Mark E. Chittum, M.D.

Retina Consultants of Southern Colorado, P.C.
2770 North Union Blvd., Suite 140
Colorado Springs, CO 80909
719-473-9595

CURRENT POSITION

1987- Present	Retina Consultants of Southern Colorado, P.C. Colorado Springs, CO

EDUCATION

1978-1982	Doctor of Medicine, University of Utah Salt Lake City, UT
1974-1978	Bachelor's Degree in Chemistry, Magna cum Laude, University of Utah Salt Lake City, UT

POSTGRADUATE TRAINING

1983-1987	Ophthalmology Residency/Retinal Fellowship, University of Washington Seattle, WA
1982-1983	Internship, University of Washington Seattle, WA

FACULTY POSITIONS

1983-1995	Clinical Instructor, University of Colorado Denver, CO
1986-1987	Acting Instructor, University of Washington Seattle, WA

HONORS & AWARDS

1978	Magna cum Laude
1978	Phi Beta Kappa
1996	Knights Templar award for indigent care

HOSPITAL PRIVILEGES

1987-Present	Memorial Hospital Colorado Springs, CO
1987-Present	Penrose-St. Francis Medical Center Colorado Springs, CO
2013- Present	Pinnacle Surgery Center Colorado Springs, CO

BOARD CERTIFICATION

1988 Ophthalmology

LICENSURE

1987-Present Colorado

PROFESSIONAL SOCIETIES

American Academy of Ophthalmology
American Society of Retina Specialists
Colorado Medical Society
El Paso County Medical Society

CLINICAL RESEARCH

Principal Investigator:

Allergan 206207-024 (Ozurdex)
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/Phase 3b

Fast Track/60° Pharmaceuticals 60PH04 (Tafenoquine)
Multisite, Randomized, Double Blind, Placebo-Controlled Study to Assess the Long-Term Safety of Tafenoquine

Genentech/Roche GX28228 (Ladder)
A Phase II, Multicenter, Randomized, Active Treatment-Controlled Study of the Efficacy and Safety of the Ranibizumab Port Delivery System for Sustained Delivery of Ranibizumab in Patients with Subfoveal Neovascular Age-Related Macular Degeneration

Genentech/Roche BP29647 (Avenue)
A Multiple-Center, Multiple-Dose and Regimen, Randomized, Active Comparator Controlled, Double-Masked, Parallel Group, 36 Week Study to Investigate the Safety, Tolerability, Pharmacokinetics, and Efficacy of RO6867461 Administered Intravitreally in Patients with Choroidal Neovascularization Secondary to Age-Related Macular Degeneration

Genentech/Roche BP30099 (Boulevard)
A Multiple-Center, Multiple-Dose, Randomized, Active Comparator-Controlled, Double-Masked, Parallel Group, 36 Week Study to Investigate the Safety, Tolerability, Pharmacokinetics and Efficacy of RO6867461 Administered Intravitreally in Patients with Diabetic Macular Edema

Genentech/Roche GR39821 (HtrA1)
A Phase I, Multicenter, Open-Label, Single-Dose, Dose-Escalation, and Multiple-Dose Study of the Safety, Tolerability, Pharmacokinetics, and Immunogenicity of Intravitreal Injections of RO7171009 in Patients with Geographic Atrophy Secondary to Age-Related Macular Degeneration

Genentech/Roche CR39521 (Stairway)
Simultaneous Blockade of Angiopoietin-2 and VEGF-A with the Bispecific Antibody RO6867461 (RG7716) for Extended Durability in the Treatment of Neovascular Age-Related Macular Degeneration

Genentech/Roche GR40398 (Rhine)
A phase III, multicenter, randomized, double-masked, active comparator-controlled study to evaluate the efficacy and safety of RO6867461 in patients with diabetic macular edema

Genentech/Roche GR40306 (Tenaya)
A Phase III, Multicenter, Randomized, Double-Masked, Active Comparator-Controlled Study to Evaluate the Efficacy and Safety of Faricimab In Patients With Neovascular Age-Related Macular Degeneration

Pan Optica PAN-01-101
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)

pSIVIDA PSV-FAI-001
A Phase III, Multi-National, Multi-Center, Randomized, Masked, Controlled, Safety and Efficacy Study of a Fluocinolone Acetonide Intravitreal (FAI) Insert in Subjects with Chronic Non-infectious Uveitis Affecting the Posterior Segment of the Eye

Santen 32-007 (Sakura)
A Phase III, Multinational, Multicenter, Randomized, Double-Masked, Study Assessing the Safety and Efficacy of Intravitreal Injections of DE-109 (three doses) for the Treatment of Active, Non-Infectious Uveitis of the Posterior Segment of the Eye

Sub-investigator:

Adverum ADVM-022-02 (NAb)
Blood Specimen Collection Study for the ameasurement of Adeno-Associated Virus (AAV) Neutralizing Antibodies in Subjects with Neovascular (Wet) Age-Related Macular Degeneration

Adverum ADVM-022-01 (Optic)
An Open Label Phase I Study of ADVM-022 (AAV.7m8-aflibercept) in Neovascular (Wet) Age-Related Macular Degeneration

Aerpio AKB-9778-CI-5001 (Time-2B)
Phase 2 Double-masked, Placebo-controlled Study To Assess The Safety And Efficacy Of Subcutaneously Administered AKB-9778 15mg Once Daily Or 15mg Twice Daily For 12 Months In Patients With Moderate To Severe Non-Proliferative Diabetic Retinopathy

Alcon C-12-074
Advanced AMD Phase 1 trial-A Multicenter, Open-Label, Single Ascending Dose Study to Assess the Safety, Tolerability, and Serum Pharmacokinetics of Intravitreal CLG561 in Subjects with Advanced Age-Related Macular Degeneration

Alcon LHA510-2201
A Randomized, Double-Masked, Vehicle-Controlled Proof-of-Concept Study for Topically Delivered LHA510 as a Maintenance Therapy in Patients with Wet Age-Related Macular Degeneration

Alcon C-12-006 (Osprey)
A Prospective, Randomized, Double-Masked, Multicenter, Two Arm Study Comparing the Efficacy and Safety of ESBA1008 versus EYLEA in Subjects with Exudative Age-Related Macular Degeneration

Alcon C-10-083 (See)
Safety and Efficacy Study of ESBA1008 versus Lucentis for the Treatment of Exudative Age-Related Macular Degeneration

Alcon/Novartis RTH258-C001 (Hawk)
A 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

Allegro DME-202B (Del Mar)
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 in the Treatment of Diabetic Macular Edema

Allergan 190342-038 (Beacon)
Safety and Efficacy of Brimonidine Posterior Segment Drug Delivery System in Patients with Geographic Atrophy Secondary to Age-related Macular Degeneration

Allergan 150998-004 (Palm)
Evaluation of Abicipar Pegol (AGN-150998) in Patients with Decreased Vision Due to Diabetic Macular Edema

Ampio AP-05-002 (Ampio)
A Randomized, Placebo-Controlled, Parallel, Double-Masked Study to Evaluate the Efficacy and Safety of Two Doses of Oral OPTINA in Adult Patients

Chengdu Kanghong KHB-1802 (Panda)
A Multicenter, Double-masked, Randomized, Dose-Ranging Trial to Evaluate the Efficacy and Safety of Conbercept Intravitreal Injection in Subjects with Neovascular Age-related Macular Degeneration

Genentech FVF4579g (Harbor)
A Phase III, Double-Masked, Multicenter, 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 Subfoveal Neovascular Age-Related Macular Degeneration

Genentech FVF4967g (Shore)

A Multi-Center Randomized Study Evaluating Dosing Regimens for Treatment with Intravitreal Ranibizumab Injections in Subjects with Macular Edema Following Retinal Vein Occlusion

Genentech/Roche GX30191 (Omaspect)

A Multicenter, Open-Label Extension Study to Evaluate the Long-Term Safety and Tolerability of Lampalizumab in Patients with Geographic Atrophy Secondary to Age-Related Macular Degeneration who have Completed a Roche-Sponsored Study

Genentech/Roche GX29185 (Spectri)

A Phase III, Multicenter, Randomized, Double-Masked, Sham-Controlled Study to Assess the Efficacy and Safety of Lampalizumab Administered Intravitreally to Patients with Geographic Atrophy Secondary to Age-Related Macular Degeneration

MacTel NHOR Registry

A Natural History Observation and Registry Study of Macular Telangiectasia Type 2

Neurotech pharmaceuticals NTMT-03-A (Renexus)

A Phase III Multicenter Randomized, Sham Controlled, Study to Determine the Safety and Efficacy of Renexus in Macular Telangiectasia type 2

Novartis CRTH258B2301 (Kestrel)

A Two-Year, Three-Arm, Randomized, Double-Masked, Multicenter, Phase III Study Assessing the Efficacy and Safety of Brolucizumab versus Aflibercept in Adult Patients with Visual Impairment due to Diabetic Macular Edema

Novartis CRTH258AUS04 (Merlin)

A multicenter, randomized, double-masked Phase 3a study to assess safety and efficacy of brolucizumab 6mg q4 weeks compared to aflibercept 2 mg q4 weeks in patients with neovascular age-related macular degeneration (nAMD) with persistent retinal fluid

Novartis CLFG316A2203

A Multicenter, Randomized, Sham-Control, Proof-of-Concept Study of Intravitreal LFG316 in Patients with Geographic Atrophy Associated with Age-Related Macular Degeneration

Novartis CRTH258A2301E1 (Hawk Extension)

A 24 week, double-masked, multicenter, two-arm extension study to collect safety and efficacy data on brolucizumab 6 mg drug product intended for commercialization in patients with neovascular age-related macular degeneration who have completed the CRTH258A2301 study

Novartis CRTH258C2301 (Raptor)

An Eighteen-Month, Two-Arm, Randomized, Double-Masked, Multi-Center, Phase III Study Assessing the Efficacy and Safety of Brolucizumab versus Aflibercept in Adult Patients with Visual Impairment due to Macular Edema secondary to Branch Retinal Vein Occlusion (RAPTOR)

Novartis CRTH258C2302 (Raven)

An Eighteen-Month, Two-Arm, Randomized, Double-Masked, Multi-Center, Phase III Study Assessing the Efficacy and Safety of Brolucizumab versus Aflibercept in Adult Patients with Visual Impairment due to Macular Edema secondary to Central Retinal Vein Occlusion (RAVEN)

Ophthotech OPH1002A (Eclipse)

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

Ophthotech OPH1004 (Solaris)

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 Either Avastin or Eylea Compared to Avastin or Eylea Monotherapy in Subjects with Subfoveal Neovascular Age-Related Macular Degeneration

Opthea 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)

Opthea OPT-302-1003

Phase 1b/2a Study of OPT-302 In Combination With Aflibercept For Persistent Central-involved Diabetic Macular Edema

pSIVIDA PSV-FAI-006

A Controlled, Multi-Center Study of the Utilization and Safety of the MK II Inserter and the Safety of the FAI Insert in Subjects with Non-Infectious Uveitis Affecting the Posterior Segment of the Eye

Quark QRK207

A Phase 2/3, Randomized, Double-Masked, Sham-Controlled Trial of QPI-1007 Delivered By Single or Multi-Dose Intravitreal Injection(s) to Subjects with Acute NonArteritic Anterior Ischemic Optic Neuropathy (NAION)

Regeneron R2176-3-AMD-1417 (Capella)

A Phase 2, Double-Masked, Randomized, Controlled, Multiple-Dose, Regimen-Ranging Study of the Efficacy and Safety of Intravitreal REGN2176-3 in Patients with Neovascular Age-Related Macular Degeneration

