee, **J.L. Goldberg** (2012). Developmental Distribution of Mitochondria in Retinal Ganglion Cell Axons. *ARVO* 3968/D832

M.L. Bajenaru, A. Rachelle, C. Santos, B.A. Obeso, E. Trakhtenberg, D. Ivanov, J. Ponmattam, S. Gutierrez, E. Hernandez, M.E. Fini, **J.L. Goldberg** (2012). β1 Integrin-Focal Adhesion Kinase (FAK) Signaling Modulates Retinal Ganglion Cells Survival. *ARVO* 3482/D786

J.F. Griffith, **J.L. Goldberg** (2012). The Frequency of Optical Coherence Tomography Testing in Glaucoma. *ARVO* 663/A329

D.W. Pita-Thomas, M. Steketee, **J.L. Goldberg**, K. Kador (2012). Functionalized Nanoparticles To Enhance Regenerative Axon Growth. *ARVO* 303/A544

E.F. Trakhtenberg, Y. Wang, S. Fernandez, A. Lapins, R. Panara, J. Shechter, R. Rottmann, J. Farmer, S. Yang, **J.L. Goldberg** (2012). Set-β Subcellular Localization-dependent Regulation Of Retinal Ganglion Cell Neurite Growth. *ARVO* 290/A531

Y. Wang, D. Brown, B. Watson, Y. Duan, **J.L. Goldberg** (2012). Novel Rodent Model of Posterior Ischemic Optic Neuropathy. *ARVO* 2977/D766.

E.F. Trakhtenberg, Y. Wang, S.G. Fernandez, A.Lapins, J. Schechter, S. Yang, X. Liu, **J.L. Goldberg** (2012). Subcellular localization-dependent effect of Set-β on axon growth and regeneration. *CSHL Meeting*; 175

D.W. Pita-Thomas, M. Steketee, B. Hampton, J.L.Goldberg (2012). Synaptotagmin vesicle trafficking to the nerve injury site: Implications for injury sealing and new growth cone formation Cold Spring Harbor Labs Axon Guidance Synapse Formation and Regeneration. *CSHL Meeting*; 132.

D.W. Pita-Thomas, M.B. Steketee, K. Kador, B.M. Hampton, K.A. Thakor, S. Moysidis, J.E. Weinstein, X. Jin, **J.L. Goldberg** (2012). Functionalized nanoparticles to enhance regenerative axon growth. *SFN* 346.18/J17

J. Hertz, X. Jin, J. Li, K. Russano, B. DeRosa, D. Valenzuela, D. Dykxhoorn, V. LeFebvre, **J.L. Goldberg** (2012). Control of retinal ganglion cell differentiation. *SFN* 425.02/A2

Apara, M. Blackmore, Y. Wang, S. Bhattacharya, **J.L. Goldberg** (2012). Protein-protein interactions involved in the transcriptional control of intrinsic axon growth ability in retinal ganglion cells. *SFN* 531.17/B16

E.C. Trakhtenberg, Y. Wang, S.G. Fernandez, A. Lapins, J. Schechter, K. Gupta, J. Farmer, S. Yang, X. Liu, G.M. Mlacker, **J.L. Goldberg** (2012). Subcellular localization-dependent effect of Set-β on axon growth. *SFN* 531.01/A70

M. Steketee, J.E. Weinstein, A. Kreymerman, **J.L. Goldberg** (2012). Activity-dependent expression of nuclear encoded mitochondrial proteins in retinal ganglion cell axons in vivo. *SFN* 312.08

S. Al-Shamekh, J. Hertz, C-C. Yuan, B. DeRosa, M. Uddin, B. Corneo, S. Temple, D. Dykxhoorn, **J.L. Goldberg** (2012). Control of retinal ganglion cell differentiation. *World Stem Cell Summit, Palm Beach, FL* #12740

D. Valenzuela, J. Hertz, B. Qu, R. Patel, **J.L. Goldberg** (2012). Survival and Integration of Developing and Progenitor-Derived Retinal Ganglion Cells Following Transplantation. *World Stem Cell Summit, Palm Beach, FL* #13530

J. Hertz, X. Jin, B. DeRosa, J. Li, P. Venugopalan, D. Valenzuela, R. Patel, K. Russano, K. Muller, V. LeFebvre, D. Dykxhoorn, **J.L. Goldberg** (2012). SoxC family members regulate retinal ganglion cell differentiation. *World Stem Cell Summit, Palm Beach, FL* #13531

M.J. Weiss, J.E. Weinstein, **J.L. Goldberg** (2013). Animal model for epithelial downgrowth. ASCRS, San Francisco.

K. Kador, E. Salero-Coca, K. Russano, L.W. Lau, **J.L. Goldberg** (2013). Tissue Engineered Model of the Outer Neural Retina and Retinal Pigment Epithelium. *ARVO*, 1302/B10.

N.J. Kunzevitzky, K. Alvarez-Delfin, R.M. Merkhofer, A.D. Weisman, **J.L. Goldberg** (2013). The transparency transcriptome: gene expression profile of human corneal endothelial cells. *ARVO*, 1698/D333.

K. Alvarez-Delfin, N.J. Kunzevitzky, A.D. Weisman, R.M. Merkhofer, **J.L. Goldberg** (2013). A cell therapy approach to address corneal endothelial dysfunction. *ARVO* 1648/D283.

D.L. Chao, E. Salero, Y. Wang, C-H. Volmar, **J.L. Goldberg** (2013). Elucidating molecular mechanisms of blood retina barrier permeability. *ARVO*, 5612/B135.

J.E. Weinstein, M.J. Weiss, **J.L. Goldberg** (2013). An animal model for epithelial downgrowth. ARVO 2575/D375.

M.I. Morkin, E.F. Trakhtenberg, Y. Wang, S. Fernandez, G.M. Mlacker**, J.L. Goldberg** (2013). Regulation of Set-β's subcellular localization and posttranslational modifications affect axon growth and regeneration. *ARVO* 2473/D78.

B. Qu, J. Hertz, R.D. Patel, Y. Wang, **J.L. Goldberg** (2013). Retinal Ganglion Cell Transplantation After Optic Nerve Injury. *ARVO* 2243/A0112.

S-Y. Chen, M.A. Mahabole, E.L. Horesh, S.T. Wester, **J.L. Goldberg**, S.C. Tseng (2013). Isolation and Characterization of Stem Cells from Human Orbital Adipose Tissues. *ARVO* 735/D0394.

Y. Wang, A. Apara, M. Blackmore, D.P. Brown, M.E. LeBlanc, A.E. Trillo, **J.L. Goldberg** (2013). Regulation of Krüppel-like Transcription Factor (KLF's) Family Members Promotes Potent Axon Regeneration in the Adult Rat Optic Nerve. *ARVO* 4693/B262.

J.L. Goldberg, M. Morkin, J. Li, R. Corredor, Z. Cozacov, E. Trakhtenberg, D. Pita-Thomas, M.S. Kapiloff (2013). Soluble adenylyl cyclase activity promotes retinal ganglion cell survival and axon growth. *SFN* San Diego, CA: 796.15/B32

E.F. Trakhtenberg, Y. Wang, M.I. Morkin, S. Fernandez, G.M. Mlacker, K. Gupta, J. Shechter, X. Liu, S. Yang, K.H. Patel, **J.L. Goldberg** (2013). Set-β regulates axon growth and regeneration. *SFN* San Diego, CA: 796.06/B23

P. Venugopalan, Y. Hertz, B. Qu, K. Muller, **J.L. Goldberg** (2013). Retinal ganglion cells transplanted In vivo exhibit light-evoked responses. *SFN* San Diego, CA: 611.12/D8

M.I. Morkin, Y. Wang, M.D. Kritzer, M. Kapiloff, **J.L. Goldberg** (2013). mAKAP is necessary for retinal ganglion cell survival after optic nerve injury. *SFN* San Diego, CA: 601.09

J. Hertz, X.-L. Jin, B.A. Derose, J.Y. Li, P. Venugopalan, D.A. Valenzuela, R.D. Patel, K.R. Russano, S.A. Al-Shamekh, D. Velmeshev, Y. Cheng, T.M. Boyce, A. Dreyfuss, M.S. Uddin, K.J. Muller, D.M. Dykxhoorn, **J.L. Goldberg** (2013). A soxc transcriptional network is required for visual pathway development. *SFN* San Diego, CA: 511.30/B34

Y. Wang, A. Apara, M. Blackmore, D.P. Brown Jr., A.E. Trillo, J.L. Bixby, V.P. Lemmon, **J.L. Goldberg** (2013). Regulation of Krüppel-like transcription factor (KLF) family members promotes axon regeneration. *SFN* San Diego, CA: 419.12/E48

Apara, Y. Wang, A. Trillo, M. Blackmore, S. Bhattacharya, **J.L. Goldberg** (2013). Protein-protein interactions involved in the transcriptional control of intrinsic axon growth ability in retinal ganglion cells. *SFN* San Diego, CA: 419.09/E45

D.W. Pita-Thomas, E. Trakhtenberg, S. Fernandez, M.I. Morkin, Y. Wang, G.M. Mlacker, J. Shechter, X. Liu, S. Yang, K.H. Patel, **J.L. Goldberg** (2013). Serotonin receptors regulate neurite growth in retinal ganglion cells. *SFN* San Diego, CA: 126.18/B6

A. Kreymerman, M. Steketee, Y. Wang, **J.L. Goldberg** (2013). The role of mitochondrial fission/fusion in CNS axon regeneration. *SFN* San Diego, CA: 126.12/A26

K. Iwao, A. Apara, Y. Wang, N. Kunzevitzky, **J.L. Goldberg** (2014). The Krüppel-Like Factor Gene Target Dusp14 Regulates Axon Growth and Regeneration. *World Ophthalmology Congress*, Tokyo, Japan: PO-716

S. Alshamekh, J. Hertz, B. Derosa, D. Dyxhoorn, **J.L. Goldberg** (2014). Generating Human Retinal Ganglion Cells from Human Induced Pluripotent Stem Cells in Feeder and Feeder-Free Conditions. *World Ophthalmology Congress*, Tokyo, Japan: PO-834

J.L. Goldberg (2014). Stem Cells to Retinal Ganglion Cells: Differentiation, Transplantation and Integration. ARVO Orlando, FL: 253.

C. Leahy, H. Radhakrishnan, **J.L. Goldberg**, V. Srinivasan (2014). Label-free optical quantification of inner retinal oxygen metabolism. ARVO Orlando, FL: 223/B0031.

K. Iwao, A. Apara, N.J. Kunzevitzky, Y. Wang, D. Moore, M. Blackmore, **J.L. Goldberg** (2014). The Krüppel-Like Factor Gene Target Dusp14 Regulates Axon Growth and Regeneration. ARVO Orlando, FL: 1447/B0049.

