

## Literature Library

Title	Lead Author	Publication	Institution(s)	Publication Type
Novel Types of Small RNA Exhibit Sequence- and Target-dependent Angiogenesis Suppression Without Activation of Toll-like Receptor 3 in an Age-related Macular Degeneration (AMD) Mouse Model	Masakatsu Takanashi, Katsuko Sudo, Shinobu Ueda, Shin-Ichiro Ohno, Yuko Yamada, Yasuhiro Osakabe, Hiroshi Goto, Yoshimichi Matsunaga, Akio Ishikawa, Yoshihiko Usui and Masahiko Kuroda	Molecular Therapy—Nucleic Acids (2015) 4, e258	Department of Molecular Pathology, Animal Research Center, Department of Ophthalmology, Tokyo Medical University, Tokyo, Japan	Peer Reviewed
Increased susceptibility to fundus camera-delivered light-induced retinal degeneration in mice deficient in oxidative stress response proteins	Yi Ding, Bogale Aredo, Xin Zhong, Cynthia X. Zhao, Rafael L. Ufret-Vincenty	Experimental Eye Research 159 (2017) 58-68	Department of Ophthalmology, UT Southwestern Medical Center, Dallas, TX	Peer Reviewed
Fundus Camera-Delivered Light-Induced Retinal Degeneration in Mice with the RPE65 Leu450Met Variant is Associated with Oxidative Stress and Apoptosis	Xin Zhong, Bogale Aredo, Yi Ding, Kaiyan Zhang, Cynthia X. Zhao, and Rafael L. Ufret-Vincenty	Invest Ophthalmol Vis Sci. 2016;57:5558–5567	Department of Ophthalmology, University of Texas Southwestern Medical Center, Dallas, Texas	Peer Reviewed
Non-amyloidogenic processing of amyloid beta precursor protein is associated with retinal function improvement in aging male APP <sup>swe</sup> /PS1 $\Delta$ E9 mice	Sandrine Joly, Simon Lamoureux, Vincent Pernet	Neurobiology of Aging (2017)	CUO-Recherche, Université Laval Centre de recherche du CHU de Québec-Pavillon	Peer Reviewed
The natural retinoprotectant chrysophanol attenuated photoreceptor cell apoptosis in an N-methyl-N-nitrosourea-induced mouse model of retinal degeneration	Fan-Li Lin, Cheng-Hui Lin, Jau-Der Ho, Jing-Lun Yen, Hung-Ming Chang, George C. Y. Chiou, Yu-Wen Cheng, & George Hsiao	Scientific Reports 7:41086	Graduate Institute of Medical Sciences and Department of Pharmacology, School of Medicine, College of Medicine. School of Pharmacy, College of Pharmacy. Department of Ophthalmology. Department of Anatomy, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan. Department of Neuroscience and Experimental Therapeutics and Institute of Ocular Pharmacology, College of Medicine, Texas A&M Health Science Center	Peer Reviewed

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Mutations in CTNNA1 cause butterfly-shaped pigment dystrophy and perturbed retinal pigment epithelium integrity	Nicole T M Saksens, Mark P Krebs, Frederieke E Schoenmaker-Koller, Wanda Hicks, Minzhong Yu, Lanying Shi, Lucy Rowe, Gayle B Collin, Jeremy R Charette, Stef J Letteboer, Kornelia Neveling, Tamara W van Moorsel, Sleiman Abu-Ltaif, Elfride De Baere, Sophie Walraedt, Sandro Banfi, Francesca Simonelli, Frans P M Cremers, Camiel J F Boon, Ronald Roepman, Bart P Leroy, Neal S Peachey, Carel B Hoyng, Patsy M Nishina, & Anneke I den Hollander	Nature Genetics, Volume 48, Number 2, 2016	Department of Ophthalmology, Radboud University Medical Center. The Jackson Laboratory. Department of Ophthalmic Research, Cole Eye Institute, Cleveland Clinic Foundation. Department of Ophthalmology, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. Department of Human Genetics, Radboud University Medical Center. Department of Ophthalmology, Ghent University Hospital. Center for Medical Genetics, Ghent University Hospital. Telethon Institute of Genetics and Medicine, Pozzuoli, Italy. Department of Biochemistry, Biophysics and General Pathology, Second University of Naples. Eye Clinic, Multidisciplinary Department of Medical, Surgical and Dental Sciences, Second University of Naples. Department of Ophthalmology, Leiden University Medical Center. Division of Ophthalmology, The Children's Hospital of Ophthalmology, Philadelphia. Center for Cellular and Molecular Therapeutics, The Children's Hospital of Ophthalmology. Research Service, Louis Stokes Cleveland Veterans Affairs Medical Center.	Peer Reviewed
Longitudinal live imaging of retinal $\alpha$ -synuclein: GFP deposits in a transgenic mouse model of Parkinson's Disease/Dementia with Lewy Bodies	Diana L. Price, Edward Rockenstein, Michael Mante, Anthony Adame, Cassia Overk, Brian Spencer, Karen X. Duong-Polk3, Douglas Bonhaus, James Lindsey, & Eliezer Masliah	Scientific Reports, 6:29523. (2016).	Neuropore Therapies, Inc., San Diego, USA. Department of Neurosciences, University of California, La Jolla. Department of Ophthalmology, University of California, La Jolla. Department of Pathology, University of California, La Jolla, CA	Peer Reviewed
Multimodal analysis of ocular inflammation using the endotoxin-induced uveitis mouse model	Colin J. Chu, Peter J. Gardner, David A. Copland, Sidath E. Liyanage, Anai Gonzalez-Cordero, Sophia-Martha Kleine Holthaus, Ulrich F. O. Luhmann, Alexander J. Smith, Robin R. Ali, and Andrew D. Dick	Disease Models & Mechanisms, 9(4), 473-81	School of Clinical Sciences, University of Bristol, UK. Institute of Ophthalmology, London, UK. Roche Pharmaceutical Research and Early Development, Ophthalmology Discovery & Biomarkers, Roche Innovation Center Basel, F. Hoffmann-La Roche Ltd, Basel, Switzerland. NIHR Biomedical Research Centre for Ophthalmology at Moorfields Eye Hospital and UCL Institute of Ophthalmology, London, UK.	Peer Reviewed

