

Peter G. Hovland, MD, PhD  
CV

**PERSONAL**

**BUSINESS ADDRESSES:**

Colorado Retina Associates  
255 S Routt St, Ste 200  
Lakewood, CO 80228

**MEDICAL LICENSE:**

Colorado – 44590; Expiration Date 4/30/21

**NPI:**

1720047210

**COLORADO RETINA ASSOCIATES:**

Since 1/2006

**BOARD CERTIFICATION:**

Diplomate, American Board of Ophthalmology  
since 2005

## **EDUCATION AND TRAINING**

- COLLEGE:** University of Colorado, Boulder, CO  
B.A., 1984  
Ph.D., Biochemistry, 1995
- RESEARCH FELLOW:** University of Colorado, Boulder, CO  
Radiological Sciences, 1995-1996
- MEDICAL SCHOOL:** University of Colorado, Boulder, CO  
M.D., 2000
- INTERNSHIP:** University of Colorado, Boulder, CO  
Transitional, 2000 - 2001
- RESIDENCY:** University of Wisconsin, Madison, WI  
Ophthalmology, 2001 - 2004
- FELLOWSHIPS:** Massachusetts Eye and Ear Infirmary, Boston, MA  
Harvard Medical School, Department of Ophthalmology  
Retina Surgical Fellow, 2004 - 2006
- Schepens Retina Associates, Boston, MA  
Vitreoretinal Disease Clinical Fellow  
2004 – 2006
- Schepens Eye Research Institute, Boston, MA  
Department of Ophthalmology  
Harvard Medical School  
Retina Research Fellow, 2004-2006
- PROFESSIONAL SOCIETIES:**
- Association for Research in Vision and Ophthalmology  
1998-present
  - Colorado Medical Society, 2006-present
  - Arapaho-Douglas-Elbert Medical Society, 2006-present
  - International Society of Ocular Oncology, 2006-present
  - American Academy of Ophthalmology, 2007-present
  - Colorado Society of Eye Physicians and Surgeons, 2007-present
  - Schepens International Society, 2008-present
  - Collaborative Ocular Oncology Group, 2008-present
  - American Society of Retinal Specialists, 2009-present
  - American Association of Ophthalmic Oncologists and Pathologists, 2012-present
  - Retina Society, 2013-present

CURRENT POSITIONS: Partner, Colorado Retina Associates, PC  
Denver, CO

Board of Trustees  
Massachusetts Eye and Ear Infirmary  
2011-present

Associate Clinical Professor  
Rocky Vista Medical School, Denver, CO  
2012-present

PAST POSITIONS: Course Instructor, Biochemistry, Introduction to Biomedical  
Sciences Office of Diversity  
University of Colorado Health Sciences Center, 1996-1998

Course Instructor, Genetics, Introduction to Biomedical Sciences  
Office of Diversity, University of Colorado Health Sciences Center  
1996-1998

Supplemental Instruction Leader in Biochemistry for Medical  
Students, Multicultural Enrichment Center  
University of Colorado Health Sciences Center, 1996-1998

Adjunct Clinical Scientist, Schepens Eye Research Institute  
Boston, 2009-2010

Corporator-Schepens Eye Research Institute, Boston, 2010-2011

Director, International Observership Program in Retina Research  
Colorado Retina Associates, P.C., 2012

HOSPITAL or AFFILIATED  
INSTITUTIONAL  
APPOINTMENTS:

- Associate Physician, Schepens Retina Associates, Boston  
MA, 2006 – 2007
- Founding Partner, Colorado Retina Associates, 2006-present
- Medical Staff, Porter Memorial Hospital, Denver CO  
2006-present
- Medical Staff, The Children's Hospital, Denver, CO, 2006-  
present
- Medical Staff, Kaiser Permanente, CO, 2006-present
- Surgeon/Partner, Lincoln Surgery Center, Parker, CO  
2006-present