A. Bartakova, K. Alvarez-Delfin, E. Salero, A.D. Weisman, N.J. Kunzevitzky, **J. L. Goldberg** (2014). Human Corneal Endothelial Cell Characterization For Cell Therapy. ARVO Orlando, FL: 2038/C0057

N.J. Kunzevitzky, E. Arrieta, K. Alvarez-Delfin, A. Bartakova, S. Moysidis, A.D. Weisman, E. Salero, J-M.A. Parel, **J.L. Goldberg** (2014). A rabbit model for corneal endothelial dysfunction. ARVO Orlando, FL: 2040/C0059

K. Patel, E. Trakhtenberg, Y. Wang, M.I. Morkin, S. Fernandez, G. Mlacker, K. Gupta, S. Dombrowski, X. Liu, **J.L. Goldberg** (2014). Set-β regulates retinal ganglion cells' neurite growth and optic nerve regeneration. ARVO Orlando, FL: 2387/B0086

M.I. Morkin, E. Trakhtenberg, W. Pita-Thomas, S. Fernandez, P. Venugopalan, Y. Wang, V. Porciatti, **J.L. Goldberg** (2014). Serotonin modulates retinal ganglion cell axon growth and excitability through developmentally regulated serotonin receptor 2C. ARVO Orlando, FL: 2446/B0145.

M.L. Bajenaru, B.A. Obeso, X. Luo, A.R.C. Santos, O. Khoury, E. Trakhtenberg, W.D. Dietrich, **J.L. Goldberg**, K. Park (2014). The role of focal adhesion kinase (FAK) in retinal ganglion cells regeneration. ARVO Orlando, FL: 2670.

E. Salero, J. Moroney, **J.L. Goldberg** (2014). RPE dedifferentiation can be inhibited by small molecules. ARVO Orlando, FL: 2970/D0021.

J. Griffith, **J.L. Goldberg** (2014). The Prevalence of Co-Morbid Retinal Disease in Patients with Glaucoma at an Academic Medical Center. ARVO Orlando, FL: 4288/B0056

Y. Wang, J. Li, J. Hertz, M.D. Kritzer, M.S. Kapiloff, **J.L. Goldberg** (2014). The scaffold protein mAKAPα regulates retinal ganglion cell survival and axon growth. ARVO Orlando, FL: 5733/B0041

A. Kreymerman, **J.L. Goldberg** (2014). Role of mitochondrial dynamics in axon growth. Joint Symposium of the 4th International Neural Regeneration Symposium, 6th International Spinal Cord Injury Treatments and Trials Symposium, and the 9th Asia Pacific Symposium on Neural Regeneration, Nanjing, China

P. Venugopalan, L. Schenk, Y. Wang, K. Muller, **J.L. Goldberg** (2014). Functional integration of retinal ganglion cells after in vivo transplantation. SFN, Washington DC, 295.07/A28

Y. Wang, K. Iwao, A. Apara, D.L. Moore, M. Blackmore, N.J. Kunzevitzky, **J.L. Goldberg** (2014). The krüppel-like factor gene targeting dusp14 regulates axon growth and regeneration. SFN, Washington DC, 399.09/C12

A. Kreymerman, Y. Wang, N.J. Kunzevitzky, M.B. Steketee, **J.L. Goldberg** (2014). The role of mitochondrial fission/fusion in CNS axon regeneration. SFN, Washington DC, 399.11/C14

A. Apara, Y. Wang, A. Trillo, I. Iwao, M. Blackmore, **J.L. Goldberg** (2014). Protein-protein interactions involved in the transcriptional control of intrinsic axon growth ability in retinal ganglion cells. SFN, Washington DC, 399.15/C18

X. Zhang, J. Hertz, X.-L. Jin, B.A. DeRosa, J.Y. Li, P. Venugopalan, D.A. Valenzuela, R.D. Patel, K.R. Russano, S.A. AlShamekh, D. Velmeshev, Y. Cheng, T.M. Boyce, A. Dreyfuss, M.S. Uddin, K.J. Muller, D.M. Dykxhoorn, **J.L. Goldberg** (2014). Novel regulatory mechanisms for the SoxC transcriptional network required for visual pathway development. SFN, Washington DC, 588.03/A3

E.F. Trakhtenberg, D.W. Pita-Thomas, D. Velmeshev, S.M. Dombrowski, **J.L. Goldberg** (2014). Characterization and differential expression analysis of polyadenylated and non-polyadenylated riboRNA-depleted transcripts during maturation of defined population of CNS neurons. SFN, Washington DC, 593.17/B45

J.L. Goldberg, Y. Wang, J. Li, T.S. Stiles, J. Hertz, M.D. Kritzer, T. Nguyen, M.S. Kapiloff (2014). The scaffold protein mAKAPα regulates retinal ganglion cell survival and axon growth. SFN, Washington DC, 593.24/B52

L. Ford, **J.L. Goldberg**, F. Selan, H. Greenberg, Y. Shi (2015). Post-Marketing Review of Visual Defects Reported with Topiramate. North American Neuro-Ophthalmological Society (NANOS) Annual Meeting, San Diego, CA.

L. Ford, **J.L. Goldberg**, F. Selan, H. Greenberg, Y. Shi (2015). Comprehensive Postmarketing Review of Visual Defects Reported with Topiramate. American Academy of Neurology Annual Meeting, Washington, DC.

C. Rocco, A. Kreymerman, **J.L. Goldberg**, S. Cherqui (2015). Treatment of Inherited Eye Defects By Systemic Hematopoietic Stem Cell Transplantation. ASGCT 18th Annual Meeting, New Orleans, LA.

J.L. Goldberg, C. Rocca, A. Kreymerman, S. Cherqui (2015). Treatment of inherited eye defects by systemic hematopoietic stem cell transplantation. ARVO Annual Meeting, Denver, CO: 3467 - D0203

G. Weiner, S. Sharma, T. Mulder, S. Shah, C. Angelopoulos, E. Ruoslahti, **J.L. Goldberg** (2015). In vivo phage display uncovers retinal endothelium-homing motifs in normal and optic nerve crushed eyes. ARVO Annual Meeting, Denver, CO: 3619 - A0113

J.E. Weinstein, **J.L. Goldberg**, M. Steketee (2015). Developmental Distribution of Mitochondria in Retinal Ganglion Cell Axons. ARVO Annual Meeting, Denver, CO: 4953 - B0152

C.-A. Rodriguez-Barrientos, N.J. Kunzevitzky, A. Bartakova, J. Zavala, **J.L. Goldberg**, J.E. Valdez (2015). Optimization of Human Corneal Endothelial Cell Morphology. ARVO Annual Meeting, Denver, CO: 1146 - D0048

N.J. Kunzevitzky, A. Bartakova, K. Wilczek, J. Sheu, J. Van Dyke, G. Bauer, **J.L. Goldberg** (2015). Culture, functional characterization and stability of human corneal endothelial cells. ARVO Annual Meeting, Denver, CO: 1165 - D0067

K.E. Kador, P. Venugopalan, M. Malek, **J.L. Goldberg** (2015). Tissue Engineered Model of the Inner Neural Retina. ARVO Annual Meeting, Denver, CO: 1675

K. Tenerelli, X. Zhang, J. Hertz, P. Venugopalan, C.B. Sun, S.A. Alshamekh, **J.L. Goldberg** (2015). Novel transcriptional mechanisms regulate visual pathway development. ARVO Annual Meeting, Denver, CO: 3603 - A0032

C. Leahy, H. Radhakrishnan, G. Weiner, **J.L. Goldberg**, V.J. Srinivasan (2015). Anatomically-accurate graphing and flow modeling of the retinal vasculature using Doppler OCT and angiography. ARVO Annual Meeting, Denver, CO: 5966 - A0137

X. Zhang, P. Venugopalan, K. Tenerelli, C. Sun, J. Galvao, K. Muller, **J.L. Goldberg** (2015). Integration of human embryonic stem cell-derived retinal ganglion cells after in vivo transplantation. SFN Annual Meeting, Chicago, 31.11/A58

E.F. Trakhtenberg, D.W. Pita-Thomas, D. Velmeshev, S.M. Dombrowski, L.I. Benowitz, **J.L. Goldberg** (2015). Analysis of coding and non-coding transcripts during maturation of defined population of CNS neurons. SFN Annual Meeting, Chicago, 381.10/A48

A. Kreymerman, M.B. Steketee, **J.L. Goldberg** (2015). The role of mitochondrial dynamics in CNS axon regeneration. SFN Annual Meeting, Chicago, 568.21/A64

J.L. Goldberg (2016). Optic nerve restoration: Bench to bedside. 2016 China - ARVO Networking Forum, ARVO Annual Meeting, Seattle, WA.

J.L. Goldberg (2016). Career Development Tips for the Clinician-Scientist. Clinician-Scientist Forum: How to Become a Successful Clinician-Scientist, ARVO Annual Meeting, Seattle, WA.

J.L. Goldberg (2016). Retinal Ganglion Cell Differentiation and Transplantation. In SIG, Integration in stem cell therapy – a challenge and a hope for vision. ARVO Annual Meeting, Seattle, WA.

X. Xia, A. Bartakova, J. Van Dyke, T.D. Petrie, B. Fury, E.L. Fledderman, G. Bauer, N.J. Kunzevitzky, **J.L. Goldberg** (2016). Functional Markers for Cultured Human Corneal Endothelial Cells. ARVO Annual Meeting, Seattle, WA: 5280 - A0207

L.J. Saunders, A. Li, A. Belghith, F.A. Medeiros, **J.L. Goldberg**, J.M. Liebmann, C.A. Girkin, C. Bowd, R.N. Weinreb, L.M. Zangwill (2016). Investigating the relationship between changes in retinal nerve fiber layer (RNFL) thickness and visual field (VF) damage in glaucoma patients with existing visual field loss. ARVO Annual Meeting, Seattle, WA: 2284

P. Shaw, J. Fang, A. Sang, Y. Wang, L. Levin, J. Buck, M. Kapiloff, **J.L. Goldberg** (2016). Soluble adenylyl cyclase is required for retinal ganglion cell and photoreceptor differentiation. ARVO Annual Meeting, Seattle, WA: 6131

D. Buickians, A. Kreymerman, **J.L. Goldberg** (2016). Application of GRIN lens for in vivo fluorescence microscopy of retinal ganglion cells. UCSF/BioEngineering Institute of California, 17th Annual UC Systemwide Bioengineering Symposium.

D. Buickians, A. Kreymerman, E. Huynh, Y. Gong, H. Chen, **J.L. Goldberg** (2016). Application of gradient index lens for In vivo fluorescent microscopy of retinal ganglion cells. Society for Neuroscience Annual Meeting, San Diego, CA: 560.13

A. Kreymerman, J. Weinstein, D. Buickians, T. Tran, N. Sun, L. Bazik, M. Steketee, **J.L. Goldberg** (2016). Mitochondrial dynamics in retinal ganglion cell development and regeneration. Society for Neuroscience Annual Meeting, San Diego, CA: 118.10

E.G. Cameron, J. Galvao, C.R. Douglas, R. Lodhavia, **J.L. Goldberg** (2016). Role of soluble adenylate cyclase in reactive astrocytes. Society for Neuroscience Annual Meeting, San Diego, CA: 209.16

S.H. Shah, L.M. Schiapparelli, S. Saturday, D. McClatchy, Y. Ma, J. Yates, III, H. Cline, **J.L. Goldberg** (2016). Quantifying changes in protein synthesis and transport in optic neuropathies. Society for Neuroscience Annual Meeting, San Diego, CA: 210.09

J. Galvao, K. Iwao, A. Apara, Y. Wang, M. Ashouri, T.N. Shah, D.L. Moore, M. Blackmore, N.J. Kunzevitzky, **J.L. Goldberg** (2016). The kruppel like factor gene target dusp 14 regulates axon growth and regeneration. Society for Neuroscience Annual Meeting, San Diego, CA: 316.10

E.F. Trakhtenberg, Y. Li, Q. Feng, J. Tso, P.A. Rosenberg, **J.L. Goldberg**, L.I. Benowitz (2016). Zinc chelation and Klf9 suppression additively promote long distance axon regeneration after optic nerve injury. Society for Neuroscience Annual Meeting, San Diego, CA: 420.22

L.M. Schiapparelli, S. Shah, D. McClatchy, H. He, J. Li, Y. Ma, S. Saturday, **J.L. Goldberg**, J. Yates, III, H. Cline (2016). Novel strategies for detection and identification of the axonal "transportome" and pre-synaptome" in the rodent visual system. Society for Neuroscience Annual Meeting, San Diego, CA: 210.22

V. PROFESSIONAL

Funded Research Performed:

RESEARCH SUPPORT, CURRENT

NEI/NIH (U01-EY027261; MPI with Huberman, Cline, Benowitz) $499,000 direct costs/yr x 3 years
"Molecular Discovery for Optic Nerve Regeneration"
The major goals are to use proteomics and transcriptomics to identify regulators of optic nerve regeneration.

