HARVARD MEDICAL SCHOOL
Department of Ophthalmology

Harvard Medical School
Department of Ophthalmology

ARVO ABSTRACTS 2012

May 6–10, 2012
Fort Lauderdale, FL

Harvard Medical School
Department of Ophthalmology

ARVO ABSTRACTS 2012

Presented at the Association for Research in Vision and Ophthalmology Annual Meeting

May 6–10

Greater Fort Lauderdale/Broward County Convention Center
1950 Eisenhower Boulevard, Fort Lauderdale, FL 33316

CONTENTS

Abstracts are listed alphabetically by first author's surname

★ First author = ARVO Travel Grant recipient

This collection of abstracts was extracted from the complete ARVO abstract index. Any errors or omissions are inadvertent.

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Syeda F. Absar[1], Desirée Cyr[1], Alan D. Proia[2], Muhammad T. Malik[1], Peter Bex[1], Kameran Lashkari[1]. [1]Schepens Eye Research Institute, Massachusetts Eye and Ear, Department of Opthalmology, Harvard Medical School, Boston, MA; [2]Department of Pathology, Duke University Medical Center, Durham, NC.
Identifying the Roles of Interferon-Gamma Inducible Chemokines in Progression of Age-related Macular Degeneration (AMD)

Bissan A. Ahmed[1], Andrew Stempel[1], Trevor McFarland[1], Bruce Ksander[2], Binoy Appukuttan[1], Tim Stout[1]. [1]Casey Eye Institute, OHSU, Portland, OR;[2]Scepens Eye Research Institute, Harvard Medical School, Boston, MA.
Inhibition of Ocular Tumor Cell Growth With RTEF-1 Peptide Fragment

James D. Akula[1,2], Toco Y. Chui[1,2], David P. Bissig[3A], Bruce A. Berkowitz[3A,3B]. [1]Ophthalmology, Children's Hospital Boston, Boston, MA;[2]Ophthalmology, Harvard Medical School, Boston, MA; [A]Anatomy and Cell Biology, [B]Ophthalmology, [3]Wayne State University School of Medicine, Detroit, MI.
A New Focus on Refraction in the "ROP Rat"

★ *Concetta F. Alberti, P Matthew Bronstad, Alex Hwang, Amanda Albu, Egor Ananev, Robert Goldstein, Eli Peli, Alex R. Bowers.* Schepens Eye Research Institute, Dept Ophthalmology, Harvard Medical School, Boston, MA.
Scanning And Detection Of Static And Moving Pedestrians By Drivers With Hemianopia In A Simulator

Albert H. Alhatem[1], Uli H. von Andrian[2], Pedram Hamrah[1,2]. [1]Cornea Service and Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [2]Immune Disease Institute, Program in Cellular and Molecular Medicine at Children's Hospital Boston, Harvard Medical School, Boston, MA.
Peripheral Antigen Presenting Cells Are Differentially Distributed in Normal and Inflamed Murine Corneas

R R. Allingham[1], Yutao Liu[2], Jason Gibson[2], Joshua Wheeler[2], Xuejun Qin[2], Christopher A. Girkin[3], Stephen K. Akafo[4], Allison E. Ashley-Koch[2], POAG African American Study Group, Michael A. Hauser[5].[1]Ophthalmology, Duke University Eye Center, Durham, NC; [2]Medicine, Duke University Medical Center, Durham, NC; [3]Ophthalmology, Univ of Alabama at Birmingham, Birmingham, AL; [4]Surgery, University of Ghana Medical School, Korle Bu, Ghana; [5]Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC.
POAG Genetic Risk Factors In The African American and West African Populations

Mariacarmela Allocca[1], Ana Santos-Carvalho[1,2], Budd A. Tucker[3], Sara Qi[1], Caio V. Regatieri[1], Caihui Zhang Zhang[1], Konrad Hochedlinger[4], Claudia Cavadas[2], Michael J. Young[1]. [1]Schepens Eye Research Institute/Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [2]Center for Neuroscience and Cell Biology and Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal; [3]Department of Ophthalmology and Visual Sciences, Institute for Vision Research, Carver College of Medicine, Iowa City, IA; [4]Massachusetts General Hospital Cancer Center and Center for Regenerative Medicine, Boston, MA.
Characterization And Differentiation In Photoreceptors Of Retina-derived Induced Pluripotent Stem Cells

Clemens Alt[1], Judith M. Runnels[1], Kin-Sang Cho[2], Charles P. Lin[1].[1]Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA; [2]Schepens Eye Research Institut, Boston, MA.
In Vivo Imaging of Microglial Turnover in Response to Ionizing Radiation with a multi-color Confocal Scanning Laser Ophthalmoscope

Francisco Amparo[1], Parisa Emami-Naeini[1], Haobing Wang[2], Reza Dana[1].[1]MEEI/SERI Harvard Ophthalmology, Boston, MA; [2]Eaton-Peabody Laboratory, Massachusetts Eye & Ear Infirmary, Boston, MA.
The Conjunctival Redness Index (CRI): A Novel Automated Index for Measuring Ocular Injection

Samer N. Arafat[1,2], Anita N. Shukla[1], Claes H. Dohlman[1], James Chodosh[1], Joseph B. Ciolino[1]. [1]Massachusetts Eye and Ear Infirmary, Department of Ophthalmology, Harvard Medical School, Boston, MA; [2]Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Department of Ophthalmology, Harvard Medical School, Boston, MA.
Cross-linking Donor Corneas for the Boston Keratoprosthesis: A Method of Increasing Resistance to Collagenolytic Degradation

*Joseph F. Arboleda-Velasquez, Alexandra M. James, Patricia A. D'Amore.*Schepens Eye Research Institute, Boston, MA.
Notch-mediated Cell-cell Interactions In The Pathophysiology Of Diabetic Retinopathy

Cheryl A. Arcinue[1], C. Stephen Foster[1], Olga Ceron[1], Lama Almulki[2].[1]Uveitis and Ocular Immunology, Massachusetts Eye Research & Surgery Institution, Cambridge, MA; [2]Ophthalmology, Massachusetts Eye Res and Surgery Inst, Cambridge, MA.
Clinical Experience With Sustained-Release Intravitreal Corticosteroid Implants: A Comparison Between The Fluocinolone Acetonide (Retisert) And Dexamethasone (Ozurdex) Implants In Uveitis

Pichaporn Artornsombudh[1,2], Ofelya Gevorgyan[1], Abhishek Payal[2], Sana Siddique[1], Charles S. Foster[1,3]. [1]Massachusetts Eye Research and Surgery Institution, Cambridge, MA; [2]University of Pennsylvania, Philadelphia, PA;[3]Harvard Medical School, Boston, MA.
Infliximab treatment of birdshot retinochoroidopathy

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Neda Baniasadi[1], Eleftherios I. Paschalis[1], Johannes F. DeBoer[2], Teresa C. Chen[1]. [1]Ophthalmology, Massachusetts Eye & Ear Infirmary, Harvard Medical School, Boston, MA; [2]Ophthalmology, VU university, Amsterdam, The Netherlands.
Analysis of Spectral Domain Optical Coherence Tomography Retinal Nerve Fiber Layer Thickness Patterns in Different Subtypes of Open Angle Glaucoma

Petr Y. Baranov[1], Gustavo B. Melo[2], Michael J. Young[3]. [1]Schepens Eye Research Institute, Boston, MA; [2]Ophthalmology, Federal Univ of Sao Paulo/UNIFESP, Aracaju, Brazil; [3]Schepens Eye Research Inst, Harvard Medical School, Boston, MA.
Characterization Of Human Retinal Progenitor Cells

Savannah E. Baril, Suzanne K. Freitag. Ophthalmology, MEEI, Boston, MA.
Incidence Of Benign And Malignant Eyelid Tumors At The Massachusetts Eye And Ear Infirmary Over One Year

Alain M. Bauza[1], Parisa Emami-naeini[2], Nishant G. Soni[1], Paul D. Langer[1], Marco A. Zarbin[1], Neelakshi Bhagat[1]. [1]Institute of Ophthalmology & Visual Science, New Jersey Medical School, Newark, NJ; [2]Ophthalmology, Schepens Eye Research Institute, Boston, MA.
Demographics and Outcomes of Vitreo-retinal Surgeries in Eyes with Assault- Related Open Globe Injuries

Sebastien Besner[1], Giuliano Scarcelli[1], Roberto Pineda, II[2], Seok H. Yun[1].[1]Wellman Center for Photomedicine, Harvard Medical School, Boston, MA; [2]Ophthalmology, Mass Eye & Ear Infirmary, Boston, MA.
In Vivo Biomechanical Imaging of the Human Eye with Brillouin Microscopy

★ *Tomas Blanco, Hyun Soo Lee, Daniel R. Saban.* Ophthalmology, Schepens Eye Res Inst, MEE, Harvard Medical School, Boston, MA.
Corneal Inflammatory Cell (IC) Recruitment in Murine Allergic Conjunctivitis (AC): An Intravital Confocal Microscopy Study

Anna M. Blonska[1], Roberta Secondi[1], Giovanni Staurenghi[2], Francois C. Delori[3], Janet R. Sparrow[1]. [1]Department of Ophthalmology, Columbia University, New York, NY; [2]Dept of Clinical Science, University of Milan, Eye Clinic Sacco Hospital, Milano, Italy; [3]Ophthalmology, Schepens Eye Research Institute, Boston, MA.
Quantitative Assessment of Autofluorescence in Mice Using Scanning Laser Ophthalmoscopy

Sara J. Bowne[1], Lori S. Sullivan[1], Jennifer D. Churchill[1], Susan H. Blanton[2], Dianna K. Wheaton[3], David G. Birch[3], Kari E. Branham[4], John R. Heckenlively[4], Eric A. Pierce[5], Stephen P. Daiger[1]. [1]Human Genetics Center, Univ of Texas Health Science Ctr, Houston, TX; [2]Hussman Institute of Human Genomics, Univ. of Miami, Miami, FL; [3]The Retina Foundation of the Southwest, Dallas, TX; [4]Ophthal & Vis Sciences, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI; [5]Massachusettes Eye and Ear Infirmary, Harvard Medical School, Boston, MA.
Genome-Wide Linkage Analysis For Gene Discovery In Autosomal Dominant Retinitis Pigmentosa

Lauren A. Branchini[1], Caio V. Regatieri[2], Jonathan J. Liu[3], Ignacio Flores-Moreno[1], Namrata Nandakumar[4], Mehreen Adhi[1], James G. Fujimoto[5], Jay S. Duker[1]. [1]Ophthalmology, New England Eye Center, Boston, MA;[2]Ophthalmology, Schepens Eye Res Inst - Harvard Medical, Boston, MA;[3]Electrical Engineering & Computer Sci, Massachusetts Institute of Technology, Cambridge, MA; [4]Ophthalmology, Tufts Medical Center (NEEC), Brookline, MA; [5]Electrical Engineering & Computer Sci, Massachusetts Inst of Technology, Cambridge, MA.
Choroidal Morphology in Neovascular Age Related Maculuar Degeneration as Compared with Healthy Controls Using Spectral Domain Optical Coherence Tomography

Irene Bravo-Osuna[1], Ashley Woodward[2], Pablo Argueso[2], Irene Teresa Molina Martínez[1], R Gómez[3], FJ de la Mata[3], Manuel Muzmán Navarro[4], Magali Noiray[5], Gilles Ponchel[5], Rocío Herrero-Vanrell[1]. [1]Pharmaceutical Technology, University Complutense of Madrid, Madrid, Spain;[2]Department of Ophthalmology, Schepens/Harvard University, Boston, MA; [3]Dept. of Inorganic Chemistry, School of Pharmacy, University of Alcalá (UAH), Networking Research Center on Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN), Madrid, Spain; [4]Dept. of Pharmaceutical Technology, School of Pharmacy, University of Alcalá (UAH), Madrid, Spain; [5]CNRS UMR 8612 Laboratoire de Physicochimie, Pharmacotechnie et Biopharmacie, Université de Paris Sud, Paris, France.
Linear Polymers Versus PAMAM Dendrimers In The Interaction With Transmembrane Ocular Mucins: Analysis By Biosensor Technology

Fabiano Cade[1,2], Eleftherios Paschalis[1], Caio V. Regatieri[3,2], Reza Dana[1,3], Claes H. Dohlman[1]. [1]Cornea and Refractive Surgery, Massachusetts Eye & Ear Infirmary, Harvard Medical School, Boston, MA; [2]Ophthalmology, Federal Sao Paulo University, Sao Paulo, Brazil; [3]Schepens Eye Research Institute, Harvard Medical School, Boston, MA.
Retinal Damage in Severe Chemical Burn and the Use of Infliximab Therapy

Alison B. Callahan[1], James Hoffman[2], John D. Pemberton[2], John Nguyen[3], Jennifer Sivak[3], Tory Weatherford[2], Edward J. Wladis[4], Aaron Fay[1].[1]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA;[2]Ophthalmology, University of Arkansas for Medical Sciences, Little Rock, AR; [3]Ophthalmology, West Virginia University Eye Institute, Morgantown, WV; [4]Ophthalmology, Lions Eye Institute, Albany Medical College, Albany, NY.
Prophylactic Post-Operative Antibiotics in Enucleation and Evisceration: A 10-year Multicenter Retrospective Chart Review

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Bernardo M. Cavalcanti[1], Andrea Cruzat[2], Yureeda Qazi[3A], Neda Baniasadi[4], Monique Trinidad[3B], Amy Watts[3C], Douglas Critser[5A], Charles Leahy[3C], Christine W. Sindt[5B], Pedram Hamrah[1]. [1]Cornea/Ophthalmology, Harvard Medical School/MEEI, Boston, MA; [2]Cornea / Ophthalmology, Harvard Medical Sch/MEEI, Boston, MA; [A]Ophthalmology, [B]Cornea Research, [C]Contact Lens, [3]Massachusetts Eye and Ear Infirmary, Boston, MA; [4]Cornea/Ophthalmology, MA Eye & Ear Infirm/Harvard Med Sch, Boston, MA; [A]Contact Lens, [B]Ophthalmology, [5]University of Iowa, Iowa City, IA.
Contact Lens/Contact Lens solution Combinations Determine the Inflammatory Changes on the Ocular Surface: A Laser In Vivo Confocal Microscopy Study

*Han-Ying P. Chang, Nancy Huynh, Sheila Borboli-Gerogiannis.*Ophthalmology, Massachusetts Eye & Ear Infirmary, Brookline, MA.
Eye Injuries Associated With Orbital Or Periorbital Trauma

*Ayan Chatterjee, Dong-Jin Oh, Min Hyung Kang, Douglas J. Rhee.*Department of Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA.
Central Corneal Thickness Demonstrates No Correlation with TonoLab-measured IOP in Strains of Mice with Single Transgenic Deletions of Matricellular Proteins