**CLINICAL RESEARCH**

2006-07	Director	Clinical Research Project Walter and Olivia Kiebach Project for Research in Prevention and Treatment of Macular Degeneration, Schepens Retina Associates, Boston, MA
2007-10	Research Sub-investigator	Clinical Research Project Alimera - C-01-05-00 I DME treatment with FA Porter Memorial Hospital, Denver
2007-10	Research Sub-investigator	Clinical Research Project DENALI - (Novartis) PDT + Ranibizumab treatment of AMD Porter Memorial Hospital, Denver
2007-10	Research Sub-investigator	Clinical Research Project OMEGA - (Othera) Geographic Atrophy Treatment Porter Memorial Hospital, Denver
2007-09	Research Sub-investigator	Clinical Research Project SEAGUL (Genentech) AMD Genotypes Using Ranabizumab Porter Memorial Hospital, Denver
2008-11	Research Sub-investigator	Clinical Research Project CRUISE (Genentech) CRVO treatment with Ranabizumab Porter Memorial Hospital, Denver
2008-11	Research Sub-investigator	Clinical Research Project BRAVO (Genentech) BRVO treatment with Ranabizumab Porter Memorial Hospital , Denver
2008-present	Principle Investigator	Genomic Studies of Choroidal Melanoma. Porter Memorial Hospital, Denver
2008-09	Principle Investigator	Tissue Banking of Choroidal Melanoma Porter Memorial Hospital , Denver
2009	Research Sub-investigator	Clinical Research Project

		HARBOR (Genentech) Wet AMD treatment dose ranging Colorado Retina Associates
2011-present	Research Sub-investigator	Clinical Research Project  SHORE (Genentech) RVO treatment with Ranabizumab Colorado Retina Associates
2011-present	Research Sub-investigator	Clinical Research Project  SAK.URA (Santen) Uveitis treatment Colorado Retina Associates
2011-present	Research Sub-investigator	Clinical Research Project  CAIN (Novartis) Uveitis treatment Colorado Retina Associates
2011-present	Research Sub-investigator	Clinical Research Project  FORSEE Dry AMD home monitoring Colorado Retina Associates
2011-present	Research Sub-investigator	Clinical Research Project  FAME (Alimera) Treatment of macular edema Colorado Retina Associates

2011-present	Research Sub-investigator	Clinical Research Project EYEGATE Uveitis treatment with Iontophoresis Colorado Retina Associates
2011-present	Research Sub-investigator	Clinical Research Project BAM (GSK) Dry AMD treatment Colorado Retina Associates
2011-present	Research Sub-investigator	Clinical Research Project VISTA Regeneron DME treatment with VEGF-Trap Colorado Retina Associates
2012-present	Research Sub-investigator	Clinical Research Project XOMA Uveitis treatment with gevokizumab Colorado Retina Associates
2012-present	Research Sub-investigator	Clinical Research Project Oculos (OHR-002) Wet AMD treatment with eyedrops Colorado Retina Associates

Administrative Responsibilities:

1989-93	University of Colorado Executive Committee of the Graduate School
1989-90	Treasurer, Student Senate, University of Colorado Health Sciences Center
1990-91	President Student Senate, University of Colorado Health Sciences Center
1991-92	Basic Sciences Student Council, University of Colorado Health Sciences Center
2003-04	Chief Resident, Department of Ophthalmology and Visual Sciences, University of Wisconsin
2013-present	Chair, Institutional Review Board, Porter Adventist Hospital
2013-present	Medical Director, Ocular Melanoma Foundation

Major Committee Assignments:

1989-90	CU President's Teaching Scholars awards committee
1990-91	University of Colorado President Search Committee
1992	Local Arrangements Committee, American Society for Cellular Biology
1996-2000	Curriculum Committee, School of Medicine, University of Colorado
2004	Curriculum Steering Committee, Department of Ophthalmology and Visual Sciences, University of Wisconsin
2004	Education Working Group, Department of Ophthalmology and Visual Sciences, University of Wisconsin
2008-2010	Continuing Medical Education, Porter Memorial Hospital, Denver
2010-present	Institutional Review Board, Porter Memorial Hospital, Denver
2010-present	Medical Advisory Committee, Lincoln Surgical Center, Parker, CO
2012-present	Scientific Advisory Board, Ocular Melanoma Foundation