NEI/NIH (R01-EY026766; MPI with Kapiloff) 04/01/16-03/31/21 ~$500,000 total costs/yr x 5 years
"Function of MEF2 in Neuroprotection and Regeneration in Ischemic Optic Neuropathy"
The major goal of this project is to understand how MEF2 family transcription factors regulate retinal ganglion cell survival and regeneration after optic nerve stroke.

NEI/NIH (R41; co-PI) 09/01/14-08/31/16 $225,000 total costs
"RAP as a therapeutic for regeneration of the optic nerve after insult"
The major goal of this project is to bring RAP towards clinical application.

NEI/NIH (R41-EY024803-01S1) 09/01/14-08/31/16 $39,553 total costs over 1 year
Administrative supplement to extend project goals.

NINDS/NIH (F31-NS087789; Kreymerman PI; Goldberg Sponsor) 11/01/14-12/31/16 $40,123 total x 2 years
"The role of mitochondrial fission/fusion in CNS axon regeneration"

Pre-doctoral training grant to support stipend of doctoral student Alex Kreymerman in my lab, to support study of mitochondrial fission genes in axon growth.

NEI/NIH (F32-EY; Cameron PI; Goldberg Sponsor) 09/01/15-08/31/18 $51-55,000 total x 3 years
"Role of Soluble Adenylate Cyclase in Reactive Astrocytes"
Post-doctoral training grant to support trainee Evan Cameron in my lab.

CIRM (DISC1-08848) Awarded, pending $237,564 total over 18 months
"Embryonic Stem Cells for Corneal Endothelial Degeneration"
The major goal of this grant is to optimize ESC to corneal endothelial cell differentiation.

Glaucoma Research Foundation 02/01/12-01/31/18 $1,350,000 direct costs
"Catalyst for a Cure II: Biomarker Initiative"
The major goal of this grant is to find new biomarkers for retinal ganglion cell dysfunction in glaucoma.

DOD (11269004) 09/01/13-08/31/17 $250,000 total costs/year x 4 years
"Enhancing Optic Nerve Regeneration After Trauma"
The major goal of this grant is to optimize combined nanoparticle and viral vector approaches to stimulating optic nerve regeneration.

DOD (MR130120; co-PI with Gorantla, Benowitz) 10/01/15-09/30/17 $1,000,000 total costs over 2 years
"Novel Strategies for Optic Neuroregeneration and Retinal Projection Reintegration After Ocular Trauma"
The major goal of this grant is to develop combinatorial strategies to promote optic nerve regeneration after whole eye transplant in a rodent model.

DOD (MR141331; co-PI with Benowitz, Zack) 12/15/15-12/14/2018 $1,500,000 total costs over 3 years
"Molecular Control of Optic Nerve Regeneration"
The major goal of this grant is to study the transcriptomics of regenerating RGCs and discover new molecular pathways that regulate optic nerve repair.

BrightFocus Foundation 07/01/14-06/30/16 $200,000 direct costs over 3 years
"Translational Cell Therapies for Glaucoma"
The major goal of this project is to initiate early-phase clinical trials for regenerative therapies in glaucoma.

Fox Center for Regenerative Ophthalmology 09/01/14-08/31/17 $300,000 direct costs over 3 years
"Whole Eye Transplant"
The major goal of this project is to bring whole eye transplant towards clinical application.

VA Merit (I01-BX002950) 01/01/17-12/31/20 $650,000 direct costs over 4 years
"Retinal Ganglion Cell Differentiation and Transplantation"
The major goal of this project is to define the signaling pathways that regulate neuronal differentiation during development and in human stem cell populations, and that regulate integration into adult retinal circuits after transplantation.

Kleberg Foundation Awarded, pending $300,000 direct costs over 2 years
"Cellular Metabolic Imaging and Vision Restoration in Glaucoma"
The major goal is to measure retinal ganglion cell metabolic function in therapeutic glaucoma trials.

RESEARCH SUPPORT, COMPLETED

NIH, various (Continuing)
I have been participating faculty on 3 T32 training grants and 1 P30 core grant at the University of Miami, a T32 training grant and K12 institutional training grant (with role of Research Director) at UCSD, and a P30 core grant at Shiley Eye Center, UC San Diego.

02/01/05-01/31/06 Stanley Glaser Fund $25,000
"Developmental Changes in Intrinsic Axon Growth Ability of Corticospinal Upper Motor Neurons"
The major goals of this project are to develop a magnetic particle strategy to enhance regeneration in the CNS.

06/01/05-12/31/06 Orthopedic Development, Inc. $40,000
"Magnetic Particles for Regeneration"
The major goals of this project are to develop a magnetic particle strategy to enhance regeneration in the CNS.

07/01/05-06/30/06 The Glaucoma Foundation $35,000
"Developmental Determinants of Retinal Ganglion Cell Regenerative Ability"
The major goals of this project are to examine the basis of RGC regenerative failure by screening developmentally regulated genes.

01/01/07-12/31/07 The Glaucoma Foundation $50,000
"Developmental Determinants of Retinal Ganglion Cell Regenerative Ability – Year 2"
The major goals of this project are to examine the basis of RGC regenerative failure by examining developmentally regulated genes.

07/01/05-06/30/08 FSDH/FBRP/James & Esther King Fndn $150,000 total costs/year x 3 years
"Ischemic Axon Injury: Role of Neurotrophic Factors and Electrical Activity"
The major goals of this project are to understand survival signaling of retinal neurons after optic nerve stroke.

07/01/05-06/30/09 American Heart Association $65,000 total costs/year x 4 years
"Role of Activity and Cyclic-AMP in CNS Neuron Survival After Ischemic Injury"
The major goals of this project are to develop a model of pediatric stroke and examine the role of neuronal activity and cAMP levels on survival and regeneration.

09/01/05-08/31/09 NEI/NIH (R03) $151,500/year x 3 years
"Intrinsic Molecular Control of Axon Growth Ability in RGCs"
The major goal of this project is to determine the genes that change through RGC development, and whether these genes affect RGC regenerative ability in vitro.

01/01/07-12/31/09 The Wilson Foundation (V. Lemmon, PI; J. Goldberg, Co-I)
The major goals of this project are to determine whether corticospinal motor neurons undergo a developmental loss of intrinsic axon growth ability, and to determine a molecular basis for any such loss.

02/01/07-01/31/10 NEI/NIH (R21-EY017971) $190,937 total costs/year x 3 years
"Magnetic Nanoparticles for Trophic Stimulation and Axon Regeneration"
The major goal of this project is to develop a magnetic particle strategy to enhance regeneration in the CNS.

06/01/07-05/31/12 NINDS/NIH (R01-NS061348) $301,219 total costs/year x 4 years
"Developmental Control of Retinal Ganglion Cell Axon Regeneration"
The major goal of this project is to understand how RGC development leads to a loss of intrinsic capacity for axon regeneration.

07/01/07-12/30/10 The Dana Foundation $33,333 direct costs/year x 3 years
"Structural Imaging of the Amblyopic Brain"
The major goal of this project is to identify structural or wiring defects in the amblyopic brain using high-resolution and diffusion-tensor MRI.

02/01/08-01/31/09 Supplement to NEI/NIH (R21) $11,926 total costs
"Magnetic Nanoparticles for Trophic Stimulation and Axon Regeneration"
The goal for this supplement is to examine ocular protein expression for a panel of new antigens.

10/01/09-09/30/10 Dept. of Defense $85,000 direct costs
"Human Retinal Stem Cell Culture and Transplantation"
I am PI of this sub-project of the "Florida Consortium to Save Sight" (Byron Lam, overall PI)
The major goal of this project is to study human retinal stem cells for ocular repair.

10/01/09-09/30/12 NEI/NIH (RC1-EY020297 "Challenge Grant") $382,500 total costs/year x 2 years
"Retinal Scaffolds: Synaptic and Stem Cell Integration"
The major goal of this project is to develop a 3-dimensional retina ex vivo.

04/01/10-03/31/12 American Health Assistance Foundation $100,000 direct costs total
"Manipulation Kruppel-Like Factors For RGC Regeneration"
The major goal of this project is to create viral vectors to suppress KLFs after optic nerve injury.

07/01/10-06/30/12 Research to Prevent Blindness $100,000 total costs
"Walt and Lilly Disney Award for Amblyopia Research"
The major goal of this project is to identify structural or wiring defects in the amblyopic brain using high-resolution and diffusion-tensor MRI. This work continues from prior funding from the Dana Foundation.

07/01/10-08/31/12 Interdisciplinary Research Development Initiative (UM) $100,000 total costs
"Electrospun Scaffolds for 3D Retinal Tissue Engineering"
The major goal of this project is to promote directional axon growth on 3D scaffolds.

07/01/10-06/30/11 ASCRS Foundation $5,000 one-time award
"Corneal Endothelial Cell Replacement Therapy: A Nanoparticle Approach"
The major goal of this project is to develop cell replacement therapies for the corneal endothelium.

08/01/10-06/30/15 NEI/NIH (R01-EY020913) ~$483,000 total costs/yr x 4 yrs (+1 n.c.e.)
"Kruppel-like Transcription Factors in Retinal Ganglion Cell Regeneration"
The major goal of this project is to understand how specific transcription factors regulate CNS regeneration.

08/01/12-06/30/13 NEI/NIH (R01-EY020913-02S1) ~$120,000 total costs/yr x 3 years
Supplement to promote diversity in science.

07/01/12-06/30/13 NEI/NIH (R01-EY020913-03S1) $72,555 total costs
Supplement to extend protein detection technology in support of parent grant.

06/01/11-05/31/13 NIH/OD (U01-NS074490, MPI with J. Bixby, V. Lemmon) $182,000 total costs
"Triazine Compounds to Promote Regeneration in Optic Neuropathies"

The major goal of this project is to test new compounds in a model of optic nerve stroke.

11/01/11-10/30/12 James and Esther King Foundation (2KF03) $100,000 total costs
Technology Transfer Feasibility Grant, "Functionalized Magnetic Nanoparticles as a Therapeutic Tool to Improve Axon Regeneration After Stroke"
The major goal of this grant is to explore in vivo delivery of magnetic nanoparticles to the retina/optic nerve.

01/01/12-06/30/12 Advanced Cell Technology ~$36,000 total costs
Research contract for embryonic stem cell-derived ocular cell collaboration.

