MICHAEL A. SINGER, M.D.

9157 Huebner Road ♦ San Antonio ♦ Texas ♦ 78240

(210) 697-2020 ♦[msinger1@earthlink.net](mailto:msinger1@earthlink.net)

*EMPLOYMENT* **Medical Center Ophthalmology Associates San Antonio, TX**

Vitreoretinal Surgeon 1995-Present

Director of Clinical Trials 2003-Present

Managing Partner 2002-2016

*PREVIOUS* **Southern California Permanente Retina Group Los Angeles, CA**

*EMPLOYMENT* Chairman 1993-1995

**Kaiser Permanente Los Angeles, CA**

Retina Surgeon 1992-June 1995

*FACULTY* **University of Texas Health Science Center** **San Antonio, TX**

*APPOINTMENTS* Clinical Assistant Professor 2004-2012

Clinical Associate Professor 2012-Present

Clinical Professor of Ophthlamology 2017-Present Developed Clinical Research Program 2009-Present

Retina Day faculty 2013-Present

**Methodist Ambulatory Surgical Hospital** **San Antonio, TX**

Chairman of Ophthalmology 1999-Present

**University of Southern California** **Los Angeles, CA**

Clinical Faculty 1998-2000

*EDUCATION* **Boston University School of Medicine Boston, MA**

Six-Year Medical Program May 18, 1986

Doctor of Medicine: Medical Degree

Bachelor of Arts May 18, 1986

*POST GRADUATE MEDICAL TRAINING*

**Fellowship** Eye Consultants of Atlanta **Atlanta, GA**

Piedmont Hospital July 1, 1991-June 30, 1992

*William Hagler, MD and William Jarrett, MD Retina Fellowship*

**Residency** St. Vincent’s Hospital and **New York, NY**

Medical Center of New York July 1, 1988-June 30, 1990

Ophthalmology Resident

Ophthalmology Chief Resident July 1, 1990-June 30, 1991

**Pre-Residency** Doheny Eye Institute **Los Angeles, CA**

Pre-Residency Fellowship 1987-1988

**Internship** LA County USC Medical Center **Los Angeles, CA**

Ophthalmology Internship June 24, 1986-June 27, 1987

*CERTIFICATIONS*

**Board** American Board of Ophthalmology October 18, 1992

**Certification** Re-certification December 31, 2002

Re-certification December 31, 2012

**PRK Certifications** Summit UCLA January 1996

VISX (USC) June 1996

*SOCIETIES AND BOARDS*

**Ophthalmology** American Academy of Ophthalmology, Fellow 1993

Future Focus: “Transitioning to Managed Care” October 29, 1994

Expert Panel Member

San Antonio Society of Ophthalmology 1996-Present

American Society of Retina Specialists 1995-Present

Retina Society 2010-Present

Macula Society 2013-Present

ASRS Pat Survey Committee member 2012 - 2015

ASRS Research and Development committee 2012 - Current

ASRS Safety Committee 2012 - Current

Clinical Faculty Retina for FT1000 online Journal 2012 - Current

DSMC and Committees

**American Academy Ophthalmology**

Skills Transfer Course Faculty: Retinal Vein Occlusion 2014 and 2015

DRCRnet Protocol R Design Committee 2009-2010

DRCRnet Protocol M Writing Committee 2011-2012

**Primary investigator**

**of Record to FDA**

Reinforce: A Prospective Multicenter Study of Dexamethasone Intravitreal Implant (DEX) in Diabetic Macular Edema(DME) -Allergan

2017 Horizon Study for wet macular degeneration - Genentech 2010

Sirius Study (SIRNA for Age Related Macular Degeneration)

Allergan 2009

*AWARDS*  Kaiser Permanente - Physician Innovation Award 1994

American Society of Retina Specialists Honor Award 2006

American Society of Retina Specialist 2009

Senior Honor Award - New York, NY

American Society of Retina Specialist Film 2009

Festival Award - New York, NY

Edgar Thomas (Gary) Award 2013

Faculty Member of the Year FT 1000 2013

ASRS Service Award 2013

OSN 150 2016

ASRD Film Festival Award –Boston, MA 2017

Retina Hall of Fame 2018

**Committees**

**Data Safety Monitoring**

DSCM Adverum ADVM-022: Multi-Center, Open-Label, Phase I, Dose Escalation Trial Designed to Assess the Safety and Tolerability of a Single Intravitreal (IVT) Administration of ADVM-022 in Patients with Wet AMD who are Responsive to Anti-Vascular Endothelial Growth Factor (VEGF) Treatment 2018

EMR200066-012: Phase II Randomized Double Blind Placebo Controlled

Trial of Combination of Pimasertib with SAR245409 or of Pimasertib with SAR245409 Placebo in Subjects with Previously Treated Unresectable Low Grade Ovarian Cancer 2014 - 2017

Protocol No. CNTO2476MDG1002: Phase 1/2a, Multicenter, Randomized, Dose Escalation, Fellow-Eye Controlled, Study Evaluating the Safety and Clinical Response of a Single, Subretinal Administration of Human Umbilical Tissue-Derived Cells (CNTO 2476) in Subjects with Visual Acuity Impairment Associated with Geographic AtrophySecondary to Age-related Macular Degeneration 2010 - 2017

**Journal Reviewer**

Ophthalmology

Retina

Journal of Clinical Pharmacy and Therapeutics

Acta Ophthalmology

Lancet

Opthalmologica

Clinical Ophthalmology

BMC

BJO

Clinical and Experimental Ophthalmology

AJO

JAMA Ophthalmology

Current Eye Research

Case Reports in Ophthalmology

Journal of Ophthalmology

Expert opinion on drug delivery

Retina Physician

OSLI

***PUBLICATIONS***

***(Peer Reviewed)***

**Singer MA,** Miller DM, Gross JG, Greven CM, Kapik B, Bailey C, FRCOphth, Ganchi F, MBBS, Kuppermann BD, Visual Acuity Outcomes in Diabetic Macular Edema With Fluocinolone Acetonide 0.2 µg/Day Versus Ranibizumab Plus Deffered Laser (DRCR Protocol I). *Aug 2018, Ophthalmic Surgery, Lasers and Imaging Retina*

**Singer MA,** Dugel PU, Fine HF, Capone A, Maltman J. Real-World Assessment of Dexamethasone Intravitreal Implant in DME: Findings of the Prospective Multicenter REINFORCE Study. *Jun 2018, Ophthalmic Surgery, Lasers and Imaging Retina*

Bahadorani S, Krambeer C, Wannamaker K, Tie W, **Singer MA,** Jansen M, Espitia J, Sohn JH.The Effects of Repeated Ozurdex Injections on Ocular Hypertension. *Apr 2018, Clinical Ophthalmology*

McDonald MB, Sheha H, Tighe S, Janik SB, Bowden F III, Chokshi AR, **Singer MA**, Nanda S, Gazi MA, Dierker D, Shupe AT. Treatment Outcomes in the Dry Eye Amniotic Membrane (DREAM) Study. *Apr 2018, Clinical Ophthalmology*

Jansen ME, Krambeer CJ, Kermany DS, Waters JN, Tie T, Bahadorani S, Singer J, Comstock JM, Wannamaker K, **Singer MA.**

Appointment Compliance in Patients with Diabetic Macular Edema and Exudative Macular Degeneration. *Mar 2018, Ophthalmic Surgery, Lasers and Imaging Retina*

Kermany DS, Goldbaum M, Cai W, **Singer MA**, Valentim CCS, Zhang K. Identifying Medical Diagnoses and Treatable Diseases by Image-Based Deep Learning. *Feb 2018 Cell*

Fan W, Uji A, Borrelli E, **Singer MA**, Sagong M, vanHemert J, Sadda S.

Precise Measurement of Retinal Vascular Bed Area and Density on Ultra-Wide Fluorescein Angiography in Normal Subjects. *Feb 2018, American Journal of Ophthalmology*

Beck KD, Schifanella D, Nagi KS, Anderson DL, **Singer MA**. Writing Thank You Notes after Ophthalmology Residency Interviews? *Dec 2017, The Ophthalmology Open Journal*

Kaiser PK, **Singer MA**, Tolentino M, Erickson K, Saroj N, Berliner AJ, Chu KW, Zhu X, Liu ZW, Clark WL. Long Term Safety and Visual Outcome of Aflibercept in Neovascular Age-Related Macular Degeneration*. Ophthalmology Retina Vol I Issue 4 2017. 304-313*

Krambeer CS, **Singer MA**, Jansen M, Ober M, Stewart M, Shah G, Griggs P, Altaweel M. Retina Specialists: How We Think. *Austin Ophthalmol. 2017; 2(1): 1008.*

Bahadorani S, **Singer MA.** Recent Advances in the Management and Understanding of Macular Degeneration. *Apr 2017, F1000 Research*

Regillo CD, Callanan DG, Do DV, Fine HF, Holekamp NM, Kuppermann BD, **Singer MA**, Singh RP.

Use of Corticosteroids in the Treatment of Patients with Diabetic Macular Edema Who Have a Suboptimal Response to Anti-VEGF: Recommendations of an Expert Panel. *Apr 2017, Ophthalmic Surgery, Lasers and Imaging Retina.*

Bahadorani S, **Singer MA**. The Value of Area Under the Curve Analysis as an Outcome Measure in the Assessments of a Continuing Fluocinolone Acetonide Implant (ILUVIEN®). *Jan 2017, US Ophthalmic Review*

**Singer MA,** Jansen ME, Tyler L, Woods P, Ansari F, Jain U, Singer J, Bell DJ, Krambeer C. Long-Term Results of Combination Therapy Using Anti-VEGF Agents and Dexamethasone Intravitreal Implant for Retinal Vein Occlusion: An Investigational Case Series.” *Clinical Ophthalmology (Auckland, N.Z.)* *11 (2017): 31–38. Dec 2016*

Bar- Or D, Orlando A, **Singer MA**: Potential Beneficial Effect of Low-Dose Danazol in Combination with Renin–Angiotensin System Inhibitors in Diabetic Macular Edema *Acta Ophthalmology web. November 2016 DOI: 10.1111/aos.13318*

Michael E. Jansen, MD; Seenu M. Hariprasad, MD; **Singer MA,** MD Treatments for Diabetic Macular Edema: Past, Present, and Future

Ophthalmic Surgery, Lasers and Imaging Retina

*September 2016 - Volume 47 · Issue 9: 794-800*

*Posted September 15, 2016*

*DOI: 10.3928/23258160-20160901-01*

Campochiaro P,Khanani A, **Singer MA,** PatelS, BoyerD, DugelP, KheraniS, Withers B. Enhanced Benefit in Diabetic Macular Edema from AKB-9778 Tie2 Activation Combined with Vascular Endothelial Growth Factor Suppression:*Ophthalmology, Vol. 123, Issue 8, p1722–1730*

*Published online: May 27, 2016*

**Singer MA,** Kermany DS, Waters J, Jansen ME, Tyler L. Diabetic macular edema: it is more than just VEGF. *May 2016* *F1000Research*. *2016;5:F1000 Faculty Rev-1019. doi:10.12688/f1000research.8265.1.*

**Singer MA,** Sagong M, Hemert J, Kuehlewein L, Bell D, Sadda , S Ultra-widefield Imaging of the Peripheral Retinal Vasculature in Normal Subjects *Ophthalmology, Vol. 123, Issue 5, p1053–1059*

*Published online: February 17, 2016*

Tyler, L; **Singer MA,**; Bell DJ, Long-Term Outcome in Patients with Vitreomacular Traction Treated with a Single Injection of Ocriplasmin

*Retinal Cases & Brief Reports. 11(1):34-37, Feb 2016*

**Singer MA**, Tyler L, Jansen M, Waters J. Comparison of Anti-VEGF, Steroid, and Combination Therapy in the Treament of Retinal et al. Combination Therapy for RVO.

*Jan 2016 International Journal of Ophthalmic Research*

Dugel PU, Capone A, **Singer MA,** Dryer RF, Dodwell DG, Roth DB, Shi R, Walt JG, Scott L, Hollander DA. Two or More Dexamothasone Intravitreal Implants in Treatment Naiive Patients with Macular Edema due to Retinal Vein Occlusion: Subgroup Analysis of a Retrospective Chart Review Study.

*Sep 2015 BMC Ophthalmology*

Tan CS, Chew MC, vanHemert J, **Singer MA**, Bell DJ, Sadda SR. Measuring the Precise Area of Peripheral Retinal Non-Perfusion Using Ultra-Widefield Imaging and its Correlation with the Ischaemic Index*. Jul 2015, The British Journal of Ophthalmology*

Kuppermann DB, Goldstein M, Maturi RK, **Singer MA**, Tufail A, Weinberger D, Li XY, Liu CC, Lou J, Pollack A, Whitcup SM/ Dexamethasone Intravitreal Implant as Adjunctive Therapy to Ranibizumab in Neovascular Age-Related Macular Degeneration: A Multicenter Randomized Controlled Trial*. June 2015 Ophthalmologica*

**Singer MA**, Capone A Jr, Dugel PU, Dreyer RF, Dodwell DG, Roth DB, Shi R, Walt JG, Scott LC, Hollander DA; Two or more dexamethasone intravitreal implants as monotherapy or in combination therapy for macular edema in retinal vein occlusion: subgroup analysis of a retrospective chart review study. SHASTA Study Group..

BMC Ophthalmol. *2015 Apr 1;15:33. doi: 10.1186/s12886-015-0018-y.*

**Singer MA ,**Meyer J, Shah G. Blinder K, Waheed N, Reichel E, Stalmans P, Tewari T.

Early Evolution of the Vitreomacular Interface and Clinical Efficacy After Ocriplasmin Injection for Symptomatic Vitreomacular AdhesionOphthalmic Surgery, Lasers and Imaging Retina

*February 2015 - Volume 46 · Issue 2: 209-216*

*Posted February 1, 2015*

*DOI: 10.3928/23258160-20150213-21*

**Singer MA**, Tan CS, Surapaneni KR, Sadda SR. Targeted Photocoagulation of Peripheral Ischemia to Treat Rebound Edema

*Dove Press, Volume 2015:9, P337-341(February 2015)*

**Singer MA**, Tan CS, Bell DJ, Sadda SR. Area of Peripheral Retinal Nonperfusion and Treatment Response in Branch and Central Retinal Vein Occlusion. *Retina:*[*Volume 34 - Issue 9 - p 1736–1742*](http://journals.lww.com/retinajournal/toc/2014/09000)*. doi: 10.1097/IAE.0000000000000148 (September 2014)*

Tan CS, Lim LW, **Singer MA**, r Sadda SR. Early Peripheral Laser Photocoagulation of Nonprefused Retina Improves Vision in Patients with Central Retinal Vein Occlusion. Results of a Proof of Concept Study*. Aug 2014 Graefe’s Archive for Clinical and Experimental Ophthalmology*

Camopchiaro PA, Wykoff CC, **Singer MA**, Johnson R, Marcus D, Yau L, Sternberg G. Monthly Versus As-Needed Ranibizumab Injections in Patients with Retinal Vein Occlusion (The Shore Study). *Jul 2014, Ophthalmology (121)12 with 146 Reads, DOI: 10.1016/jophtha.2014.06.011 Source: PubMed*

**Singer MA,** Advances in the management of macular degeneration.

F1000 *Prime Reports. May 2014;6:29. doi: 10.12703/P6-29*

Capone A Jr, **Singer MA**, Dodwell DG, Dreyer RF, Oh KT, Roth

DB, Walt JG, Scott LC, Hollander DA.Efficacy and safety of two or more dexamethasone intravitreal implant injections for treatment of macular edema related to retinal vein occlusion (Shasta study)*Retina,Volume34(2):342-51. doi: 10.1097/IAE.0b013e318297f842,*

*(February 2014)*

**Singer MA**, Cohen SR, Groth SL, Porbandarwalla S. Comparing bevacizumab versus ranibizumab for initial reduction of central macular thickness in patients with retinal vein occlusions. *J. ClinOphthalmol. 2013;7:1377-83. doi: 10.2147/OPTH.S46235.Epub (July 2013)*

Callanan DG, Gupta S, Boyer DS, Ciulla TA, **Singer MA**, Kuppermann BD, Liu C, Li X. Dexamethasone Intravitreal Implant in Combination with Laser Photocoagulation for the Treatment of Diffuse Diabetic Macular Edema

*Ophthalmology, Vol. 120, Issue 9, p1843–1851. Published online: May 23, 2013*

Bhavsar AR, Torres K, Beck,RW, Bressler NM, Ferris FL,. Friedman SMM, Glassman AR, Maturi RK, Melia M, **Singer MA**, Stockdale R. CM and Diabetic Retinopathy Clinical Research Network.

Randomized Clinical Trial Evaluating Intravitreal Ranibizumab or Saline for Vitreous Hemorrhage from Proliferative Diabetic Retinopathy.JAMA *Ophthalmol.,2011,Mar;131(3):283-293/jamaophthalmol.2013..*

Dugal PU, Bebchuk J, Nau J, Reichel E, **Singer MA**, Barak A, Binder S, Jackson T Epimacular Brachytherapy for Neovascula Age-related Macular Degeneration: A Randomized, Controlled Trial. *Ophthalmology Volume 120, Number 2, pg 317, (February 2013)*

**Singer MA**,HerroAJ,Singer J,Surapaneni K,EspitiaJ, and Sponsel,WE. Utility of Anterior Segment OCT Measurements for Predicting Severe Eye Pressure Increase after Intravitreal Dexamethasone Implant

*J. Clin Exp Ophthalmol 4:311. doi: 10.4172/2155-9570.1000311*

*(December 2013)*

**Singer MA**, Tan CS, Sadda, SR[Peripheral Ischemia and Rebound Edema in RVO](http://bmctoday.net/retinatoday/2012/10/article.asp?f=peripheral-ischemia-and-rebound-edema-in-rvo)*Retina Today, (October 2012)*

**Singer MA**, Groth SL, Sponsel WE, Herro A, Pollard J, Cohen SR, Cohen JH.Association of OCT angle recess width with IOP response after intravitreal triamcinolone injection. *Jul 2012 Retina (Philidelphia, Pa.) 33(2) 14 Reads DOI: 10.1097/AIE.0b013e3182675c72 Source: PubMed*

**Singer MA**, Bell DJ, Woods P, Pollard J, Boord T, Herro A, Porbandarwalla S. Effect of Combination Therapy with Bevacizumab and Dexamethasone Intravitreal Implant in Patients with Retinal Vein Occlusion. *Retina, 2012 Mar 29. (Epub ), Retina. 2012 Jul;32(7):1289-94 print, (July 2012)*

**Singer MA**, Cid MD, Luth J, Porbandarwalla SS, Herro A, et al. (2012). Incidence of Corneal Melt in Clinical Practice: Our Experience vs. A Meta-Analysis of the Literature.*J Clinic Experiment Ophthalmol S1:003. doi:10.4172/2155-9570. S1-003 (January 2012)*

**Michael A Singer,** Nancy Amir, Angela Herro, Salman S Porbandarwalla, Joseph Pollard Improving Quality of Life in Patients with End-Stage Age-Related Macular Degeneration: Focus on Miniature Ocular Implants. *Jan 2012. Clincal Ophthalmology (Auckland, N.Z)*

**Singer, MA1**, Herro, A2, Pollard,J, Cohen,JCohen,S, Groth, S, Sponsel, W

Anterior Segment OCT of Patients with Steroid Response After Intravitreal Triamcinolone Injection: The association of angle recess size and IOP elevation. Invest Ophthalmol Vis Sci 2012;53: E-Abstract 677.[ARVO](http://abstracts.iovs.org/misc/terms.shtml) (July 2012)

**Singer MA**, Awh CC, Sadda S, Freeman WR, Antoszyk AN, Wong P, Tuomi L.HORIZON: An Open-Label Extension Trial of Ranibizumab for Choroidal Neovascularization Secondary to Age-Related Macular Degeneration.[*Ophthalmology.*](http://www.ncbi.nlm.nih.gov/pubmed/22306121)*2012 Jun;119(6):1175-83. doi: 10.1016/j.ophtha.2011.12.016. Epub 2012 Feb 4*

**Singer MA**, del Cid MR, Shelton CR, Boord T.

Pars Plana Posterior Capsulotomy in a Patient with Telescope Prosthesis for Age-Related Macular Degeneration. *Aug 2010, Archives of Ophthalmology 128(8):1065-7. DOI: 10.1001/archophthalmol.2010.156*

Boyer DS, Busquets MA, Cousins SW, Heier JH, **Singer MA.**  New and Emerging Treatment paradigms for Macular Edema in Retinal Vein Occlusion and Diabetic Retinopathy. *Oct 2009, Retina Today*

Shields C, Piccone M, Shields J, Eagle R, **Singer MA**. Mushroom-shaped Choroidal Recurrence of Retinoblastoma-25 Years After Therapy. *Archives of Ophthalmology Vol. 120, (June 2002)*

**Singer MA.** Botulinum T. Treatment of Essential Blepharospasm and Heminfacial Spasm.*OphthalmologyVol 3, 3 pg 48, September 1996.*

**Singer MA**, Hagler WS, Grossniklaus HE. Toxoplasmosa Gondii Retinochoroiditis After Liver Transplantation *Retina Vol 13 (Issue No 1) pg 40-45, 1993.*

**Book Chapter**

Pearse A. Keane, MD, MSc, FRCOphth, MRCSI; Colin S. Tan, MBBS, FRCSEd (Ophth), MMed (Ophth); **Michael A. Singer, MD**; ; SriniVas R. Sadda, MD, Seenu Hariprasad, MD. Management of Retinal Vein Occlusion: Current Concepts. Chapter 5: Role Of Imaging In The Management Of Macular Edema Secondary To Retinal Vein Occlusion

***Podcasts*** Retinal Physician: Retina Minute-Read by 300 physicians. Monthly Podcast. January 2018-present.

Retina Today Video Podcast, Eyetube Radio, Dr. David Boyer speaks

with Dr. Michael Singer of Medical Center Ophthalmology Associates in San Antonio, TX, September 2011

Retina Today Podcast, Eyetube Radio, Dr. David Brown speaks with Dr.

Michael Singer of Medical Center Ophthalmology Associates in an Antonio, TX, July 2011

Singer MA, Oetting T. MOC Exam Review Course: "The Academy's best kept secret." American Academy of Ophthalmology Podcast, June 2011.

***Videos*** Eyetube Video: Ozurdex 2.0 The Game has Changed December 2012

EyetubeVideo:Ozurdex Pearls and Pitfalls, September 2009

Eyetube Video, Biopsy of Retinal Lesions with a Novel Sub-Retinal

Aspiration Cannula, October 2009

***Non-Ophthalmology***

***Boards***

Kaiser Permanente Management Association 1994-1995

Board of Directors

American Diabetes Association, President July 1996-July 1998

Humana Utilization Review Board 1996-2003

Champus Utilization Review Board 1996-2003

Juvenile Diabetes Foundation, Board Member September 1999-2002

Socrates Social Venture Fund Aspen, CO

Director of Scholarship SectionDecember 2000-2003

Board Member 2003-2007

Board Member Acumen Fund Health Technology 2001-2008

Scientific Advisory Board

MDTV Advisory Board 2002-2009

CAMP Independence for Diabetic Children (Faculty) 1996-current

CAMP Independence (Board of Directors) 2003-2009

***Other Industries*** Dolce Food Corporation, Founder and CEO January 2004-January 2007

*Founded Ice Cream Corporation –*

*Created a sugar free product, distributed through*

*1,000 supermarkets in the southern U.S.*

*Profits donated to diabetic education and research*

Board Member 2007-2010

***PRESENTATIONS***

**Singer MA,** Wanamaker K, Krambeer C. The Effect of Intraocular Pressure Increases on

Retinal Nerve Fiber Layer. Art Club Jules Gonin July 2018, Retina Subspecialty Day American

Academy of Ophthalmology Chicago October 2018.

**Singer MA,** Kermany D, Singer J. Identifying Medical Diagnoses and Treatable Diseases by

Image-Based Deep Learning. Retina Society September 2018 San Fransico CA.

**Singer MA.** The FAME Study: Correlation Between Long-Term Control of Edema with

ILUVIEN®, Improvement in Visual Acuity and Patient Reported Outcomes Presented at the

American Society of Retina Specialists. Vancouver VA July 2018.

**Singer MA.** Treatment Burden Associated with Intravitreal Injections the Real World: Paladin Phase 4 Trial with Flucinolone Acetonide. ARVO Honolulu HI May 2018.

**Singer MA,** Tuomi L, Hill L, Hemphill M, Haskova Z. Predictors of Early Improvements in Diabetic Reinopathy Severity in a Significant Proportion of Patients After Month 3 and Month 6 of Ranibizumab Treatment. Macula Society Meeting, Beverly Hills, CA February 2018.

**Singer MA**, Area-Under-the –Curve Analysis of Fluocinolone Acetonide 0.2 µg/day Implant vs. Ranibizumab Plus Deferred Laser. Poster, Retina Society, Boston 2017 and American Academy of Ophthalmology, New Orleans 2017.

**Singer MA**, Noronha G: An Analysis of the Phase 2 Trial with Intravitreal Aflibercept and Suprachoroidal Triamcinolone Acetonide Compared to Intravitreal Alfibercept Alone in Retinal Vein Occlusion Patients in Terms of Perfusion Status. Paper, ARVO, Baltimore, MA 2017.

**Singer MA**, So J, Tuomi L, Ruiz CQ: Optimizing the Safety and Efficacy of the Ranibizumab Prefilled Syringe. Macula Society, Singapore June 2017.

**Singer MA1**; Dugel PU2, Fine HF3, Capone A4, Maltman J5. REINFORCE: A Prospective Multicenter Study of Dexamethasone Intravitreal Implant (DEX) in Diabetic Macular Edema (DME) – Complete Results. 1Medical Center Ophthalmology Associates, San Antonio, TX. 2Retinal Consultants of Arizona, Phoenix, AZ. 3Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ. 4Associated Retinal Consultants, Royal Oak, MI, 5Allergan plc, Irvine, CA. Retina World Congress, 2017.

**Singer MD1**, Dugel PU2, Fine HF3, Capone A4, Maltman J5. REINFORCE: A ProspectiveMulticenter Study of Dexamethasone Intravitreal Implant (DEX) in Diabetic Macular Edema (DME) – Interim Results. 1Medical Center Ophthalmology Associates, San Antonio, TX. 2Retinal Consultants of Arizona, Phoenix, AZ. 3Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ. 4Associated Retinal Consultants, Royal Oak, MI, 5Allergan plc, Irvine, CA. Macula Society, 2016.

**Singer, MA**. An Observational Study of Dexamethasone Intravitreal Implant in Diabetic Macular Edam: Interim Results from the Reinforce Study. Macula Society, 2016.

Jansen ME, Tyler L, KermanyD, Waters J, **Singer MA.** Comparing bevacizumab, ranibizumab, and aflibercept for early reduction of macular edema in patients with retinal vein occlusions (RVO). ARVO Annual Meeting Abstract September 2016. Invest. Ophthalmol. Vis. Sci.. 2016; 57(12):4156.

**Singer MA,**  Orlando A, Clift V, Bar-Or D. Potential Beneficial Effect of Low Dose Danazol in Combination With Renin Angiotensin System Inhibitors in Diabetic Macular Edema: a 12-week Double Blind Randomized Controlled Trial. ARVO Annual Meeting Abstract September 2016., Retina Society September 2016, Invest. Ophthalmol. Vis. Sci.. 2016; 57(12):3250.

Fine HF, **Singer MA**, Dugel PU, Capone A, Maltman J.

Real-World Assessment of Dexamethasone Intravitreal Implant in Diabetic Macular Edema: Interim Analysis from the REINFORCE Study. ARVO Annual Meeting Abstract September 2016. Invest. Ophthalmol. Vis. Sci.. 2016; 57(12):3259.

**Singer MA:** Long-term Visual Outcomes by Baseline Subgroup Characteristics of Intravitreal Aflibercept Injection for Neovascular Age-Related Macular Degeneration after the VIEW1 Study. ARVO Annual Meeting Abstract June 2015. Invest. Ophthalmol. Vis. Sci.. 2015; 56(7 ):4607.

Tyler L, **Singer MA,**  Bell DJ, Ansari F, Jain U, Woods P. Intraocular Pressure Control for Patients Undergoing Combination Intravitreal Anti-VEGF and Dexamethasone Therapy for Macular Edema from Retinal Vein Occlusion. ARVO Annual Meeting Abstract June 2015. Invest. Ophthalmol. Vis. Sci.. 2015; 56(7 ):5801.

**Singer MA,** Capone A, Dugel PU, Dreyer RF, Dodwell DG, Roth DB, Shi R, Walt JG, Scott LC, Hollander DA. Safety and Efficacy of Two or More Dexamethasone Intravitreal Implants in Treatment-Naïve Patients with Macular Edema Due to Retinal Vein Occlusion. ARVO Annual Meeting Abstract April 2014. Invest. Ophthalmol. Vis. Sci.. 2014; 55(13):1797.

Dodwell DG, Capone A, **Singer** **MA**, Dugel PU, Dreyer RF, Roth DB, Shi R, Walt JG, Scott LC, Hollander DA. Two or More Dexamethasone Intravitreal Implants Used as Monotherapy or Combined With Other Therapy in Retinal Vein Occlusion. ARVO Annual Meeting Abstract April 2014. Invest. Ophthalmol. Vis. Sci.. 2014; 55(13):1807.

Sadda SR, Tan CS, van Hemert J, Bell DJ, Chew M, **Singer MA**. Correlation of precise area of peripheral non-perfusion with the ischemic index in retinal vein occlusion. ARVO Annual Meeting Abstract April 2014. Invest. Ophthalmol. Vis. Sci.. 2014; 55(13):247.

Capone A, **Singer MA,** Dodwell D, Dreyer R, Oh K, Roth D, Walt J, Scott L, Hollander D. Retrospective Study of Two or More Dexamethasone Intravitreal Implant 0.7 mg Injections for Retinal Vein Occlusion. ARVO Annual Meeting Abstract June 2013. Invest. Ophthalmol. Vis. Sci.. 2013; 54(15):2820.

Jansen M1, Krambeer C2, Kermany D3, Singer J3, Waters J1, **Singer MA3**. Compliance Trends in Patients with Diabetic Macular Edema and Exudative Macular Degeneration. 1University of Texas Health Science Center at San Antonio, 2Texas Tech University Health Science Center El Paso, 3Medical Center Ophthalmology Associates. AAO poster: P0533

Jansen M1, Tyler L1, Kermany D2, Waters J1, **Singer MA2**. Comparing bevacizumab, ranibizumab, and aflibercept for early reduction of macular edema in patients with retinal vein occlusions. 1University of Texas Health Science Center at San Antonio, 2Medical Center Ophthalmology Associates. Abstract # 2441773, 4156-D0070. ARVO 2016.

Tyler L, **Singer** **MA,** Bell DJ, Ansari F, Jain U, Woods P.

Intraocular Pressure Control for Patients Undergoing Combination Intravitreal Anti-VEGF and Dexamethasone Therapy for Macular Edema from Retinal Vein Occlusion FREE. ARVO Annual Meeting Abstract June 2015. *Invest. Ophthalmol. Vis. Sci.. 2015; 56( ):5801.doi:*

**Singer MA.**"Efficacy Assessment of the 0.2 mg/day Fluocinolone Acetonide (FAc) Intravitreal Implants vs. Sham Control Using the Area Under the Curve (AUC) Method (FAME).”

**Singer MA**. Safety of Intravitreal Aflibercept Injection (IAI) from RE-VIEW in Neovascular Age-Related Macular Degeneration (nAMD). AAO, 2015.

**Singer MA,** Long-Term Effects of Combination Therapy Using Anti-VEGF Agents and Dexamethasone Intravitreal Implant for Retinal Vein Occlusions (RVO). The Retina Society, 47th Annual Scientific Meeting, Philadelphia, Pennsylvania; Sept 11-14, 2014

**Singer MA,** Long term Analysis of combination Therapy in Retinal Vein Occlusion: presented at club Jules Gonin Zurich Switzerland and Retina Society Philadelphia PA 2014

**Singer MA,** The 2012 Medicare data: How do Retina Specialists Stack Up: presented at the Third Coast Retina Conference, May 2014 Austin, TX

**Singer MA,** Comparison of Monotherapyvs Combination Therapy in Retinal Vein Occlusion: A SHASTA Study Sub analysis presented at the Macula Society Key Largo Fl. February 2014

**Singer MA1**, Sabbah S1, Antoszyk A2, Singh R3, Li A3, Bell DJ1, Dodwell D4. Non-Steroidal drops for the treatment of Central Serous choroidopathy (CSR). 1Medical Center Ophthalmology, San Antonio, TX. 2Charlotte Eye Ear Nose and Throat Associates, Charlotte, NC. 3Cole Eye Institute, Cleveland, OH. 4Illinois Retina Center.

**Singer MA,** The Use of NSAIDS in Central Serous Chorioretinopathy: presented at AAO Subspecialty Day New Orleans, LA, November 2013

**Singe rMA,** The SHORE Study presented at Retina Society, September 2013: Los Angeles CA

**Singer MA,** The Use of Three Dimension Image Conversion in Optos Imaging: presented at the American Society of Retina Specialists meeting, August 2013, Toronto Canada

**Singer MA,** Anterior Segment OCT of Patients with Steroid Response After Intravitreal Triamcinolone Injection: The association of angle recess size and IOP elevation

Michael Singer1, Angela Herro2, Sylvia L. Groth3, Steven Cohen2, Jeffrey Cohen1, Joe Pollard1, William E. Sponsel4. 1Med Center Ophthalmology presented as a poster ARVO 2012

Presentations 2012

**Singer MA,** The Use of Anterior Segment OCT to Help Predict Steroid Responders after Intravitreal Injections presented at Club Vit June 2012 and ASRS 2012 and AAO Subspecialty Day 2012

**Singer MA,** How SLT Affects the Angle A Three Dimensional View

Michael Singer, Angela Herro, Josh Singer Joe Pollard William Sponsel

Presented as a poster/film at the ISIE ARVO Imaging Conference submitted to ASRS film festival

**Singer MA,** Predictive Value of the Area of Peripheral Retinal Non-Perfusion on Treatment Response in Branch and Central Retinal Vein Occlusion

Colin Tan, Michael Singer, Joe Pollard and SrinivasSadda presented as a paper at ARVO (Dr.Tan), presented at Macula Society (Dr. VasSadda) to be presented at Retina Society and ASRS 2012 (Dr. Singer)

**Singer MA,** Bevacizumab and Dexamethasone intravitreal implant in patients with Retinal Vein Occlusion-Twelve Month Extention Study. Paper American Society of Retina Specialists, to be presented at Subspecialty Day, American Academy of Ophthalmology (Orlando, Fl. October 2011

**Singer MA, Patel SS, Uy HS, Liu C-C, Li X-Y, Li SM. Dexamethasone Intravitreal Implant (DEX Implant) Alone and as an Adjunct to Ranibizumab for the Treatment of Choroidal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD) (ARVO 2011)**Poster Paper Retina Society 2011. American Society of Retina Specialists 2011.

**Singer MA**, Bell DJ, Boord T. Effects of Combination Therapy with Bevacizumab and Dexamethasone Intravitreal Implant in Patients with Retinal Vein Occlusion-Six Month Results. American Society of Retina Specialists (Vancouver,Canada, 2010), Subspecialty Day, American Academy of Ophthalmology (Chicago, IL, 2010) Paper/Poster

**Singer MA**, Gupta S, Ciulla T, Liu C-C, Lou J, L X-Y.Safety and efficacy of intravitreal Dexamethasone implant plus laser photocoagulation versus laser alone for treatment of diffuse Diabetic Macular Edema. Retina Society (San Francisco, CA, 2010) Paper

**Singer MA**, Gray S, Murahashi W Yee, Saroj N, Rundle A, Rubio R

Subgroup Analyses of Visual Acuity Outcomes in the BRAVO Study of IntravitrealRanibizumab in Patients with Macular Edema Following Branch Vein Occlusion, **Association of Research and Vision in Ophthalmology 2010. Poster**

Kuppermann, B, **Singer, MA**, Tufail, A, Lou, J, Li, Xiao-Yan, Whitcup, S. OzurdexTM(Dexamethasone Intravitreal Implant) as Adjunctive Therapy to Lucentis® in Patients with Chroroidal Neovascularization Secondary to Age-Related Macular.**Association of Research and Vision in Ophthalmology 2010. Paper**

Del Cid MR, **Singer MA**. Corneal Melts Associated with the Use of Topical Nonsteroidal Anti-Inflammatory Drugs (NSAIDs): A Review of the Literature. Alamo City Ophthalmology Clinical Conference, San Antonio, TX, 2010.  
  
Del Cid MR, **Singer MA**, Bell D. Topical Nonsteroidal Therapy for the Treatment of Central Serous Chorioretinopathy.Invstigative Ophthalmology and Visual Science. 2010: ARVO E-Abstract 3311. Poster at ARVO, Ft. Lauderdale, FL, 2010.

**Singer MA**, Bell DJ, Boyer D. et al. Non-Steroidal Drops Safe for Long-Term Use? American Academy of Ophthalmology, poster presentation San Francisco, CA, October 2009.

**Singer MA**, Bell DJ, Boord T. Effect of Combination Therapy with Bevacizumab and Dexamethasone Intravitreal Implant in Patients with Retinal Vein Occlusion. Vindico Medical Education, Maui, HA, January 2010. Presentation

**Singer MA**, del Cid MR, Bell DJ, Trichopoulos N, O’Conner P, Padmanabhan S. Unknown Case presented at the Imaging Conference at the Retina Congress as well as submitted at the film festival (2009)

**Singer MA**, Wong P, Tuomi L. Visual Acuity after 2 Years in the Horizon Trail of PRN IntravitrealRanibizumab (Lucentis) in Patients with Neovascular Age-related Macular Degeneration presented at the Retina Congress, New York, NY (2009) Poster

**Singer MA**, Wong P, Tuomi L. Visual Acuity after 2 Years Data for Safety and Efficacy in the Horizon Trail of PRN IntravitrealRanibizumab (Lucentis®) in Patients with Neovascular Age-related Macular Degeneration presented at the ARVO (2009) (submitted for publication) Paper

**Singer MA**, Wong RL, Rodriguez J, Alderete C, Johnson S. Like Reaction After Oral Moxifloxacin (Avelox) Administration Presented at American Society of Retina Specialist 25th Annual Meeting. Palm Springs, California, December 1-5, 2007. Poster

**Singer MA**, Wong RL, Alderete C, Hartman R. Vitrase for Vitreous Hemorrhage Revisited Presented at The Cannes Retina Festival Nice, France, September 9-13, 2006. Paper

**Singer MA**, Wong RL, Alderete C, Hartman R. Avastin – It’s Not Just For Retina Anymore. Poster at the Cannes Retina Festival Nice, France; 9-13 September 2006. Poster

**Singer MA**, Fisher SJ, Hartman R. Surgical Capsulotomy in an Implantable Miniature Telescope Patient Presented at the American Society of Retina Specialists Montreal, Quebec, Canada, July 16-20 2005. Poster

**Singer MA**, Kimbrell PN. Comparison of Central Retinal Artery Occlusion in Eyes with and without Hyperbaric Oxygen Presented at the American Society of Retina Specialists Montreal, Quebec, Canada, July 16-20, 2005. Paper

**Singer MA**, Cohen JH, Scribbick F, Garcia IM, Paulson C. Increases in Intraocular Pressure after Kenalog Injection Presented at the American Society of Retina Specialists Annual Meeting New York, New York; August 2003. Paper

Warman JR, Crawford J, Evans RM, Simmons JW, Stanley EA, Strohlow R, **Singer MA**. Dependency-Induced Increase in Intraocular Pressure: A Contributing Factor for Postoperative Visual Loss After Spinal Surgery Poster Exhibit Presented at the Scoliosis Research Society Annual Meeting Seattle, Washington; September 2002. Paper

Shields C, Piccone M, Shields J, Eagle R, **Singer MA**. Mushroom-shaped Choridal Recurrence of Retinoblastoma-25 Years After Therapy. Archives of Ophthalmology Vol. 120, June 2002.

**Singer MA**. Transthermotherapy in the Treatment of Classic and Occult Choroidal Neovascularization. Presented at the IRIS Pre-Academy Meeting October 2000; 2001 Vitreous Society Meeting; and “Expert Speaker” Iridex Booth American Academy of Ophthalmology 2001. Paper

**Singer MA**, Levy G. The Evidence of Plaquenil Retinopathy in a Large Multi-Center Outpatient Practice. Presented at American Academy of Ophthalmology Meeting October 1995. Poster

**Singer MA**, Kowalski G. The use of EMLA to Reduce Pain of Botulinum Toxin Injections Presented at Blepharospasm Foundation Conference, September 1995. Paper

**Singer MA**, Rio N. The Pathologic Effects of Retained Perflourocarbons Presented at the Vitreous Society August 1994. Poster

**Singer MA**, Schwatz SD, Green RL, et al. Factors Associated with Retinal Detachment in Penetrating Ocular Trauma. Investigative Science; 1988 (29): 303 Presented as a poster ARVO 1988, Sarasota, Florida

Gaster R, Burstein N, **Singer MA**. Laser Surgery of the Cornea.Investigative Ophthalmology and Visual Sciences; 1987 (14); *45.*Presented as a paper ARVO, Sarasota, Florida (1987)

**Singer MA,** Wong E, Yaplee S. The Presentation of a Lost Contact Lens, (Letter) CLAO, 1986 Oct-Dec (4) p. 200-201, presented at CLAO meeting, Las Vegas, Nevada, 1986 (poster)

***RESEARCH***

**Principal Investigator 2018 – Current**

Santen LUMINA Protocol 010906IN A Phase III, Multi-Center, Sham-Controlled, Randomized, Double-Masked Study Assessing the Efficacy and Safety of Intravitreal Injections of 440 µg DE-109 for the Treatment Active, Non-Infectious Uveitis of the Posterior Segment of the Eye

**Principal Investigator 2018 – Current**

DRCR Protocol AH Single-Arm Study Assessing the Effects of Pneumatic Vitreolysis on Macular Hole

**Sub-Investigator 2018 – Current**

Aldeyra Therapeutics Protocol ADX-102-AC-010 A Multi-Center, Double-Masked, Randomized, Parallel-Group, Vehicle-Controlled, Enviromental Clinical Trial with Reproxalap Ophthalmic Solutions (0.25% and 0.5%) in Subjects with Seasonal Allergic Conjunctivitis

**Sub-Investigator 2018 – Current**

ICON Blepharitis Protocol C-12-305-001 A Phase III, Multi-Center, Randomized, Double-Masked, Parallel-Group, Comparative Study to Evaluate the Clinical Efficacy and Safety of ISV-305 (0.1% Dexamethasone) Compared to Vehicle in the Treatment of Subjects with Blepharitis

**Sub-Investigator 2018 – Current**

ICON Post-Op Cataract Protocol C-16-305-003 A Phase III, Randomized, Multi-Center, Double-Masked Study to Compare the Ocular Safety, Tolerability and Efficacy of ISV-305 (0.1% Dexamethasone in Durasite® 2) to Durasite 2 Vehicle for the Treatment of Inflammation and Pain Associated with Cataract Surgery

**Sub-Investigator 2018 – Current**

Clearside Topaz Protocol CLS1003-302 A Randomized, Masked, Controlled Trial to Study the Safety and Efficacy of Suprachoroidal CLS-TA in Combination with an Intravitreal Anti-VEGF Agent in Subjects with Retinal Vein Occlusion

**Principal Investigator 2018 – Current**Yosemite Protocol GR40349 A Phase III, Multi-Center, Randomized, Double-Masked, Active Comparator-Controlled Study to Evaluate the Efficacy and Safety of RO6867461 in Patients with Diabetic Macular Edema

**Sub-Investigator 2018 – Current**

IONIS Protocol ISIS 696844-CS3 A Phase II, Placebo-Controlled, Double-Masked Study to Assess Safety and Efficacy of ISIS 696844, an Antisense Inhibitor of Complement Factor B, in Patients with Geographic Atrophy Secondary to Age-Related Macular Degeneration (AMD)

**Principal Investigator 2018 – Current**

Portal Protocol GR40549 A Multi-Center, Open-Label Extension Study to Evaluate the Long-Term Safety and Tolerability of the Port Delivery System with Ranibizumab in Patients with Neovascular Age-Related Macular Degeneration

**Sub-Investigator 2018 – Current**

Chengdu Protocol KHB-1801 A Multi-Center, Double-Masked, Randomized, Dose-Ranging Trial to Evaluate the Efficacy and Safety of Conbercept Intravitreal Injection in Subjects with Neovascular Age-Related Macular Degeneration

**Sub-Investigator 2018 – Current**

Champ Protocol CP-NVK002-0001 A 3-Arm, Randomized, Double-Masked, Placebo-Controlled, Phase III, Study of Atropine Sulfate Ophthalmic Solution 0.01% and 0.02%

**Principal Investigator 2018 – Current**

Archway Protocol GR40548 A Phase III, Multi-Center, Randomized, Visual Assessor-Masked, Active-Comparator Study of the Efficacy, Safety and Pharmacokinetics of the Port Delivery System with Neovascular Age-Related Macular Degeneration

**Principal Investigator 2018 - Current**

Apellis Protocol APL2-303 A Phase III, Multi-Center, Randomized, Double-Masked, Sham-Controlled Study to Compare the Efficacy and Safety of Intravitreal APL-2 Therapy with Sham Injections in Patients with Geographic Atrophy (GA) Secondary to Age-Related Macular Degeneration (AMD)

**Principal Investigator 2017 – Current**

DRCR Prominent Protocol AD Eye Ancillary Study: Diabetic Retinopathy Outcomes in a Randomized Trial of Pemafibrate versus Placebo

**Sub-Investigator 2017- Current**

Aerpio Time-2B Protocol AKB-9778-CI-5001 A Phase 2, Double-masked, Placebo-Controlled study to Assess the Safety and Efficacy of Subcutaneously administered AKB-9778 15 MG Once Daily or 15MG Twice Daily for 12 Months in Patients with Moderate to Severe Non-Proliferative Diabetic Retinopathy.

**Principal Investigator 2017 - Current**

Graybug Protocol GBV-102-001 A Phase 1/2 Multicenter Study Evaluating the Safety, Tolerability and Efficacy of an Intravitreal Depot Formulation of Sunitinib Malate (GB-102) in Subjects with Neovascular Age-Related macular Degeneration.

**Principal Investigator 2017 - Current**

Opthea DME Protocol OPT-302-1003 A Phase 1b/2a study of OPT-302 in Combination with Aflibercept for Persistent Central-Involved Diabetic Macular Edema.

**Sub-Investigator 2017 - Current**

Clearside Tybee Protocol CLS1004-201 Randomized, Double masked, Controlled Study Comparing the Safety and Efficacy of Suprachoroidal CLS-TA with Intravitreal Aflibercept versus Aflibercept Alone in Subjects with Diabetic Macular Edema.

**Principal Investigator 2017 - Current**

Allegro Dry AMD Study 101 A Randomized, Controlled, Double Masked, Crossover Clinical Trial Designed to Evaluate the Safety and Exploratory Efficacy of 1.0 mg Luminate (Alg-1001) as a Treatment for Non-Exudative macular Degeneration.

**Principal Investigator 2017 - Current**

Kal-Vista A randomized sham-controlled double-masked Phase 2a study of the efficacy, safety and tolerability of the intravitreal plasma kallikrein inhibitor, KVD001, in subjects with center-involving diabetic macular edema (ciDME) who have had prior anti‑vascular endothelial growth factor (VEGF) treatment.

**Principal Investigator 2017 - Current**

Opthea AMD Protocol OPT-302-1002 A dose-ranging study of intravitreal OPT-302 in combination with ranibizumab, compared with ranibizumab alone, in participants with neovascular age-related macular degeneration (wet AMD).

**Principal Investigator 2017 - Current**

DRCR Protocol AB Intravitreous Anti-VEGF vs. Prompt Vitrectomy for Vitreous Hemorrhage from Proliferative Diabetic Retinopathy.

**Sub-Investigator 2017-2018**

Senju Sunrise Protocol SUN-131-03 A Multi-Center, Double-Masked, Randomized, Placebo-Controlled Evaluation of the Safety and Efficacy of SUN-131 Transdermal System (TDS) as Compared to Placebo TDS in Patients with a Chalazion

**Sub-Investigator 2016-2018**

Clearside Sapphire Protocol CLS1003-301 A Randomized, Masked Controlled Trial to Study the Safety and Efficacy of Suprachoroidal CLS-TA in Conjunction with Intravitreal Aflibercept in Subjects with Retinal Vein Occlusion

**Principal Investigator 2016-Current**

Ladder Protocol GX28228 A Phase II, Multi-Center, Randomized, Active Treatment-Controlled Study of the Efficacy and Safety of the Ranibizumab Port Delivery System for Sustained Delivery of Ranibizumab in Patient with Subfoveal Neovascular Age-Related Macular Degeneration.

**Principal Investigator 2016-2018**

OHR-1601Protocol NCT02727881 A Phase III Study of the Efficacy and Safety Study of Squalamine Ophthalmic Solution in Subjects with Neovascular AMD (MAKO). Patients will receive injections of ranibizumab. In addition, patients will receive either Squalamine lactate 0.2% eye drops or Placebo eye drops. The study duration is 2 years.

**Principal Investigator** **2016-2018**

Boulevard Protocol NCT02699450 A Phase 2 Study of RO6867461 in Participants with Center-Involving Diabetic Macular Edema (CI-DME)

**Sub-Investigator** **2016-2018**

EyeGate Uveitis Protocol EGP- 437-006 A Prospective, Multi-Centered, Randomized, Double-Masked, Positive-Controlled Phase 3 Clinical Trial Designed to Evaluate the Safety and Efficacy of Iontophoretic Dexamethasone Phosphate Ophthalmic Solution Compared to Prednisolone Acetate Ophthalmic Suspension (1%) in Patients with Non-Infectious Anterior Segment Uveitis.

**Principal Investigator 2016-Current**

TLC RVO Protocol NCT02006147 A Phase IIa Trial of TLC399 (ProDex) in Subjects with Macular Edema due to Retinal Vein Occlusion (RVO): A Double Masked, Randomized Trial to Evaluate Efficacy and Tolerability.

**Principal Investigator 2016-Current**

Regeneron Panorama Protocol VGFTe- OD-1411 A phase III, Double Masked, Randomized Study of the Efficacy and Safety of the Intravitreal Aflibercept Injection in Patients with Moderately Severe to Severe Non-Proliferative Retinopathy.

**Principal Investigator 2016-2018**

Regeneron Ruby Protocol R910-3-DME-1518 A Randomized, Double Masked, Active Controlled, Phase II Study of the Efficacy, Safety, and Tolerability of Repeated Doses of Intravitreal REGN910-3 in Patient with Diabetic Macular Edema.

**Principal Investigator**  **2015 - Current**

Paladin Study Protocol M-01-15-004 A Phase 4 Safety Study of IOP Signals in Patients Treated with ILUVIEN® (fluocinolone acetonide intravitreal implant) 0.19 mg

**Principal Investigator 2015-Current**

Allergan Cedar Protocol NCT0246292 A Phase III Safety and Efficacy Study of Abicipar Pegal (AGN-150998) in Patients with Neovascular Age-Related Macular Degeneration.

**Principal Investigator** **2015-2018**

Proxima A Protocol NCT02479386 An Epidemiologic Study of Disease Progression in Patients With Geographic Atrophy Secondary to Age-Related Macular Degeneration

**Principal Investigator** **2015-2018**

Daiichi Sankyo Protocol NCT 02530918 Phase I Dose Escalation and expansion Study of DS-7080a in Subjects with Neovascular Age-Related Macular Degeneration.

**Sub-Investigator** **2015-2017**

Alcon Protocol NCT02307682 A Phase III, Two-Year, Randomized, Double-Masked, Multicenter, Three-Arm Study Comparing the Efficacy and Safety of RTH258 Versus Aflibercept in Subjects With Neovascular Age-Related Macular Degeneration.

**Principal Investigator 2015-2017**

Regeneron Capella Protocol R2176-3-AM1417 A Phase II, Double Masked, Randomized, Controlled, Multiple Dose, Regimen-Ranging Study of the Efficacy and Safety of Intravitreal REGN2176-3 in Patient with Neovascular Age-Related Macular Degeneration.

**Sub-Investigator 2015-Current**

A Phase 2, Double-Masked, Randomized, Active Controlled Study to Evaluate the Efficacy and Safety of ASP8232 in Reducing Central Retinal Thickness in Subjects with Diabetic Macular Edema

**Principal Investigator 2015-Current**

A Phase 2 Multicenter, Randomized, Controlled, Double-Masked Clinical Trial Designed to Evaluate the Safety and Exploratory Efficacy of Luminate (ALG-1001) As Compared to Avastin and Focal Laser Photocoagulation in the Treatment of Diabetic Macular Edema

**Principal Investigator 2014-2018**

Allegro DME Protocol NCT-02348918 A Phase II Randomized, Controlled, Double Masked, Multi-Center Clinical Trial Designed to Evaluate the Safety and Exploratory Efficacy of Luminate (ALG-1001) as Compared to Avastin and Focal Laser Photocoagulation in the Treatment of Diabetic Macular Edema.

**Principal Investigator 2014-2018**

Allegro PVD Protocol PVD-202 A Phase II, Randomized, Double Masked, Placebo-Controlled Multi-Center Clinical Trial Designed to Evaluate the Safety and Efficacy of Luminate in Inducing PVD in Subjects with Non-Proliferative Diabetic Retinopathy.

**Principal Investigator** **2014-2016**

Allergan Retrospective Study ECHO Protocol GMA-OZU-13-598 The Ozurdex Diabetic Macular Edema (DME) Patient Registry

**Sub-Investigator 2014-2016**

Clearside TANZANITE: Safety and Efficacy of Suprachoroidal CLS-TA in Combination with Intravitreal Aflibercept in Subjects with Macular Edema Following Retinal Vein Occlusion

**Principal Investigator 2014-2016**

A Phase 1 Open-Label, Multi-Center Trial with Randomization to Dose to Evaluate the Safety and tolerability of Topical Ocular PAN-90806 in Patients with Neovascular Age-Related Macular Degeneration ( AMD)

**Principal Investigator 2013-2015**

A Phase 2, Randomized, Double-Masked, Placebo-Controlled, Parallel Group, Multi-Center Study to Compare the Efficacy and Safety of Chemokine CCR2/5 Receptor Antagonist (PF-04634817) With That of Ranibizumab in Adult subjects With Diabetic Macular Edema

**Principal Investigator 2014-Current**

Study of Comparative Treatments for Retinal Vein Occlusion 2 [SCORE2]: A Multicenter, Prospective, Randomized Non-inferiority Trial of Eyes With Macular Edema Secondary to Central Retinal Vein Occlusion, Comparing Intravitreal Bevacizumab Every 4 Weeks With Intravitreal Aflibercept Every 4 Weeks.

**Principal Investigator 2013-2015**

A Phase 3 Randomized, Double-Masked, Controlled Trial To Establish the Safety and Efficacy of Intravitreous Administration of Fovista (Anti PDGF-B Pegylated Aptamer) Administered in Combination with Lucentis Compared to Lucentis Monotherapy in Subjects with Subfoveal Neovascular Age-Related Macular Degeneration

**Principal Investigator 2013-2014**

Phase 2 Study of the Efficacy and Safety of Squalamine Lactate Ophthalmic solution 0.2% Twice Daily in subjects with Neovascular Age-Related Macular Degeneration

**Principal Investigator 2013-2014**

A Prospective, Two Cohort, single-Masked Study to Evaluate the Effect of ESBA 1008 Applied by Micro volume Injection or Infusion in Subjects with Exudative Age-Related Macular Degeneration

**Sub-Investigator 2013-2014**

Alcon 001 Protocol C-13-001 A Phase 2, Randomized, Active-Controlled, Single-masked, Multi-Center Study to Assess the Safety and Efficacy of Daily Subcutaneous AKB-9778 Administered for 3 Months, as Monotherapy of Adjunctive to Ranibizumab, in Subjects with Diabetic Macular Edema

**Sub-Investigator 2013-2015**

A Phase I Open-Label, Multi-Center Trial with Randomization to Dose to Evaluate the Safety and Tolerability of Topical Ocular PAN-90806 in Patients with Neovascular Age-Related Macular Degeneration (AMD)

**Principal Investigator 2013-2016**

Allergan Reinforce Protocol GMA-US-EYE-0272 A Retrospective Data Collection Study in Patients Receiving Anti-VEGF Injections for Retinal Vein Occlusion or DME

**Principal Investigator 2012-2013**

A Multi Center, Patient-Masked, Safety Extension Study to Evaluate the Biodegradation of the Brimonidine Tartrate Posterior Segment Drug Delivery System

**Sub-Investigator 2012-2013**

A 1- Month, Multicenter, Observational Study to Evaluate the Degree of Ocular Inflammation Associated with Pars Plana Vitrectomy

**Principal Investigator 2012-2016**

Acucella Protocol 4429-202 A Phase 2b/3 Multicenter, Randomized, double-Masked, Dose-Ranging Study Comparing the Efficacy and Safety of Emixustat Hydrochloride (ACU-4429) with Placebo for the Treatment of Geographic Atrophy Associated with Dry Age-Related Macular Degeneration

**Principal Investigator 2012-2013**

A 6-month, Phase II, Double-masked, Multicenter, Randomized, Placebo- Controlled, Parallel Group Study to Assess the Safety and Efficacy of Topical Administration Two Concentrations of FOV2304 (1% and 2%) Twice Daily for the Treatment of Center-involving Clinically Significant

Macular Edema Associated with Diabetic Retinopathy

**Principal Investigator 2012-2014**

Bromonidine Study A Multicenter, Open-Label, Randomized Study Comparing the Efficacy and Safety of 700ug Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) to Ranibizumab in Patients with Diabetic Macular Edema

**Principal Investigator 2012-2018**

DRCR Protocol S Prompt Panretinal Photocoagulation versus Intravitreal Ranibizumab with Deferred Panretinal Photocoagulation for Proliferative Diabetic Retinopathy

**Principal Investigator 2012-2014**

A Prospective Case-crossover Study to Evaluate the Possible Association between the Use of PDE5 Inhibitors and the Risk of Acute Non-Arteritic Anterior Ischemic Optic Neuropathy (NAION)

**Principal Investigator 2011-2013**

A Multicenter Randomized Study Evaluation Dosing Regimens for Treatment with Intravitreal Ranibizumab Injections in Subjects with Macular Edema Following Retinal Vein Occlusion

**Principal Investigator 2011-2014**

### Galley – Genetic Assessment of early to late macular degeneration study

**Principal Investigator 2010-2013**

A Phase III, Double-Masked, Multi-Center, Randomized, Active Treatment-Controlled Study of the Efficacy and Safety of 0.5 mg and 2.0 mg Ranibizumab Administered Monthly or On An As-Needed Basis (PRN) in Patients with SubfovealNeovascular Age-Related Macular Degeneration

**Sub-Principal Investigator 2010-2013**

A Randomized, Double Masked, Controlled Phase 3 Study of the Efficacy, Safety, and Tolerability of Repeated Intravitreal Administration of VEGF Trap-Eye in Subjects with Macular Edema Secondary to Central Retinal Vein Occlusion (CRVO)

**Principal Investigator 2010-2012**

A Multicenter, Masked, Randomized, Sham-controlled, Parallel-group, 3 month study with a 9- month Safety Extension to Evaluate the Safety and Efficacy of Brimonidine Tartrate Posterior Segment Drug Delivery System (Brimonidine Tartrate PS DDS) Applicator system in Improving Visual Function in Patients with a Previous Rhegmatogenous Macula-Off Retinal Detachment

**Principal Investigator 2010-2012**

An Evaluation of IntravitrealRanibizumab for Vitreous Hemorrhage Due to Proliferative Diabetic Retinopathy

**Principal Investigator 2010-2012**

### SEVEN year observational Update of macular degeneration patients post-MARINA/ANCHOR and HORIZON trials

**Principal Investigator 2010-2013**

A 12- Month, Multicenter, 2 Stage (Open Label, Dose Escalation, Followed by a Masked, Randomized) Single dose Study of the Safety and Efficacy of AGN-208397 in Patients with Macular Edema (ME) Associated with Retinal Vein Occlusion (RVO)

**Principal Investigator 2009-2012**

An Open-Label, Multi-Center Extension Study to Evaluate the Safety and Tolerability of Ranibizumab in Subjects with Choroidal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD) or Macular Edema Secondary to Retinal Vein Occlusion (RVO) Who Have Completed a Genentech-Sponsored Ranibizumab Study

**Principal Investigator 2009-2011**

A 26-Week, Open-Label Study to Assess the Safety and Efficacy of 700μg Dexamethasone Posterior Segment Drug Delivery System Applicator System in the Treatment of Vitrectomized Subjects with Diabetic Macular Edema (DME)

**Principal Investigator 2009-2011**

A 26 Week, Open-Label Study to Assess the Safety and Efficacy of 700μg Dexamethasone Posterior Segment Drug Delivery System Applicator System In Conjunction with Lucentis® in the Treatment of Patients with Choroidal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD)

**Principal Investigator 2009-2011**

A Randomized,Placebo Controlled, Double-Masked, Multi-Center Trial of MicroplasminIntravitreal Injection For Non-Surgical Treatment of Focal Vitreomacular Adhesion.

**Principal Investigator** **2009-2010**

MiviTrust Protocol TG-MV-007 Ocripalsmin Research to Better Inform Treatment

**Principal Investigator 2009-2013**

A Phase III, Double-Masked, Multi-Center, Randomized, Sham Injection-Controlled Study of the Efficacy and Safety of Ranibizumab Injection in Subjects with Clinically Significant Macular Edema with Center Involvement Secondary to Diabetes Mellitus

**Principal Investigator 2009-2013**

A Randomized, Prospective, Active Controlled, Study of the Epi-Rad90 ™ Ophthalmic System for the Treatment of SubfovealChoroidal Neovascularization Associated with Wet Age-Related Macular Degeneration

**Principal Investigator 2008-2012**

A Randomized, Double Masked, Active Controlled Phase III Study of the Efficacy, Safety, and Tolerability of Repeated Doses of Intravitreal VEGF Trap in Subjects with Neovascular Age-Related Macular Degeneration

**Principal Investigator 2008-2012**

Multi-Center, Masked, Randomized, Sham-controlled, Paired-Eye Comparison, 12-Month (Plus 12-Month Extension) Study to Evaluate the Safety and Effects on Retinal Structure and Visual Function of Brimonidine Tartrate Posterior Segment Drug Delivery System (Brimonidine Tartrate PS DDS) Applicator System in Patients with Geographic Atrophy From Age-related Macular Degeneration

**Principal Investigator 2008-2011**

A Multi-Center, Masked, Randomized, Sham-Controlled, Parallel-Group, 6-Month (Plus 6-Month Extension) Study to Evaluate the Safety and Effects on Visual Function of Brimonidine Tartrate Posterior Segment Drug Delivery System (Brimonidine Tartrate PS DDS) Applicator System in Patients with Primary Open-Angle Glaucoma

**Principal Investigator 2008-2010**

A Phase 2, Randomized, Double-Masked, Placebo-Controlled, Dose-Ranging Clinical Study to Assess the Safety and Efficacy of Subconjunctival Injections of Sirolimus in Patients with Diabetic Macular Edema Secondary to Diabetic Retinopathy

**Principal Investigator 2008-2010**

A Phase 2, Randomized, Masked, Controlled Clinical Study to Assess the Safety and Efficacy of Lucentis® Plus Sirolimus Versus Lucentis® Plus Placebo in Patients With Sub-FovealChoroidal Neovascularization Secondary to Age-Related Macular Degeneration

**Principal Investigator 2008-2013**

A Feasibility Study to Evaluate the Safety and Tolerability of the Epi-Rad90TM Ophthalmologic System for the Treatment of SubfovealChoroidalNeovascularization (CNV) in Patients with Age-Related Macular Degeneration (AMD) That Have Failed Primary Anti-VEGF Therapy

**Principal Investigator 2008-2012**

A Randomized, Single Masked, Long-Term, Safety, and Tolerability Study of Intravitreal VEGF Trap Eye in Subjects with Neovascular VEGF Trap-Eye in Subjects with Neovascular Age-Related Macular Degeneration

**Principal Investigator 2008-2012**

The Safety and Efficacy of Al-8309b Ophthalmic Solution for the Treatment of Geographic Atrophy (GA) Secondary to Age-Related Macular Degeneration (AMD)

**Principal Investigator 2007-2010**

A 52-Week, Masked, Multi-Center, Randomized, Controlled Trial (with Up to 13 Weeks Additional Follow-Up) to Assess the Safety and Efficacy of 700mg Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) Applicator System in Combination with Laser Photocoagulation Compared with Laser Photocoagulation Alone in the Treatment of Subjects with Diffuse Diabetic Macular Edema (DME)

**Principal Investigator 2007-2009**

A 6-Month, Single-Masked, Multi-Center, Randomized, Controlled Study to Assess the Safety and Efficacy of 700mg Dexamethasone Posterior Segment Drug Delivery System Applicator System as Adjunctive therapy to Lucentis® Compared with Lucentis® Alone in the Treatment of Patients with Choroidal Neovascularization Secondary to Age-Related Macular Degeneration

**Principal Investigator 2006-2008**

A 2-year, Multi-Center, Randomized, Controlled, Masked, Dose-Finding Trial to Assess the Safety and Efficacy of Multiple Intravitreal Injections of AGN211745 in Patients with SubfovealChoroidal Neovascularization Secondary to Age-Related Macular Degeneration

**Principal Investigator 2006-2008**

A Phase II, Randomized, Controlled Study of the Safety, Tolerability and Biological Effect of Repeated Intravitreal Administrative of VEGF Trap in Patients with Neovascular Age-Related Macular Degeneration

**Principal Investigator 2006-2008**

A Phase III, Multi-Center, Randomized, Sham injection-Controlled Study of the Efficacy and Safety of Ranibizumab Injection Compared with Sham in Subjects with Macular Edema Secondary to Branch Retinal Vein Occlusion

**Principal Investigator 2006-2008**

A Phase III, Multi-Center, Randomized, Sham Injection-Controlled Study of the Efficacy and Safety of Ranibizumab Injection Compared with Sham in Subjects with Macular Edema Secondary to Central Retinal Vein Occlusion

**Principal Investigator 2005-2012**

A 3-Year, Phase III, Multi-Center, Masked, Randomized, Sham-Controlled Trial to Assess the Safety and Efficacy of 700 µg and 350 µg Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) Applicator System in the Treatment of Patients with Diabetic Macular Edema

**Principal Investigator 2005-2008**

An Open-Label, Multicenter Extension Study to Evaluate the Safety and Tolerability of Ranibizumab in Subjects with SubfovealChoroidal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD)

**Principal Investigator 2005-2007**

A Phase IIIB, Single-Masked, Multi-Center, Randomized Study to Evaluate the Safety and Tolerability of Ranibizumab in Naive and Previously Treated Subjects with Choroidal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD)

**Principal Investigator 2005-2007**

A Phase 2/3 Randomized, Controlled, Double-Masked, Multi-Center, Comparative Dose-Finding Trial, in Parallel Groups, to Compare the Safety and Efficiency of Intravitreous Injections of 0.3µg Pegaptanib Sodium (Macugen ®), Given as Every 6 Weeks for 2 Years, to Sham Injections in Subjects with Diabetic Macular Edema (DME) Involving the Center of the Macula

**Principal Investigator 2004-2008**

A Randomized, Single-Masked, Multi-Center, Phase 2 Evaluation of the Effect of Photodynamic Therapy Using Verteporfin (Visudyne Therapy) In Combination with Intravitreal Injection of Either 0 mg, 1 mg, or 4 mg of Kenalog in Occult Subfoveal and Minimally Classic Subfoveal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD)

**Principal Investigator 2004-2008**

A Six Month Phase 3, Multi-Center, Masked, Randomized, Sham-Controlled Trial (with Six-Month Open-Label Extension) to Assess the Safety and Efficacy of 700 μg and 350 μg Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS Applicator System) in the Treatment of Patients with Macular Edema Following Central Retinal Vein Occlusion or Branch Retinal Vein Occlusion

**Principal Investigator 2004-2005**

A Phase II Prospective, Randomized, Double Masked, Sham-Controlled, Dose Ranging, Multi-Center Trial to Assess the Effect of Pegaptanib Sodium on Foveal Thickening in Patients with Exudative, Sub Foveal, Age-Related Macular Degeneration

**Principal Investigator 2004-2005**

A Phase II Prospective, Randomized, Double Masked, Sham-Controlled, Dose Ranging, Multi-Center Trial to Assess the Effect of Pegaptanib Sodium on Foveal Thickening in Patients with Exudative, Sub Foveal, Age-Related Macular Degeneration

**Principal Investigator 2003-2006**

A Phase III, Multi-Center, Randomized, Double-Masked, Active Treatment–Controlled Study of the Efficacy and Safety of Rhufab V2 (Ranibizumab) Compared to Verteporfin (Visudyne) Photodynamic Therapy in Subjects with Predominantly Classic Sub FovealNeovascular Age-Related Macular Degeneration

**Principal Investigator 2003-2006**

A Phase III, Multi-Center, Randomized, Double-Masked, Active Treatment–Controlled Study of the Efficacy and Safety of Rhufab V2 (Ranibizumab) Compared to Verteporfin (Visudyne) Photodynamic Therapy in Subjects with Predominantly Classic Sub FovealNeovascular Age-Related Macular Degeneration

**Principal Investigator 2003- 2005**

A Prospective, Multi-Center Clinical Trial of the Implantable Miniature Telescope (IMT) in Patients with Central Vision Impairment Associated with Age Related Macular Degeneration

**Principal Investigator 2003-2005**

A Phase III, Multi-Center, Randomized, Double-Masked, Sham Injection-Controlled Study of the Efficacy and Safety of Rhufab V2 (Ranibizumab) in Subjects with Minimally Classic or Occult Sub Foveal Neovascular Age-Related Macular Degeneration

**Principal Investigator 2002-2005**

A Randomized, Placebo-Controlled, Double Masked, Multi-Center, Phase III Study of the Effect of Visudyne Therapy in Occult with No Classic SubfovealChoroidal Neovascularization (CNV) Secondary to Age-Related Macular Degeneration (AMD)

***INVEStigator-Sponsor Clinical Trials***

**Principal Investigator 2018 – Current**

ORPHEE2 Protocol OPT1010 Observation of Peripheral Morphology in Normal

**Principal Investigator**  **April 2013-2015**

ORPHEE- Observation of Peripheral Retinal Morphology In Normal

**Principal Investigator April 2011-Current**

Using Optos machine in the Anti-VEGF/OZURDEX Combination Trial (Optos)

**Principal Investigator September 2009-Current**

OZURDEX as an adjunctive therapy to Anti-VEGF in patients with retinal vein occlusion (RVO)

***LICENSURE***

Texas State Medical License May 18, 1995-Current

California State Medical License July 6, 1987-Current

Florida State Medical License August 20, 2003-Current

Arizona State Medical License September 17, 2003-Current

Department of Public Safety

Texas Controlled Substances Certification