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Optimization of an Image-Guided Laser-Induced Choroidal Neovascularization Model in Mice	Yan Gong, Jie Li, Ye Sun, Zhongjie Fu, Chi-Hsiu Liu, Lucy Evans, Katherine Tian, Nicholas Saba, Thomas Fredrick, Peyton Morss, Jing Chen, Lois E. H. Smith	PLoS ONE 10(7): e0132643	Department of Ophthalmology, Boston Children's Hospital, Harvard Medical School, Boston, Massachusetts, United States of America, Department of Ophthalmology, Sichuan Provincial Hospital and Sichuan Academy of Medical Science, Chengdu, Sichuan, People's Republic of China	Peer Reviewed
Progressive Degeneration of Retinal and Superior Collicular Functions in Mice with Sustained Ocular Hypertension	Hui Chen, Yan Zhao, Mingna Liu, Liang Feng, Zhen Puyang, Ji Yi, Peiji Liang, Hao F. Zhang, Jianhua Cang, John B. Troy, and Xiaorong Liu	Invest Ophthalmol Vis Sci. 2015 Feb 26;56(3):1971-84	Department of Ophthalmology, Feinberg School of Medicine, Northwestern University, Chicago. Department of Biomedical Engineering, Robert R. McCormick School of Engineering and Applied Science, Northwestern University, Evanston, Illinois. Department of Neurobiology, Weinberg College of Arts and Sciences, Northwestern University, Evanston, Illinois. School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China	Peer Reviewed
Overexpression of Brain-Derived Neurotrophic Factor Protects Large Retinal Ganglion Cells After Optic Nerve Crush in Mice	Feng L, Puyang Z, Chen H, Liang P, Troy JB, Liu X	eNeuro. 2017 Jan 17;4(1). pii: ENEURO.0331-16.2016	Department of Ophthalmology, Feinberg School of Medicine, Northwestern University, Chicago, IL, USA, Department of Neurobiology, Weinberg College of Arts and Sciences, Northwestern University, Evanston, IL, USA, Department of Biomedical Engineering, Robert R. McCormick School of Engineering and Applied Science, Northwestern University, Evanston, IL, USA, and School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China	Peer Reviewed
Retinal Ganglion Cell Loss is Delayed Following Optic Nerve Crush in NLRP3 Knockout Mice	Zhen Puyang, Liang Feng, Hui Chen, Peiji Liang, John B. Troy & Xiaorong Liu	Sci Rep. 2016 Feb 19;6:20998	School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China. Department of Biomedical Engineering, Robert R. McCormick School of Engineering and Applied Science, Northwestern University, Evanston, Illinois. Department of Ophthalmology, Feinberg School of Medicine, Northwestern University, Chicago, Illinois. Department of Neurobiology, Weinberg College of Arts and Sciences, Northwestern University, Evanston, Illinois	Peer Reviewed

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Title	Lead Author	Publication	Institution(s)	Publication Type
Subtype-dependent Morphological and Functional Degeneration of Retinal Ganglion Cells in Mouse Models of Experimental Glaucoma	Zhen Puyang, Hui Chen, Xiaorong Liu	J Nat Sci. 2015 May 1;1(5)	Department of Ophthalmology, Feinberg School of Medicine, Northwestern University, Chicago, Illinois. School of Biomedical Engineering, Shanghai Jiao Tong University, Shanghai, China. Department of Neurobiology, Weinberg College of Arts and Sciences, Northwestern University, Evanston, Illinois	Peer Reviewed
Ursodeoxycholic Acid Attenuates Endoplasmic Reticulum Stress-Related Retinal Pericyte Loss in Streptozotocin-Induced Diabetic Mice	Yoo-Ri Chung, Jeong A. Choi, Jae-Young Koh, and Young Hee Yoon	J Diabetes Res. 2017;2017:1763292	Department of Ophthalmology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea Neural Injury Research Center, Asan Institute for Life Sciences, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea Department of Neurology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea	Peer Reviewed
The anti-ALS drug riluzole attenuates pericyte loss in the diabetic retinopathy of streptozotocin-treated mice	Jeong A. Choi, Yoo-Ri Chung, Hye-Ran Byun, Hwangseo Park, Jae-Young Koh, Young Hee Yoon	Toxicol Appl Pharmacol. 2017 Jan 15;315:80-89	Neural Injury Research Center, Asan Institute for Life Sciences, University of Ulsan College of Medicine, Seoul, Republic of Korea Department of Ophthalmology, University of Ulsan College of Medicine, Seoul, Republic of Korea Department of Neurology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea Department of Bioscience and Biotechnology, Sejong University, Seoul, Republic of Korea	Peer Reviewed
Effects of kallidinogenase on retinal edema and size of non-perfused areas in mice with retinal vein occlusion	Anri Nishinaka, Shinichiro Fuma, Yuki Inoue, Masamitsu Shimazawa, Hideaki Hara	J Pharmacol Sci. 2017 Jun;134(2):86-92	Molecular Pharmacology, Department of Biofunctional Evaluation, Gifu Pharmaceutical University, Gifu, Japan	Peer Reviewed