02/01/12-12/31/15 Pew Foundation $2,000,000 total costs

07/01/13-06/30/15 BrightFocus Foundation (Co-I; K Muller PI) $100,000 total costs
"Cell Therapy for Retinal Ganglion Cell Loss in Glaucoma"
The major goal of this project is to investigate retinal ganglion cell synaptic integration and electrical activity after transplantation to the inner face of the retina.

09/01/14-08/31/16 NINDS/NIH (R21-NS090066; co-I; S. Cherqui PI) $325,000 direct costs over 2 years
"Hematopoietic stem cell-based therapy for Friedrich Ataxia" (withdrawn upon leaving UCSD)

08/01/15-07/31/20 NEI/NIH (R01-EY025693; co-I; P Shaw PI) $225,000 direct costs/year x 5 yrs
"HTRA1 as a Therapeutic Target in the Treatment of Wet AMD" (withdrawn upon leaving UCSD)

09/21/13-09/20/15 DOD (122229032; Project PI; Byron Lam PI) ~$125,000 total costs/year x 2 years
"Warfighters' Supplement: Center for Ophthalmic Innovation – ONOVA" (Byron Lam, PI)
"Timing the Treatment of Optic Nerve Injury" (Goldberg, Sub-Project PI)
The major goal of this grant is to study the importance of timing in viral vector approaches to stimulating optic nerve regeneration.

12/01/11-11/30/16 NEI/NIH (R01-EY022129; MPI with Kapiloff) ~$527,000 total costs/yr x 4 years (+1 n.c.e.)
"Signaling Scaffolds in Stroke"
The major goal of this project is to understand how specific signaling complexes regulate retinal ganglion cell survival and regeneration after optic nerve stroke.

09/20/13-11/30/15 NEI/NIH (R01-EY022129-03S1) ~$85,901 total costs/year x 2.2 years
Supplement to promote diversity in science.

12/01/11-11/30/15 NEI/NIH (R01-EY022129-01S1) $77,091 total costs
Supplement to extend study of soluble adenylate cyclase knockout mice in support of parent grant.

RESEARCH SUPPORT, PENDING

(Please enquire for current information)

RESEARCH SUPPORT/AWARDS, STUDENTS/FELLOWS

2005 Fight For Sight Summer Student Fellowship, $2100, Carly Moerdyk (declined)
2005 Lois Pope Life Summer Student Fellowship, $2500, Carly Moerdyk
2005-07 NIH Training Grant, Full postdoctoral support, M. Vanessa Almeida
2007 Medical Faculty Association Margaret Whelan Graduate Student Scholarship, $750, Mauris De Silva
2007 UM Honors Program Summer Research Fellowship, $1500, John Thurston, Jr. (declined)
2007 Lois Pope Summer Research Scholarship, $2500, John Thurston, Jr.
2007 Lois Pope Summer Research Scholarship, $2500, Punam Parikh
2007 Fight for Sight Student Summer Fellowship, $2100, Melissa Velarde
2008 Lois Pope Summer Research Scholarship, $2500, Timothy Boyce
2008 Lois Pope Summer Research Scholarship, $2500, Kevin Willeford
2008-09 NIH Training Grant, Predoctoral support, Darcie Moore
2008 Margaret Whelan Scholarship Fund Travel Grant, $800, Darcie Moore
2009 Univ. Miami Honors Program Scholarship, $1500, Ananth Sastry
2009 Lois Pope Summer Research Scholarship, $1500, Clayton Armstrong
2009 Lois Pope Summer Research Scholarship, $1500, Timothy Boyce
2009 Lois Pope Summer Research Scholarship, $1500, Angelica Ortiz
2009 Fight for Sight Student Summer Fellowship, $2100, Monica Vandervoort
2009 Gold Foundation Fellowship, $1500, Janet Li
2010 Fight for Sight Student Summer Fellowship, $2100, Ananth Sastry
2010 Beyond the Book, $2500, Ananth Sastry
2010 ISER Travel Fellowship, $768, Ying Hu
2010 Medical Faculty Association Postdoc Travel Award, Ying Hu
2010 Lois Pope Summer Research Scholarship, Angelica Ortiz

2010 Fight for Sight Postdoctoral Fellowship, Declined, Ying Hu
2010 AHA Postdoctoral Fellowship, $47,428 (Year 1), Ying Hu
2011-13 AHA Predoctoral Fellowship, $20,680 x 2 years, Ephraim Trakhtenberg
2011 Fight for Sight Student Summer Fellowship, $2100, Mohammed Shan Uddin
2011 Margaret Whelan Scholarship Fund Travel Grant, $800, Ephraim Trakhtenberg
2011 Lois Pope Life Fellows Research Award, $1000, Yoni Hertz
2011-12 Research to Prevent Blindness Medical Student Fellowship, $30,000, Jessica Weinstein
2012 Carl and Barbara Alving Award, Eastern Atlantic Student Research Forum, "Most Outstanding Research Achievement for the Year," $3000, Stavros Moysidis
2012 Margaret Whelan Scholarship Fund Travel Grant, $800, Michael Steketee
2012 Vanderbilt Symposium Travel Award, Jessica Weinstein
2012-13 ASCRS, $5000, Matt Weiss
2012 SACNAS Travel Award, Stephanie Fernandez
2012 Lois Pope Life Fellows Research Award, $1000, Ephraim Trakhtenberg
2013 15th International Symposium on Neural Regeneration, Asilomar, CA, Travel Award $225, Travis Stiles
2013 Best Graduate Student Presentation, Neurosciences Program, U Miami, Praseeda Venugopalan
2014 Research Creativity and Innovation Forum, Biological Sciences, 3rd Place, Daniel Valenzuela
2014 Int'l Society for Stroke Research, Travel Award for Junior Investigators, $1000, Ephraim Trakhtenberg
2014 Biological Sciences Undergraduate Research Eureka Program, $2,500 plus housing, Lior Schenk
2014 San Diego Foundation Blasker Award, $50,000, Geoffrey Weiner
2014 Chancellor's (Ledell) Research Scholarship and the Howell Research Scholarship, Monisha Malek, $2,500 plus housing
2014 Howell Research Scholarship, Monisha Malek, declined (she got 3 awards!)
2014 Society of Women Engineer's Scholarship, Monisha Malek, declined (she got 3 awards!)
2014 Chancellor's (Ledell) Research Scholarship, Christopher Douglas, $2,500 plus housing
2014 UCSD/Wendy Kwok Eureka! Biological Sciences Scholarship, Lior Schenk, $2,500 plus housing
2014 Malcolm R. Stacey Memorial Scholarship, Lior Schenk (declined, he got 2 awards)
2014 Best Graduate Student Presentation, Neurosciences Program, U Miami, Alex Kreymerman
2014 NIH Short Term Summer Research Training Program, Kellie Satterfield
2014 Wings for Life Travel Fellowship, 9th Asia Pacific Symposium on Neural Regeneration, Alex Kreymerman, $750 plus registration, hotel
2014 Biomedical Entrepreneurship: A Roadmap to the Future Symposium at UC Berkeley, Xiong Zhang, registration and travel up to $500
2014 UCSD Postdoctoral Research Symposium, Best Oral Presentation Award, Alena Bartekova, $500
2014-16 NINDS F31 Predoctoral NRSA, Alex Kreymerman, $40,123 total costs x 2 years
2015 ARVO NEI Travel Grant, Karl Kador, $750
2015 UCSD Eureka! Biological Sciences Scholarship, Chris Douglas, $2,500 plus housing
2015 William Randolph Hearst / CSU Trustees' Award for Outstanding Achievement, Kevin Tenerelli, $6000
2015-18 NSF Predoctoral Fellowship, Nicole Hoffner, $46,000 total costs/year x 3 years
2015-17 Minority Access to Research Careers program, $16,000 total costs/year x 2 years
2015-18 NEI F32 Postdoctoral NRSA, Evan Cameron, $51,530+ total costs/year x 3 years
2016 University of Miami, Graduate Student of the Year, Alex Kreymerman

Editorial responsibilities:

1997-present: Independently solicited peer review for the journals *Science, Nature, Nature Medicine, Proceedings of the National Academy of Sciences, Journal of Neuroscience, Public Library of Science One (PLoS One), Journal of Cell Biology, IOVS, Current Biology, Molecular Biology of the Cell, European Journal of Neuroscience*, *Brain Research, Molecular and Cellular Neuroscience, Developmental Neuroscience,* and *IEEE Transactions on Biomedical Engineering*, among others.
2011-2013: Associate Editor, *JAMA Ophthalmology (formerly Archives of Ophthalmology)*
2013-2016: Section Editor, Stem Cells in Ophthalmology, *Current Ophthalmology Reports*
2016-present: Editorial Committee, Guest member, *Annual Review of Vision Science*

Professional and Honorary Organizations:

1997-present: Society for Neuroscience, member.
1999-2003: American College of Physicians, student member.
2004-2008: American Society for Cell Biology, member.

2004-present: Association for Research in Vision and Ophthalmology, member.
2006-present: American Academy of Ophthalmology, member (member-in-training *2006-2009*)
2008-present: The Glaucoma Foundation, Scientific advisory board member
2009-present: American Medical Association, member
2009-present: Society for Heed Fellows, member
2009-present: American Glaucoma Society, provisional member
2010-2012: Biomedical Engineering Society (BMES), member
2010-2013: World Glaucoma & World Glaucoma Patient Associations: Florida representative
2010-present: American Society for Clinical Investigation (elected to Society)

Honors and Awards [with dates]
1994: Yale University, New Haven, CT: *magna cum laude*; Distinction in the Major of Biology
1998: Asia/Pacific Symposium on Neural Regeneration, Hong Kong SAR: Poster Presentation Grant
2001: Medical Student Research Symposium, Stanford, CA: Oral Presentation Award
2003: American Academy of Neurology: Medical Student Prize for Excellence in Neurology
2003: Alzheimer's Association: Excellence in Alzheimer's Disease Research Award
2004: Santa Clara Valley Medical Center: as an intern, nominated for Best Housestaff Teaching Award
2005: Stanley Glaser Research Award
2006: Association of University Professors of Ophthalmology: Winner, Resident/Fellow Research Forum
2008: Florida Society of Ophthalmology: Winner, Research Forum
2009: University of Miami Medical Group: Recognized in Top 15 UMMG doctors for on-time appointments.
2009: Poster of Interest, ASCRS Meeting, San Francisco: "Magnetic Nanoparticle Technology for Ocular Therapeutics"
2009: Heed Fellowship Award
2010: Thermo Fisher Cellome Award, "Best published peer-reviewed scientific paper using high-content screening in 2009" (accepted by co-1st authors Moore and Blackmore)
2010: ASCRS Foundation Research Award
2010: Walt and Lilly Disney Award for Amblyopia Research, Research to Prevent Blindness
2010: Hope For Vision, Scientist of the Year
2010: Elected to the American Society for Clinical Investigation
2011: Walter G. Ross Distinguished Chair in Ophthalmic Research
2012: ARVO Cogan Award
2013: Cless "Best of the Best" Award (voted best lecture at AAO, ARVO annual meetings)
2015: Hawaiian Eye 2015 "Speaker of the Day" award for best lecture
2015: Nominated for residents' Clinical Teaching award, Shiley Eye Center, UCSD
2017: Hawaiian Eye 2017 "Speaker of the Day" award for best lecture

Post-Doctoral (Non-Clinical) Fellowships:
Postdoctoral Fellow Stanford University Medical School, Stanford, CA June 2003-June 2004