★ *Sunil K. Chauhan, Daniel R. Saban, Reza Dana.* Department of Ophthalmology, Schepens Eye Research Institute, and Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA.
CCR7-amplified Regulatory T Cells Acquire Maximal Lymph Node Homing and Suppress Corneal Allograft Rejection

Jing Chen[1], Colman J. Hatton[1], Aimee M. Juan[1], Dorothy T. Pei[1], Christian G. Hurst[1], Jean-Sebastian Joyal[1], Dan Xu[1], Ann Hellstrom[2], Lois E. Smith[1].[1]Ophthalmology, Harvard Med Sch Children's Hosp, Boston, MA;[2]Department of Ophthalmology, Institute of Neuroscience and Physiology, The Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden.
Inhibition Of β-adrenergic Receptor With Propranolol Does Not Protect Against Oxygen-induced Retinopathy

*Yihe Chen, Sunil Chauhan, Hyun Soo Lee, Daniel R. Saban, Reza Dana.*Schepens Eye Research Institute / Mass. Eye & Ear Infirmary, Boston, MA.
Chronic Dry Eye Disease is Predominately Mediated by Memory T Cells

Justin Chew[1], Chenying Guo[1], Maximilian Staudt[2], Dongfeng Chen[1,3].[1]Schepens Eye Research Institute, Boston, MA; [2]Institute of Medical and Human Genetics, Charité – Universitätsmedizin Berlin, Berlin, Germany;[3]Center for Innovative Visual Rehabilitation Center, Boston, MA.
Using the RGC-5 Cell Model for the Study of Retinal Ganglion Cell Development and Axon Regeneration

Kin-Sang Cho[1], Qiang Yang[1,2], Huihui Chen[1,3], Dekuang Yu[1,4], Wan-Heng Wang[5], Gang Luo[1], Xinghuai Sun[2], Iok-Hou Pang[5], Wenyi Guo[2,6], Dong Feng Chen[1,7]. [1]Schepens Eye Research Institute, Massachusetts Eye and Ear, Department of Ophthalmology, Boston, MA; [2]Ophthalmology, Eye & ENT Hospital, Fudan University, Shanghai, China; [3]Ophthalmology, The Second Xiangya Hospital, Central South University, Changsha, China;[4]Biomedical Engineering School, Southern Medical University, Guangzhou, China; [5]Alcon Research Ltd, Fort Worth, TX; [6]Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; [7]Center for Innovative Visual Rehabilitation Center, VA Boston Healthcare System, Boston, MA.
Effects of Ocular Hypotensive Agents in a Microbead-induced Mouse Model of Glaucoma

Woo Jhon Choi[1A], Bernhard Baumann[1A,2], Allen C. Clermont[3], Edward P. Feener[3], Jonathan J. Liu[1A], Alison M. Hayward[1B], Jay S. Duker[2], James G. Fujimoto[1A]. [A]Research Laboratory of Electronics / Electrical Engineering & Computer Science, [B]Division of Comparative Medicine, [1]Massachusetts Institute of Technology, Cambridge, MA; [2]New England Eye Center / Tufts University, Boston, MA; [3]Beetham Eye Institute, Joslin Diabetes Center, Boston, MA.
Analysis of Total Retinal Blood Flow in Normal and Diabetic Rats with Ultrahigh-Speed Spectral / Fourier Domain OCT

Joseph B. Ciolino[1], Cristina F. Stefanescu[2,3], Katherine A. Wymbs[2], Sarah L. Spraque[2], Daniel R. Mascoop[2], Shireen S. Rudina[2], Fabiano Cade[1], Daniel S. Kohane[3,2]. [1]Ophthalmology, Massachusetts Eye and Ear Infirmary/ Harvard Medical School, Boston, MA; [2]Massachusetts Institute of Technology, Cambridge, MA; [3]Anesthesiology, Children's Hospital Boston/Harvard Medical School, Boston, MA.
Drug Eluting Contact Lenses For The Treatment Of Glaucoma

Carmen M. Colitz[1], Richard R. Dubielzig[2], Robin Kelleher Davis[3]. [1]Aquatic Animal Health Univ of Florida, Aquatic Animal Eye Care LLC, Jupiter, FL;[2]Pathobiol Sciences, Univ of Wisconsin-Madison, Madison, WI;[3]Ophthalmology, Schepens Eye Research Institute and Massachusetts Eye and Ear, Harvard Medical School, Boston, MA.
Horizontal Keratopathy In Dolphins Analogous To Keratoconus In Humans

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Clara M. Colon[1A,1B], Bernardo M. Cavalcanti[1A,1B], Andrea Cruzat[1A,1B], Yureeda Qazi[1A,1B], Candice Williams[1A,1B], Douglas B. Critser[2], Amy Watts[1C], Charles Leahy[1C], Christine W. Sindt[2], Pedram Hamrah.
In Vivo Confocal Microscopy of Immune Cells in the Cornea of Normal Subjects Demonstrates Irregular Peripheral Distribution of Dendritic Cells

Laura Contreras-Ruiz, Arpita Gosh-Mitra, Bruce Turpie, Marie Shatos, Darlene A. Dartt, Sharmila Masli. Schepens Eye Research Inst and Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School, Boston, MA.
Inflammatory Cytokines In Thrombospondin-1 Deficient Conjunctiva Block Goblet Cell Mucin Secretion

Cynthia A. Cordeiro[1,2], Erica L. Vieira[3], Vinicius M. Castro[3], Walderez O. Dutra[3], Juliana L. Orefice[1], Rogerio A. Costa[1], Wesley R. Campos[3], Fernando Orefice[1], Antonio L. Teixeira[3], Lucy H. Young[2]. [1]Centro Brasileiro de Ciências Visuais, Belo Horizonte, Brazil; [2]Massachusetts Eye and Ear Infirmary, Boston, MA; [3]Federal Univ of Minas Gerais, Belo Horizonte, Brazil.
T Cell Immunoregulation In Active Ocular Toxoplasmosis

Frances J. Corkin[1A,2], Ronald M. Hansen[1A], Margaret A. Kenna[1B], Heidi L. Rehm[2], Anne Moskowitz[1A], Abigail Wilkins[1B], Anne B. Fulton[1A]. [A]Ophthalmology, [B]Otolaryngology, [1]Children's Hospital Boston, Boston, MA; [2]Genetic Medicine, Partners Healthcare, Boston, MA.
Scotopic Sensitivity in Pediatric Patients with Usher Syndrome

Tessa Crowl[1], Natalia Surzenko[2], Larysa Pevny[1]. [1]Genetics and Molecular Biology, University of North Carolina- Chapel Hill, Chapel Hill, NC;[2]Harvard University, Boston, MA.
SOX2 Maintains the Quiescence of Müller Glial Cells

★ *Nelly M. Cruz[1], Yang Yuan[2], Rinku Baid[3], Uday Kompella[3], Neena B. Haider[1].* [1]Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA; [2]Genetics, Cell Biology & Anatomy, Univ of Nebraska Medical Ctr, Omaha, NE; [3]Department of Pharmaceutical Sciences, University of Colorado Denver, Aurora, CO.
Efficacy of Nanoparticle-based Gene Delivery for Rescuing Nr2e3 Associated Retinal Degeneration

Borja Salvador Culla[1], Irmgard Behlau[1], Rony R. Sayegh[1], François Delori[2], Claes H. Dohlman[1]. [1]Cornea - Keratoprosthesis, Massachusetts Eye & Ear Infirmary, Boston, MA; [2]Schepens Eye Research Institute, Boston, MA.
Light-induced Maculopathy After Keratoprosthesis Surgery - True Or False?

Zeina Dagher[1,2], Joseph Vaz[1], Michael Goodridge[1], Leona E. Ling[3], Mara Lorenzi[1,2], Chiara Gerhardinger[1,2]. [1]Schepens Eye Research Institute, Massachusetts Eye and Ear, Boston, MA; [2]Harvard Medical School, Boston, MA; [3]Biogen Idec, Cambridge, MA.
Constitutive Signaling Through the TGF-β Receptor I ALK5 is Required for Pericyte Survival in Adult Retinal Vessels

Darlene A. Dartt[1,2], Robin R. Hodges[1,2]. [1]Schepens Eye Research Institute, Boston, MA; [2]Department of Ophthalmology, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA.
Activation Of P2X7 Receptors In Lacrimal Gland Acini Increases Protein Secretion, But Not Cellular Permeability Or IL-1beta Secretion

Robin Kelleher Davis[1], Pablo Argueso[1], Juliet R. Gionfriddo[2], David A. Sullivan[1]. [1]Ophthalmology, Schepens Eye Research Inst. and Mass. Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [2]Dept. of Clinical Sciences, Colorado State University, Fort Collins, CO.
Chromatographic Analysis of Carbohydrate Profiles in Tears from Marine Mammals, Camelids and Humans

Maite Sainz de la Maza[1], Nicolas Molina[1], Luis A. Gonzalez-Gonzalez[2], Priyanka P. Doctor[3], Joseph Tauber[4], Stephen Foster[2,5]. [1]Instituto Clinico Oftalmologia, Hospital Clinico Oftalmologia, Barcelona, Spain;[2]Ophthalmology, Massachusetts Eye Research and Surgery Institution, Cambridge, MA; [3]Ophthalmology, BayWiew Clinic, Mumbai, India;[4]Ophthalmology, Tauber Eye Center, Kansas City, MO; [5]Ophthalmology, Harvard Medical School, Boston, MA.
Scleritis Associated with Inflammatory Bowel Disease

Juan Ding, Wendy Kam, David Sullivan. Harvard Medical School, Schepens Eye Research Institute, Boston, MA.
Influence of Isotretinoin on Human Meibomian Gland Epithelial Cells

Claes H. Dohlman, Rony R. Sayegh. Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA.
Wide-angle Fundus Imaging Through The Boston Keratoprosthesis

Thomas H. Dohlman, Shilpa Kodati, Jing Hua, Yihe Chen, Sunil K. Chauhan, Reza Dana. Schepens Eye Research Institute, Harvard Medical School, Boston, MA.
Th17 Cell-associated Chemokine Receptor and Ligand Expression in Dry Eye Disease

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Tobias Duncker[1], Jonathan P. Greenberg[1], Theodore Smith[1], Stephen H. Tsang[1], François C. Delori[2]. [1]Ophthalmology, Columbia University, New York, NY; [2]Schepens Eye Research Institute, Harvard Medical School, Boston, MA.
Quantitative Autofluorescence (qAF) in Best Vitelliform Macular Dystrophy

★ *Khayyam Durrani[1,2], John H. Kempen[3], Gui-Shuang Ying[4], James T. Rosenbaum[5A], Eric B. Suhler[5B], Jennifer E. Thorne[6], Douglas A. Jabs[7], Grace A. Levy-Clarke[8], Robert B. Nussenblatt[9], C. Stephen Foster[1,2].* [1]Massachusetts Eye Research & Surgery Institution, Cambridge, MA;[2]Harvard Medical School, Boston, MA; [3]Ophthal-Biostatistics & Epidemiol, Scheie Eye Inst/Univ of Penn, Philadelphia, PA; [4]Ophthalmology, Scheie Eye Institute, Philadelphia, PA; [A]Ophthalmology, [B]Uveitis Clinic/Portland VAMC, [5]Casey Eye Institute-OHSU, Portland, OR; [6]Ophthalmology, Johns Hopkins Wilmer Eye Inst, Baltimore, MD; [7]Ophthalmology, Mount Sinai School of Medicine, New York, NY; [8]Tampa Bay Uveitis Center, Brandon, FL; [9]National Eye Inst/NIH, Bethesda, MD.
Adalimumab for Ocular Inflammation

Parisa Emami-naeini[1], Daniel R. Saban[1], Takaaki Hattori[2], Hyun Soo Lee[1], William Stevenson[1], Reza Dana[3]. [1]Ophthalmology, Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Boston, MA;[2]Ophthalmology, Tokyo Medical University, Shinjuku, Japan; [3]MEEI/SERI Harvard Ophthalmology, Boston, MA.
Generation of Maturation-Resistant Dendritic Cells through Ex-vivo Manipulation of Donor Corneal Buttons

Miriam Englander[1], Demetrios Vavvas[2]. [1]Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA; [2]Ophthalmology, MEEI Harvard, Boston, MA.
Surgical results of epiretinal membrane peel surgeries done by vitreoretinal fellows at the Massachusetts Eye and Ear Infirmary

Baojian Fan[1], Stephanie Loomis[1], Jae Hee Kang[2], Dan Yi Wang[1], Brian Yaspan[3], Michael A. Hauser[4], Louis R. Pasquale[1], Jonathan L. Haines[3], Janey L. Wiggs[1], NEIGHBOR consortium investigators. [1]Dept of Ophthalmology Harvard Med Sch, Massachusetts Eye & Ear Infirmary, Boston, MA; [2]Dept of Medicine Channing Lab, Brigham and Women's Hospital, Boston, MA; [3]Center for Human Genetics Research, Vanderbilt University, Nashville, TN; [4]Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC.
***CDKN2BAS* DNA Sequence Variants Are Associated with Exfoliation Glaucoma**

Michael H. Farkas[1], Greg Grant[2], Maria Sousa[1], Eric A. Pierce[1]. [1]Ocular Genomics Institute, Massachusetts Eye and Ear Infirmary, Boston, MA;[2]University of Pennsylvania, Philadelphia, PA.
Transcriptome Analyses Identify Novel Exons In Known Inherited Retinal Disease Genes

Tara L. Favazza[1], Gloria DeWalt[2], Nan Zhang[1,3], Ronald M. Hansen[1,3], Anne B. Fulton[1,3], William D. Eldred[2], James D. Akula[1,3]. [1]Ophthalmology, Children's Hospital Boston, Boston, MA; [2]Biology, Boston University, Boston, MA; [3]Ophthalmology, Harvard Medical School, Boston, MA.
Nitric Oxide and Signal Loss in the "ROP Rat" Retina

*Gilbert T. Feke, Douglas J. Rhee, Angela V. Turalba, Louis R. Pasquale.*Glaucoma, Massachusetts Eye and Ear Infirmary, Boston, MA.
Effect of Timolol 0.5%-Dorzolamide 2% versus Timolol 0.5%-Brimonidine 0.2% on Retinal Vascular Autoregulation and Ocular Perfusion Pressure in Patients with Primary Open Angle Glaucoma

R D. Ferguson[1], Daniel X. Hammer[1], Mircea Mujat[1], Nicusor Iftimia[1], James D. Akula[2]. [1]Biomedical Imaging Group, Physical Sciences Inc, Andover, MA; [2]Ophthalmology, Children's Hospital Boston, Boston, MA.
Novel Wavefront Sensor For Small Animal Adaptive Optics Imaging