Community Service related to professional work:

2007-12	Sponsor, Vision Walk Fundraiser for Foundation for Fighting Blindness
---------	---

Editorial Boards:

1990-91	Editor, "The Catalyst" UCHSC Graduate School newsletter
2005-06	Reviewer, Investigative Ophthalmology & Visual Science
2006	Reviewer, European Journal of Cancer
2006	Reviewer, Diabetes
2012	Reviewer, Diabetic Technology and Therapeutics
2012	Reviewer, Archives of Ophthalmology

Awards and Honors:

- 1989 Colorado Institute for Research in Biotechnology graduate research fellowship
- 1989 2<sup>nd</sup> place poster presentation at the 2nd Annual Colorado Biotechnology Symposium
- 1990-91 University of Colorado Health Sciences Center-Colorado Commission on Higher Education graduate training fellowship
- 1993 University of Colorado Health Sciences Center Student Research Forum/Presbyterian-St. Luke's award for poster presentation
- 1997 Recipient, NIH Medical Student Summer Cancer Research Fellowship
- 1998 Excellence in Research citation at the annual meeting of the American Federation of Medical Research, Carmel, CA
- 1998 Merit and Service Award, University of Colorado School of Medicine
- 1998 Cited for Academic Excellence, School of Medicine Student Promotions Committee, University of Colorado School of Medicine



## **PUBLICATIONS**

### *Original Articles.*

**Hovland PG**, Flick J, Johnston M, and Sclafani, RA. Galactose as a Gratuitous Inducer of GAL Gene Expression in Yeasts Growing on Glucose *Gene*, 1989; 83:57-64

**Hovland PG**, Tecklenberg M, and Sclafani RA. Overexpression of the Protein Kinase Pak1 Suppresses Yeast DNA Polymerase Mutations *Molecular and General Genetics* 1997; 256(1): 45-53

Hovland AR, La Rosa FG, **Hovland PG**, Cole WC, Kumar A, Prasad JE, and Prasad KN. Cyclosporin A Regulates the Levels of Cyclophilin A in Neuroblastoma Cells in Culture. *Neurochemistry International* 1999; 35: 229-235

Taravella MJ, Viega J, Luizer F, Drexler J, Blackburn P, **Hovland PG**, and Repine JE. Respirable Sized Particles in the Excimer Laser Plume, *Journal of Cataract & Refractive Surgery* 2001; 27(4): 604-7

Lei H, **Hovland P**, Velez G, Haran A, Gilbertson D, Hirose T, and Kazlauskas A. A potential role for PDGF-CC in experimental and clinical proliferative vitreoretinopathy *Investigative Ophthalmology and Visual Science* 2007; 48: 2335-2342

Lei H, Velez G, **Hovland P**, Hirose T, Kazlauskas A. Plasmin is the major protease responsible for processing PDGF-C in the vitreous of patients with proliferative vitreoretinopathy. *Investigative Ophthalmology and Visual Science*. 2008 Jan; 49(1): 42-8

Lei H, Velez G, **Hovland P**, Hirose T, Kazlauskas A. Growth factors outside of the PDGF family drive experimental PVR. *Investigative Ophthalmology and Visual Science*. 2009 Jul; 50(7):3394-403. Epub 2009 Mar 25

Abdel-Rah man MH, Pilarski R, Cebulla CM, Massengill JB, Christopher BN, Boru G, **Hovland P**, Davidorf FH. Germline BAP 1 mutation predisposes to uveal melanoma, lung adenocarcinoma, meningioma, and other cancers. *Journal of Medical Genetics*. 2011 Dec; 48(12): 856-9. Epub 2011 Sep 22

Onken MD, Worley LA, Char DH, Augsburger JJ, Correa ZM, Nudlman E, Aaberg TM Jr, Altaweel MM, Bardenstein OS, Finger PT, Gallie BL, Harocopos GJ, **Hovland PG**, McGowan HD, Milman T, Mrulhyunjaya P, Simpson ER, Smith ME, Wilson OJ, Wirostko WJ, Harbour JW. Collaborative ocular oncology group report number I: prospective validation of a multi-gene prognostic assay in uveal melanoma. *Ophthalmology*. 2012 Aug; 119(8): 1596-603. Epub 2012 Apr 21

### *Reviews.*

Prasad KN, Hovland AR, La Rosa, FG, and **Hovland PG**. Prostaglandins as Putative Neurotoxins in Alzheimer's Disease: a Minireview. *Proceedings of the Society for Experimental Biology and Medicine* 1998; 219: 120-125

Prasad KN, Cole W, and **Hovland PG**. Cancer Prevention Studies: Past, Present, and Future directions *Nutrition* 1998; 14(2): 197-210

Prasad KN, Hovland AR, Nahreini P, Cole WC, Hovland P, Kumar B, and Prasad KC. Differentiation genes: are they primary targets for human carcinogenesis? *Exp Biol Med.* 2001; 226(9): 805-13

Hovland PG, Trempe C. Genomic Investigations of Uveal Melanoma, *Seminars in Ophthalmology* 2005; 20(4): 231-38

Book Chapters:

Ip, MS and **Hovland PG**. "Ocular Tschemic Syndrome" in: Retinal Imaging, Huang, D, Kaiser, PK, Lowder, CY, Traboulsi, E, eds. Lippencott, 2006

**Hovland PG**, Mukai S, Hirose T, "Advanced Retinopathy of Prematurity" in Albert and Jacobiec's Principles and Practice of Ophthalmology, 3rd Edition Dec 2007

Educational Material.

1996-98 Course Syllabus. "Introduction to Biochemistry".  
Introduction to Biomedical Sciences, Office of Diversity,  
University of Colorado Health Sciences Center

1996-98 Course Syllabus. "Introduction to Genetics".  
Introduction to Biomedical Sciences, Office of Diversity,  
University of Colorado Health Sciences Center

2012 Study guide for Medical Student Ophthalmology Rotation  
Colorado Retina Associates

Dissertation:

**Hovland, PG. PAK1** Encodes an essential protein kinase that suppresses DNA Polymerase alpha of *Saccharomyces cerevisiae*. Doctoral dissertation, University of Colorado, 1995

Abstracts/Lectures.

**Hovland, PG** and Sclafani RA A Genetic Approach to Continuous Fermentation  
2<sup>nd</sup> Annual Colorado Biotechnology Symposium, Boulder, 2<sup>o</sup>d Prize Winner Fall, 1989

**Hovland, PG** and Sclafani RA Extragenic Suppression of ts-DNA Polymerases by a Novel Kinase, Annual meeting of the Rocky Mountain Branch of the American Society of Microbiology, 1993

**Hovland, PG** and Sclafani RA A Protein Kinase Suppresses DNA polymerase Alpha Temperature Sensitivity FASEB meeting on Yeast Chromosome Structure and Dynamics, Santa Cruz, CA, July 1994

**Hovland PG** Amazing Free Molecular Biology Software Molecular Biology Program Retreat, UCHSC, Estes Park, November, 1994

Hovland AR, **Hovland PG**, Edwards-Prasad J, Prasad KN Induced Expression of Mitochondrial ATP synthase and Proton Phosphate Symporter Genes in Differentiated Neuroblastoma Cells. The 36th Annual Meeting of the American Society for Cell Biology, December 1996

**Hovland PG**, Hovland AR, Edwards-Prasad J, and Prasad, KN Demonstration of Increased Expression of Growth-Suppressing Genes in Differentiated Neuroblastoma Cells by Differential Display Technique The 36<sup>th</sup> Annual Meeting Society for Cell Biology; December 1996

**Hovland PG**, Hovland AR, LaRosa F, and Prasad KN, Induced Gene Expression in cAMP-Differentiated Neuroblastoma, Annual Meeting of American Federation for Medical Research, Carmel, CA 1998. Cited for Excellence in Research