Other Professional Activities (e.g. papers presented; performances; conference proceedings; seminar or conference panel member; catalogue work; etc):

INVITED PRESENTATIONS

1998, Stanford Medical Scientist Training Program: "Why Do CNS Neurons Fail to Regenerate After Axotomy?"
1999, Stanford Medical Scientist Training Program: "Why Don't CNS Neurons Regenerate After Axotomy?"
1999, Stanford Neurosciences Annual Retreat: " Intrinsic and Extrinsic Mediators of CNS Axon Regeneration"
1999, International Symposium on Development and Regeneration…: Symposium Speaker
Ministry of Science and Technology, Tsukuba, Japan: "Survival and Growth of Retinal Ganglion Cells After Axotomy"
1999, 10th Anniversary Developmental Biology Conference, Fallen Leaf Lake, CA: "Survival and Growth of Retinal Ganglion Cells After Axotomy"
2000, Stanford Medical Scientist Training Program: "What Signals Induce CNS Axon Growth?"
2001, Stanford Medical Scientist Training Program: "An Irreversible Neonatal Switch from Axonal to Dendritic Growth in the Developing CNS"
6/2001, Gordon Research Conference: Neurotrophins: Full-length oral presentation: "Extrinsic and Intrinsic Control of Axon Regeneration"
5/2002, Association for Research in Vision and Ophthalmology (ARVO): Symposium Speaker: "Extrinsic and Intrinsic Control of Axon Regeneration by Retinal Ganglion Cells"

6/2002, Gordon Research Conference: Molecular and Cellular Neurobiology: Short-format oral presentation: "Retinal Maturation Triggers Retinal Ganglion Cells to Switch From an Axonal to a Dendritic Growth Mode"
2002, American Paraplegia Society 48th Annual Conference: Platform Presentation: "Extrinsic and Intrinsic Control of Axon Regeneration by Retinal Ganglion Cells"
2002, University of Miami Frontiers in Vision Science, Seminar Speaker: "Control of Axon Regeneration by Retinal Ganglion Cells"
6/2003, Gordon Research Conference: Neurotrophins: Invited, full-length presentation: "Intrinsic Control of Axon Regeneration in Retinal Ganglion Cells"
10/2005, University of Wisconsin, Madison: Invited Speaker: "Extrinsic and Intrinsic Control of Axon Regeneration in Retinal Ganglion Cells"
2006, Florida Consortium to Save Sight: Forum Speaker and Panel Leader/Discussant: "Optic Nerve Regeneration I"
1/2006, Association of University Professors of Ophthalmology: "Retinal Ganglion Cell Death After Axon Injury: Role of Physiologic Levels of Electrical Activity"
2006, Enhancing Military Ocular Health Capabilities, Miami, FL, Invited Speaker: "Molecular and Cellular Strategies for Regeneration of the Optic Nerve"
7/2006, CNS Complications of Diabetes, 11th Annual JDRF/EASD Oxford Workshop, Invited Platform Speaker: "Intrinsic and Extrinsic Control of Axon Growth by Retinal Ganglion Cells"
10/2006, Neuroprotective Strategies in Degenerative Eye Disease, Vanderbilt Eye Institute, Invited Platform Speaker: "Intrinsic Control of Axon Growth in Retinal Ganglion Cells"
2007, Retinal Degenerations, Bascom Palmer Eye Institute, Speaker and Session Moderator: "Trophic Support of Neuronal Survival and Regeneration"
4/2007, Yale University Neuroengineering Seminar Series, Invited Speaker: "Engineering Neural Regeneration in the Visual System"
7/2007, International Society of Neurochemistry/American Soc. Neurochem Annual Meeting, Invited Platform Speaker: "Modeling Ischemic Optic Neuropathy in Rodents"
9/2007, Pacific Ocular Regeneration Biology XII: Invited Platform Speaker: "Retinal Ganglion Cell Biology and Regeneration"
4/2008, Association for Research in Vision and Ophthalmology Annual Meeting: Invited Platform Speaker: "Nanotechnology for Ocular Repair"
6/2008, Neural Interfaces Conference (NIH), Cleveland, OH, Invited Platform Speaker: "Role of Electrical Activity in Retinal Ganglion Cell Survival and Axon Growth"
6/2008, World Ophthalmology Congress, Hong Kong: Invited Platform Speaker: "Magnetic Nanoparticles for Optic Nerve Repair"
9/2008, Cincinnati Children's Hospital: Invited Seminar Speaker: "Development and Regeneration of Retinal Ganglion Cells"
9/2008, Glaucoma Think Tank, Glaucoma Foundation, Invited Speaker and Session Moderator
9/2008, International Congress for Eye Research, Beijing: Invited Platform Speaker: "Magnetic Nanoparticle Technology for Optic Nerve Repair"
10/2008, Florida International University, Biomedical Engineering Lecture Series: "Nanotechnology for Eye Repair"
10/2008, Neural Degeneration in Glaucoma: Mechanisms to New Treatments," Vanderbilt: Invited Platform Speaker: "Retinal Ganglion Cell Survival and Regeneration"
11/2008, American Heart Associated Annual Meeting, AHA Grantees Session
1/2009, Harvard University Medical School, Invited Speaker, Harvard Institutes of Medicine Path. Dept. seminar series
2009, Innovations in Visual Restoration 2009 – DOD Project Conference, Invited Speaker, Miami, FL
4/2009, Florida Atlantic University, Neurosciences Program Seminar Speaker
5/2009, ARVO: Platform (SIG) Speaker: "Regulation of Retinal Ganglion Cell Survival and Axon Growth in Ischemic Optic Neuropathy."
5/2009, ARVO: Session Moderator, "Retinal Ganglion Cell Injury and Regeneration" *(368:3463-3469)*
5/2009, Medical College of Georgia, Distinguished Speaker Seminar Speaker: "Survival and Regeneration of Retinal Neurons"
7/2009, Florida Society of Ophthalmology, Pediatric Subspecialty Day, Invited Speaker: "Is the Amblyopic Brain Normal? Viewing Visual Pathways With DT-MRI"
8/2009, BioNIUM: Bio-Nano Initiative at UM, Invited Speaker: "Magnetic Nanoparticle Approaches to Ocular Repair"
8/2009, Lasker Foundation/IRRF Foundation Initiative for Innovation in Vision Research, Woods Hole, MA: "Retinal Ganglion Cell Survival and Regeneration"
11/2009 Inter-American Course in Clinical Ophthalmology: "New Horizons in Glaucoma Treatment"
2/2010 NEI Symposium, "Focus on Glaucoma," Bethesda, MD: "Intrinsic Control of Optic Nerve Regeneration"

3/2010 Lasker/IRRF Foundation/HHMI Conference, Janelia Farm, VA: "Role of Astrocytes and Other Glial Cells in Retinal Degeneration, Including Glaucoma"
4/2010 ASCRS, Paper presentation, "Fuchs Dystrophy: Clinical Characteristics of Surgical and Non-Surgical Patients"
5/2010 ARVO: Symposium Speaker, "Axon Regeneration in the Optic Nerve"
5/2010 ARVO: Symposium Moderator and co-Organizer, "Axonal Injury"
5/2010 ARVO: Symposium Moderator and co-Organizer, "Axonal Injury"
5/2010 "Glaucoma Management: Beyond IOP" CME Symposium Speaker, San Diego, CA, "How Can RGCs Be Protected"
5/2010 4th Annual ISCI Symposium, Stem Cell Therapy and Biology, Miami, FL, "Stem Cells for Retinal Degenerations"
6/2010 University of Kentucky, Lexington, Dept of Ophthalmology, Visiting Professor, "Glaucoma Diagnosis, Progression, and Current Research"
7/2010 International Society of Eye Research Annual Meeting, Montreal, Canada, "KLF Transcription Factors and Their Role In Axon Regeneration"
8/2010 University of Pittsburgh Medical Center, Pittsburgh, PA, "Retinal Ganglion Cell Survival and Regeneration"
9/2010 Glaucoma Research Foundation Scientific Advisory Board, San Francisco, CA, "Glaucoma: Current Diagnosis and Management"
10/2010 Biomedical Engineering Society Annual Meeting, Auston, TX, Platform presentation, "Electrical Activity Promotes Neuronal Survival and Regeneration"
10/2010 CURSO, Miami, FL, Platform presentations, "New Horizons in Glaucoma Treatment" and, "Structure-Function Measurement in Glaucoma"
11/2010 Duke Univ. Dept of Ophthalmology, Durham, NC, Invited Speaker "Survival of Retinal Ganglion Cells after Ischemic Optic Neuropathy"
11/2010 Society for Neuroscience Annual Meeting, San Diego, CA, Symposium Chair "Transcriptional Control Mechanisms in Axon Growth and Regeneration" *and Speaker,* "Developmental regulation of axon growth ability by Kruppel like factors"
12/2010, BioNIUM: Bio-Nano Initiative at UM, Invited Speaker: "Nanoparticle-Mediated Signaling Endosome Localization Regulates Growth Cone Dynamics and Neurite Growth"
2/2011, Angiogenesis Exudation and Degeneration, Miami, FL, Invited Speaker: "Nanoparticle Applications in Retina"
3/2011, Visiting Professor, University of Michigan/Kellogg Eye Center: "RGC Regeneration: Nanoparticles and Neurotrophins" and, "Neuroenhancement in Glaucoma"
3/2011, Asia-Pacific Association of Ophthalmology (APAO), Invited Speaker, ASIA-ARVO Symposium
5/2011, ARVO SIG Speaker, "Neurotrophic growth factors: CNTF"
5/2011, ARVO Minisymposium Speaker, "Nanoparticles and Neurotrophins for RGC Survival and Regeneration"
5/2011, Fox Center/McGowan Inst. Regenerative Ophthalmology Conference, Pittsburgh, Plenary Address, "Regeneration in the Retina and Optic Nerve"
6/2011, Stanford Univ. Dept of Ophthalmology, Grand Rounds Speaker
10/2011, AAO/ARVO Symposium, AAO, Orlando, Symposium Speaker, "Recovery of Vision in Optic Neuropathies: Control of Axon Extension"
1/2012, Euretina Society Winter Meeting, Symposium Speaker, "Neuroprotection of the retina and the optic nerve head: Bench to bedside"
2/2012, Nature Miami Winter Symposium, Session Chairman, "Nanotechnology in Biomedicine: Imaging"
3/2012, American Glaucoma Society, Symposium Speaker, "RGC Axon Survival and Regeneration"
4/2012, Vanderbilt Eye Institute, Invited Speaker
4/2012, UCSD/Hamilton Glaucoma Institute, Invited Speaker
5/2012, ARVO Cogan Award Lecture, "Retinal Ganglion Cell Development and Regeneration"
5/2012, Fudan University Medical School/EENT Hospital, Shanghai, Invited lecturer, attendant to thesis defense
5/2012, Fox Center/McGowan Institute, Regenerative Medicine in Ophthalmology Conference, Pittsburgh, Invited Speaker, "Nanoparticles and Neurotrophins: Engineering Regeneration"
9/2012, Cold Spring Harbor Labs, Axon Guidance Synapse Formation & Regeneration, Session Chair
9/2012, Vanderbilt Eye Institute, Regenerative Medicine in Glaucoma, Invited Speaker, "RGC Survival and Regeneration: Electrical Activity and Adenylate Cyclases"
10/2012, Burke Medical Research Institute, Cornell/Weill School of Medicine, NY, Invited lecturer, "Survival and Regeneration in the Visual System"
10/2012 Society for Neuroscience Annual Meeting, San Diego, CA, NanoSymposium Chair "Transplantation and Regeneration"
10/2012 Heed Resident Retreat, Invited Faculty
11/2012 American Academy of Ophthalmology, "Direct Delivery of Neuroprotective Glaucoma Therapy"