Thomas A. Fuchsluger[1,2], Ula V. Jurkunas[3], Andrius Kazlauskas[4], Reza Dana[5]. [1]Department of Ophthalmology, Heinrich-Heine-University Duesseldorf, Duesseldorf, Germany; [2]Department of Ophthalmology, Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [3]Dept of Ophthalmology/Harvard Med Sch, Mass Eye&Ear Infirmary; Schepens Eye Res, Boston, MA;[4]Ophthalmology, Schepens Eye Res Inst/ Harvard, Boston, MA;[5]MEEI/SERI Harvard Ophthalmology, Boston, MA.
Viral Vectors For Gene Transfer To Corneal Endothelial Cells

Terry Gaasterland[1A], Lee E. Edsall[1A], Robert N. Weinreb[1B], Kaweh Mansouri[1B], Kang Zhang[1C], Douglas E. Gaasterland[2], Michael A. Hauser[3], Julia E. Richards[4], Janey L. Wiggs[5], NEIGHBOR Consortium Investigators[5]. [A]Institute for Genomic Medicine, Scripps Genome Center, [B]Hamilton Glaucoma Center, Shiley Eye Center, Department of Ophthalmology, [C]Shiley Eye Center, Department of Ophthalmology, Institute for Genomic Medicine, [1]Univ of California San Diego, La Jolla, CA; [2]Eye Doctors of Washington, Chevy Chase, MD; [3]Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC; [4]Ophthal & Visual Sciences, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI; [5]Ophthalmology-Harvard Med Sch, Mass Eye & Ear Infirmary, Boston, MA.
Parameterized Analysis of Weighted Variants in Blended Cohorts Optimizes Analysis of Exomes from Primary Open Angle Glaucoma Cases from the NEIGHBOR Study

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Chiara Gerhardinger[1,2], Yang Liu[1,2], Zeina Dagher[1]. [1]Schepens Eye Research Institute Massachusetts Eye and Ear, Boston, MA; [2]Harvard Medical School, Boston, MA.
Overexpression of IL-1 Receptor Antagonist in the Rat Retina by AAV2-mediated Gene Transfer Prevents Capillary Loss in Experimental Diabetes

Marcus D. Gingerich[1,2], Roman Akhmechet[3], Stuart F. Cogan[4], Timothy D. Plante[4], Douglas B. Shire[1,2], John L. Wyatt, Jr.[5], Joseph F. Rizzo, III[3,1]. [1]VA Boston Healthcare System, Boston, MA; [2]CNF/Cornell University, Ithaca, NY; [3]Ophthalmology, Mass Eye & Ear Infirmary, Boston, MA; [4]EIC Laboratories, Norwood, MA; [5]Electrical Engineering, MIT, Cambridge, NY.
A Microfabricated, Combination Flexible Circuit/Electrode Array for a Subretinal Prosthesis

Ernesto D. Golez, III[1], Tarek A. Shazly[2], Alessandro Porta[3], Fabio Ferentini[3], Mark A. Latina[4]. [1]Ophthalmology, Massachusetts Eye and Ear Infirmary, Reading, MA; [2]Ophthalmology, MEEI / HMS, Reading, MA;[3]Ophthalmology, Eye Unit, Ospedale "C. Cantu", Abbiategrasso, Italy;[4]Reading Health Center, Reading, MA.
The Cost Effectiveness And Duration Of Effectiveness Of SLT As Primary And Secondary Therapy Relative To Medications In The Treatment Of Primary Open Angle Glaucoma

Maria B. Grant[1], Ashay Bhatwadekar[1], Ping Hu[2], Sugata Hazra[1], Sergio Caballero[1], Susanne Mohr[3A], Steven F. Abcouwer[4], Daniel R. Saban[5], Tailoi Chan-Ling[6], Julia V. Busik[3B]. [1]Pharmacology and Therapeutics, University of Florida, Gainesville, FL; [2]Department of Anatomy, University of Sydney, Camperdown, Australia; [A]Department of Physiology,[B]Physiology, [3]Michigan State University, East Lansing, MI;[4]Ophthalmology & Visual Science, Univ of Michigan Kellog Eye Ctr, Ann Arbor, MI; [5]Schepens Eye Research Institute, Harvard Medical School, Boston, MA; [6]Anatomy, University of Sydney, Sydney, Australia.
Loss of Neuronal Support to the Bone Marrow BM Promotes Increased Generation Of (C-C Motif) Receptor 2^{+} (CCR2^{+})Monocytes And Reduced Endothelial Progenitors Cells (EPC): Implications For Diabetic Retinopathy (DR) Pathogenesis

★ *Chenying Guo[1], Kin-Sang Cho[1], Kissaou Tchedre[1], Jie Ma[1], Huihui Chen[1], Taimur Malik[1], Dong Feng Chen[1,2].* [1]Harvard Medical School, Schepens Eye Research Institute, Boston, MA; [2]Center for Innovative Visual Rehabilitation, VA Boston Healthcare System, Boston, MA.
IGF-1 Binding Protein Like Protein 1 (IGFBPL-1) Promotes Axon Outgrowth In Retinal Ganglion Cells Through The Regulation Of IGF-1 Signaling Pathway

Xiaoqing Q. Guo, Audrey E. Hutcheon, James D. Zieske. Schepens Eye Research Institute, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary and Harvard Medical School, Boston, MA.
Comparison of Fibrosis-Related mRNA in Human Corneal Fibroblasts Treated with TGF-β1 or TGF-β3

Naina Gupta[1], Demetrios Vavvas[2]. [1]Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Ophthalmology, MEEI Harvard, Boston, MA.
Success of Fellow Performed Macular Hole Surgery without Internal Limiting Membrane Peel and with Limited Positioning

Ramez I. Haddadin, Dong-Jin Oh, Douglas J. Rhee. Ophthalmology - Glaucoma Service, Massachusetts Eye & Ear Infirmary / Harvard Medical School, Boston, MA.
SPARC Is Not Involved In Latanoprost-induced Changes In Intraocular Pressure, Nor In Trabecular Meshwork Or Ciliary Body Smooth Muscle Cells

Pedram Hamrah[1], Yureeda Qazi[1], Caroline A. Blackie[2,3], Donald R. Korb[2,3].[1]Ocular Surface Imaging Center, Cornea Service, Department of Ophthalmology, Massachusetts Eye & Ear Infirmary, Harvard Medical School, Boston, MA; [2]Krob and Associates, Boston, MA; [3]Tearscience, Boston, MA.
Subclinical Inflammation May Explain The Persistence Of Refractory Dry Eye Symptoms After Apparently Successful Treatment For Meibomian Gland Dysfunction

Colman J. Hatton[1], Jing Chen[2], Aimee Juan[1], Christian G. Hurst[1], Dorothy T. Pei[1], Andreas Stahl[3], Przemyslaw Mike Sapieha[4], Jean-Sebastien Joyal[5], Dan Xu[1], Lois E. Smith[6]. [1]Ophthalmology, Children's Hospital Boston, Boston, MA; [2]Ophthalmology, Harvard Med Sch Children's Hosp, Boston, MA; [3]Univ Eye Hospital Freiburg, Freiburg, Germany; [4]Ophthalmology, University of Montreal, Montreal, QC, Canada; [5]Ophthalmology, Children's Hospital, Harvard Med Sch, Boston, MA; [6]Ophthalmology, Harvard Univ/Childrens Hospital, Boston, MA.
Characterization of the Dishevelled Family Proteins in Oxygen-Induced Retinopathy

★ *Houman D. Hemmati[1,2], Miguel Manzano-Garcia[2], Daniel S. Kohane[3], Robert Langer[2].* [1]Ophthalmology, Mass. Eye & Ear Infirmary, Harvard Medical School, Boston, MA; [2]Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA; [3]Anesthesiology, Laboratory for Biomaterials and Drug Delivery, Children's Hospital Boston, Harvard Medical School, Boston, MA.
Prolongation of Proparacaine Corneal Anesthesia by an In Situ Cross Linked Hydrogel of Carboxymethylcellulose

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Joseph Ho[1], Lauren A. Branchini[2], Caio V. Regatieri[3], Chandrasekharan Krishnan[4], James G. Fujimoto[5], Jay S. Duker[6]. [1]Department of Ophthalmology, Tufts-New England Eye Center, Berkeley, CA;[2]Ophthalmology, New England Eye Center, Brookline, MA;[3]Ophthalmology, Schepens Eye Res Inst - Harvard Medical, Boston, MA;[4]Department of Ophthalmology, Tufts-New England Eye Center, Boston, MA; [5]Electrical Engineering & Computer Sci, Massachusetts Inst of Technology, Cambridge, MA; [6]Ophthalmology, New England Eye Center, Boston, MA.
Analysis of Peripapillary Choroidal Thickness in Glaucoma and Normal Patients via Spectral Domain Optical Coherence Tomography

Robin R. Hodges[1,2], Richard B. Carroza[1,2], Jeffrey A. Bair[1,2], Dayu Li[1,2], Marie A. Shatos[1,2], Darlene A. Dartt[1,2]. [1]Schepens Eye Research Institute, Boston, MA; [2]Massachusetts Eye and Ear, Boston, MA.
Muscarinic and EGF Receptors Activate The EGF Receptor In Cultured Rat Conjunctival Goblet Cells To Increase Intracellular [Ca^{2+}] And Stimulate Mucin Secretion

Kai Hu[1], Homayon Ghiasi[2], Ulrich H. Von Andrian[3], Pedram Hamrah[1,4].[1]Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA;[2]Surgery/Ophthal Research, Cedars-Sinai Medical Center, Los Angeles, CA; [3]Immune Disease institute, Boston, MA; [4]Immue Institute Disease, Boston, MA.
Corneal Dendritic Cells Suppress Local Corneal Damage and Mediate Systemic Viral Dissemination in Herpes Simplex Keratitis

Rachel M. Huckfeldt, Eugene Shildkrot, Anne Marie Lane, Evangelos Gragoudas, Joan W. Miller. Retina Service, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary and Harvard Medical School, Boston, MA.
Proton Beam Irradiation for Choroidal Neovascularization: Long-term Prevalence of Radiation Retinopathy

Rebecca S. Hunter[1], Danielle Ledoux[2], Ann-Marie Lobo[1]. [1]Ophthalmology, Massachussetts Eye and Ear Infirmary, Boston, MA; [2]Ophthalmology, Children's Hospital of Boston, Boston, MA.
Outcomes Of TNF Alpha Inhibitor Therapy In Juvenile Idiopathic Arthritis Associated Uveitis

Christian G. Hurst[1], Jing Chen[1], Andreas Stahl[1,2], Nathan M. Krah[1], Jean-Sebastien Joyal[1], Aimee M. Juan[1], Colman J. Hatton[1], Dorothy T. Pei[1], Przemyslaw Sapieha[1,3], Lois E. Smith[1]. [1]Dept. of Ophthalmology, Harvard Medical School, Children's Hospital Boston, Boston, MA; [2]University Eye Hospital Freiburg, Freiburg, Germany; [3]Dept. of Ophthalmology, Maisonneuve-Rosemont Hospital Research Centre, University of Montreal, Montreal, QC, Canada.
Retinal Expression Of Wnt-pathway Mediated Genes In Low-density Lipoprotein Receptor-related Protein 5 (Lrp5) Knockout Mice

Audrey E. Hutcheon, Dimitrios Karamichos, Xiaoqing Q. Guo, James D. Zieske. Schepens Eye Research Institute, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary and Harvard Medical School, Boston, MA.
Corneal Epithelium Stimulates Fibrosis in a 3D Corneal Fibroblast Model

*Nancy Huynh, Han-Ying Peggy Chang, Sheila Borboli-Gerogiannis.*Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA.
Ophthalmology Inpatient Consultations For Patients With Acute And Chronic Leukemia At A Boston Tertiary Care Hospital

Mary Lou Jackson[1], Kimberly A. Schoessow[2], Jennifer Wallis[1]. [1]Harvard Dept of Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA;[2]Vision Rehabilitation, VA, Palo Alto, CA.
Reading Performance With A Video Magnifier In Patients With Central Field Loss

Ralph J. Jensen[1], Joseph F. Rizzo, III[2]. [1]Boston VA Med Ctr, Boston, MA;[2]Ophthalmology, Mass Eye & Ear Infirmary, Boston, MA.
Electrical Stimulation Of Retinal Ganglion Cells In Degenerate Rat Retina With A Small Subretinal Electrode

Caihui Jiang, Petr Baranov, Ruilin Wang, Xinmei Zhang, Michael Young. Ophthal-Schepens Eye Rsrch Inst, Harvard Medical School, Boston, MA.
Functional And Anatomic Evaluation Of Human Retinal Progenitor Cells Transplanted Into The Subretinal Space Of Rhodopsin Knockout Mice

Yiping Jin[1], Sunil Chauhan[1], Hyun Soo Lee[1], Yihe Chen[1], Charles N. Serhan[2], Reza Dana[1]. [1]Ophthalmology, Schepens Eye Rsrch Inst/Harvard Med Sch, Boston, MA; [2]Center for Experimental Therapeutics and Reperfusion Injury, Departmemt of Anesthesiology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA.
Resolvin D1 Stable Analog Promotes Corneal Allograft Survival

★ *Jean-Sebastien Joyal[1], Jing Chen[1], Aimee Juan[1], Colman J. Hatton[1], Dorothy Pei[1], Christian Hurst[1], Molly R. Seaward[1], Patrick Bherer[2], Bruno Maranda[2], Lois E. Smith[1].* [1]Ophthalmology, Harvard University, Childrens Hospital, Boston, MA; [2]Genetics, Université de Sherbrooke, Sherbrooke, QC, Canada.
Lipid-derived Energy Shortage Precedes Subretinal Neovascularization In A Mouse Model Of Mactel

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Aimee Juan[1], Carolyn Wu[1], Chatarina Löfqvist[2], Lois E. Smith[1], Deborah K. VanderVeen[1], Ann Hellström[2], WINROP Consortium. [1]Ophthalmology, Children's Hospital Boston, Harvard Medical School, Boston, MA;[2]Ophthalmology, Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden.
A Multicenter Study Analyzing Weight Gain to Predict Retinopathy of Prematurity

Wendy R. Kam, Shaohui Liu, David A. Sullivan. Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA.
Influence of Proliferation and Differentiation on Lipid Accumulation and Gene Expression in Human Meibomian Gland Epithelial Cells

*Min Hyung Kang, Dong-Jin Oh, Ayan Chatterjee, Douglas J. Rhee.*Department of Ophthalmology, Harvard Medical School/MEEI, Boston, MA.
Testican-1 (SPOCK-1) is differentially expressed in Human Ciliary Body and Trabecular Meshwork

Kishore Reddy Katikireddy, Reza Dana, Ula V. Jurkunas. Schepens Eye Research Institute,Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA.
Differentiation Potential Of Human Limbal Fibroblasts To Corneal Epithelial-like Cells