Regeneron VGFT-OD-0605 (View 1)

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

Regeneron VGFTe-AMD-1124, Phase IV (Review)
An Open-Label Study of the Efficacy, Safety and Tolerability of Intravitreal Administration of VEGF Trap-Eye (Intravitreal Aflibercept Injection) in Patients with Neovascular Age-Related Macular Degeneration

Regeneron R2176-3-AMD-1303
An Open-Label, Dose Escalation Study of the Safety and Tolerability of Intravitreal REGN2176-3 in Patients with Neovascular Age Related Macular Degeneration/ Phase 1

Regeneron VGFTe-OD-1411 (Panorama)
A Phase 3, Double-Masked, Randomized Study of the Efficacy and Safety of Intravitreal Aflibercept Injection in Patients with Moderately Severe to Severe Nonproliferative Diabetic Retinopathy

Regeneron VGFTe-RVO-1027 (Vibrant)
A Double-Masked, Randomized, Active-Control Study of the Efficacy, Safety and Tolerability of Intravitreal Administration of VEGF Trap-Eye (Intravitreal Aflibercept Injection) in Patients with Macular Edema Secondary to Branch Retinal Vein Occlusion

Regeneron R910-3-DME-1518 (Ruby)
A Randomized, Double-Masked, Active-Controlled, Phase 2 Study of the Efficacy, Safety and Tolerability of Repeated Doses of Intravitreal REGN910-3 in Patients with Diabetic Macular Edema

Regeneron VGFT-OD-1009 (Vista)
Regeneron VGFT-OD-1009: A Double-Masked, Randomized, Active-Controlled, Phase 3 Study of the Efficacy and Safety of Intravitreal Administration of VEGT-Trap-Eye in Patients with Diabetic Macular Edema

Samsung SB11-G31-AMD
A Phase III Randomized, Double-masked, Parallel Group, Multicenter Study to Compare the Efficacy, Safety, Pharmacokinetics and Immunogenicity between SB11 (proposed ranibizumab biosimilar and Lucentis in Subjects with Neovascular Age-related Macular Degeneration

Tyrogenex X82-OPH-201
A Randomized, Double-masked, Placebo-controlled, Dose-finding, Non-inferiority Study of X-82 plus prn IVT Anti-VEGF Compared to prn IVT Anti-VEGF Monotherapy in Neovascular AMD/Phase 2b

PUBLICATIONS

Phase 1 Trial of Anti-Vascular Endothelial Growth Factor/Antiangiopoietin 2 Bispecific Antibody RG7716 for Neovascular Age-Related Macular Degeneration. Usha Chakravarthy, MD, Clare Bailey, MD, David Brown, MD, Peter Campochiaro, MD, Mark Chittum, MD, Karl Csaky, MD, AdnanTufail, MD, Paul Yates, MD, Patrick Cech, PhD, Mylene Giraudon, Pharma D, Paul Delmar, PhD, Piotr Szczesny, MD, Jayashree Sahni, MD, Anne Boulay, PhD, Sandra Nagel, MD, Sabine Furst-Recktenwald, MD, Dietmar Schwab, PhD. Opthalmology Retina 2017, 1-12; American Academy of Ophthalmology.

Acute Retinal Pigment Epitheliitis. Luttrul JK, Chittum ME. Am J Ophthalmology. 1995 Sep; 120(3):389-91.

Photocoagulation Treatment of Radiation Retinopathy. Kinyoun JL, Chittum ME, et al. AM J Ophthalmology. 1988 May 15; 105(5):470-8.

Acute Retinal Pigment Epitheliitis. Chittum ME et al. Ophthalmology. 1987 EP; 94(9):1114-9

Congenital Iris Cysts. Grutzmacher RD, Chittum ME, et al. Br. J Ophthalmology. 1987 Mar; 71(3):227-34.

Contamination of Corneal Tissue from Infected Donors. Chittum ME, et al. Arch Ophth. 1985 Jun; 103(6):802-4.