11/2012 Wilmer Eye Institute, Johns Hopkins, Invited Speaker, "Survival and Regeneration in the Visual System"
12/2012: World Stem Cell Summit, Palm Beach, FL, Invited Speaker
1/2013: Glaucoma 2.0, Bench to Bedside, Miami, FL, Course Co-Director
1/2013: Glaucoma 2.0, Bench to Bedside (CME), Miami, FL, Invited Faculty, "NT-501 CNTF Implant for Glaucoma and NAION: Phase 1 Data"
1/2013: New Horizons Forum, San Francisco, CA, Invited Faculty, "Why Glaucoma Biomarkers?"
2/2013: Ophthalmology Update (CME), San Diego, CA, Invited Faculty, "Glaucoma: Neuroprotection"
2/2013: NEI Audacious Goals, Bethesda, MD, Invited participant
2/2013: University of Maryland Chemistry-Biology Interface Program, Invited Faculty: "KLFs in Axon Regeneration"
3/2013: American Glaucoma Society Annual Meeting, San Francisco, CA, Invited Faculty: "Neural Regeneration and Cell Therapies"
4/2013: "Beyond IOP" CME meeting, San Francisco, CA, Invited Faculty: "Biomarkers in Glaucoma" and "Unmet Needs in Glaucoma"
4/2013: Medical College of Wisconsin, Milwaukee, Invited Speaker: "RGC Survival and Regeneration"
5/2013: Society for Brain Mapping and Therapeutics, Baltimore: "Stem Cells for Glaucoma"
6/2013: Fox Center/UPMC Meeting, Vision Restoration: Regenerative Medicine in Ophthalmology, Pittsburgh, Invited Faculty: "Optic Nerve Regeneration and Neuroprotection"
7/2013: World Glaucoma Congress, Vancouver, Canada, Invited Faculty: "Anti-Glaucoma Medications Beyond IOP" and "Retinal Ganglion Cells in Glaucoma: Bench to Bedside"
10/2013: Daniel Scott Weston Lecture, Glaucoma Research Foundation, Palo Alto, CA: "Retinal Ganglion Cells in Glaucoma: Bench to Bedside"
10/2013: Invited Lectures, Optometric Glaucoma Association, Seattle, WA: "Stems Cells and Nanotherapeutics in Glaucoma"; "Neuroprotection and Regeneration of Retinal Ganglion Cells"; *OGS/AAO Joint Symposium:* "The Future of Glaucoma Therapy: Protecting and Regenerating"
10/2013: Plenary Session Lecture, American Academy of Optometry, Seattle, WA: "Stem Cells for Glaucoma", and *Invited Lecture*, "The Case for Neuroprotection Trials in Glaucoma"
10/2013: Heed Resident Retreat, Invited Faculty
1/2014: Latin American Glaucoma Specialists Meeting, Invited Faculty: "Regenerative Ophthalmology for Glaucoma", and "Genetics of Glaucoma: What? Why?"
2/2014: American Glaucoma Society, Invited Faculty: "Novel Rescue Approaches"
3/2014: Asian Glaucoma Specialists Meeting, Invited Faculty: "Regenerative Ophthalmology for Glaucoma"
4/2014: World Ophthalmology Congress, Tokyo, Invited Faculty: "Neural Regeneration in Glaucoma"
5/2014: Neurosciences Program Retreat, UCSD, Invited Speaker: "Axon Regeneration: Transcriptional Regulation by KLFs"
5/2014: ARVO, Orlando FL, Platform SIG Presentation, "Stem Cells to Retinal Ganglion Cells: Differentiation, Transplantation and Integration"
6/2014: Tufts University Dept of Ophthalmology, Vision Research Seminar Series: "Axon Regeneration: Connecting Intrinsic and Extrinsic Regulation"
6/2014: Fox Center/UPMC Meeting, Vision Restoration: Regenerative Medicine in Ophthalmology, Pittsburgh, Invited Faculty: "Stem Cells for Glaucoma"
7/2014: International Society for Eye Research biannual meeting, San Francisco, Invited Faculty: "Transitioning Regenerative Therapies from the Bench to the Clinic"
9/2014: Joint Symposium of the 4th International Neural Regeneration Symposium, 6th International Spinal Cord Injury Treatments and Trials Symposium, and the 9th Asia Pacific Symposium on Neural Regeneration, Nanjing, China, Invited Faculty: "Linking Intrinsic and Extrinsic Modulators of Axon Regeneration"
9/2014: *Society for Heed Fellows Resident Mentorship Retreat, Chicago, Invited Faculty:* "How to write NIH grants"
10/2014: Rich Lecturer, University of Alabama Birmingham: "RGC Regeneration, Bench to Bedside"
10/2014: American Academy of Ophthalmology Annual Meeting, Chicago, IL; AAO/ARVO Symposium on Ocular Drug and Gene Delivery to the Posterior Segment, Invited Faculty: "Encapsulated Cell Technology"
11/2014: Society for Neuroscience Annual Meeting, Washington DC, Symposium Co-Chair and Speaker, Cellular and Molecular Mechanisms of Neural Regeneration: "Transcriptional regulation of axon regeneration in adult CNS"
11/2014: National Eye Institute Audacious Goals Initiative Workshop, Co-Chair: "Regenerating the Optic Nerve"
12/2014: West Coast Optometric Association, Huntington Beach, CA, Invited Speaker: "Gonioscopy – Performance and Interpretation", "Stem Cells for Glaucoma," and "Update on Medical Therapy for Glaucoma"
1/2015: Hawaiian Eye, Maui, HI, Invited Speaker, "Regenerative Therapies for Glaucoma"
2/2015: AGS-NANOS Joint Symposium, San Diego, CA, Invited Speaker: "Regeneration for Glaucoma"
2/2015: Ophthalmology Update Meeting, La Jolla, CA, Invited Speaker: "Update on Medical Treatment"

3/2015: Lasker/International Retina Research Foundation Meeting, Astrocytes in Glaucoma, Janelia Farm, VA, workshop participant
3/2015: Curso Internacional "Perspectives actuals en glaucoma," Mexico City: 4 lectures on glaucoma and glaucoma research
4/2015: Asia-Pacific Academy of Ophthalmology Annual Congress, Guangzhou, China, Session Chair and Speaker, Regenerative Medicine in Ophthalmology"; *Session Chair*, "New Developments in Glaucoma Medical Therapy"; *Speaker*, "Delivering Neurotrophins for Glaucoma"
4/2015: ASCRS Annual Meeting, Innovators Symposium Speaker, "Cell Therapies from the Lab to the Clinic"
4/2015: Washington University Department of Ophthalmology, Vision Science Seminar Speaker, "Regenerative Ophthalmology, Bench to Bedside"
5/2015: ARVO, Denver, CO, Invited Speaker: "Retinal Ganglion Cell Axon Regeneration"; "Influence of Age on Regenerative Potential in Optic Neuropathies"
6/2015: SoCal Stem Cell Consortium, Invited Speaker: "Retinal Ganglion Cell Differentiation and Transplantation"
6/2015: USC Eye Institute 40th Anniversary Symposium, Invited Speaker, "Bringing Regenerative Therapies from the Retina to the Optic Nerve"
6/2015: Fox Center for Regenerative Ophthalmology, University of Pittsburgh, Invited Speaker, "Moving Cell Therapy towards Clinical Application"
7/2015: ISOPT, Berlin, Invited Speaker, "Neuroregeneration in non-glaucomatous optic neuropathies"
8/2015: Nantucket Glaucoma, Invited Speaker, "Rho kinase inhibition: front of the eye AND back of the eye"
9/2015: *Society for Heed Fellows Resident Mentorship Retreat, Chicago, Invited Faculty:* "How to write NIH grants"
11/2015: Zongshan Ophthalmic Center 50th Anniversary, Ocular Stem Cell Forum, Invited Faculty, "Differentiation and Transplantation of Retinal Ganglion Cells"
11/2015: FQRS 21st Vision Health Research Network Annual Meeting, Quebec City, Keynote Speaker, "Differentiation and Transplantation of Retinal Ganglion Cells"
12/2015: Case Western Reserve University Department of Neurosciences and Department of Ophthalmology and Visual Sciences, Invited Speaker, "Optic Nerve Regeneration: Connecting Intrinsic and Extrinsic Regulation"
12/2015: Department of Developmental and Regenerative Biology, Icahn School of Medicine at Mount Sinai, Seminar Speaker, "Differentiation and Transplantation of Retinal Ganglion Cells"
1/2016: UC Berkeley School of Optometry Oxyopia Seminar, "Cell Therapy for Glaucoma"
1/2016: Hawaiian Eye, Hawai'I, Comprehensive Program, "Optic Nerve Regeneration, Bench to Bedside"; *Nursing Program,* "Stem Cells for Glaucoma"
2/2016: Houston College of Optometry, Invited Speaker, "Optic Nerve Regeneration: Connecting Intrinsic and Extrinsic Regulation"
3/2016: American Glaucoma Society, Fort Lauderdale, FL, Invited speaker, "Topical Administration of a ROCK/NET Inhibitor Promotes Retinal Ganglion Cell Survival and Axon Regeneration"
4/2016: Columbia University Florence Epstein Teicher Lectureship, "Regenerative Ophthalmology, Bench to Bedside"
4/2016: NEI Audacious Goals Workshop, Seattle, WA, Invited faculty
5/2016: ARVO, Seattle, WA, Invited Lectures, in 2016 China - ARVO Networking Forum, "Optic nerve restoration: Bench to bedside", *in Clinician-Scientist Forum: How to Become a Successful Clinician-Scientist,* "Career Development Tips for the Clinician-Scientist", *and in SIG, Integration in stem cell therapy – a challenge and a hope for vision,* "Retinal Ganglion Cell Differentiation and Transplantation"
5/2016: University of Michigan, Taubman Lecture and Kellogg Eye Center Grand Rounds, "Stem Cells for Glaucoma" *and* "Optic Nerve Regeneration and Vision Restoration: Connecting Intrinsic and Extrinsic Regulation"
6/2016: Institute de la Vision, Paris, Invited Lecture, "Cyclic AMP Signaling in RGC Survival and Regeneration"
6/2016: Fox Center for Regenerative Ophthalmology, University of Pittsburgh, Invited Speaker, "Optic Nerve Regeneration and Vision Restoration: Connecting Intrinsic and Extrinsic Regulation"
8/2016: FASEB Conference on KLF Biology, Keynote Speaker, "Axon Regeneration: Connecting Intrinsic and Extrinsic Regulation"
9/2016: Cambridge Ophthalmological Association, Invited faculty, "Stimulating RGC Regeneration"
9/2016: Heed Resident Retreat, Chicago, Invited faculty
9/2016: UC Berkeley Sheldon Golden Conference, Invited faculty for COE course, "The Future of Glaucoma Medical Therapy" and "The Future of Glaucoma Surgical Therapy"
10/2016: Joint Conference, Neuroprotection in the Visual System, Hospital Gemelli, Rome, Keynote Speaker, "Biomarkers for Glaucoma and Pathways to Neuroprotection"
10/2016: Oklahoma Department of Ophthalmology, "Stem Cells for Glaucoma: Differentiation and Circuit Integration"
10/2016: AAO Glaucoma Subspecialty Day, Chicago, Invited Speaker, "Neuroprotection"
10/2016: AAO Annual Meeting, Chicago, Invited Speaker, "Corneal Endothelial Cells: Biology and Transplantation"