Taravella, MJ and **Hovland PG** Comparison and Safety of Two Protocols Utilizing Collagen Shields to Deliver Ofloxacin to the Human Eye Investigative Ophthalmology & Visual Science 40(4) Abstract Number 632(B592) at the Association for Research in Vision and Ophthalmology annual meeting, March 15, 1999

Taravella, MJ, Viega, J, and **Hovland PG** Are There Dangerous Respirable Sized Particles in the Excimer Laser Plume? Poster presentation Annual Meeting of the American Academy of Ophthalmology, October, 1999

**Hovland PG**, Hovland, KR, Hovland AR, Prasad KN. A Comparison of Expression Profiles of 588 Human Genes for a Primary Uveal Melanoma and Cultured Metastatic Cutaneous Melanoma Cells. Poster presentation, Association for Research in Vision and Ophthalmology Annual Meeting, May, 2000

**Hovland PG**, Altaweel, MM, Blodi, BA, Ip, MS, Hejny, C, and Barney, NP, Photodynamic Therapy of Subfoveal and Juxtafoveal Choroidal Neovascularization Secondary to Nongranulomatous Uveitis, Investigative Ophthalmology & Visual Science 44 Abstract Number (4876/B535) at the Association for Research in Vision and Ophthalmology annual meeting, May 8, 2003

Menke MN, Feke GT, McMeel JW, **Hovland P**, Branagan A, Hunter Z, Treon SP, Assessing hyperviscosity syndrome in patients with Waldenstrom's macroglobulinemia by measuring retinal circulation with the laser Doppler technique. 3rd International Workshop on Waldenstrom's Macroglobulinemia October 10, 2004

**Hovland PG**, Menke MN, Branagan A, Hunter Z, Treon SP, McMeel JW, Feke GT. Effect of Plasmapheresis on Retinal Hemodynamics in Patients with Waldenstrom's Macroglobulinemia. Association for Research in Vision and Ophthalmology Annual Meeting, May 4th, 2005

**Hovland PG**, Menke MN, Branagan A, Hunter Z, Treon SP, McMeel JW, Feke GT. Effect of Plasmapheresis on Retinal Hemodynamics in Patients with Waldenstrom's Macroglobulinemia. New England Ophthalmological Society, May 20th, 2005

**Hovland PG**, Menke MN, Branagan A, Hunter Z, Treon SP, McMeel JW, Feke GT. Effect of Plasmapheresis on Retinal Hemodynamics in Patients with Waldenstrom's Macroglobulinemia. At "Update on Ophthalmology" Annual meeting, Department of Ophthalmology, Harvard Medical School June 13<sup>th</sup>, 2005

**Hovland PG**, Menke MN, Branagan A, Hunter Z, Treon SP, McMeel JW, Feke GT. Retinal Findings and Hemodynamics in Patients with Waldenstrom's Macroglobulinemia. Annual meeting, Wilmer Eye Institute, Johns Hopkins Medical School, 2005

**Hovland PG**, "Does PDGF-CC Play a Role in Proliferative Vitreoretinopathy?" Presented at Eyetech and Pfizer's "Retina Fellows Advisory Board" meeting, Montreal, July 2005

**Hovland PG**, Berisha F, Inoue J, McMeel JW, Hirose T, Schepens CL. Intravitreal Bevacizumab As Primary Therapy Of Acute Submacular Hemorrhage Due To Neovascular Macular Degeneration. Association for Research in Vision and Ophthalmology Annual Meeting, 2006

Lei H, **Hovland PG**, Velez G, Eriksson U, Gilbertson DG, Hirose, T, Kazlauskas A. A Potential Role for PDGF-CC in Proliferative Vitreoretinopathy, Association for Research in Vision and Ophthalmology Annual Meeting, 2006

**Hovland PG**. Update on Choroidal Melanoma, Tumor Board, Porter Memorial Hospital, 2007

Hovland KR, **Hovland PG**. Cultural Challenges in Retinoblastoma Management, International Society of Ocular Oncology Congress, Sienna, June 29, 2007

**Hovland PG**. Update on Pediatric Ophthalmology, Family Medicine Lecture Series, Porter Memorial Hospital, 2008

**Hovland PG**, Intravitreal Bevacizumab for Radiation Retinopathy, University of Colorado Department of Ophthalmology Annual Research Meeting. June 2008

**Hovland PG**, Hovland KR, Intravitreal Bevacizumab for Radiation Retinopathy due to I-125 Brachytherapy of Choroidal Melanoma, Paper presentation, Retina Society Annual Meeting, Scottsdale AZ Sep 27 2008

**Hovland PG**, Treatment of Radiation Oculopathy due to 1-125 Brachytherapy of Uveal Melanoma with Intravitreal Bcvacizumab, Transpupillary Thermotherapy, and Surgery, International Society of Ocular Oncology Congress, Cambridge, September 2009

**Hovland PG**, Unusual Pediatric Tumor, Wills Intraocular Tumor Symposium, Philadelphia, 2010

**Hovland PG**, Intraocular Tumors. Mile-High Masters of Retina, Denver CO, January 2011

**Hovland PG**, Unusual Anterior Segment Tumor, Wills Intraocular Tumor Symposium, Philadelphia, April 2011

**Hovland PG**, Cummings S, Association of Iris Color with GEP Class in Uveal Melanoma, paper presentation, Association for Research in Vision and Ophthalmology, May 2011

**Hovland PG**, Schneider K, Albano E, A. Novel Germ line Mutation of the Retinoblastoma Susceptibility Gene is Associated with Incomplete Penetrance, International Society of Ocular Oncology Congress, Buenos Aires, November 2011

**Hovland PG**. Rapid Regression of Post-Brachytherapy Choroidal Melanoma in Response to Avastin, International Society of Ocular Oncology Congress, November Buenos Aires, 2011

J. William Harbour, Michael O. Onken, Lori A. Worley, James J. Augsburger, Zelia M Correa, Devron H. Char, Eric Nudleman, Thomas M. Aaberg, Jr., Michael M. Altaweel, David S. Bardenstein, Paul T. Finger, Brenda L. Gallie, George J. Harocopos, **Peter G. Hovland**, Hugh D. McGowan, Tatyana Milman, Prithvi Mruthyunjaya, E. Rand Simpson, Morton E. Smith, David J. Wilson, William J. Wirostko, Prospective Evaluation of a Gene Expression Profile Prognostic Assay for Uveal Melanoma in 514 Patients, International Society of Ocular Oncology Congress, November, Buenos Aires, 2011

**Hovland PG**, Genetics of Age-Related Macular Degeneration, Mile-High Masters of Retina, Denver CO, February 2012

**Hovland PG**, Observation, Prevention, and Adjuvant Therapy in Ocular Melanoma, Ocular Melanoma Foundation meeting in Washington DC, 3 Mar 2012

**Hovland PG**, Panelist, Treatment of Metastatic Ocular Melanoma, Ocular Melanoma Foundation meeting in Washington DC, 3 Mar 2012

**Hovland PG**, Unusual Peripheral Tumor, Wills Intraocular Tumor Symposium, Philadelphia, 9 Mar 2012

**Hovland PG**, Imaging Intraocular Tumors, for monthly CME course of the Rocky Mountain Ophthalmic Personnel. Porter Hospital, Denver 18 Dec 2012

**Hovland PG**, What's New in the Evaluation and Treatment of Intraocular Tumors, Mile-High Masters of Retina, Denver CO, 10 February 2013

**Hovland PG**, Unusual Retinal Tumor, Wills Intraocular Tumor Symposium, Philadelphia, 26 April 2013

**Hovland PG**, Enhanced Depth Imaging (EDI-OCT) Exploring the Choroid, Mile-High Masters of Retina, Denver CO, 9 February 2014

**Hovland PG**, Mystery Retinal Tumor, Wills Intraocular Tumor Symposium, Philadelphia, 30 May 2014

**Hovland PG**, Low-Penetrance Retinoblastoma, Symposium on Retinoblastoma, Memorial Sloan Kettering, New York, NY, Sep 2014