Shawn K. Kelly[1], William F. Ellersick[2], Attila Priplata[1,3], Douglas B. Shire[1,4], John L. Wyatt[3], Joseph F. Rizzo, III[5]. [1]Center for Innovative Visual Rehab, VA Boston Healthcare System, Boston, MA; [2]Analog Circuit Works, Sudbury, MA; [3]Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, MA; [4]Cornell University, Ithaca, NY;[5]Ophthalmology, Mass Eye & Ear Infirmary, Boston, MA.
Power and Data Telemetry Developments for a Retinal Implant

Svetlana V. Kiosseva[1], Lily L. Wong[1], Xiaohong Zhou[2], James F. McGinnis[1].[1]Ophthalmology, Dean A McGee Eye Inst, Univ of OK, Oklahoma City, OK;[2]Massachusetts Eye and Ear Infirmary Howe Lab, Harvard Med School, Boston, MA.
Genome-Wide Expression Profiling in the Retina of Vldlr Knockout Mouse

Takeshi Kita[1A], Allen C. Clermont[1A], Kimihiko Fujisawa[2], Tatsuro Ishibashi[2], Lloyd P. Aiello[1A,1B], Edward P. Feener[1A,1C]. [A]Joslin Diabetes Center, [B]Department of Ophthalmology, [C]Department of Medicine,[1]Harvard Medical School, Boston, MA; [2]Department of Ophthalmology, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan.
Identification of a VEGF-independent and Plasma Kallikrein-Kinin-dependent pathway of retinal vascular permeability in Diabetic Macular Edema

Erich Knop[1], Nadja Knop[1], Tannin A. Schmidt[2], Sheila Morrison[2], Benjamin D. Sullivan[3], Raheleh Rahimi Darabad[4], David A. Sullivan[4]. [1]Ocular Surface Center Berlin (OSCB), University Charite Berlin, Dept. Cell- & Neurobiol, Berlin, Germany; [2]Faculty of Kinesiology, Centre for Bioengineering Research & Education, University of Calgary, Calgary, AB, Canada;[3]TearLab Corp, San Diego, CA; [4]Schepens Eye Research Institute/Massachusetts Eye and Ear/Harvard Medical School, Boston, MA.
Identification of Lubricin Protein and mRNA Expression at the Human Ocular Surface

Shilpa Kodati[1], William Stevenson[1], Masahiro Omoto[1], Takaaki Hattori[2,1], Thomas H. Dohlman[1], Daniel R. Saban[1], Sunil K. Chauhan[1], Reza Dana[1].[1]Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [2]Ophthalmology, Tokyo Medical University, Shinjuku, Japan.
The Effect of IL-6 Neutralization on Corneal Allograft Survival

Sahar Kohanim[1], Hong-Gam Le[2], Deborah S. Jacobs[1,2]. [1]Department of Ophthalmology, Mass. Eye & Ear Infirmary/Harvard Medical School, Boston, MA; [2]Boston Foundation for Sight, Needham, MA.
When Lightening Strikes Twice: Seven cases of Stevens-Johnson Syndrome and Corneal Ectasia

Achim H. Krauss[1A], Francisco Amparo[2], Andre Okanobo[2], David C. Gale[1A], Thomas C. Wilde[1B], Caroline Sychterz[1B], Rachel Apfelbaum[3], Pratik Saha[3], Jennifer Cermak[4], Reza Dana[2]. [A]Ophthalmology, [B]DMPK,[1]GlaxoSmithKline, King of Prussia, PA; [2]Schepens Eye Research Institute, Boston, MA; [3]Product Development, GlaxoSmithKline, Collegeville, PA;[4]Sirtris a GSK Company, Cambridge, MA.
Improvement Of Corneal Staining By A Sirt1 Activator In A Mouse Model Of Dry Eye

Christine N. Pham Lagler[1], Wuqaas M. Munir[1], Melissa M. Wong[1], Anita N. Shukla[2]. [1]Ophthalmology, Boston University Medical Center, Boston, MA; [2]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
Use of Anterior Segment Optical Coherence Tomography as an Adjunctive Modality for Predicting Corneal Volume

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Eric Lapalme[1], Flavio Rezende[1], Sandra Favret[1], François Binet[1], Gaelle Mawambo[1], John Paul P. SanGiovanni[2], Andreas Stahl[3], Lois E. Smith[4], Przemyslaw Sapieha[1]. [1]Ophthalmology, Hopital Maisonneuve-Rosemont, Montreal, QC, Canada; [2]Clinical Trials Branch, National Eye Institute/NIH, Bethesda, MD; [3]Univ Eye Hospital Freiburg, Freiburg, Germany;[4]Ophthalmology, Harvard Univ/Childrens Hospital, Boston, MA.
The Omega-3 Fatty Acid Metabolite 4-HDHA Reduces VEGF-Induced Choroidal Neovascularization in a VEGFR2-independent manner

Hong-Gam Le[1], Deborah S. Jacobs[1,2]. [1]Boston Foundation for Sight, Needham, MA; [2]Ophthalmology, Harvard Medical School, Boston, MA.
Impact of PROSE Treatment of the Ocular Sequelae of Stevens-Johnson Syndrome

Hyunjoo J. Lee[1,2A], Robert Dunphy[2B], Mary Daly[2A,1], Donna Siracuse-Lee[2A,1]. [1]Ophthalmology, Boston Medical Center / Boston University School of Medicine, Boston, MA; [A]Ophthalmology, [B]Optometry, [2]Veterans Affairs Boston Healthcare System, Boston, MA.
***In Vivo* Confocal Microscopy Study Of Conjunctival Intraepithelial Neoplasia Treated With Interferon-alpha2b**

*Nahyoung G. Lee, Daniel R. Lefebvre, Savannah Baril, Suzanne K. Freitag.*Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
Community Acquired Methicillin-Resistant Staphylococcus aureus periorbital abscesses are transmissible between members of the same household

Hetian Lei[1], Marc-Andr Rheaume[2], Jing Z. Cui[3], Shizuo Mukai[2], David Maberley[4], Arif Samad[4], Joanne A. Matsubara[3], Andrius Kazlauskas[1].[1]Ophthalmology of Harvard Medical School, Schepens Eye Research Institute/Massachusetts Eye & Ear Infirmary, Boston, MA;[2]Ophthalmology of Harvard Medical School, Massachusetts Eye & Ear Infirmary, Boston, MA; [3]Ophthalmology & Visual Sciences, University of British Columbia, Vancouver, BC, Canada; [4]Ophthalmology & Visual Sciences, Dalhousie University, Halifax, NS, Canada.
A Novel Function of p53: A Gatekeeper of Retinal Detachment

Luis A. Lesmes[1], Jennifer Wallis[2], Zhong-Lin Lu[3], Mary Lou Jackson[2], Peter Bex[1]. [1]Harvard Dept of Ophthalmology, Schepens Eye Research Institute, Boston, MA; [2]Harvard Dept of Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA; [3]LOBES, Dept of Psychology, Ohio State University, Columbus, OH.
Clinical Application Of A Novel Contrast Sensitivity Test To A Low Vision Population: The Quick CSF Method

Yong N. Li, John E. Dowling. Molecular and Cellular Biology, Harvard University, Cambridge, MA.
A Correlation Study between a Bipolar Cell's Morphology and Its Photoreceptor Connectivity in the Zebrafish Retina

Cailing Liu, Thore Schmedt, Ula Jurkunas. Schepens / Massachusetts Eye and Ear, Harvard Medical School, Boston, MA.
The Role Of DJ-1 In Nrf2-regulated Antioxidant Defense In Human Corneal Endothelial Cells

Qin Liu, Eric A. Pierce. Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA.
Identification Of Rp1 Interacting Proteins Using *In Vivo* Affinity Purification Approaches

Yao Liu[1,2], Dagny C. Zhu[1,2], Anne M. Lane[1,2], Justin M. Kanoff[1,2], Sona Chaudhry[1], Ankoor S. Shah[1,3]. [1]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Harvard Medical School, Boston, MA;[3]Ophthalmology, Children's Hospital Boston, Boston, MA.
Assessment of Injury-Related Knowledge and Education in Patients Following Open-Globe Injury

*Alice C. Lorch, Jennifer Wallis, Danielle Trief, Mary Lou Jackson.*Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
Outcomes Of Vision Rehabilitation In Patients With Low Vision Who Do, Or Do Not, Participate In Occupational Therapy

Mara Lorenzi[1,2], Lucia Sobrin[3,2]. [1]Schepens Eye Research Institute, Massachusetts Eye and Ear, Boston, MA; [2]Harvard Medical School, Boston, MA; [3]Retina/Uveitis, Mass Eye & Ear Infirmary, Boston, MA.
Pilot Validation of a Marker of Risk for Development of Diabetic Retinopathy

★ *Jie Ma[1], Chenying Guo[1], Guochun Chen[2], Desirée Cyr[1], Kameran Lashkari[1,3].* [1]Schepens Eye Research Institute, Boston, MA; [2]The second Xiangya Hospital, Central South University, Changsha, China;[3]Massachusetts Eye & Ear Infirmary, Boston, MA.
Transfection of IGF-1 and IGFBPL-1 in Neuronal Progenitor Cells from Human Persistent Fetal Vascular for Neuroprotection

Mirgholamreza Mahbod[1,2], Bernardo Cavalcanti[1], Andrea Cruzat[1], Monique Trinidad[1], Candice Williams[1], Pedram Hamrah[1].
In Vivo Laser Confocal Microscopic Findings of Palisades of Vogt in Normal Subjects and Patients with Ocular Surface Disease

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Muhammad Taimur A. Malik[1], Rajesh C. Rao[2], Chenying Guo[1], Justin Chew[1], Xiaoling Jiao[1,3], Dong Feng Chen[1,4]. [1]Schepens Eye Research Institute/Massachusetts Eye and Ear, Department of Opthalmology, Harvard Medical School, Boston, MA; [2]Department of Opthalmology and Visual Sciences, Washington University School of Medicine, St. Louis, MO;[3]Department of Opthalmology, Beijing University First Hospital, Beijing, China; [4]VA Center for Innovative Visual Rehabilitation, RR&D Center of Excellence, VA Boston Healthcare System, Boston, MA.
Epigenetic Regulation of Wnt signaling to mediate Müller Cell Survival and Proliferation

*Christina K. Marko, Ann Tisdale, Sandra Spurr-Michaud, Ilene K. Gipson.*Schepens Eye Research Institute, Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School, Boston, MA.
The Effect of Desiccating Environmental Stress on Spdef Null Mice that Lack Conjunctival Goblet Cells

Jerome Mauris[1], Flavio Mantelli[1], Noorjahan A. Panjwani[2], Pablo Argueso[1]. [1]The Schepens, Mass Eye & Ear, Harvard Med School, Boston, MA; [2]Department of Ophthalmology, Tufts University Medical School, Boston, MA.
Modulation of Ocular Surface Barrier Function by Galectin-3

Scott M. McClintic[1], Michael K. Yoon[2], Maziar Bidar[3], Robert C. Kersten[1].[1]Ophthalmology, University of California, San Francisco, San Francisco, CA; [2]Ophthalmology, Massachusetts Eye And Ear Infirmary, Boston, MA;[3]Oculoplastic Consultants of Central California, Fresno, CA.
Tissue Necrosis Following Diode Laser-Assisted Transcanalicular Dacryocystorhinostomy

Bruce W. McKee[1,2], Marcus D. Gingerich[1,2], Stuart F. Cogan[3], Douglas B. Shire[1], John L. Wyatt[4], Joseph F. Rizzo, III[5]. [1]Center for Innovative Visual Rehabilitation, VA Boston Health Care System, Boston, MA; [2]Cornell NanoScale Science & Technology Facility, Cornell University, Ithaca, NY;[3]EIC Laboratories, Norwood, MA; [4]Electrical Engineering, Massachusetts Institute of Technology, Cambridge, MA; [5]Ophthalmology, Mass Eye & Ear Infirmary, Boston, MA.
A Microfabricated Chronic Percutaneous Penetrating Electrode Array for a Subretinal Prosthesis

Balaraj B. Menon, Bharathi Govindarajan, Sandra Spurr-Michaud, Ilene K. Gipson. Ophthalmology, Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School, Boston, MA.
Characterization of a Truncated and More Potent Zinc Metalloprotease, ZmpC, from *Streptococcus pneumoniae* that Abrogates the MUC16 Barrier in Ocular Surface and Tracheal-Bronchial Epithelial Cells

John B. Miller[1], Rajesh C. Rao[2], Netan Choudhry[1], David M. Wu[3], Gaurav K. Shah[4], Demetrios Vavvas[1], Shizuo Mukai[1], Dean Eliott[1]. [1]Harvard Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Department of Ophthalmology and Visual Sciences, Washington University School of Medicine/The Retina Institute, St. Louis, MO; [3]Doheny Eye Institute, University of Southern California, Los Angeles, CA; [4]Barnes Retina Institute, Town and Country, MO.
Pockets of Subretinal Fluid after Retinal Reattachment Surgery: New Insights with SD-OCT

Wuqaas M. Munir[1], Saleha Z. Munir[2], Melissa Wong[1], Anita N. Shukla[3].[1]Ophthalmology, Boston Univ School of Medicine, Boston, MA; [2]New England College of Optometry, Boston, MA; [3]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
Correlation Of Central Corneal Volume To Central Corneal Thickness In Normal Eyes

Timothy J. Murtha, Diabetic Retinopathy Clinical Research Network. Beetham Eye Inst, Joslin Diabetes Center, Natick, MA.
Observational Study of Worsening To Center- Involved Macular Edema Following Cataract Surgery in a Cohort with Diabetic Retinopathy

Namrata Nandakumar[1], Ahad Fazelat[2], Muhammad Taimur A. Malik[3], Rami Mangoubi[4], Mukund Desai[5], Kameran Lashkari[6]. [1]Ophthalmology, Massachusetts Eye and Ear Infirmary/ Schepens, Boston, MA;[2]Ophthalmology, bellows goodman shaker siegel, Manchester, NH;[3]Schepens Eye Research Institue, Boston, MA; [4]C.S. Draper Lab, Cambridge, MA; [5]C.S. Draper Labs, Cambridge, MA; [6]Schepens Eye Research Institute, Harvard Med School, Boston, MA.
Application of Enhanced Near-Infrared Fundus Reflectance for Analysis of Subretinal Lesions Associated with AMD