10/2016: VisionNYC, Invited Speaker, "Integrating a Developing Neuron into an Adult Circuit"
1/2017: Hawaiian Eye, Hawai'I, Comprehensive Program, "Optic Nerve Regeneration, Bench to Bedside"; "Stem Cells for Glaucoma"
1/2017: International Society for Stem Cell Research, Nucleus Forum, Berkeley, CA, "Stem Cells in Ophthalmology"
2/2017: Center for Definitive and Curative Medicine, Stanford, "Novel Corneal Cell Transplantation Approaches"
2/2017: Glaucoma360 New Horizons, San Francisco, Invited Speaker, "Update on Biomarkers for Glaucoma"
3/2017: MEEI Military Vision Conference, Invited Speaker, "Optic Nerve Regeneration, Bench to Clinic"

Upcoming lectures
5/2017: ARVO Course, Translational Approaches to Stem Cell Therapies
5/2017: ARVO NEI Town Hall Meeting, Stem Cells
5/2017: ARVO SIG, Optic Nerve Regeneration
6/2017: MEEI Distinguished Lecturer
6/2017: NY Glaucoma Society, Invited Speaker

HUMAN CLINICAL TRIALS under my direction/co-direction
IRB 20060229: PI, "Amblyopia: Structural Maintenance and Critical Period Plasticity" – prospective clinical trial funded by the Dana Foundation and Research to Prevent Blindness Walt and Lilly Disney Award
IRB 20060251: co-I, "Molecular Genetic Approach to Inherited Eye Diseases" – Byron Lam, PI
IRB 20060313: PI, "Genetics of Ophthalmic Disease" – closed; merged with protocol IRB 20060251
IRB 20060230: PI, "Retinal Cell Culture: Survival and Regeneration" – prospective generation of human-derived retinal stem cells
IRB 20080992: PI, "Corneal Endothelial Dysfunction: Retrospective Review" – chart review
IRB (VA): co-I (with Ninel Gregori, William Prunty), "Treatment of Diabetic Retinopathy" – chart review
NCT00981435: PI, "Steroids After Laser Trabeculoplasty (SALT) Trial: Effect of Anti-Inflammatory Treatment on the Efficacy of SLT" – prospective randomized, controlled trial
NCT01408472: Sponsor-Investigator, PI, "NT-501 CNTF Implant for Glaucoma: Safety, Neuroprotection and Neuroenhancement" – prospective phase I trial of a surgical implant; I wrote IND for FDA (approved);
IRB 20090300: Sponsor-Investigator, PI, "CNTF Implant for Ischemic Optic Neuropathy: A Phase I Study" – prospective phase I trial of a surgical implant; I wrote IND for FDA (approved);
IRB 20110094: PI, "The role of retinal nerve fiber layer optical coherence tomography data to predict future visual field loss in patients with glaucoma" – chart review
141794: PI, "Adaptive Optics Imaging in Ophthalmology" – prospective technology and biomarker development
141399: PI, "Iridocorneal Angle Evaluation" – comparison of imaging technologies for clinical utility
NCT02855450: PI, "Study to Evaluate Safety and Efficacy of rhNGF Eye Drops Solution Versus Vehicle in Patients With Glaucoma (NGF-Glaucoma)" – prospective phase II trial of a surgical implant; I wrote IND for FDA (approved; expected start date 3/2017);
NCT02862938: Sponsor-Investigator, PI, "Study of NT-501 Encapsulated Cell Therapy for Glaucoma Neuroprotection and Vision Restoration" – prospective phase II trial of a surgical implant; I wrote IND for FDA (started enrollment 2016);

GRANT REVIEW
1997-present: Review of competitive grants for the Paralyzed Veterans of America, the US Army Medical Research and Materiel Command (USAMRMC), the Hong Kong Science Ministry, and the Medical Research Council (South Africa).
2008-2009: Ad hoc member, NIH Center for Scientific Review panel, Anterior Eye Disease (AED)
2009-present: Scientific Advisory Board, The Glaucoma Foundation
2009: Ad hoc member, NIH Center for Scientific Review panel, Cell Biology CB-N (58).
2010-present: Ad hoc member, Wings For Life Foundation grant review.
2010-present: Ad hoc member, Wellcome Trust grant review (UK).
2010: Ad hoc member, NIH CSR panel, ZRG BDCN (A55) RC4
2011: Ad hoc member, NIH CSR panel, AED
2011: Ad hoc member, NIH CSR panel, SYN
2012: Ad hoc member, NIH CSR panel, ZRG1 BBBP-E (53) R (NIH Director's Early Independence Award)
2012: Ad hoc member, NEI "Audacious Goals Award" (Review/ratings by mail)
2013: Ad hoc member, NEI "Audacious Goals Award" final review panel at NIH
2013: Ad hoc member, NIH CSR panel, NIGMS special emphasis panel ZGM1 CBB-0 (MI)

2013: Ad hoc member, NIH CSR panel, NOMD
2013-present: Member, NIH/CSR panel, DVPS
2013-2016: Scientific Advisory Panel, Research to Prevent Blindness, Inc.
2014: Scientific Review Committee, BrightFocus Foundation.
2014-present: Scientific Advisory Committee, E. Matilda Ziegler Foundation.
2015-present: Member, VA Merit Review panel, Neurobiology F section (NURF)

VI. TEACHING

Teaching Awards Received:
2004: Santa Clara Valley Medical Center: as an intern, nominated for Best Housestaff Teaching Award
2015: Nominated for residents' Clinical Teaching award, Shiley Eye Center, UCSD

Teaching Specialization (courses taught):
2005-2012: University of Miami Advanced Topics in Developmental Biology (MDB652)
2009-2012: Resident Lectures, Bascom Palmer Eye Institute
Two lectures on Glaucoma Pathophysiology and New Frontiers in Glaucoma Treatment
One lecture on Corneal Endothelial Cells
Staffing resident cataract surgery, 1st Mondays
Taught lectures and discussions on Eye Development, Axon Growth, Regeneration
2009-2012: University of Miami Program in Biomedical Sciences PIBS 601/602 Course Director
This is the major course series (9 hours/week) for the 1st year graduate students in the fall curriculum
2013-2015: Resident and Fellow Lectures, Shiley Eye Center/UCSD
Basic and Clinical Science lectures (4-6/year) on glaucoma and related topics
Staffing resident and fellow cataract and glaucoma clinical and surgical education
Faculty at Shiley Eye Center Grand Rounds, weekly
2012-present: Heed Resident Retreat Faculty
Mentorship and lecture to top 20-25 national residents selected for academic promise

Thesis and Dissertation Advising/Post-doctoral student supervision
Postdoctoral and Research Fellows (my laboratory: U Miami 2004-2013; UCSD 2013-present)
(Past)
2005-07: Mauris DeSilva, postdoctoral fellow (PhD: David Odde, U Minn). Current position (2014): Assistant Prof. of Research, Univ. Texas San Antonio Dept of Biomedical Engineering, and Principal Investigator, Naval Medical Research Institute, San Antonio, TX
2005-08: Monica Vanessa Almeida, postdoctoral fellow. Current position (2010): Resident in Family Medicine, San Juan, PR
2005-09: Yuanli Duan, postdoctoral fellow (PhD: Ken Muller, U Miami). Current position (2009-12): Resident in Psychiatry, Nassau, NY
2007-10: Ying Hu, postdoctoral fellow (PhD: Alan Harvey, U Western Australia.) Current position (2010-15): Scientist, Regeneron Pharmaceuticals, Tarrytown, NY.
2008-09: Sabri Raza, clinical research fellow. Current position (2010): finishing ophth. residency in Ankara, Turkey
2008-10: Marlon Parra, clinical research coordinator. Current position (2010): clin. res. coord., Ft. Lauderdale, FL
2009-13: Michael Steketee, postdoctoral fellow (PhD: Kathryn Tosney, U Michigan; now tenure-track Assistant Professor at UPMC Ophthalmology/McGowan Institute; studied signaling endosomes and mitochondrial dynamics in growth cones and axon growth).
2010-11: Narsis Daftarian, Visiting Scholar (MD; from Tehran; VR-trained; studying retinal stem cells).
2011-12: Bo Qu, MD, Visiting Scholar (now Associate Professor, Ophthalmology, China Medical University 4th Affiliated Hospital, Shen Yang, Liao Ning Province, China; studying cell transplantation to retina)
2011-13: Enrique Salero, PhD, Research Assistant Professor (PhD: Center of Molecular Biology Severo Ochoa, Madrid; postdoctoral fellowships with Mary E Hatten and Sally Temple; studying RPE/stem cells; now Research assistant professor at University of Miami/Bascom Palmer Eye Institute)
2011-13: Keiichiro Iwao, MD, PhD, Visiting Scholar (from Saga University/Masaru Inatani, Saga, Japan; studying optic nerve regeneration; now Assistant Professor of Ophthalmology, Kumamoto University, Japan).
2011-13: Daniel Wolfgang Pita-Thomas, postdoctoral fellow (PhD: Manuel Nieto-Sampedro, Cajal Institute; now a postdoc at Washington Univ. St. Louis with Valeria Cavalli).
2012-13: Karen Alvarez-Delfin, PhD, postdoctoral fellow (PhD with James Fadool at FSU; brief postdoc with Abby Hackam; studying corneal endothelial cells; now full-time teaching faculty at Miami-Dade college)

2012-13: Shomoukh AlShamekh, Visiting Scholar (MD; King Saud University; studying iPSCs; now applying to residency in ophthalmology).
2012-14: Melina Morkin, MD, postdoctoral fellow (MD from Argentina; 2014 now in ophthalmology residency at Tufts)
2013-14: Fang Jihua, MD, PhD, visiting scholar (Vice Director, Department of Ophthalmology, First Hospital of Jingzhou and Associate Professor, Yangtze University School of Medicine; 2015: Dean of Department of Ophthalmology, First Hospital of Changsha)
2010-15: Karl Kador, postdoctoral fellow (PhD: Anu Subramanian, U Nebraska Lincoln; research scientist in Dublin, Ireland; 2016: U Missouri Kansas City, assistant professor).
2012-15: Yan Wang, MD, PhD, postdoctoral fellow (completed thesis with me while getting PhD from Fudan University, Shanghai; mentors at Fudan were Drs. Sun and Mo)
2013-15: Xiong "Sean" Zhang, PhD, postdoctoral fellow (PhD: Thomas Smithgall, UPMC; Scientist at Allele Biotech, San Diego; 2016 McKinsey Consulting)
2013-15: Alena Bartakova, MD, postdoctoral fellow (Czech; Medical school in Brussels; prior fellowship Dwayne Stupack at UCSD; now postdoc with Eric Nudleman, UCSD)
2013-15: Travis Stiles, PhD, postdoctoral fellow (PhD: Steven Gonias, UCSD; now CEO of Novoron)
(Current)
2014-: Joana Galvao, PhD, postdoctoral fellow (PhD 2014: Fran Cordeiro, University College London)
2014-: Xin Xia, MD, PhD, postdoctoral fellow
2014-: Evan Cameron, PhD, postdoctoral fellow (PhD 2014: Phyllis R. Robinson, University of Maryland)
2016-: Varun Kumar, PhD, postdoctoral fellow (PhD 2016: Kent State)
2016-: Kun-che Chang, PhD, postdoctoral fellow (PhD 2016: Mark Petrash, U Colorado)