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Genome editing abrogates angiogenesis in vivo	Xionggao Huang, Guohong Zhou, Wenyi Wu, Yajian Duan, Gaoen Ma, Jingyuan Song, Ru Xiao, Luk Vandenberghe, Feng Zhang, Patricia A. D'Amore & Hetian Lei	Nat Commun. 2017 Jul 24;8(1):112	Schepens Eye Research Institute of Massachusetts Eye and Ear, Harvard Medical School, Boston, MA, USA. Department of Ophthalmology, Harvard Medical School, Boston, MA, USA. Hainan Eye Hospital, Haikou, Hainan Province, China. Shanxi Eye Hospital, Taiyuan, Shanxi Province, China. Department of Ophthalmology, Second Xiangya Hospital, Second Xiangya Hospital, Central South University, Changsha, Hunan Province, China. Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing, China. Broad Institute of the Massachusetts Institute of Technology and Harvard University, Cambridge	Peer Reviewed
Anti-inflammatory properties of shikonin contribute to improved early-stage diabetic retinopathy	Po-Lin Liao, Cheng-Hui Lin, Ching-Hao Li, Chi-Hao Tsai, Jau-Der Ho, George C. Y. Chiou, Jaw-Jou Kang, & Yu-Wen Cheng	Sci Rep. 2017 Mar 21;7:44985	Institute of Toxicology, College of Medicine, National Taiwan University, Taipei, Taiwan, ROC. School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan ROC. Department of Physiology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, ROC. Department of Pharmacology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, ROC. Department of Ophthalmology, Taipei Medical University Hospital, Taipei, Taiwan, ROC. Institute of Ocular Pharmacology, College of Medicine, Texas A&M Health Science Center, College Station, TX, USA.	Peer Reviewed
Interleukin-33 regulates tissue remodeling and inhibits angiogenesis in the eye	Sofia Theodoropoulou, David A Copland, Jian Liu, Jiahui Wu, Peter J Gardner, Ema Ozaki, Sarah L Doyle, Matthew Campbell, and Andrew D Dick	J Pathol. 2017 Jan;241(1):45-56	Academic Unit of Ophthalmology, School of Clinical Sciences, University of Bristol, Bristol, UK University College London–Institute of Ophthalmology, London, UK Department of Clinical Medicine, School of Medicine, Trinity College Dublin, Dublin, Ireland Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Ireland National Institute for Health Research (NIHR) Biomedical Research Centre at Moorfields Eye Hospital and University College London Institute of Ophthalmology, London, UK	Peer Reviewed

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A kind of rd1 mouse in C57BL/6J mice from crossing with a mutated Kunming mouse	Weiming Yan, Lu Yao, Wei Liu, Kai Sun, ZuoMing Zhang, Lei Zhang	Gene. 2017 Apr 5;607:9-15	Department of Clinical Medicine, Faculty of Aerospace Medicine, Key Laboratory of Aerospace Medicine of the National Education Ministry, The Fourth Military University, Xi'an, Shaanxi Province, China Medical Experiment Center, Shaanxi University of Chinese Medicine, Shiji Ave., Xi'an-Xianyang New Ecomic Zone, Xi'an, Shaanxi Province, China	Peer Reviewed
Amyloid $\beta$ peptides overexpression in retinal pigment epithelial cells via AAV-mediated gene transfer mimics AMD-like pathology in mice	Tuhina Prasad, Ping Zhu, Amrisha Verma, Paramita Chakrabarty, Awilda M. Rosario, Todd E. Golde, & Qihong Li	Sci Rep. 2017 Jun 12;7(1):3222	Department of Ophthalmology, University of Florida, Gainesville, Florida. 2Department of Neuroscience, Center for Translational Research in Neurodegenerative disease and McKnight Brain Institute, University of Florida, Gainesville, Florida	Peer Reviewed
Periodic Exposure to Smartphone-Mimic Low-Luminance Blue Light Induces Retina Damage Through Bcl-2/BAX-Dependent Apoptosis	Cheng-Hui Lin, Man-Ru Wu, Ching-Hao Li, Hui-Wen Cheng, Shih-Hsuan Huang, Chi-Hao Tsai, Fan-Li Lin, Jau-Der Ho, Jaw-Jou Kang, George Hsiao, and Yu-Wen Cheng	Toxicol Sci. 2017 May 1;157(1):196-210	School of Pharmacy, College of Pharmacy; Department of Pharmacology, School of Medicine, College of Medicine; Department of Physiology, School of Medicine, College of Medicine; Graduate Institute of Medical Sciences, College of Medicine, Taipei Medical University; Institute of Toxicology, College of Medicine, National Taiwan University; Department of Ophthalmology, Taipei Medical University Hospital; and Department of Ophthalmology, Taipei Medical University, Taipei, Taiwan	Peer Reviewed
SOCS3 in retinal neurons and glial cells suppresses VEGF signaling to prevent pathological neovascular growth	Smith, Lois E.H.	Science Signaling * (395), ra94. doi: 10.1126/scisignal.aaa8695 2015	Department of Ophthalmology, Harvard Medical School, Boston Children's Hospital, Boston, MA, USA	Peer Reviewed
Pigment epithelium-derived factor inhibits retinal microvascular dysfunction induced by 12/15-lipoxygenase-derived eicosanoids	Al-Shabraway, M	Biochimica et Biophysica Acta 1851(2015)290-298	Georgia Regents University, Augusta, GA, USA, Mansoura University, Egypt, Qatar University, Doha, Qatar.	Peer Reviewed