Koji M. Nishiguchi[1,2], Makoto Nakamura[2], Mineo Kondo[2], Shinji Ueno[2], Tetsuhiro R. Yasuma[2], Rick Tearle[3], Jacques Beckmann[1], Hiroko Terasaki[2], Eliot L. Berson[4], Carlo Rivolta[1]. [1]Department of Medical Genetics, University of Lausanne, Lausanne, Switzerland; [2]Department of Ophthalmology, Nagoya University School of Medicine, Nagoya, Japan;[3]Complete Genomics Inc., Mountain View, CA; [4]Harvard Medical School, The Berman-Gund Laboratory for the Study of Retinal Degenerations, Massachusetts Eye and Ear Infirmary, Boston, MA.
Whole Genome Analysis Of 16 Unrelated Patients With Autosomal Recessive Retinitis Pigmentosa Reveals Novel Single-Base And Large Structural Genomic Mutations

Emily R. Noonan[1A], Tara L. Favazza[1A], Nan Zhang[1A,2], Alessia Di Nardo[1B,2], Ronald M. Hansen[1A,2], James D. Akula[1A,2], Mustafa Sahin[1B,2], Anne B. Fulton[1A,2]. [A]Ophthalmology, [B]Neurology, [1]Children's Hospital Boston, Boston, MA; [2]Harvard Medical School, Boston, MA.
Effects of Vigabatrin on Retina in Pigmented Rats

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

*Dong-Jin Oh, Guadalupe Villarreal, Jr., Min Hyung Kang, Douglas J. Rhee.*Dept of Ophthalmology, Harvard Medical School MEEI, Boston, MA.
Lithium Chloride Induces MicroRNA-29b and Suppresses Extracellular Matrix Synthesis in the Trabecular Meshwork

Masahiro Omoto, Yiping Jin, Reza Dana, Sunil K. Chauhan. Schepens Eye Research Institute, Harvard Medical School, Boston, MA.
Mesenchymal Stem Cells Suppress Alloimmunity in Corneal Transplantation

Diana Pachon, Alaa Radwan, C. S. Foster. MERSI, Cambridge, MA.
Idiopathic Panuveitis Associated With Retinitis Pigmentosa

Sotiria Palioura[1,2], Y. Pierre Gobin[3], Scott E. Brodie[1,4], Ira J. Dunkel[5], Brian P. Marr[1], David H. Abramson[1]. [1]Ophthalmic Oncology Service, Memorial Sloan-Kettering Cancer Center, New York, NY; [2]Currently, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [3]Division of Interventional Neuroradiology, Departments of Radiology, Neurosurgery and Neurology, Weill Cornell Medical College, New York Presbyterian Hospital, New York, NY;[4]Department of Ophthalmology, Mount Sinai School of Medicine, New York, NY; [5]Department of Pediatrics, Memorial Sloan-Kettering Cancer Center, New York, NY.
Intra-arterial Chemotherapy for the Management of Retinoblastoma in Eyes with Extensive (>50%) Retinal Detachment

*Thanos D. Papakostas, Anthony B. Daniels, Demetrios G. Vavvas.*Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA.
Natural History Of Drusenoid Pigment Epithelium Detachments In Age-related Macular Degeneration Using Spectral Domain Oct

Louis R. Pasquale[1A], Stephanie Loomis[1A], Jae H. Kang[2], Brian Yaspan[3], Richard K. Lee[4], Margaret A. Pericak-Vance[5], Michael A. Hauser[6], Julia E. Richards[7], Jonathan L. Haines[3], Janey L. Wiggs[1B]. [A]Ophthalmology,[B]Ophthalmology-Harvard Med School, [1]Mass Eye & Ear Infirmary, Boston, MA; [2]Medicine, Brigham and Women's Hospital, Boston, MA; [3]Center for Human Genetics Research, Vanderbilt University, Nashville, TN; [4]Bascom Palmer Eye Institute, Miami, FL; [5]Human Genomics, Univ of Miami Miller Sch of Med, Miami, FL; [6]Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC; [7]Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI.
CDKN2BAS Genotype - Glaucoma Phenotype Correlations In The GLAUGEN Study And The NEIGHBOR Consortium

Mrinali Patel, Kathryn Colby. Ophthalmology, Harvard Medical School, Mass Eye & Ear Infirmary, Boston, MA.
Clinicopathological Features of Young Patients Diagnosed with Primary Acquired Melanosis with Atypia or Conjunctival Melanoma

Dorothy T. Pei[1], Przemyslaw Sapieha[2], Jing Chen[1], Andreas Stahl[3], Aimee M. Juan[1], Colman J. Hatton[1], Christian G. Hurst[1], Timothy S. Kern[4], James D. Akula[1], Lois E. H. Smith[1]. [1]Children's Hospital Boston/Harvard Medical School, Boston, MA; [2]Maisonneuve-Rosemont Hospital Research Centre/ University of Montreal, Montreal, QC, Canada; [3]University Eye Hospital, Freiburg, Germany; [4]Louis Stokes Veterans Hospital/ Case Western Reserve University, Cleaveland, OH.
Omega-3 Polyunsaturated Fatty Acids Preserve Retinal Function In Type II Diabetic Mice

Laura Phan[1], Michael K. Yoon[2], Thomas Hwang[3], Timothy McCulley[1].[1]Ophthalmology, Wilmer Eye Institute, Baltimore, MD; [2]Ophthalmology, Massachusetts Eye and Ear, Boston, MA; [3]Ophthalmology, Kaiser Permanente Medical Group, Redwood City, CA.
The "Swinging Sclera" Modification Of Evisceration: Assessment Of Motility And Long Term Follow-up

Sonja G. Prager[1,2], Salma H. Radwan[1,3], Hanna Kwak[1], Paolo S. Silva[1], Stephen A. Burns[4], Lloyd P. Aiello[1], Jennifer K. Sun[1]. [1]Beetham Eye Institute, Joslin Diabetes Center/Harvard Medical School, Boston, MA;[2]Department of Ophthalmology and Optometry, Medical University Vienna, Vienna, Austria; [3]Ophthalmology, Cairo University, Cairo, Egypt;[4]School of Optometry, Indiana University, Bloomington, IN.
Characterization of Diabetic Retinopathy Lesions Using Adaptive Optics Scanning Laser Ophthalmoscopy

Christina R. Prescott, Pedram Hamrah, Ula Jurkunas. Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
Regional variability in endothelial cell density in Fuchs Endothelial Corneal Dystrophy; An HRT3 Study

Yureeda Qazi[1], Bernardo Cavalcanti[1], Andrea Cruzat[1], Susan Cheng[1], Candice Williams[1], Monique Trinidad[1], Deborah Witkin[1], Caroline A. Blackie[2], Donald R. Korb[3], Pedram Hamrah[1,4]. [1]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA; [2]TearScience, Boston, MA; [3]Korb Associates, Boston, MA; [4]Immune Disease Institute, Harvard Medical School, Boston, MA.
Immune Response in Meibomian Gland Dysfunction (MGD) and the Effect of Anti-Inflammatory Therapy: An *In Vivo* Confocal Microscopy (IVCM) Study

Juan Qu, Tatjana Jakobs. Howe Laboratory of Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA.
Optic Nerve Head Astrocytes Increase Expression Of Tenascin C In Response To Injury

Alaa E. Radwan[1], Ravi Parikh[1,2A], Ujwala Baheti[1], Matthew Austin[2B], C. Stephen Foster[1]. [1]Uveitis, MERSI, Cambridge, MA; [A]Public health, [B]public health, [2]Harvard school, Cambridge, MA.
Risk factors associated with relapse of Birdshot Retinochoriodopathy

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Salma Radwan[1,2], Ahmed Z. Soliman[1,2], Sonja G. Prager[1,3], Paolo S. Silva[1], Hanna Kwak[4A], George L. King[4B], Lloyd P. Aiello[1], Jennifer K. Sun[1]. [1]Ophthalmology, Joslin Diabetes Center, Harvard Medical School, Boston, MA; [2]Ophthalmology, Cairo University Medical School, Cairo, Egypt;[3]Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria; [A]Ophthalmology, [B]Research, [4]Joslin Diabetes Center, Boston, MA.
Decreasing Retinal Layer Thickness with Increasing Diabetes Duration is Independent of Diabetic Retinopathy Severity and Retinal Central Subfield Thickness

Aparna Raghuram[1,2], Oyinkansola Kolawole[1,3], Ronald M. Hansen[1,2], Anne B. Fulton[1,2]. [1]Department of Ophthalmology, Childrens Hospital Boston, Boston, MA; [2]Harvard Medical School, Boston, MA; [3]Northeastern University, Boston, MA.
Flicker Electroretinogram - Temporal Response Function In Children On Vigabatrin (VGB)

Adriana Ransijn[1], Giulia Venturini[1], Silvio Alessandro Di Gioia[1], Shyana Harper[2], Carol Weigel-DiFranco[2], Carlo Rivolta[1], Eliot L. Berson[2]. [1]Department of Medical Genetics, University of Lausanne, Lausanne, Switzerland; [2]Harvard Medical School, The Berman-Gund Laboratory for the Study of Retinal Degenerations, Massachusetts Eye and Ear Infirmary, Boston, MA.
FAM161A Mutations In Patients With Early-onset Retinitis Pigmentosa In The United States

Caio V. Regatieri[1,2], Petr Baranov[1], Ana Carvalho[1], ChiWan Ko[1], Sarah Tao[3], Michael J. Young[1]. [1]Ophthalmology, Schepens Eye Res Inst - Harvard Medical, Boston, MA; [2]Ophthalmology, Federal University of Sao Paulo, Sao Paulo, Brazil; [3]Advanced Development Center, CooperVision, Inc., Pleasanton, CA.
Pre Differentiated Human Retinal Progenitor Cells Integrate and Express Mature Markers on the Host Retina

Birgit Regenfuss[1], Deniz Hos[1], Felix Bock[1], Jasmine Onderka[2], Sharmila Masli[3], Claus Cursiefen[1]. [1]Ophthalmology, University of Cologne, Cologne, Germany; [2]Ophthalmology, University of Erlangen-Nuremberg, Erlangen, Germany; [3]Ophthalmology/Harvard Med School, Schepens Eye Research Institute, Boston, MA.
TRAIL Influences Human Lymphatic Microvascular Endothelial Cell (HMVECs) Proliferation and Lymphangiogenesis

Flavio A. Rezende[1], Eric Lapalme[1], Cynthia X. Qian[2], Aouatef Benlemmouden[1], Sandra Favret[1], Nicolas Tetreault[1], Francois Binet[1], Lois E. Smith[3], John Paul P. SanGiovanni[4], Przemyslaw Mike Sapieha[1]. [1]Ophthalmology, Maisonneuve-Rosemont Hospital, Montreal, QC, Canada; [2]Ophthalmology, University of Montreal, Montreal, QC, Canada;[3]Ophthalmology, Harvard Univ/Childrens Hospital, Boston, MA; [4]Clinical Trials Branch, National Eye Institute/NIH, Bethesda, MD.
Omega-3 Supplementation Influences Vitreal Levels of Vascular Endothelial Growth Factor in Exudative Age-Related Macular Degeneration

Miin Roh[1], Yan Zhang[1], Yusuke Murakami[1], Aristomenis Thanos[1], Demetrios G. Vavvas[1], Larry Benowitz[2], Joan W. Miller[1]. [1]Ophthalmology, MEEI, Angiogenesis Lab, Boston, MA; [2]Neuroscience, Laboratories for Neuroscience Research in Neurosurgery, F.M. Kirby Neurobiology Center, Children's Hospital Boston, MA.
Etanercept, A Widely Used Inhibitor Of Tumor Necrosis Factor-α (TNF-α), Prevents Retinal Ganglion Cell Loss In A Rat Model Of Glaucoma

Daniel R. Saban, Sharmila Masli, Payal Khandelwal, Hyun S. Lee, Simona Schelereth, Tomas Blanco. Ophthalmology, Schepens Eye Res Inst, MEE, Harvard Medical School, Boston, MA.
Deletion of Thrombospondin (TSP)-1 in Dendritic Cells (DC) of the Conjunctiva Exacerbates Allergic Conjunctivitis (AC)

Zahra Sadrai, William Stevenson, Andre Okanobo, Yihe Chen, Jing Hua, Sunil Chauhan, Reza Dana. MEEI/SERI Harvard Ophthalmology, Boston, MA.
Topical Blockade of Phosphodiesterase 4 (PDE4) Ameliorates Dry Eye Disease

John Paul P. SanGiovanni[1], Jing Chen[2], Roberta J. Dennison[3], Traci E. Clemons[4], Przemyslaw Mike Sapieha[5], Lois E. Smith[6], Emily Y. Chew[7]. [1]Clinical Trials Branch, National Eye Institute/NIH, Bethesda, MD;[2]Harvard Med Sch/Children's Hosp, Boston, MA; [3]Harvard Med Sch, Boston, MA; [4]EMMES Corp., Rockville, MD; [5]Ophthalmology, University of Montreal, Montreal, QC, Canada; [6]Harvard Med Sch/Children's Hospital, Boston, MA; [7]National Eye Inst/NIH, Bethesda, MD.
Regulatory Elements in Noncoding DNA Contain AMD-Associated Sequence Variants

Daniel R. Saunders, Peter J. Bex, Russell L. Woods. Schepens Eye Research Institute, Boston, MA.
A Novel, Objective Measure of Information Acquisition from Video is Correlated with Blur

Rony R. Sayegh, Claes H. Dohlman, Eli Peli. Ophthalmology, Schepens Eye Research Institute, Massachusetts Eye & Ear, Boston, MA.
Evaluation of the Through-focus Curve of the Boston Keratoprosthesis

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Simona L. Schlereth[1,2], Hyun Soo Lee[1], Eun Young Park[1], Parisa Emami-naeini[1], Nambi Nallasamy[1], Sunil K. Chauhan[1], Reza Dana[1]. [1]Schepens Eye Research Institute and Massachusetts Eye and Ear Infirmary, Boston, MA;[2]University Eye Hospital, Cologne, Germany.
Natural Killer (NK) Cells Promote Corneal Angiogenesis In β-FGF Micropellet Model

J. Sebag[1,2], Kenneth M. Yee[2,1], Michele C. Madigan[3], Lloyd P. Aiello[4], Alfredo A. Sadun[2]. [1]VMR Institute, Huntington Beach, CA;[2]Ophthalmology, Doheny Eye Institute and Keck School of Medicine, University of Southern California, Los Angeles, CA; [3]School of Optometry & Vision Science, University of NSW, Sydney, Australia; [4]Ophthalmology, Joslin Diabetes Center, Harvard Medical School, Boston, MA.
Bioinformatic Analysis of Embryonic Human Vitreomics

Marie A. Shatos, Robin R. Hodges, Rachel A. Scott, David McNay, Sharmila Masli, Darlene A. Dartt. Department of Ophthalmology, Harvard Medical School, Schepens Eye Research Institute, Mass Eye and Ear, Boston, MA.
Comparative Analysis of Progenitor Cells from Lacrimal Glands of Wild Type and Thrombospondin-1 Null Mice