Graduate students (my laboratory: U Miami 2004-2013; UCSD 2013-2015; Stanford 2015-present)
(Past)
2005-09: Noelia J Kunzevitzky: UM Cell Biology program PhD student. Then post-doc with Nick Tsinoremas (CCS at UM); now Chief Operations Officer at a startup biotech company.
2005-10: Darcie L Moore: UM Neurosciences program PhD student; then postdoctoral training with Sebastian Jessberger, Inst. Cell Biol, ETH Zurich; won Gruber Award from SFN in 2016; now Assistant Professor of Stem Cell and Regenerative Medicine, U Wisconsin, Madison.
2005-12: Raul G Corredor: UM Neurosciences program PhD student. Now Assistant Prof of psychiatry at FIU.
2006-13: Jonathan Yoni Hertz: UM Neurosciences program PhD student; then Visiting Assistant Prof at FAU; now director of glaucoma medical sciences liaison program at Bausch and Lomb.
2009-14: Akintomide Tommy Apara: UM MD/PhD, neurosciences PhD student; now ophth residency at UCSD.
2009-13: Ephraim Trakhtenberg: UM Neurosciences PhD student; then a postdoc with Larry Benowitz, Harvard; now Assistant Professor of Neuroscience at U Conn.
2010-12: Yan Wang: Visiting Scholar/PhD Student from Fudan University, Shanghai; mentors there are Drs. Sun and Mo; then a postdoc with me through 2015; now recovering from cancer.
2011-13: Kristina Russano: Biomedical Engineering MS student. Now continuing as lab manager.
2012-13: Haneen Alsehli: Barry University Biomedical Science MS student, now in graduate school for PhD.
2010-15: Praseeda Venugopalan: UM Neurosciences program PhD student; co-Mentor Ken Muller; Visiting Graduate Scholar at UCSD; now at Genentech.
(Current)
2012-: Alex Kreymerman (UM Neurosciences program PhD student; Visiting Graduate Scholar at UCSD).
2013-: Geoffrey Weiner (UCSD MSTP/Neurosciences program; co-Mentor Rich Daneman).
2014-: Sahil Shah (UCSD MSTP/Neurosciences program; co-Mentor Holly Cline).

Other Graduate Student Thesis Committees (U Miami 2004-2013; UCSD 2013-present)
2005-07: Naomi Rosenkrantz (UM Pharmacology program – Steve Roper Lab).
2005-09: William Buchser (UM Neurosciences program – Vance Lemmon Lab).
2006-08: Derek Rosensweig (UM Pharmacology program – Vlad Slepak Lab).
2006-08: Denise Abulafia (UM Developmental Cell Biology program; Committee Chairman – Dalton Dietrich Lab).
2007-12: Michael Sinclair (UM Neurosciences program – Nirupa Chaudhari Lab).
2008: Ying Wang (UM Developmental Cell Biology program – M. E. Fini Lab).
2010-11: Nicole Carlson (UM Neurosciences program – Michael Kim Lab).
2011-12: Nima Sharafai (UM MD/PhD Neurosciences program – Akira Chiba Lab).
2013-15: Panid Sharifnia (UCSD MSTP/Neurosciences PhD program – Yishi Jin lab).
2014: Suzanne Rohrback (Biomedical Sciences PhD program – Hemal Patel lab).

2014-15: Meghan Barron (Biomedical Sciences PhD Program – Martin Tresguerres lab).
2015-16: Alexander Heitman (Neurosciences/Psychology PhD program – Chichilnisky then MacLeod labs).

UCSD – Undergraduate Student, Medical Student and Resident Laboratory Mentoring
2013-14: Abigail Huang (Shiley Eye Center Ophthalmology resident).
2013-15: Chris Douglas (UCSD undergraduate).
2013-15: Daisy Ho (UCSD undergraduate).
2013-14: Lauren Boe (UCSD undergraduate).
2013-15: Lior Schenk (UCSD undergraduate).
2013-15: Monisha Malek (UCSD undergraduate).
2013-16: Rajul Lodhavia (UCSD undergraduate).
2013-15: Tu Nguyen (UCSD undergraduate).
2013-15: Tammy Tran (UCSD undergraduate).
2013-14: Roman Fajardo (Shiley Eye Center Ophthalmology Resident).
2013-14: Lynhea Anicete (UCSD undergraduate).
2014-15: Kellie Satterfield (UCSD Medical Student).
2014-15: Alan Sang (UCSD undergraduate).
2014-15: Catalina Sun (UCSD undergraduate).
2014-15: David Buickians (UCSD undergraduate).
2014-15: Kevin Tenerelli (CSU San Marcos undergraduate; CIRM intern)
2014: Usha Kumar (Shiley Eye Center Ophthalmology Resident).
2015: Justin D'Avanzo (UCLA undergraduate).
2015: Sandra Shu (UCSD undergraduate).

UNIVERSITY OF MIAMI – My laboratory, Undergraduate Theses
2005: Undergraduate Honors Thesis (Carly Moerdyk). Med School at NYU. Neurology residency at UM.
2007: Undergraduate Honors Thesis (Thouhid Khan).
2008: Undergraduate Honors Thesis (Nima Sharifai). MD/PhD program at University of Miami.
2008: Undergraduate Honors Thesis (John Thurston Jr.). Med School at Johns Hopkins.
2010: Undergraduate Honors Thesis (Ananth Sastry). Med School at University of Miami.
2010: Undergraduate Honors Thesis (Timothy Boyce).
2012: Undergraduate Honors Thesis (Dale Brown).
2013: Undergraduate Honors Thesis (Stephanie Fernandez).
2014: Undergraduate Honors Thesis (Daniel Valenzuela).

STANFORD UNIVERSITY
1998: Supervised a Brown University undergraduate for a summer project (Cora Stryker).
1999: Supervised a Columbia University undergraduate for a summer project (Adriana Galvan).
1999-2001: Supervised a Stanford University undergraduate over the course of a 2-year project that culminated in her honors thesis and co-publication (Ying Hua; then completed Stanford Med).
2000: Supervised a Brown University undergraduate for a summer project; culminated with co-publication (Juan S. Espinosa; completed PhD; now a postdoc at UCSF).
2000-2003: Supervised a Stanford University post-baccalaureate; culminated with co-publication (MEC).
2001-2002: Supervised a Developmental Biology Program graduate student's rotation project; expected to culminate with co-publication (Richard Daneman; now faculty at UCSD).
2001-2004: Supervised an MSTP/Neurosciences Program graduate student's project; culminated with co-publication (Mauricio E. Vargas; now at Jules Stein EyeStar ophthalmology program).
2002-2003: Supervised a Neurosciences Program graduate student's rotation project (ASV).
2003-2004: Supervised a Stanford University post-baccalaureate; culminated with co-publication (Jack T. Wang; now finishing MD/PhD at Stanford).

VII. SERVICE

Community Activities
2004-09: UM Department of Community Service Health Fairs: occasional participant
2008-present: The Glaucoma Foundation, New York, NY: Scientific Advisory Board, member
2010-13: World Glaucoma Assn./World Glaucoma Patient Assn.: Florida rep. and coordinator for World Glaucoma Week
2014: BrightFocus Foundation. Scientific Review Committee

2013-2016: Research to Prevent Blindness, Scientific advisory board member
2014-present: National Eye Institute Audacious Goals Initiative Workshop on Regenerating the Optic Nerve, Co-Chair and ongoing contributor
2014-present: E. Matilda Ziegler Foundation: Scientific Advisory Board, member
2014-present: American Glaucoma Society, Research Committee member
2016-present: Gilbert Family Neurofibromatosis Institute, External Advisory Board member
2016: National Eye Institute Audacious Goals Initiative advisory meeting, Clinical Application of Stem Cell Therapies for Human Eye Disease

Stanford Committee and Administrative Responsibilities
2015-present: Director and Chair of the Byers Eye Institute/Department of Ophthalmology
2015-present: Council of Clinical Chairs
2015-present: Medical Executive Committee
2015-present: Perioperative Services Medical Committee
2016-2017: Overlapping Surgery Committee
2016-present: Stanford Neurosciences Institute, Senior Advisory Council

UCSD Committee and Administrative Responsibilities
2012-2015: Director of Research, Shiley Eye Center/Department of Ophthalmology: establish and administer Vision Research Seminar series and other special seminars; assist the Chairman with research strategy and faculty recruitment; develop faculty research programs; prepare annual research reports; address departmental space allocations; initiate Masters Degree in Ophthalmology;
2012-2015: Leadership Council member, Shiley Eye Center/Department of Ophthalmology: regular meetings; advise the Chairman on issues of departmental steering
2013-2015: Neurosciences Program Minor Proposition Committee
2013-2015: EMR committee, member, Shiley Eye Center/Department of Ophthalmology
2013-2015: Neurosciences Program Faculty; participate in program retreats, proposal and thesis committees, advising
2014-2015: UCSD Health Sciences Research Council, member: the Research Council is tasked with advising the Chancellor and offering solutions on issues germane to research on the health sciences/medical campus.
2014-2015: UCSD Animal Care Program LBR users group committee, member and chair
2014-2015: Neuroscience Program student advisor: mentor students on how to navigate course work, lab rotations, or other events that arise during their first year
2014-2015: UCSD Stem Cell Task Force: charged with creation of a national-class, full-service stem cell processing lab to be located at the Center for Advanced Laboratory Medicine (CALM), including developing the business case including timelines, resource requirements, implementation and operational plans and leadership requirements.

University of Miami Committee and Administrative Responsibilities
2004-06: Search Committee Member, Directorship of the McKnight Center for Age-Related Memory Loss
2005-06: Search Committee Member, Faculty position in Pharmacology
2006-07: Neurosciences Curriculum Committee Member
2007-08: Unified Graduate Admissions Implementation Committee, Member
Charge: To evaluate cross-medical school graduate/PhD programs in biomedical sciences.
Outcome: We proposed changing to a unified admissions system which was accepted by the Dean in the Fall, 2007, for implementation by Fall, 2009.
2008-12: Unified Program in Biomedical Sciences Curriculum Committee, Chairman
Charge: To completely recreate (completed 6/2009) and subsequently administer (ongoing) the medical school graduate/PhD umbrella curriculum for the new Program in Biomedical Sciences
2009: Bascom Palmer Eye Institute Compensation Committee, Member
2009-12: Program in Biomedical Sciences PIBS 601/602 Course Director
This is the major course series (9 hours/week) for the 1st year graduate students in the fall curriculum
2011-12: University Research Council, member
Chartered to promote research by faculty and students, and refer specific policy recommendations to the Executive Vice President and Provost, in four categories: 1, Allocation of Funds; 2, Research Policy; 3, Research Planning; 4, Communication. Natural Sciences and Engineering subcommittee, member.
2011-13: MD-PhD Program Council, member (oversight committee)
2011-13: MD-PhD Program student mentor (regular meetings to counsel MD-PhD students during transition to PhD years)