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A Chimeric Cfh Transgene Leads to Increased Retinal Oxidative Stress, Inflammation, and Accumulation of Activated Subretinal Microglia in Mice	Ufret-Vincenty, RL	Invest Ophthalmol Vis Sci. 2015;56:3427-3440. DOI:10.1167/iavs.14-16089	Department of Ophthalmology, UT Southwestern Medical Center, Dallas, Texas, United States	Peer reviewed
Chronic Ocular Hypertension Induced by Circumlimbal Suture in Rats	He, Zheng	Invest Ophthalmol Vis Sci. 2015;56:2811-2820. DOI:10.1167/iavs.14-16009	Department of Optometry and Vision Sciences, University of Melbourne, Parkville, Victoria, Australia	Peer reviewed
Retinal Ganglion Cell Loss and Mild Vasculopathy in Methylene Tetrahydrofolate Reductase (Mthfr)-Deficient Mice: A Model of Mild Hyperhomocysteinemia	Smith, S.B.	Invest Ophthalmol Vis Sci. 2015;56:2684-2695. DOI:10.1167/iavs.14-16190	Department of Cellular Biology and Anatomy, Department of Ophthalmology, and The James and Jean Culver Vision Discovery Institute at Georgia Regents University, Augusta, Georgia, United States	Peer reviewed
Progressive Degeneration of Retinal and Superior Collicular Functions in Mice With Sustained Ocular Hypertension	Liu, Xiaorong	Invest Ophthalmol Vis Sci. 2015;56:1971-1984. DOI:10.1167/iavs.14-15691	Department of Ophthalmology, Feinberg School of Medicine, Northwestern University, Chicago, Illinois, & Department of Neurobiology, Weinberg College of Arts and Sciences, Northwestern University, Evanston, Illinois, United States	Peer reviewed
Assessment of Retinal Function and Morphology in Aging Ccl2 Knockout Mice	Fletcher, EL	Invest Ophthalmol Vis Sci. 2015;56:1238-1252. DOI:10.1167/iavs.14-15334	Department of Anatomy and Neuroscience, University of Melbourne, Melbourne, Australia	Peer reviewed
Mthfr as a modifier of the retinal phenotype of Crb1 rd8/rd8 mice	Smith, S.	Experimental Eye Research 145 (2016) 164-172 doi: 10.1016/j.exer.2015.11.013	Department of Cellular Biology and Anatomy, Medical College of Georgia, Augusta University, Georgia, USA	Peer Reviewed
Tissue and urokinase plasminogen activators instigate the degeneration of retinal ganglion cells in a mouse model of glaucoma	Chintala, S.	Experimental Eye Research 143 (2016) 17-27 doi: 10.1016/j.exer.2014.10.003	Laboratory of Ophthalmic Neurobiology, Eye Research Institute of Oakland University, Minnesota, USA	Peer Reviewed

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Retinal Dystrophy and Optic Nerve Pathology in the Mouse Model of Mucopolipidosis IV	Slaugenhaupt, S.	American Journal of Pathology, Vol.186, No.1, January 2016 doi: 10.1016/j.ajpath.2015.09.017	Department of Neurology, Center for Human Genetic Research, Harvard Medical School, Massachusetts, USA	Peer Reviewed
The Pros and Cons of Vertebrate Animal Models for Functional Therapeutic Research on Inherited Retinal Dystrophies	Collin, R.	Progress in Retinal and Eye Research, 48 (2015) 137-159 doi: 10.1016/j.preteyeres.2015.04.004	Radboud Institute for Molecular Life Sciences, Radboud University Medical Center, Nijmegen, The Netherlands	Peer Reviewed
Light aversion and corneal mechanical sensitivity are altered by intrinsically photosensitive retinal ganglion cells in a mouse model of corneal surface damage	Gorin, M.	Experimental Eye Research 137 (2015) 57-62 doi: 10.1016/j.exer.2015.05.025	Department of Ophthalmology, Jules Stein Eye Institute, David Geffen School of Medicine, UCLA, Los Angeles, CA, USA	Peer Reviewed
Characterization of a Spontaneous Retinal Neovascular Mouse Model	Connor, K	PLoS ONE 9(9): e106507. doi:10.1371/journal.pone.0106507	Angiogenesis Laboratory, Department of Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, Massachusetts, And Department of Ophthalmology, Harvard Medical School, Boston, Massachusetts United States of America,	Peer reviewed
Spontaneous Development of Autoimmune Uveitis Is CCR2 Dependent	McNamara NA	Am J Pathol 2014, 184: 1695-1705; <a href="http://dx.doi.org/10.1016/j.ajpath.2014.02.024">http://dx.doi.org/10.1016/j.ajpath.2014.02.024</a>	Francis I. Proctor Foundation, the Diabetes Center, and the Departments of Ophthalmology and Anatomy, University of California San Francisco, & the School of Optometry and the Vision Science Program, University of California Berkeley	Peer reviewed
Alterations of Retinal Vasculature in Cystathionine-β-Synthase Heterozygous Mice	Smith, S	American Journal of Pathology, Vol.184, No.9, September 2014	Georgia Regents University, Augusta, GA, USA, Idaho State University, Pocatello, Idaho, USA	Peer Reviewed
Dynamic in-vivo, real-time detection of retinal oxidative status in a model of elevated intraocular pressure using a novel, reversibly responsive, profluorescent nitroxide probe.	Barnett, N	Experimental Eye Research 129(2014)48-56	University of Queensland, Brisbane, Queensland, Australia.	Peer Reviewed



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Endothelial TWIST1 Promotes Pathological Ocular Angiogenesis	Chen, J	Invest Ophthalmol Vis Sci. 2014;55:8267-8277. DOI:10.1167/iops.14-15623	Harvard Medical School, Boston, Massachusetts, USA, Sichuan University, Chengdu, Sichuan, China.	Peer Reviewed
Generation and Characterization of a Murine Model of Bietti Crystalline Dystrophy	Kelly, E	Invest Ophthalmol Vis Sci. 2014;55:5572-5581 DOI:10.1167/iops.13-12717	University of Washington, Seattle, Washington, USA	Peer Reviewed
Targeting Muller Cell-Derived VEGF 164 to Reduce Intravitreal Neovascularization in the Rat Model of Retinopathy of Prematurity	Hartnett EM	Investigative Ophthalmology & Visual Science February 2014, Vol.55, 824-831. doi:10.1167/iops.13-13755	Department of Ophthalmology, The John Moran Eye Center, University of Utah, Salt Lake City, Utah, USA	Peer reviewed literature
Quantitative Spatial and Temporal Analysis of Fluorescein Angiography Dynamics in the Eye	Bui B	PLoS ONE 9(11): e111330. doi:10.1371/journal.pone.0111330. 2014	Department of Optometry and Vision Sciences, The University of Melbourne, Parkville, Victoria, Australia	Peer Reviewed
Regenerative Therapeutic Potential of Adipose Stromal Cells in Early Stage Diabetic Retinopathy	Rajashekhar G	PLoS ONE 8(5): e63904. doi:10.1371/journal.pone.0063904. 2014	Indiana Center for Vascular Biology & Medicine, Indiana University School of Medicine, Indianapolis, USA	Peer reviewed literature
Retinal Ischemia/Reperfusion Injury Is mediated by Toll-like Receptor 4 Activation of NLRP3 Inflammasomes	Li, X	Invest Ophthalmol Vis Sci. 2014;55:5466-5475. DOI:10.1167/iops.14-14380	Peking University People's Hospital, Beijing, China, University of Michigan Kellogg Eye Center, Ann Arbor, Michigan, USA	Peer Reviewed
Selective Impairment of a Subset of Ran-GTP-binding Domains of Ran-binding Protein 2 (Ranbp2) Suffices to Recapitulate the Degeneration of the Retinal Pigment Epithelium (RPE) Triggered by Ranbp2 Ablation	Ferreira, P	Journal of Biological Chemistry October 24, 2014 Volume 289 Number 43 29767-29789	Duke University Medical Center, Durham, North Carolina, USA, Cleveland Clinic Foundation, Cleveland, Ohio, USA	Peer Reviewed

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Sustained inhibition of neovascularization in vldlr <sup>-/-</sup> mice following intravitreal injection of cerium oxide nanoparticles and the role of the ASK1-P38/JNK-NF-κB pathway	McGinnis, J	Biomaterials 35(2014)249-258	University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA, University of Central Florida, Orlando, FL, USA.	Peer Reviewed
γδ T Cells as a Major Source of IL-17 Production during Age-Dependent RPE Degeneration	Cai, J	Invest Ophthalmol Vis Sci. 2014;55:6580-6589. DOI: 10.1167/iov.14-15166	University of Texas Medical Branch, Galveston, Texas, USA	Peer Reviewed
Spontaneous CNV in a Novel Mutant Mouse Is Associated With Early VEGF-A-Driven Angiogenesis and Late-Stage Focal Edema, Neural Cell Loss, and Dysfunction	Shima DT	Invest Ophthalmol Vis Sci. 2014;55:3709-3719.	Department of Ocular Biology and Therapeutics, University College London, Institute of Ophthalmology, London, United Kingdom	Peer reviewed literature
Long-Term Retinal Cone Survival and Delayed Alteration of the Cone Mosaic in a Transgenic Mouse Model of Star-gardt-Like Dystrophy (STGD3)	Sauvé Y	Invest Ophthalmol Vis Sci. 2014;55:424-439.	Department of Ophthalmology and Visual Sciences, University of Alberta, Edmonton, Alberta, Canada	Peer reviewed literature
Mitochondrial Oxidative Stress in the Retinal Pigment Epithelium Leads to Localized Retinal Degeneration	Lewin AS	Invest Ophthalmol Vis Sci. 2014;55:4613-4627.	Department of Molecular Genetics and Microbiology, College of Medicine, University of Florida, Gainesville, Florida, USA	Peer reviewed literature
Quantitative Analyses of Retinal Vascular Area and Density After Different Methods to Reduce VEGF in a Rat Model of Retinopathy of Prematurity	Hartnett EM	Invest Ophthalmol Vis Sci. 2014;55:737-744.	Department of Ophthalmology, John Moran Eye Center, University of Utah, Salt Lake City, Utah, USA	Peer reviewed literature
Targeting Muller Cell-Derived VEGF <sub>164</sub> to Reduce Intravitreal Neovascularization in the Rat Model of Retinopathy of Prematurity	Hartnett EM	Invest Ophthalmol Vis Sci. 2014; 55:824-831	Department of Ophthalmology, The John Moran Eye Center, University of Utah, Salt Lake City, Utah, USA	Peer reviewed literature

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The Oral Iron Chelator Deferiprone Protects Against Systemic Iron Overload-Induced Retinal Degeneration in Hepcidin Knockout Mice	Dunaief JL	Invest Ophthalmol Vis Sci. 2014;55:4525-4532.	F.M. Kirby Center for Molecular Ophthalmology, Scheie Eye Institute, University of Pennsylvania, Philadelphia, Pennsylvania, USA	Peer reviewed literature
Effects of Anti-VEGF Treatment on the Recovery of the Developing Retina Following Oxygen Induced Retinopathy	Drenser KA	Invest Ophthalmol Vis Sci. 2014; 55:1884-1892.	Pediatric Retinal Research Laboratory, Eye Research Institute, Oakland University, Rochester, Michigan, USA	Peer reviewed literature
Up-Regulation of VEGF by Retinoic Acid During Hyperoxia Prevents Retinal Neovascularization and Retinopathy	Yan Q	Invest Ophthalmol Vis Sci. 2014;55:4276-4286.	Henan Eye Institute and Henan Eye Hospital, Zhengzhou, Henan, China; Eye Research Institute, Pediatric Retinal Research Lab, Oakland University, Rochester, Michigan, USA	Peer reviewed literature
Allosteric Inhibition of the IRE1 $\alpha$ RNase Preserves Cell Viability and Function during Endoplasmic Reticulum Stress	Papa FR	Cell 158, 534-548, July 31, 2014, Elsevier Inc. <a href="http://dx.doi.org/10.1016/j.cell.2014.07.002">http://dx.doi.org/10.1016/j.cell.2014.07.002</a>	Department of medicine, Diabetes Center, Lung Biology Center, California Institute for Quantitative Biosciences University of California, San Francisco	Peer reviewed literature
Angiographic Features of Transgenic Mice With Increased Expression of Human Serine Protease HTRA1 in Retinal Pigment Epithelium	Fu Y	Invest Ophthalmol Vis Sci 2014;55:3842-3850.	Departments of Ophthalmology and Visual Sciences, and Neurobiology and Anatomy, University of Utah Health Sciences Center, Salt Lake City, Utah, USA	Peer reviewed literature
Effects of Simvastatin on Retinal Structure and Function of a High-Fat Atherogenic Mouse Model of Thickened Bruch's Membrane	Luu CD	Invest Ophthalmol Vis Sci. 2014;55:460-468.	Centre for Eye Research Australia, University of Melbourne, Royal Victorian Eye and Ear Hospital, Melbourne, Australia	Peer reviewed literature
Lack of Paraoxonase 1 Alters Phospholipid Composition, but Not Morphology and Function of the Mouse Retina	Grimm C	Invest Ophthalmol Vis Sci. 2014;55:4714-4727.	Lab for Retinal Cell Biology, Department of Ophthalmology; Zurich Center for Integrative Human Physiology (ZIHP), University of Zurich; Zurich Center of Neuroscience (ZNZ), Zurich, Switzerland	Peer reviewed literature