Tarek A. Shazly[1A], Ernesto D. Golez[2], Mark A. Latina[1]. [A]Ophthalmology,[1]Reading Health Center, Reading, MA; [2]Ophthalmology, Massachusetts Eye and Ear Infirmary, Reading, MA.
Low-Coherence Reflectometry (OLCR) Versus Ultrasonic Techniques Of Pachymetry In Glaucomatous And Non-Glaucomatous Eyes

Lucy Q. Shen[1], Zachary M. Bodnar[2], Anne Runkle[1], Douglas Rhee[1], Dennis Mock[3], Joseph Caprioli[3], Louis R. Pasquale[1]. [1]Ophthal-Dept of Glaucoma, MA Eye & Ear Infirm/Harvard Med, Boston, MA; [2]John A. Moran Eye Center/ Univ of Utah School of Med, Salt Lake City, UT; [3]Glaucoma, Jules Stein Eye Institute, UCLA, Los Angeles, CA.
Assessing Structure-Function Relationships Based on the Glaucoma Staging System

Hasanain Shikari, Francisco Amparo, Mohammad Dastjerdi, Andre Okanobo, Giulio Ferrari, Reza Dana. Cornea, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA.
Effect Of Topical IL-1RA On Signs And Symptoms Of Dry Eye Disease In Patients With Ocular Graft-versus-host Disease (GVHD)

Jongwoo Shim[1], Hyun Soo Lee[2], Sunil Chauhan[2], Tae-im Kim[1], Eung Kweon Kim[3], Hyung Keun Lee[3]. [1]Department of Ophthalmology, Yonsei University College of Medicine, Institute of Vision Research, Seoul, Republic of Korea; [2]Department of Ophalmology, Schepens Eye Research Institute, Boston, MA; [3]Department of Ophthalmology, Yonsei University College of Medicine, Corneal Dystrophy Research Institute, Seoul, Republic of Korea.
Change In Prostaglandin Synthesizing Activities In Dry Eye Induced Mice

Douglas B. Shire[1,2], Tom Salzer[3], William Jones[4], Ali Karbasi[4], Sonny Behan[5], William A. Drohan[6], Oscar Mendoza[7], Jinghua Chen[8], John Wyatt[7], Joseph F. Rizzo, III[8]. [1]Boston VA Medical Center, Ctr for Innovative Visual Rehabilitation, Ithaca, NY; [2]Cornell NanoScale Science and Technology Facility, Ithaca, NY; [3]Hermetric, Inc., Bedford, MA;[4]Florida International University, Miami, FL; [5]Consultant, Duluth, GA; [6]Ctr for Innovative Visual Rehabilitation, Boston VA Medical Center, Cambridge, MA; [7]Massachusetts Institute of Technology, Cambridge, MA;[8]Mass Eye and Ear Infirmary, Harvard Medical School, Boston, MA.
Hermetic Sealing and Packaging Technology for the Boston Retinal Prosthesis

Anita Shukla[1], Andrea Cruzat[1], Juan-Carlos Abad[2], Claes H. Dohlman[1], Kathryn A. Colby[1]. [1]Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA; [2]Ophthalmology, Clinica Oftalmica de Medellin, Medellin, Colombia.
Results of the Boston keratoprosthesis type 1 larger backplate

Sana S. Siddique[1], Laura Amorese[1], Lama Almulki[2], Ana M. Suelves[3], C Stephen Foster[4]. [1]Ophthalmology, MERSI/OIUF, Cambridge, MA;[2]Ophthalmology, Massachusetts Eye Res and Surgery Inst, Cambridge, MA; [3]MERSI, Xirivella, Valencia, Spain; [4]Ophthalmology, Ocular Immunol & Uveitis Fndtn, Cambridge, MA.
Regulatory T-Cells In Peripheral Blood of Patients With Birdshot Retinochoroidopathy

Paolo S. Silva[1,2], Jerry D. Cavallerano[1,2], Jennifer K. Sun[1,2], Ahmed Z. Soliman[1], Jerald Wisdom[1], Abumare Akinwale[1], Lloyd M. Aiello[1,2], Lloyd P. Aiello[1]. [1]Beetham Eye Institute, Joslin Diabetes Center, Boston, MA;[2]Ophthalmology, Harvard Medical School, Boston, MA.
Identification of Additional Diabetic Retinopathy Lesions using Mydriatic Wide-field Fundus Imaging: distribution & agreement with ETDRS photography and dilated retinal examination

Nicholas Sitaras[1A,1B], Jean-Sebastien Joyal[2], Zhuo Shao[2], Mike (Przemyslaw) Sapieha[1B], Sylvain Chemtob[1A,2]. [A]Pharmacology,[B]Ophthalmology, [1]Maisonneuve-Rosemont Hosp, Montreal, QC, Canada;[2]Pharmacology, Sainte-Justine Hospital, Montreal, QC, Canada.
Activated Protease-activated Receptor Type 2 Reduces Vaso-obliteration And Accelerates Normal Revascularization In A Mouse Model Of Oxygen-induced Retinopathy

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Dimitra Skondra, Demetrios Vavvas. Ophthalmology, Retina Service, Harvard Medical School, Massachusetts Eye and Ear Infirmary, Boston, MA.
A Novel Surgical Technique For Encircling Scleral Buckle Surgery For Primary Retinal Detachment

Mary Ann Stepp[1A], Daniel R. Saban[2], Gauri Tadvalkar[1B], Ahdeah Pajoohesh-Ganji[1B], Sonali Pal-Ghosh[1B]. [A]Anatomy & Regenerative Biology and Ophthalmology, [B]Anatomy & Regenerative Biology, [1]George Washington University, Washington, DC; [2]Schepens Eye Research Institute, Harvard Medical School, Boston, MA.
Debridement Wounds to the Mouse Cornea Induce Rapid Recruitment of Monocytes and γδ T-cells

William Stevenson[1], Zahra Sadrai[1], Jing Hua[1], Shilpa Kodati[1], Sunil K. Chauhan[1], Jing-Feng Huang[2], Reza Dana[1]. [1]Schepens Eye Research Institute and Massachusetts Eye & Ear Infirmary, Harvard Medical School, Boston, MA; [2]Ophthalmology, Pfizer, San Diego, CA.
Jak1/3 Inhibition Suppresses Acute And Chronic Forms Of Murine Ocular Surface Inflammation

Uygar Sumbul[1,2], Sen Song[3], Kyle McCulloch[4], Michael Becker[4], Richard Masland[4], Sebastian Seung[1,2]. [1]Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, MA; [2]Howard Hughes Medical Institute, Cambridge, MA; [3]Biomedical Engineering, Tsinghua University, Beijing, China; [4]Department of Ophthalmology, Mass. Eye and Ear Infirmary, Harvard Medical School, Boston, MA.
Stratification Stereotypy Of Genetically Defined Retinal Ganglion Cell Types

Jun Suzuki[1], Takeru Yoshimura[2], Marina Simeonova[1], Kimio Takeuchi[1], Yusuke Murakami[1], Yuki Morizane[1], Joan W. Miller[1], Lucia Sobrin[1], Demetrios G. Vavvas[1]. [1]Ophthalmology, Angiogensis Lab, Massachusetts Eye & Ear Infirmary, Boston, MA; [2]Vascular Biology Program and Department of Surgery, Childrens' Hospital Boston, Boston, MA.
Aminoimidazole Carboxamide Ribonucleotide (AICAR) Ameliorate Experimental Autoimmune Uveitis

*Kimio Takeuchi, Cynthia Kamami-Levy, Demetrios G. Vavvas.*Ophthalmology, Massachusetts Eye and Ear Infirmary(MEEI), Boston, MA.
Human Umbilical Tissue-derived Cells (hUTC) Ameliorate Retinal Vascular Leakage In A Diabetic Rat

Dhananjay Tambe[1], Ramin Zareian[2], Dimitrios Karamichos[3], James D. Zieske[3], Jeffrey W. Ruberti[2]. [1]Department of Environmental Health, Harvard school of public health, Boston, MA; [2]Mechanical Engineering, Northeastern University, Boston, MA; [3]Department of Ophthalmology, Schepens Eye Research Institute, Harvard medical school, Boston, MA.
Continuous Measurement Of Physical Forces During Human Primary Corneal Fibroblast Migration

Laura M. Tarko[1,2], Jim Z. Li[3], Darlene A. Dartt[2], Debra A. Schaumberg[4].[1]Boston University School of Public Health, Boston, MA; [2]Schepens Eye Research Institute, Boston, MA; [3]Clinical Development & Medical Affairs, Pfizer Inc, San Diego, CA; [4]Preventive Medicine, Harvard Med Sch/Brigham & Women's, Boston, MA.
The Natural History Of Dry Eye Disease From The Patient's Perspective

Matthew G. Trese[1], Murilo B. Abud, Sr.[2A], Caio V. Regatieri[3], Michael J. Young[2B]. [1]Schepens Eye Rsch Inst/Boston Univ, Boston, MA; [A]Retina,[B]Schepens Eye Research Inst, [2]Harvard Medical School, Boston, MA;[3]Ophthalmology, Schepens Eye Res Inst - Harvard Medical, Boston, MA.
Human Retinal Pigment Epithelium Cell Secretions Promote Human Retinal Progenitor Cell Differentiation into Photoreceptors

Danielle Trief[1,2], Paul A. Legutko[3], Mary K. Daly[1,4]. [1]Ophthalmology, Veterans Affairs Boston Healthcare System, Boston, MA;[2]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA;[3]Semphonic, Novato, CA; [4]Ophthalmology, Boston University School of Medicine, Boston, MA.
Laterality as a Risk Factor for Intraoperative Complications During Cataract Surgery

Monique L. Trinidad[1A,1B], Raheleh Rahimi-Darabad[2], Andrea Cruzat[1A,1B], Amir Hajrasouliha[2], Deborah Witkin[1A,1B], Candice Williams[1A,1B], Reza Dana[1A], Pedram Hamrah[1A,1B]. [A]Cornea Service, [B]Ocular Surface Imaging Center, [1]Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Schepens Eye Research Institute, Boston, MA.
Epithelial Immune Cell Alterations and the Effect of Anti-Inflammatory Treatment in Patients with Dry Eye Syndrome: An *In Vivo* Confocal Microscopy Study

Tor P. Utheim[1], Øygunn A. Utheim[1], Jon Roger Eidet[1], Maria de La Paz[2], Edward Messelt[3A], Borghild Roald[3B], Darlene A. Dartt[4], Torstein Lyberg[1].[1]Center for Clinical Research, Oslo University Hospital, Oslo, Norway; [2]El centro de Oftalmología Barraquer, Barcelona, Spain; [A]Institute for Oral Biology, [B]Department of Pathology, [3]University of Oslo, Oslo, Norway;[4]Schepens Eye Research Institute, Boston, MA.
Transportation Simulations Of Cultured Human Limbal Epithelial Cells Subjected To Eye-bank Storage

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Jose L. Vega[1A], Irina Agoulnik[1B], Sharmila Masli[2], Fayaz Mir[2], Dong Feng Chen[2], Wayne Bowden[1B], Yang Quiang[2], Egla Suarez[3], Paola Durand[1A,2]. [A]Department of Neurology, [B]Department of Cell Biology and Pharmacology, [1]Herbert Wertheim College of Medicine, Miami, FL;[2]Ophthalmology, Schepens Eye Research Institute, Boston, MA;[3]Department of Biology, Florida International University, Miami, FL.
Alpha-1 Adrenergic Receptor Stimulation Induces Ocular Disease via TGF-Beta-Mediated Mechanisms

★ *Guadalupe Villarreal, Jr., Thore Schmedt, Roberto Pineda, Ula V. Jurkunas.*Department of Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA.
Evaluating the Use of Statins in the Establishment of a Corneal Endothelial Protective Phenotype

Gargi K. Vora, Bernardo Cavalcanti, Monique Trinidad, Candice Williams, Pedram Hamrah. Ocular Surface Imaging Center, Department of Cornea and Refractive Surgery, Massachusetts Eye & Ear Infirmary, Boston, MA.
In Vivo Confocal Microscopy Analysis and Image-Guided Therapy of Limbal Stem Cell Insufficiency

Sushant Wagley[1A], Shiva Gautam[1B], Jorge G. Arroyo[1A]. [A]Ophthalmology,[B]Medicine, [1]Beth Israel Deaconess Medical Center, Boston, MA.
Risk factors for age-related macular degeneration in the US population: Results from the National Health and Nutrition Examination Survey 2005-2008

Jennifer Wallis[1], Peter J. Bex[2], Luis Lesmes[2], Thomas S. Wallis[2], Mary Lou Jackson[1]. [1]Vision Rehabilitation, Harvard Medical School/Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Schepens Eye Research Institute, Harvard Medical School, Boston, MA.
Contrast Sensitivity As A Predictor Of Central Field Loss

Emily K. Wiecek[1,2A], Mary Lou Jackson[3], Steven Dakin[1], Peter J. Bex[2B,4]. [1]Institute of Ophthalmology, University College London, London, United Kingdom; [A]Ophthalmology, [B]Schepens Eye Research Institute, [2]Harvard Medical School, Boston, MA; [3]Harvard Dept of Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA; [4]Harvard Medical School Dept of Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
Visual Search with Image Enhancements in Age-Related Macular Degeneration

Candice G. Williams[1A,1B], Bernardo M. Cavalcanti[1A,1B], Andrea Cruzat[1A,1B], Monique Trinidad[1A,1B], Yesim Haussler-Sinangin[2], Reza Dana[1A], Pedram Hamrah[1A,1B]. [A]Cornea, [B]Ocular Surface Imaging Center,[1]Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Schepens Eye Research Institute, Boston, MA.
***In Vivo* Confocal Microscopy as a Tool to Evaluate Cellular Changes in the Cornea and Conjunctiva in Ocular Allergy and Non-Allergic Ocular Inflammatory Diseases**

Melissa M. Wong[1], Anita Shukla[2], Wuqaas M. Munir[1]. [1]Ophthalmology, Boston Univ School of Med, Boston, MA; [2]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA.
Change In Central Corneal Volume After Cataract Surgery

Kenton T. Woodard[1A], Takeshi Iwase[2], Luk H. Vandenberghe[3A], Ping Jie Xiao[1B], Josh C. Grieger[1C], Albert M. Maguire[3B], Katharine J. Liang[1A], Jean Bennett[3B], Peter A. Campochiaro[4], R. Jude Samulski[1B]. [A]Gene Therapy, Neurobiology, [B]Gene Therapy, [C]Joint Vector Core, [1]University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]Ophthalmology, Johns Hopkins Hospital, Baltimore, MD; [A]Gene Therapy, [B]F.M. Kirby Center for Molecular Ophthalmology, [3]University of Pennsylvania, Philadelphia, PA;[4]Ophthalmology and Neuroscience, Johns Hopkins Wilmer Eye Inst, Baltimore, MD.
Trafficking of an Adeno-Associated Virus Variant in the Retina