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Correction of the Crb1rd8 Allele and Retinal Phenotype in C57BL/6N Mice Via TALEN-Medicated Homology-Directed Repair	Wiles MV	Invest Ophthalmol Vis Sci. 2014;55:387-395.	The Jackson Laboratory, Bar Harbor, Maine, USA	Peer reviewed literature
Deletion of Aryl Hydrocarbon Receptor AHR in Mice Leads to Subretinal Accumulation of Microglia and RPE Atrophy	Swaroop A	Invest Ophthalmol Vis Sci. 2014;55:6031-6040. DOI: 10.1167/iops.14-15091	Neurobiology-Neurodegeneration & Repair Laboratory, National Eye Institute, National Institutes of Health, Bethesda, Maryland, USA	Peer reviewed literature
Deletion of Hemojuvelin, an Iron-Regulatory Protein, in Mice Results in Abnormal Angiogenesis and Vasculogenesis in Retina Along With Reactive Gliosis	Ganapathy V	Invest Ophthalmol Vis Sci. 2014;55:3616-3625.	James & Jean Culver Vision Discovery Institute; Department of Biochemistry and Molecular Biology, Medical College of Georgia, Georgia Regents University, Augusta, Georgia, USA	Peer reviewed literature
Direct Effect of Sodium Iodate on Neurosensory Retina	Saint-Geniez M	Invest Ophthalmol Vis Sci. 2014;55:1941-1952.	Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Boston, Massachusetts; Department of Ophthalmology, Harvard Medical School, Boston, Massachusetts, USA	Peer reviewed literature
Effects of Anti-VEGF Treatment on the Recovery of the Developing Retina Following Oxygen Induced Retinopathy	Drenser KA	Investigative Ophthalmology & Visual Science March 2014, Vol.55, 1884-1892. doi:10.1167/iops.13-13397	Kimberly A. Drenser, Pediatric Retinal Research Laboratory, Eye Research Institute, Oakland University, Rochester, MI USA	Peer Reviewed literature
Corneal wound healing is compromised by immunoproteasome deficiency	Ferrington DA	PLoS One. 2013;8(1):e54347. DOI:10.1371/journal.pone.0054347. Epub 2013 Jan24.	Department of Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, Minnesota	Peer reviewed literature
Corneal Wound Healing Is Compromised by Immunoproteasome Deficiency	Yuan C	PLoS ONE 8(1): e54347. doi:10.1371/journal.pone.0054347. 2013	Department of Ophthalmology and Visual Neurosciences, University of Minnesota, Minneapolis, Minnesota, USA	Peer reviewed literature

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Title	Lead Author	Publication	Institution(s)	Publication Type
Comparative Analysis of Induced vs. Spontaneous Models of Autoimmune Uveitis Targeting the Interphotoreceptor Retinoid Binding Protein	Caspi RR	PLoS ONE 8(8): e72161. doi:10.1371/journal.pone.0072161. 2013	Immunoregulation Section, Laboratory of Immunology, National Eye Institute, National Institutes of Health, Bethesda, Maryland, USA	Peer reviewed literature
A Murine Model for Retinopathy of Prematurity Identifies Endothelial Cell Proliferation as a Potential Mechanism for Plus Disease	Blobel CP	Invest Ophthalmol Vis Sci. 2013;54:5294-5302.	Arthritis and Tissue Degeneration Program Hospital for Special Surgery, New York, New York; Departments of Medicine and Physiology, Biophysics and Systems Biology, Weill Medical College of Cornell University, New York, New York, USA	Peer reviewed literature
Excitotoxicity Upregulates SARM1 Protein Expression and Promotes Wallerian-Like Degeneration of Retinal Ganglion Cells and Their Axons	Massoll C	Invest Ophthalmol Vis Sci. 2013 Apr 17;54(4):2771-80.DOI: 10.1167/iov.12-10973.	Eye Research Institute of Oakland University, Rochester, Michigan.	Peer reviewed literature
Alterations of Retinal Vasculature in Cystathionine-Beta-Synthase Mutant Mice, a Model of Hyperhomocysteinemia	Tawfik A	Invest. Ophthalmol. Vis. Sci. February 1, 2013 vol. 54 no. 2 939-949	Medical College of Georgia, Georgia Regents University, Augusta, Georgia	Peer reviewed literature
Murine Model for Retinopathy of Prematurity Identifies Endothelial Cell Proliferation as a potential Mechanism for Plus Disease	Guaiquil VH	Invest Ophthalmol Vis Sci. 2013;54:5294-5302.	Arthritis and Tissue Degeneration Program. Hospital for Special Surgery, New York, New York.	Peer reviewed literature
Targeting Photoreceptors via Intravitreal Delivery Using Novel, Capsid-Mutated AAV Vector	Kay CN, Ryals RC	PLoS One 2013; 8(9): 10.1371/annotation/99ee1789-a658-4fb0-8593-40a40e-9f344a.	Department of Ophthalmology, University of Florida College of Medicine, Gainesville, Florida, USA	Peer Reviewed literature
Use of Optical Coherence Tomography and Electroretinography to Evaluate Retinal Pathology in a Mouse Model of Autoimmune Uveitis	Chen J	PLoS ONE 8(5): e63904. doi:10.1371/journal.pone.0063904. 2013	Laboratory of Immunology, National Eye Institute, National Institutes of Health, Bethesda, Maryland, USA	Peer reviewed literature

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Title	Lead Author	Publication	Institution(s)	Publication Type
VEGF Receptor Blockade Markedly Reduces Retinal Microglia/macrophage Infiltration into Laser-Induced CNV	Huang H	PLoS ONE 1 August 2013, Volume 8, Issue 8, e71808	Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA	Peer reviewed literature
The Effects of Age and Cx3cr1 Deficiency on Retinal Microglia in the Ins2Akita Diabetic Mouse	Kezic JM	Invest. Ophthalmol. Vis. Sci. January 2013 54:854-863.	Monash University, Melbourne, Australia; University of Melbourne, Melbourne, Australia	Peer reviewed literature
Survey of Common Eye Diseases in Laboratory Mouse Strains	Chang B	Invest Ophthalmol Vis Sci. 2013;54:4974-4981	The Jackson Laboratory, Bar Harbor, Maine, USA	Peer reviewed literature
Targeting Photoreceptors via Intravitreal Delivery Using Novel, Capsid-Mutated AAV Vector	Kay CN	PLoS ONE 8(9):10.1371/annotation/99ee1789-a658-4fb0-8593-40a40e-9f344a. 2013	Department of Molecular Genetics and Microbiology, University of Florida College of Medicine, Gainesville, Florida, USA	Peer reviewed literature
Retinal Angiogenesis in the Ins2Akita mouse model of diabetic retinopathy	Han Z	Invest. Ophthalmol. Vis. Sci. January 17, 2013 vol. 54. no. 1 574-584.	University of Oklahoma Health Sciences Center, Oklahoma City, OK USA	Peer reviewed literature
Silibinin inhibits VEGF secretion and age-related macular degeneration in a hypoxia-dependent manner through the PI-3 kinase/Akt/mTOR pathway	Lin CH	British Journal of Pharmacology DOI:10.1111/1476-5381.2012.02227.x. 2013	School of pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan	Peer reviewed literature
Evaluation of a Topical Cis-urocanic acid in a Murine CAETM Model of Dry Eye Disease	Whitlock A	ARVO Poster 2013	Ora, Inc., Andover, Massachusetts, USA; Laurantis Pharma, Turku, Finland	Poster abstract

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Title	Lead Author	Publication	Institution(s)	Publication Type
An Evaluation of the Effects of the Repeat Conjunctival Allergen Challenge (CAC) Model in Various Strains of Albino Mice	Violette K	ARVO Poster 2013	Ora, Inc., Andover, Massachusetts, USA; Laurantis Pharma, Turku, Finland	Poster abstract
The Use of Soluble Muc-16 (CA-125) as a Clinically Relevant Biomarker and Endpoint in a Mouse Model of Dry Eye	Brackett J	ARVO Poster 2013	Ora, Inc., Andover, Massachusetts, USA	Poster abstract
VEGF and TNF Interact to Induce Retinal Edema in an Atypical PKC Dependent Manner	Lin C	ARVO Poster 2013	Ophthalmology and Visual Sciences, Kellogg Eye Center, University of Michigan, Ann Arbor, Michigan, USA	Poster abstract
Comparative analysis supporting DNA nanoparticles as an attractive complement to AAVs for ocular gene delivery	Naash, M I	PLoS One. 2012; 7(12): e52189. Published online 2012 Dec 18. doi: 10.1371/journal.pone.0052189	Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma, USA	Peer reviewed literature
Relaxin 2 is Functional at the Ocular Surface and Promotes Corneal Wound Healing	Hampel U	Invest. Ophthalmol. Vis. Sci. 2012 Nov 21;53(12):7780-90. doi: 10.1167/iovs.12-10714	Department of Anatomy II, Friedrich Alexander University of Erlangen-Number, Erlangen, Germany, Ulrike.	Peer reviewed literature
EphA2 Targeted Doxorubicin Stealth Liposomes as a Therapy System for Choroidal Neovascularization in Rats	Wang JL	Invest Ophthalmol Vis Sci. 2012 Oct 23;53(11):7348-57.	Peking University Eye Center, Peking University Third Hospital, Beijing, People's Republic of China.	Peer reviewed literature
Alzheimer's Disease in the Retina: Imaging Retinal Aβ Plaques for Early Diagnosis and Therapy Assessment	Koronyo Y	Neurodegener Dis. 2012;10(1-4):285-93. Epub 2012 Feb 10.	Maxine Dunitz Neurosurgical Research Institute, Los Angeles, CA, USA	Peer reviewed literature

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Title	Lead Author	Publication	Institution(s)	Publication Type
Exploration of the visual system, Part 2: In vivo analysis methods: virtual-reality optomotor system, fundus examination, and fluorescein angiography	Marcelli F	Curr.Protoc.Mouse Biol., 2, 207-218, 2012	IRO-Institute de Recherche en Ophtalmologie, Switzerland	Peer reviewed literature
Increased cone sensitivity to ABCA4 deficiency provides insight into macular vision loss in Stargardt's dystrophy	Conley SM	Biochim Biophys Acta. 2012 Jul;1822(7):1169-79.	University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA.	Peer reviewed literature
Generation of retinal pigment epithelial cells from small molecules and OCT4-reprogrammed human induced pluripotent stem cells	Krohne TU	Stem Cells Transl Med. 2012 Feb;1(2):96-109. Epub 2012 Feb 6.	The Scripps Research Institute, La Jolla, CA, USA	Peer reviewed literature
Retinoid Content, Visual Responses, and Ocular Morphology Are Comprised in the Retinas of Mice Lacking the Retinol-Binding Protein Receptor, STRA6	Ruiz A	Invest Ophthalmol Vis Sci. 2012 May 17;53(6):3027-39.	University of California at Los Angeles, CA; Universite de Strasbourg, Illkirch, France	Peer reviewed literature
DNA nanoparticle-medicated ABCA4 delivery rescues Stargardt dystrophy in mice.	Han Z	J Clin Invest. 2012 Sep 4;122(9):3221-6.	University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA.	Peer reviewed literature
Enhanced gene delivery to the neonatal retina through systemic administration of tyrosine-mutated AAV9	Dalkara D	Gene Ther.2012 Feb;19(2):176-81. doi: 10.1038/gt. 2011.163. Epub 2011 Oct 20.	Th University of California Berkeley, Berkeley, CA, USA	Peer reviewed literature
Preservation of cone photoreceptors after a rapid yet transient degeneration and remodeling in cone-only Nr1 <sup>-/-</sup> mouse retina	Roger JE	J. Neurosci. 2012 Jan 11;32(2):528-41.	National Eye Institute, NIH, Bethesda, MD, USA	Peer reviewed literature



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Title	Lead Author	Publication	Institution(s)	Publication Type
Direct gene transfer with compacted DNA nanoparticles in retinal pigment epithelial cells: expression, repeat delivery and lack of toxicity	Han Z	Nanomedicine (Lond). 2012 Apr;7(4):521-39. Epub 2012 Feb 23.	University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA	Peer reviewed literature
Ccl2/Cx3cr1 knockout mice have inner retinal dysfunction but are not an accelerated model of AMD	Vessey KA	Invest Ophthalmol Vis Sci. 2012 Nov 27;53(12):7833-46.	Department of Anatomy and Neuroscience, The University of Melbourne, Melbourne, Australia.	Peer reviewed literature
Pathological consequences of long-term mitochondrial oxidative stress in the mouse retinal pigment epithelium	Seo SJ	Exp Eye Res. 2012 Aug; 101:60-71.	University of Florida, Gainesville, FL, USA	Peer reviewed literature
The 5HT1a receptor agonist 8-OH DPAT induces protection from lipofuscin accumulation and oxidative stress in the retinal pigment epithelium	Thampi P	PLoS ONE 7(4): e34468. doi:10.1371/journal.pone.0034468. 2012	Department of Anatomy and Cell Biology, University of Florida, Gainesville, Florida, USA	Peer reviewed literature
The Rd8 Mutation of the Crb1 Gene Is Present in Vendor Lines of C57BL/6N Mice and Embryonic Stem Cells, and Confounds Ocular Induced Mutant Phenotypes.	Mattapallil MJ	Invest Ophthalmol Vis Sci. 2012 May 17;53(6):2921-7.	National Eye Institute, NIH, Bethesda, MD; Washington University School of Medicine, St.Louis, MO., USA	Peer reviewed literature
CXCR3 antagonism of SDF-1(5-67) restores trabecular function and prevents retinal neurodegeneration in a rat model of ocular hypertension	Denoyer A	PLoS One. 2012;7(6):e37873. DOI:10.1371/journal.pone.0037873. Epub 2012 Jun 4.	UPMC University Paris	Peer reviewed literature
Cochlin, Intraocular Pressure Regulation and Mechanosensing	Goel M	PLoS ONE 7(4): e34309. doi:10.1371/journal.pone.0034309. 2012	Bascom Palmer Eye Institute, University of Miami, Miami, Florida, USA	Peer reviewed literature

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Title	Lead Author	Publication	Institution(s)	Publication Type
Change In The Distribution And Phenotype Of Subretinal Macrophages With Aging In C57BL/6 Mice	Aredo B	ARVO Poster 2012	Ophthalmology, University of Texas, Southwestern Medical Center, Dallas, Texas, USA	Poster abstract
ShH10, A Novel Muller Glia Cell-specific AAV Vector, Expressing GDNF Promotes Retinal Ganglion Cell Survival Following Neuronal Injury in Thy1-YFP Mice	Pan C	ARVO Poster 2012	Weill Medical College of Cornell University, New York, New York; Avalanche Biotechnologies, Inc., Redwood City, CA; University of California, Berkeley, Berkeley, California, USA	Poster abstract
Characterization of visual impairment in a Wfs1 mouse model of Wolfram syndrome	Hamel CP	ARVO Poster 2012	INSERM, Montpellier Cedex, France; Yamaguchi University Graduate School of Medicine, UBE, Japan	Poster abstract
Effects of LMP7 Subunit Knockout Immunoproteasome on the Laser-Induced Chorioretinal Neovascular Model in Mice	Kohl JC	ARVO Poster 2012	University of Minnesota, Minneapolis, Minnesota, USA	Poster abstract
In Vivo Imaging of Experimental Auto-immune Uveitis disease progression in Cx3cr1-GFP and CD11c-YFP mice	Chen X	ARVO Poster 2012	Monash University, Clayton, Australia; Deakin University Geelong, Australia; University of Western Australia, Perth, Australia.	Poster abstract
Identification of amyloid plaques in retinas from Alzheimer's patients and noninvasive in vivo optical imaging of retinal plaques in a mouse model	Koronyo-Hamaoui M	Neuroimage. 2011 Jan;54 Suppl 1:S204-17. Epub 2010 Jun 13.	Maxine Dunitz Neurosurgical Research Institute, Cedars-Sinai Med Center, Los Angeles, CA, USA	Peer reviewed literature
Ligation of the Pterygopalatine and External Carotid Arteries Induces Ischemic Damage in the Murine Retina	Ogishima H	Invest Ophthalmol Vis Sci. 2011 Dec 28;52(13):9710-20.	Gifu Pharmaceutical University, Gifu, Japan	Peer reviewed literature

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Nanoparticle-mediated gene transfer specific to retinal pigment epithelial cells	Koirala A	Biomaterials. 2011 Dec;32(35):9483-93. Epub 2011 Sep 1.	University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA	Peer reviewed literature
New Challenging Approach In The Treatment of Diabetic Retinopathy: Intra-vitreous Co-transplant of Human Amnion Epithelial and Mesenchymal Stem Cells as Neuroprotective and Anti-apoptotic Mediators	Scalinci S	ARVO Poster 2011	University of Bologna, Bologna, Italy	Poster abstract
Transgenic Mice Expressing Variants of Complement Factor H Develop AMD-like Retinal Findings	Ufret-Vincenty RL	Invest Ophthalmol Vis Sci. 2010 Nov;51(11):5878-87.	UT Southwestern Medical Center, Dallas, Texas, USA	Peer reviewed literature