Russell L. Woods, Peter J. Bex, Daniel R. Saunders. Schepens Eye Research Institute, Boston, MA.
Free Recall as an Objective Measure of Information Acquisition from Video

John L. Wyatt, Jr.[1], William Ellersick[1], Patrick Doyle[1], Shawn Kelly[2], William Drohan[1], Oscar Mendoza[1], Douglas Shire[3], Marcus Gingerich[3], Attila A. Priplata[1], Joseph Rizzo[4]. [1]Electrical Engineering, Massachusetts Inst of Technology, Cambridge, MA; [2]Electrical Engineering, VA Boston Health Care System and Carnegie Mellon University, Pittsburg, PA;[3]Cornell Nanofabrication Facility, Ithaca, NY; [4]Dept. of Ophthalmology, Mass. Eye and Ear Infirmary, Boston, MA.
A Safe CMOS Stimulation and Communications Chip for Retinal Implants

Takefumi Yamaguchi[1], Aslihan Turhan[1], Deshea L. Harris[1], Ulrich vonAndrian[2], Pedram Hamrah[1]. [1]Cornea/Ophthalmology, Harvard Medical School/MEEI, Boston, MA; [2]Immune Disease Institute, Harvard Medical School, Boston, MA.
A Novel Mouse Model for Neurotrophic Keratopathy: Lateral Conjunctival Approach for Trigeminal Axotomy

POSTERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Brian Yaspan[1A], Louis R. Pasquale[2], Stephanie Loomis[3], Jae Hee Kang[3], Margaret A. Pericak-Vance[4], Michael A. Hauser[5], Jonathan L. Haines[1B], Janey L. Wiggs[2A], NEIGHBOR consortium investigators. [A]Center for Human Genetics Research, [B]Ctr Human Genetics Res-Med Ctr,[1]Vanderbilt University, Nashville, TN; [A]Ophthalmology-Harvard Med Sch,[2]Mass Eye & Ear Infirmary, Boston, MA; [3]Channing Laboratory, Harvard Medical School, Boston, MA; [4]Human Genomics, Univ of Miami Miller Sch of Med, Miami, FL; [5]Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC.
Hypothesis Independent Pathway Analysis Identifies Biologic Pathways Associated With Poag In Data From The Neighbor And Glaugen Genomewide Association Studies

Glenn Yiu[1], Sushant Wagley[2], Sheela Krishnan[3], Kyle Kovacs[4], Mark Kuperwaser[2], Jorge G. Arroyo[2]. [1]Ophthalmology, Massachusetts Eye & Ear Infirmary, Boston, MA; [2]Ophthalmology, Beth Israel Deaconess Med Ctr, Boston, MA; [3]Warren Alpert Medical School of Brown University, Providence, RI; [4]Albert Einstein College of Medicine, Bronx, NY.
Central Macular Thickness and Surgical Outcomes after Epiretinal membrane Extraction Surgery Combined With Phacoemulsification Surgery versus Membrane Extraction Alone

Michael K. Yoon[1], Laura T. Phan[2], Timothy J. McCulley[2]. [1]Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Ophthalmology, Wilmer Eye Institute, Baltimore, MD.
Modified Cutler-Beard Procedure: Secondary Placement of an Autologous Tarso-conjunctival Graft

Souska Zandi[1,2], Shintaro Nakao[3], Dawei Sun[4], Ruth Schmidt-Ullrich[5], Alexander Schering[1], Farhad Hafezi[2], Ali Hafezi-Moghadam[1]. [1]Radiology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA;[2]Ophthalmology, Geneva University Hospitals, Geneva, Switzerland;[3]Ophthalmology, Kyushu University, Fukuoka, Japan; [4]Ophthalmology, The Second Hosp of Harbin Med Univ, Harbin, China; [5]Signal Transduction in Tumor Cells, Max-Delbrück-Center for Molecular Medicine, Berlin, Germany.
Impact of Endothelium-specific NFκ-B Signaling on Choroidal Neovascularization

Ramin Zareian[1], Dimitrios Karamichos[2], Jeffrey A. Paten[1], James D. Zieske[2], Jeffrey W. Ruberti[1]. [1]Mechanical & Industrial Engineering, Northeastern University, Boston, MA; [2]Department of Ophthalmology, Schepens Eye Research Institute, Harvard medical school, Boston, MA.
Live, Long-Term Observation of the Mechanobiology of Confluent Primary Human Corneal Fibroblast Cultures Subjected to Applied Force

Nan Zhang[1,2], Tara L. Favazza[1], Anna Maria Baglieri[1], Anne B. Fulton[1,2], Ronald M. Hansen[1,2], P. M. Iuvone[3], James D. Akula[1,2]. [1]Ophthalmology, Children's Hospital Boston, Boston, MA; [2]Ophthalmology, Harvard Medical School, Boston, MA; [3]Ophthalmology and Pharmacology, Emory University School of Medicine, Atlanta, GA.
The Retina and Refractive Outcome in the Rat Model of ROP

Qi Zhang[1], Qin Liu[1], Chrissy Austin[2], Iain Drummond[2], Eric Pierce[1]. [1]Ocular Genomic Institute, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [2]Renal Unit, Massachusetts General Hospital, Harvard Medical School, Boston, MA.
Modeling A Ciliopathy: Ttc26 Is Required For Ciliogeneses In Photoreceptor And Kidney Epithelial Cells

Xiaohong Zhou[1], Christopher M. Robinson[1], Jaya Rajaiya[1], Donald Seto[2], Morris S. Jones[3], David W. Dyer[4], James Chodosh[1]. [1]Ophthalmology, Mass Eye and Ear - Harvard Medical School, Boston, MA; [2]School of Systems Biology, George Mason University, Manassas, VA; [3]Viral and Rickettsial Disease Laboratory, California Department of Public Health, Richmond, CA; [4]Microbiology and Immunology, University of Oklahoma Health Science Center, Oklahoma City, OK.
Mistyping of Human Adenovirus Type 19 Associated with Epidemic Keratoconjunctivitis

Alireza Ziaei, Ula V. Jurkunas. Schepens Eye Research Institute, Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School, Boston, MA.
Sulforaphane Decreases Endothelial Cell Apoptosis in Fuchs Endothelial Corneal Dystrophy: A Novel Treatment

James D. Zieske, Audrey E. Hutcheon, Dimitrios Karamichos, Xiaoqing Q. Guo. Schepens Eye Research Institute, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary and Harvard Medical School, Boston, MA.
TGF-β3 Blunts Corneal Fibrosis

PAPERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Pablo Argueso[1], Jerome Mauris[1], Zhiyi Cao[2], Noorjahan A. Panjwani[2], Ashley M. Woodward[1]. [1]Schepens Eye Research Institute and Massachusetts Eye and Ear, Dept. of Ophthalmology, Harvard Medical School, Boston, MA, Boston, MA; [2]Dept. of Ophthalmology, Tufts University School of Medicine, Boston, MA, Boston, MA.

Galectin-3 Regulates MMP-9 Activity in Human Corneal Keratinocytes through Interaction with EMMPRIN

Alexandra R. Bowers[1], Concetta F. Alberti[1], P. Matthew Bronstad[1], Amanda Albu[1], Todd Horowitz[2]. [1]Schepens Eye Res Inst, Dept Ophthalmology, Harvard Med School, Boston, MA; [2]Brigham and Women's, Harvard Med School, Boston, MA.

Does Dynamic Attention Predict Hazard Detection In People With Central Field Loss?

Emmanuel S. Buys[1], Yu-Chieh Ko[2], Jae-Hee Kang[3], Douglas Rhee[4], Peter Brouckaert[5], Janey L. Wiggs[6], Meredith S. Gregory-Ksander[2], Louis R. Pasquale[6], Kenneth D. Bloch[1], Bruce R. Ksander[2]. [1]Anesthesia-Harvard Med Sch, Massachusetts General Hospital, Boston, MA; [2]Ophthalmology-Harvard Med Sch, Schepens Eye Research Institute, Boston, MA; [3]Medicine-Harvard Med Sch, Brigham and Women's Hospital, Boston, MA; [4]Ophthalomology-Harvard Med Sch, Massachusetts Eye and Ear Infirmary, Boston, MA; [5]Molecular Biomedical Research, Ghent University, VIB, Ghent, Belgium; [6]Ophthalmology-Harvard Med Sch, Mass Eye & Ear Infirmary, Boston, MA.

Open Angle Glaucoma In Soluble Guanylate Cyclase α1-deficient Mice And Its Association With The Gucy1a3/gucy1b3 Locus In Humans

James Chodosh[1], Gurdeep Singh[1], Christopher M. Robinson[1], Shoaleh Dehghan[2], Timothy Schmidt[3], Morris S. Jones[4], David W. Dyer[3], Donald Seto[2]. [1]Ophthalmology, Mass Eye & Ear Infirmary - Harvard Medical School, Boston, MA;[2]Systems Biology, George Mason University, Manassas, VA; [3]Microbiology and Immunology, University of Oklahoma Health Science Center, Oklahoma City, OK;[4]Viral and Rickettsial Disease Laboratory, California Department of Public Health, Richmond, CA.

Over-Reliance on Serology Incompletely Characterizes Human Adenoviruses

*Andrea Cruzat, Anita Shukla, Eleftherios Paschalis, Fabiano Cade, Claes Dohlman.*Cornea / Ophthalmology, Harvard Medical Sch/MEEI, Boston, MA.

Corneal Xenografts: Carrier for the Boston Keratoprosthesis?

Anthony B. Daniels[1A], Joo-Eun Lee[1B], Shan Lu[2], Laura E. MacConaill[2], Emanuele Palescandolo[2], Scott M. Adams[1B], Evangelos S. Gragoudas[1A], J. William Harbour[3], Levi A. Garraway[2], Ivana K. Kim[1A]. [A]Department of Ophthalmology, [B]Ocular Molecular Genetics Institute, [1]Mass. Eye & Ear Infirmary, Harvard Medical School, Boston, MA; [2]Center for Cancer Genome Discovery, Dept. of Medical Oncology, Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA; [3]Department of Ophthalmology and Visual Science, Washington University School of Medicine, St. Louis, MO.

High Throughput Mass Spectrometry-based Mutation Profiling of Primary Uveal Melanoma

Julia Dieckow[1], Jerome Mauris[1], Wendy R. Kam[1], Mark P. Hatton[1,2], David A. Sullivan[1], Pablo Argüeso[1]. [1]Schepens Eye Research Institute, Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School, Boston, MA;[2]Ophthalmic Consultants of Boston, Boston, MA.

Localization and Regulation of Extracellular Matrix Metalloproteinase Inducer (EMMPRIN) in Human Meibomian Glands

Donita Garland[1], Inderjeet Kaur[1], Rosario F. Godino[1], Kaye Speicher[2], David Speicher[2], John Lambris[3], Eric Pierce[1]. [1]Ocular Genomics Institute, Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Wistar Institute, Philadelphia, PA;[3]Department of Pathology, University of Pennsylvania, Philadelphia, PA.

Complement and Basal Deposit Formation in*Efemp1*-R345W Knockin Mice

Ilene K. Gipson, Christina Kaiser Marko, Ann Tisdale, Sandra Michaud. Harvard Med Sch Dept Ophthal, Schepens Eye Research Inst., Mass. Eye and Ear, Boston, MA.

The Ocular Surface Phenotype Of Muc5AC And Muc5B Null Mice

Meredith S. Gregory-Ksander, Michelle Crane, William J. Vincent. Schepens Eye Research Institute, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA.

TLR2 Mediated Upregulation Of Ciliary Body-derived CRAMP Is Critical In Defense Against*S. Aureus* Induced Endophthalmitis

Brian P. Hafler[1,2], Constance Cepko[2]. [1]Department of Ophthalmology and Visual Science, Yale School of Medicine, New Haven, CT; [2]Department of Genetics, Harvard Medical School, Boston, MA.

Olig2 Defines Subpopulations Of Retinal Progenitor Cells Biased Towards Specific Cell Fates

PAPERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

Michael A. Hauser[1A], Brian L. Yaspan[2A], Yutao Liu[3], Allison E. Ashley-Koch[1B], Xuejun Qin[1B], Joshua Wheeler[1B], Janey L. Wiggs[4], Jonathan L. Haines[2B], NEIGHBOR Consortium Investigators, R R. Allingham[5]. [A]Ophthalmology & Medicine, [B]Medicine, [1]Duke Univ Medical Center, Durham, NC; [A]Center for Human Genetics Research, [B]Ctr Human Genetics Res-Med Ctr, [2]Vanderbilt University, Nashville, TN; [3]Medicine, Duke University Medical Center, Durham, NC;[4]Ophthalmology-Harvard Med Sch, Mass Eye & Ear Infirmary, Boston, MA;[5]Ophthalmology, Duke University Eye Center, Durham, NC.
Targeted Resequencing of CDKN2BAS Locus Identifies Variants Associated with Primary Open Angle Glaucoma

Jing Hua, William Stevenson, Thomas Dohlman, Hyun Soo Lee, Zahra Sadrai, Ilya Leskov, Daniel Saban, Sunil Chauhan, Reza Dana. Ophthalmology, Harvard Medical School, Boston, MA.
Dysfunctional Regulatory T cells in Dry Eye Disease Exacerbate Corneal Allograft Rejection

Mark S. Humayun[1], Lyndon da Cruz[2], Gislin Dagnelie[3], Jose-Alain Sahel[4], Paulo E. Stanga[5], Eugene Filley[6], Dean Eliott[7], Jacque Duncan[8], Robert J. Greenberg[9], Argus II Study Group. [1]Ophthalmology, Doheny Eye Institute - USC, Los Angeles, CA; [2]Moorfields Eye Hospital, London, United Kingdom; [3]Lions Vision Research and Rehab Center, Johns Hopkins University, Baltimore, MD; [4]Centre Hospitalier National d'Ophtalmologie des Quinze-Vingts, Paris, France; [5]Manchester Royal Eye Hospital, Manchester, United Kingdom; [6]Retina Foundation of the Southwest, Dallas, TX; [7]Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [8]University of California, San Francisco School of Medicine, San Francisco, CA; [9]Second Sight Medical Products, Sylmar, CA.
Results Update from Second Sight's Argus® II Retinal Prosthesis Study

Dimitrios Karamichos[1], Ramin Zareian[2], Audrey E. Hutcheon[1], Jeffrey W. Ruberti[2], James D. Zieske[1]. [1]Schepens Eye Research Institute, Department of Ophthalmology, Massachusetts Eye and Ear Infirmary and Harvard Medical School, Boston, MA; [2]Mechanical & Industrial Engineering, Northeastern University, Boston, MA.
TGF-β3 Replaces Serum Action in an In Vitro Model of Corneal Matrix Development

Chatarina Lofqvist[1A], Ingrid Hansen Pupp[2], Jing Chen[3], Colman J. Hatton[4], Aimee Juan[4], David Ley[2], Gunnel Hellgren[1B], Lois E. Smith[5], Ann Hellstrom[1A]. [A]Ophthalmology/Sahlgrenska Academy, [B]Pediatrics/Sahlgrenska Academy,[1]University of Gothenburg, Gothenburg, Sweden; [2]Pediatrics/Clinical Sciences, Lund University, Lund, Sweden; [3]Ophthalmology, Harvard Med Sch Children's Hosp, Boston, MA; [4]Ophthalmology, Children's Hospital Boston, Boston, MA;[5]Ophthalmology, Harvard Univ/Childrens Hospital, Boston, MA.
Proliferative Retinopathy of Prematurity is Associated with Low Serum Levels of Adiponectin

Rose Mathew, Joan Stein-Streilein. Immunology, Schepens Eye Research Institute/MEEI, Boston, MA.
ACAID Tolerogenic APC Induce Two Types Of CD4$^+$Treg Cells By Two Different Mechanisms

★ *Kevin J. McHugh[1,2], Carrie Spencer[1], Patricia A. D'Amore[1,3], Sarah L. Tao[4,5], Magali Saint-Geniez[1,3].* [1]Schepens Eye Research Institute, Boston, MA; [2]Biomedical Engineering, Boston University, Boston, MA; [3]Ophthalmology, Harvard Medical School, Boston, MA; [4]The Charles Stark Draper Laboratory, Inc., Cambridge, MA;[5]Advanced Development Center, Current Affiliation: CooperVision, Inc., Pleasanton, CA.
A porous poly(ε-caprolactone) tissue engineering scaffold for RPE Transplantation

Fayaz Mir, Bruce Turpie, Sharmila Masli. Harvard Medical School, Schepens Eye Research Inst, Boston, MA.
Thrombospondin Receptor CD47 On T Cells And Not On The Surface Of Antigen Presenting Cells Is Necessary For Treg Induction Associated With Ocular Immune Privilege

Yusuke Murakami[1], Hidetaka Matsumoto[1], Miin Roh[1], Jun Suzuki[1], Kimio Takeuchi[1], Dimosthenis Mantopoulos[1], Toshio Hisatomi[2], Yasuhiro Ikeda[2], Joan W. Miller[1], Demetrios Vavvas[1]. [1]Angiogenesis Laboratory, Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Ophthalmology, Kyushu University, Fukuoka, Japan.
Inhibition of Receptor Interacting Protein Kinase Delays Necrotic Cone Photoreceptor Cell Death in a Mouse Model of Inherited Retinal Degeneration

Eric A. Pierce[1], Qi Zhang[1], Eiko Nakamaru-Ogiso[2], Zoe Fonseca-Kelly[1], Juan Perin[3A], Emily Place[1], Mark Consugar[1], Eliot Berson[1], Xiaowu Gai[4], Marni J. Falk[3B]. [1]Ophthalmology, Harvard Medical School, Massachusetts Eye and Ear Infirmary, Boston, MA; [2]Department of Biochemistry and Biophysics, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; [A]Center for Biomedical Informatics, [B]Divisions of Human Genetics, and Rehabilitation and Metabolic Disease, Department of Pediatrics, [3]Children's Hospital of Philadelphia, Philadelphia, PA; [4]Department of Molecular Pharmacology and Therapeutics, Center for Biomedical Informatics, Loyola University Chicago Health Sciences Division, Chicago, IL.
***NMNAT1* Mutations Cause Leber Congenital Amaurosis at the LCA9 Locus**

PAPERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

S. Amer Riazuddin[1], Elyse J. McGlumphy[1], David S. Parker[2], Edwin C. Oh[2], Benjamin W. Iliff[1], Thore Schmedt[3], Ula Jurkunas[4], Robert Schleif[5], Nicholas Katsanis[2], John D. Gottsch[1]. [1]The Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD; [2]Center for Human Disease Modeling, Duke University Medical Center, Durham, NC; [3]Schepens Eye Research Institute, Harvard Medical School, Boston, MA; [4]Schepens Eye Research Institute, Harvard Medical School, Baltimore, MA; [5]Department of Biology, Johns Hopkins University, Baltimore, MD.

Mutations In The Recessive Deafness Locus *Loxhd1*Cause Dominant Late-onset Fuchs Corneal Dystrophy

Joseph F. Rizzo, III[1], Jinghua Chen[2], Douglas B. Shire[3], Shawn K. Kelly[4], William D. Eldred[5], William K. Jones[6], Patrick Doyle[7], Marcus D. Gingerich[8], John L. Wyatt[9]. [1]Ophthalmology, Mass Eye & Ear Infirmary, Boston, MA; [2]Mass Eye and Ear Infirmary, Harvard Medical School, Boston, MA; [3]Boston VA Medical Center, Ctr for Innovative Visual Rehabilitation, Ithaca, NY; [4]Center for Innovative Visual Rehab, VA Boston Healthcare System, Cambridge, MA; [5]Biology, Boston University, Boston, MA; [6]Mechanical and Materials Engineering, Florida International University, Miami, FL; [7]Boston VA Medical Center, Ctr for Innovative Visual Rehab, Cambridge, MA; [8]ECE, CIVR-VA Boston Hlthcare System/Cornell U, Ithaca, NY; [9]Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, MA.

Overview of Progress on the 256+ Channel Boston Retinal Prosthesis

Keisuke Sakurai[1], Shahrokh C. Khani[2], Vladimir J. Kefalov[1]. [1]Ophthalmology & Visual Sciences, Washington University Sch Med, Saint Louis, MO;[2]Ophthalmology, Schepens Eye Research Inst, Boston, MA.

Effect Of G-protein Coupled Kinase 1 Expression On Mouse Cone Photoresponse Termination

Srikant Sarangi[1A], Olga Minaeva[1A], Juliet A. Moncaster[1B], Noel F. Casey[1B], Robert H. Webb[2], Danielle Ledoux[3], John I. Clark[4], David G. Hunter[3], Lee Goldstein[1B]. [A]Biomedical Engineering, [B]School of Medicine, [1]Boston University, Boston, MA;[2]Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA; [3]Children's Hospital Boston, Boston, MA; [4]Biological Structure and Ophthalmology, University of Washington, Seattle, WA.

Non-invasive Clinical Detection of Age-Related and Alzheimer's Disease-Down Syndrome Dependent Changes in the Lens

Lucie Sawides[1], Carlos Dorronsoro[1], Pablo de Gracia[1], Maria Vinas[1], Michael A. Webster[2], Andrew Haun[3], Eli Peli[3], Susana Marcos[1]. [1]Instituto de Optica, CSIC, Madrid, Spain; [2]Department of Psychology, University of Nevada, Reno, NV;[3]Department of Ophthalmology, Schepens Eye Research Institute, Boston, MA.

Natural Adaptation to the Orientation of High Order Aberrations

Debra A. Schaumberg, Lynda Rose, Daniel I. Chasman. Preventive Medicine, Harvard Med Sch/Brigham & Women's, Boston, MA.

A Prospective Study of Common Polymorphisms In CX3CR1 and Risk Of Age-Related Macular Degeneration (AMD)

★ *Thore Schmedt[1], Yuming Chen[1], Shimin Li[2], Joseph A. Bonanno[2], Ula V. Jurkunas[1].* [1]Schepens Eye Research Institute, Massachusetts Eye and Ear, Department of Ophthalmology, Harvard Medical School, Boston, MA; [2]School of Optometry, Indiana University, Bloomington, IN.

Spontaneous And Telomerase Immortalization Of Primary Human Corneal Endothelial Cells

Ahmed Z. Soliman[1,2], Salma H. Radwan[1,2], Sonja G. Prager[1,3], Hanna Kwak[1], Paolo S. Silva[1], Lloyd P. Aiello[1], Jennifer K. Sun[1]. [1]Ophthalmology, Beetham Eye Institute and Section of Eye Research, Joslin Diabetes Center, Harvard Medical School, Boston, MA; [2]Ophthalmology, Cairo University Medical School, Cairo, Egypt;[3]Ophthalmology and Optometry, Medical University of Vienna, Vienna, Austria.

Spectral Domain Optical Coherence Tomography Parameters Associated with Visual Acuity in Patients with Resolved Center-Involved Diabetic Macular Edema

Jennifer K. Sun[1,2], Sonja Prager[1,3], Salma Radwan[1,4], David J. Ramsey[5], Paolo S. Silva[1,2], Hanna Kwak[1], Stephen A. Burns[6], Lloyd P. Aiello[1,2]. [1]Beetham Eye Inst & Eye Rsch Sec, Joslin Diabetes Center, Boston, MA; [2]Ophthalmology, Harvard Medical School, Boston, MA; [3]Ophthalmology and Optometry, Medical University Vienna, Vienna, Austria; [4]Ophthalmology, Cairo University Medical School, Cairo, Egypt; [5]Ophthalmology, Wilmer Eye Institute at Johns Hopkins, Baltimore, MD;[6]School of Optometry, Indiana University, Bloomington, IN.

Photoreceptor Mosaic Changes in Diabetic Eye Disease Assessed by Adaptive Optics Scanning Laser Ophthalmoscopy (AOSLO)

Allen Taylor[1], Ke Liu[1], Andrea Caceres[1], Fu Shang[1], Junyuan Gao[2], Xiurong Sun[2], Richard T. Mathias[2], Paul G. FitzGerald[3], Yifat Merbl[4]. [1]Nutrition &Vision Res-USDA-HNRCA, Tufts University, Boston, MA; [2]Physiology & Biophysics, State Univ of NY-Stony Brook, Stony Brook, NY; [3]Cell Biol & Human Anatomy, Univ of California-Davis, Davis, CA; [4]Department of Systems Biology, Harvard Medical School, Boston, MA.

Links Between Ubiquitin Biology, Calcium Regulation, Lens Organogenesis And Cataract

*Aslihan Turhan, Takefumi Yamaguchi, Ulrich H. von Andrian, Pedram Hamrah.*Cornea, Massachusetts Eye and Ear Infirmary, West Roxbury, MA.

Mucosal Addressin Cell Adhesion Molecule (MAdCAM)-1 Plays a Pivotal Role in Dendritic Cell Recruitment to the Cornea During Inflammation

PAPERS (ALPHABETICAL ORDER BY FIRST AUTHOR'S SURNAME)

John L. Ubels[1], Ilene K. Gipson[2A], Sandra J. Spurr-Michaud[2], Ann S. Tisdale[2], Rachel E. Van Dyken[1], Mark H. Hatton[3]. [1]Department of Biology, Calvin College, Grand Rapids, MI; [A]Harvard Med Sch Dept Ophthal, [2]Schepens Eye Research Institute, Boston, MA; [3]Department of Ophthalmology, Harvard Medical School, Boston, MA.

Analysis of Gene Expression in Accessory Lacrimal Glands by Laser Microdissection and cDNA Microarrays

Yuichi Uchino[1], Miki Uchino[1], Norihiko Yokoi[2], Murat Dogru[1], Motoko Kawashima[1], Aoi Komuro[3], Hiroaki Kato[2], Pablo Argueso[4], Shigeru Kinoshita[5], Kazuo Tsubota[1]. [1]Ophthalmology, Keio University School of Medicine, Tokyo, Japan; [2]Ophthalmology, Kyoto Prefectural Univ of Med, Kyoto, Japan;[3]Department of Ophthalmology, Nishijin Hospital, Kyoto, Japan; [4]Department of Ophthalmology, Schepens/Harvard University, Boston, MA; [5]Ophthalmology, Kyoto Prefectural Univ of Med, Kamigyo-Ku, Japan.

The Amount Of MUC5AC In Tears Of Visual Display Terminal (VDT) Users: Osaka Study

Megan Ulmer[1], Jun Li[2A], Ayse B. Ozel[2A], Julia Richards[2B], Sayoko E. Moroi[3], Brian Yaspan[4], Janey L. Wiggs[5], Allison Ashley-Koch[1], NEIGHBOR Consortium Investigators, Michael A. Hauser[6]. [1]Center for Human Genetics, Duke University, Durham, NC; [A]Department of Human Genetics, [B]Department of Ophthalmology and Visual Sciences, [2]University of Michigan, Ann Arbor, MI; [3]Ophthalmology & Visual Sciences, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI; [4]Center for Human Genetics Research, Vanderbilt University, Nashville, TN; [5]Ophthalmology-Harvard Med Sch, Mass Eye & Ear Infirmary, Boston, MA; [6]Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC.

Genome-wide Analysis Of Central Corneal Thickness In POAG Cases From The NEIGHBOR Consortium

Ruilin Wang, Caihui Jiang, Michael Young. The Schepens Eye Research Institute, Harvard Medical School, Boston, MA.

Monitoring Morphological Changes in the Retina of Rhodopsin$^{-/-}$ Mice with SD-OCT

Janey L. Wiggs[1], Brian Yaspan[2A], Jae Hee Kang[3], Stephanie Loomis[1], Margaret A. Pericak-Vance[4], Julia E. Richards[5], Michael A. Hauser[6], Jonathan L. Haines[2B], Louis R. Pasquale[1], NEIGHBOR consortium investigators. [1]Ophthalmology-Harvard Med Sch, Mass Eye & Ear Infirmary, Boston, MA; [A]Center for Human Genetics Research, [B]Ctr Human Genetics Res-Med Ctr, [2]Vanderbilt University, Nashville, TN; [3]Department of Medicine and Channing Laboratory, Brigham and Women's Hospital, Boston, MA; [4]Human Genomics, Univ of Miami Miller Sch of Med, Miami, FL; [5]Ophthal & Visual Sciences, Univ of Michigan-Kellogg Eye Ctr, Ann Arbor, MI; [6]Ophthalmology & Medicine, Duke Univ Medical Center, Durham, NC.

Common Variants in 9p21 and 8q23 are associated with Normal Tension Glaucoma: Results From The NEIGHBOR and GLAUGEN Genome-wide Association Studies

Jerald E. Wisdom[1A], Jennifer Sun[1A], Abumere Akinwale[1A], Ahmed Soliman[1A,2], Hillary A. Keenan[1B], Lloyd P. Aiello[1A], George L. King[1B]. [A]Ophthalmology,[B]Research, [1]Joslin Diabetes Center, Boston, MA; [2]Cairo University Medical School, Cairo, Egypt.

Protection from Proliferative Diabetic Retinopathy in Patients with 50 or More Years of Type 1 Diabetes

To download this abstract collection as a PDF, visit

http://bit.ly/harvard_arvo2012

Or scan this QR code: