

CURRICULUM VITAE

PETER L. GEHLBACH, M.D., PH.D.

WILMER OPHTHALMOLOGICAL INSTITUTE
BALTIMORE, MARYLAND

CERTIFICATION:

American Board of Ophthalmology	2000
National Board of Medical Examiners	1987
Certificate of Vitreoretinal Training, Casey Eye Institute	2000

CURRENT ADDRESS:

Office: Wilmer Ophthalmological Institute at Johns Hopkins Hospital
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Baltimore, Maryland 21287-9277
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Baltimore, Maryland 21287
Telephone: 410-502-0782

EDUCATION:

1978-1982	University of Vermont College of Arts & Sciences B.A., Biology
1982-1986	University of Vermont College of Medicine M.D., Surgery Major
1990-1994	University of Minnesota School of Medicine Department of Physiology and Neuroscience Director: Richard Purple, Ph.D. Ph.D. Dissertation: Cell and Integrative Physiology
2004-2005	Johns Hopkins University School of Medicine &

School of Professional Studies in Business and Education
Graduate Division of Business and Management
Graduate Certificate Awarded: Hopkins Business of Medicine

POSTGRADUATE TRAINING:

- 1986-1990 Surgery Intern & Resident (PGY 1-4)
The University of Health Sciences
Chicago/Medical School
Chairman: William Schumer, M.D., M.S.
- 1989-1990 Cell Physiology Research Fellowship
University of Health Sciences, Chicago at the University of Minnesota
Director: Richard Purple, Ph.D.
Chairman: Robert F. Miller, M.D.
- 1995-Jan-July Post-doctoral Research Fellow (Techniques in Protein Chemistry)
Washington University at Saint Louis
Director: Carl Romano, Ph.D.
Chairman: Michael Kass, M.D.
- 1995-1998 Ophthalmology Resident (PGY 2-4)
Washington University at Saint Louis
Chairman: Michael Kass, M.D.
- 1998-2000 Clinical Instructor, Medical and Surgical Retina
Heed and Knapp Fellow, Casey Eye Institute
Oregon Health Sciences University
Portland, Oregon
Chairman: Joe Robertson, M.D.

APPOINTMENTS:

- 1/2001- Present **Assistant Professor of Ophthalmology**
The Wilmer Ophthalmological Institute
Vitreoretinal Diseases and Surgery
The Johns Hopkins University

PROFESSIONAL EXPERIENCE:

- 2004-Present Founding Director, the Wilmer Gene Therapy Vector Center
Wilmer Ophthalmological Institute, Johns Hopkins University
School of Medicine, Johns Hopkins Hospital
Baltimore, Maryland
- 2001-Present Assistant Professor of Ophthalmology
Wilmer Ophthalmological Institute, Vitreoretinal Service
Johns Hopkins University Medical School, Johns Hopkins Hospital

Baltimore, Maryland

2005-Present Consultant (Unpaid) Sclera, Laguna Beach, California

2004-Present Consultant (Paid) Celgene, Okto Ophtho, Processed human amniotic membrane technology.

2001-Present Consultant (Unpaid), Ocular Toxicology and Ophthalmology
Charles River Laboratories, Sierra Biomedical Division
Sparks, Nevada

2004-Present Consultant (Paid), Gerson Lehrman Group's Council of Healthcare Advisors.

2001-Present Consultant, GenVec, Inc. Gaithersburg, MD

2000-2001 Instructor of Ophthalmology
Wilmer Ophthalmological Institute, Vitreoretinal Service
Johns Hopkins University Medical School, Johns Hopkins Hospital
Baltimore, Maryland

1998-1999 Staff Member, The Retina Division
The Portland Veterans Administration Medical Center
Portland, OR

1998-1999 Moderator (Weekly Fluorescein Angiography Conference)
Casey Eye Institute, Portland OR

1997 Senior Ophthalmology Resident
The John Cochran Veterans Administration Hospital
St. Louis, MO

1993-present Ad hoc journal reviewer: Visual Neuroscience (1993-present),
I.O.V.S. (1993-present), Current Eye Research (1993-present),
Experimental Eye Research (1994-present), Survey of Ophthalmology,
(1996-present), Archives of Ophthalmology (2002-present),
Ophthalmology (2003-present) Expert Opinion in Ophthalmology
(2004-present) Retina (2002-present), Journal of Gene Medicine (2003-
present), Science (single article 2005)

1994-1995 Staff Physician, Pro Care Urgent Care Centers, (Shoreview, Maple
Grove and Elke River)

1991-1995 Associate Clinical Staff, St. Paul-Ramsey Medical Center,
Department of Emergency Medicine (1991-1995, >5,000 hours as an
acute care, med./surg. physician with teaching responsibility)

1994 Emergency Medicine Locums: Formerly credentialed at Coastal, N.E.S.
and Spectrum.

1991-1994 Biomedical Frontiers, Inc.
Research collaboration & development, iron chelators
(Bo Hedlund Ph.D., Phil Hallaway, Ph.D.)

1991-1994 Research Assistant
The University of Minnesota
Department of Physiology

1991-1993 Associate Mentor: M.D., Ph.D., Summer Research Programs for
undergraduate students considering careers as physician /scientists.

- 1992 Medical Consultant E.M.P.I., Inc. - Research and development of medical products, the neurologic diagnostics platform, iontophoresis of drugs and electrical stimulation products, clinical trials, preparation of S.B.I.R. applications/reports
- 1989-1991 Teaching Assistant
University of Minnesota, Department of Physiology, Physiology 8110, (medical student instruction), and Canine Laboratory (1990-1992) 3010, (undergraduate student instruction), 5100 (dental and pharmacy student instruction)
- 1989-1991 Affiliate the Minnesota Life Support Program, Basic Life Support Instructor; Prior certification in Advanced Cardiac Life Support, Advanced Trauma Life Support, Pediatric Advanced Life Support, Neonatal Life Support
- Surgical Externships:
- 1988 Cook County Hospital, pediatric trauma surgery resident, 1988
- 1988 Loyola University of Chicago, plastics/burn unit resident, 1988
- 1987 Maryland Institute of Emergency Medical Service Systems, The Baltimore Shock Trauma Center, trauma surgery resident,
- 1987 University of Illinois, cardiothoracic surgery resident, 1987
- 1986 University of Wisconsin, Madison, general/cardiothoracic surgery,
- 1986 Jackson Memorial Hospital, Miami, trauma ER, 1986
- 1981-1983 Research Assistant, University of Vermont College of Medicine, Department of Medical Microbiology (Thomas Moehring, Ph.D.)

LABORATORY SCIENCE TEACHING:

- 2004 Faculty sponsor of Brian Lee, Johns Hopkins University Undergraduate Research Program for Academic Credit, Department of Biophysics: Fall Semester 2004 - Spring Semester 2005.
- 2004-2007 Faculty sponsor of Marisol Cano, Ph.D. Post doc, Ocular Angiogenesis, Ocular Oxidative Injury

DIDACTIC LECTURES (in the last year):

- 2005 Faculty Lectures: Year 2 Medical School Students:
-Nonproliferative Diabetic Retinopathy
-Proliferative Diabetic Retinopathy
-"Dry" Age Related Macular Degeneration
-"Wet" Age Related Macular Degeneration
-Ocular Manifestations of HIV
The Johns Hopkins University School of Medicine,
Baltimore, Maryland
Director: J.P. Dunn, M.D.

CLINICAL TEACHING:

- 2000-2001 Faculty Instructor, Inaugural Maumenee Clinician Scientist Scholar
The Wilmer Ophthalmological Institute
The Johns Hopkins University School of Medicine,
Baltimore, Maryland
Director: Morton F. Goldberg, M.D.
- 2001-present Preceptor, Clinical Skills Course
The Wilmer Ophthalmological Institute
The Johns Hopkins University School of Medicine,
Baltimore, Maryland
Director: Bert Jun, M.D.
- 2001–Present Faculty Instructor, Monthly Retina Teaching Conference
The Wilmer Ophthalmological Institute
The Johns Hopkins University School of Medicine,
Baltimore, Maryland
Chairman: Morton F. Goldberg, M.D.
- 2001-Present Faculty Instructor, Weekly Vitreoretinal Clinic
Wilmer Ophthalmological Institute
The Johns Hopkins Hospital, The Johns Hopkins University
Baltimore, Maryland
Chairman: Morton F. Goldberg, M.D.
- 2001-Present Faculty Instructor, Weekly Surgical Technique and Decision Making
The Operating Rooms
Wilmer Ophthalmological Institute
The Johns Hopkins Hospital, The Johns Hopkins University
Baltimore, Maryland
Chairman: Morton F. Goldberg, M.D.
- 2002/April Instructor, Surgical Management of PDR
Wilmer Ophthalmological Institute
The Johns Hopkins University School of Medicine,
Baltimore, Maryland
Chairman: Morton F. Goldberg, M.D.

AWARDS, HONORS AND EDUCATIONAL SCHOLARSHIPS:

Faculty (Clinical):

- Consumers' Research Council of America, Listing Guide America's Top Ophthalmologists (2004).

Faculty (Research):

- Ophthalmology Associate Research to Prevent Blindness (2004-present)
- Inaugural Maumenee Clinician Scientist Scholar (2000-2001)
The Wilmer Ophthalmological Institute, Johns Hopkins University

School of Professional Studies in Business and Education:

- Graduate Division of Business and Management, G.P.A.=4.0, (2005)

Vitreoretinal Fellowship (Clinical):

- American Ophthalmological Society-Knapp Fellowship (1999-2000)
- American Board of Ophthalmology Written Qualifying Examination (4/6/99)
Total Score: 95%; Retina Score: 99%

Vitreoretinal Fellowship (Research)

- ARVO/National Eye Institute Travel Fellowship Grant (1999)

Ophthalmology Residency:

- Heed Ophthalmic Foundation Fellowship (1998-1999)
- Top Program OKAP Score (1998)

Graduate College:

- Top Class Rank
- 4.0 Program; GPA 3.9; Cumulative GPA
- Winner of the Minnesota Medical Foundation's J. Jacob Kaplan (Clinical/Research) Award (1992)
- Winner of the I. J. Fox (Basic Science Research) Award (1992)
- Department Nominee for Thesis Dissertation Fellowship (1992)
- Selected to Lake Itasca Neuroscience, Neurobiology Field Laboratory (1990)
- Full Tuition Scholarship with research and teaching assistantships

Surgical Residency:

- Consecutive top 10% scores on the American Board of Surgery In-Training Exam
- University of Health Sciences, Chicago, Basic Science Research Fellowship
- Chief Resident tract, 9->3 pyramid

Medical College:

- Annual Surgical Research Prize Winner, University of Vermont (1986)
- Judd Scholarship
- Willet Ely Scholarship
- Edith B. Kidder Scholarship

Undergraduate:

- Vermont Sportscasters and Sportswriters: The Harmon Bove Award: "Vermont Scholar/Athlete of the Year", four year scholarship
- Plunkett Merit Scholarship
- Junior and Senior Dean's List: High Honors
- Senior 4.0 Award

MEMBERSHIP IN HONORARY SOCIETIES:

- The Society of Heed Fellows
- Sigma Xi, The Scientific Research Society
- Hemingway Award Winner, The University of Minnesota
- National Honor Society
- The Vitreous Society

PRESENT & PAST PROFESSIONAL ASSOCIATIONS:

- The Association for Research in Vision and Ophthalmology
- The American College of Eye Surgeons
- The American Society of Gene Therapy
- National Institutes of Health, Special Interest Group, Gene Therapy
- The Wilmer Resident Association
- The American Academy of Ophthalmology
- The Oregon Academy of Ophthalmology
- The American Medical Association
- The Missouri Ophthalmologic Society, Inc.
- The Oregon Medical Association
- The American College of Surgeons, candidate
- The Juvenile Diabetes Research Foundation International
- The Minnesota Chapter of the American College of Surgeons
- The Medical Society of Metropolitan Portland
- The Washington University Eye Alumni Association
- The Voyageurs' Chapter, Society for Neuroscience
- The Ramsey County Medical Society
- The Contact Lens Association of Ophthalmologists
- The American Society of Cataract and Refractive Surgery

RESEARCH GRANTS:

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|--------------|---|
| 2005-2006 | -Fund for Medical Discovery, Collaborative Noninvasive Molecular Imaging and Ocular and CNS Gene Therapy, (In preparation, 2005) |
| 2005-2006 | -NIH/NEI RO1 in preparation: A potential role for β and γ -crystallins in vascular remodeling of the eye. (In preparation, 2005) |
| 2005-2008 | -Foundation Fighting Blindness Individual Investigator Award-New Proposal. Noninvasive Molecular Imaging and Ocular Gene Therapy (Submitted Letter of Intent (3/15/05)) |
| 2005-2007 | -Pfizer Atorvastatin Research Awards Program (PI) "Uncovering a Novel Indication for Atorvastatin: Delaying the Progression of Age-related Macular Degeneration. (Submitted 3/2005) |
| 2005-2007 | -AFAR (Collaborator, PI is Dr. James Handa), " <i>Advanced Glycation Endproduct Mediated Cholesterol Deposition in Bruch's Membrane of ApoB100+/+LDLR-/- mice.</i> " \$99,545, April 1, 2005-,2007. |
| 2005-2011 | -NIH RFA, (Subcontract PI and Section PI), "Functional OCT for Diagnosis and Management of Diabetic Eye Disease (Submitted 2/2005). |
| 2005-2011 | -NIH BRP, (Subcontract PI and Section PI), "Functional OCT for Diagnosis and Management of Ocular Disease, (Submitted 2004). -Unfunded. |
| 2005-2008 | -NIH RO3 (Co-Investigator) Protection of Retinal Cells by Phase 2 Enzyme Induction, (Resubmitted 2005). -unfunded |
| 2005-2008 | -NIH RO3 (Co-Investigator) Protection of Retinal Cells by Phase 2 Enzyme Induction. (Submitted 2004). Score 189 unfunded. |
| 2004-present | -Wilmer Eye Institute Vector Center, Proposal for Initiation (Philanthropy) (\$1,000,000 Awarded to date) |

- 2003-2007 -Research to Prevent Blindness, Career Development Award. (\$200,000)-4 years
- 2003-2004 -Alexander and Margaret Stewart Trust: *Evaluation of Guttated Adenovirus Vectors Containing Pigment-Epithelium Derived Factor*. (\$50,000)-1 year
- 2003-2004 -Alexander and Margaret Stewart Trust: *Thrombospondin 1 Transgenic Mouse in Models of Ocular Neovascularization*. (\$25,000)-1 year
- 2002-3003 -GenVec, Inc.: Technician Grant for Studies Relating to the Development of Adenovirus Vector Technology for the Purpose of Inhibiting Ocular Neovascularization. (\$30,000)-1 year
- 2002-2003 -Alexander and Margaret Stewart Trust: *Electroretinography Equipment Grant*. (\$25,000)-1 year
- 2001-2006 -NIH/NEI: Mentored Clinical Scientist Development Award. *Treatment of Ocular Neovascularization by Increased Expression of Endogenous Inhibitors* (\$988,000) – 5 years
- 2001-2004 -Juvenile Diabetes Research Foundation International. Ford Motor Company Truck Plant Advanced Postdoctoral Research Fellowship
Treatment of Ocular Neovascularization by Gene Transfer, File # 10-2001-412 (\$180,000) – 3 years
- 2000-2001 -Knights Templar Eye Foundation, Inc. Molecular Biology of Endogenous Inhibitors of Angiogenesis in Retinopathy of Prematurity (\$30,000) – 1 year
- 1993 -North Star Research Foundation Grant. *Development of Techniques that Augment G.I. Motility*, Co-author/Co-investigator (Funded)
- 1993 -Blandin Foundation Finalist. Co-author/Co-investigator
- 1992 -Biomedical Frontiers, Inc./Ciba-Geiger
Funding to Determine the Potential Ocular Toxicity of the Oral Iron Chelator LI, Author/Co-investigator (Funded)
- 1992 -Minnesota Medical Foundation
Funding for the Study of Ischemia/Reperfusion Injury in the Cat Retina, Author/Co-investigator (Funded)

CLINICAL RESEARCH AND PROJECTS:

- **Co-investigator** (Evaluating Physician). Genentech FVF2598g, “*A Phase III, Multicenter, Randomized, Double-Masked, Sham Injection-controlled Study of the Efficacy and Safety of rhuFAB V2 in Subjects with Minimally Classic or Occult Neovascular Age-Related Macular Degeneration.*” Marina FVF2598g study. Wilmer Eye Institute (Multi-center), Johns Hopkins University, School of Medicine, Baltimore, MD.
- **Co-investigator.** CDME 1 Celebrex “*Preliminary multi-center assessment of laser and medical treatment of diabetic macular edema.*” NEI and Pharmacia. Start April

2003. Wilmer Eye Institute (Multi-center), Johns Hopkins University, School of Medicine, Baltimore, MD.

- **Co-investigator.** *"An Open Label, Pilot (Phase I/II), Dose-Escalation Safety and Tolerability Study of Combretastatin A4 Phosphate in Patients with Neovascular Age-Related Macular Degeneration"* Sponsor: Foundation Fighting Blindness. Wilmer Eye Institute (Multi-center), Johns Hopkins University, School of Medicine, Baltimore, MD.
- **Co-investigator.** *GV-003.001 An open-label, Phase 1, Single administration, Dose-Escalation Study of AdGVPEDF.11D in Neovascular Age-Related Macular Degeneration (AMD)* Wilmer Eye Institute (Multi-center), Johns Hopkins University, School of Medicine, Baltimore, MD.
- **Co-investigator.** *NO;03-11-05-03, Evaluation of the Retina of Subjects without Diabetes Mellitus and Subjects with Diabetes Mellitus without Diabetic Retinopathy using Optical Coherence Tomography.* Wilmer Eye Institute, Johns Hopkins University, School of Medicine, Baltimore, MD.
- **Co-investigator.** *VGFT-OD-0305 An exploratory Study of the Safety, Tolerability and Biological Activity of Intravenously Administered VEGF Trap in Patients with Neovascular Age-Related Macular Degeneration.* Regeneron Pharmaceuticals/Aventis Pharmaceuticas. Wilmer Eye Institute (Multi-center), Johns Hopkins University, School of Medicine, Baltimore, MD. Wilmer Eye Institute, Johns Hopkins University, School of Medicine, Baltimore, MD.
- **Co-investigator.** *VGFT-OD-0307 An Exploratory Study of the Safety, Tolerability and Biological Activity of Intravenously Administered VEGF Trap in Patients with Diabetic Macular Edema.* Regeneron Pharmaceuticals, Inc.
- **Co-investigator.** *Genetic Epidemiology of Retinopathy in Patients with Type 1 Diabetes.* JDF Core Grant. Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD.
- **Co-Investigator.** *Supplemental Inspired Oxygen for Hypoxia-Mediated Retinal Diseases.* Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD.
 - Nguyen QD, Shah SM, Van Anden E, Sung JU, Vitale S, Campochiaro PA. Supplemental oxygen improves diabetic macular edema: a pilot study. *Invest Ophthalmol Vis Sci.* 2004 Feb;45(2):617-24.
- **Co-Investigator.** *An Open Label, Pilot (Phase I/II), Dose-Escalation Safety and Tolerability Study of Combretastatin A4 Phosphate in Patients with Neovascular Age-Related Macular Degeneration.* Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD.

- **Co-Investigator.** *A Phase II Non-Randomized, Multicenter, Open Label Safety and Performance Evaluation of the DDS Applicator Used for the Delivery of the Dexamethasone Posterior Segment Drug Delivery System (DEX PS DDS) into the Eyes of Patients with Macular Edema.* Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD.
- **Co-Investigator.** *A Multi-Center, Randomized, Double-Masked, Placebo-Controlled Parallel-Group Dose Finding Phase II Study of PKC412 (50, 100, 150 mg/day) in Patients with Diabetic Macular Edema.* Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD.
 - Campochiaro PA & Study Group. Reduction of Diabetic Macular Edema by Oral Administration of the Kinase Inhibitor PKC412. *Invest Ophthalmol Vis Sci.* 2004 Mar;45(3):922-31.
- **Co-Investigator.** *A Phase II/III Randomized, Single-Masked, Controlled, Dose-Ranging, Multi-Center Comparative Trial, in Parallel Groups. To Establish the Safety and Efficacy of Intravitreal Injections of EYE001 (Anti-VEGF Pegylated Aptamer) Given at 6 Weekly Intervals for 54 Weeks, in Patients with Exudative Age-Related Macular Degeneration (AMD).*
- **Principal Investigator.** (Co-investigators: Earl Palmer, M.D. and Joseph Robertson, M.D.). *Enhanced Screening of Retinopathy of Prematurity: A Feasibility Trial of Combined Ultrasound and RetCam Photography.* IRB approved 3/5/99.
- **Co-Investigator.** *Vitraxe: Intravitreal hyaluronidase for non-clearing vitreous hemorrhage.* Casey Eye Institute, Oregon Health Sciences University, Portland OR.
 - No Authors Listed: Hyaluronidase (Vitraxe)—ISTA:hyaluronidase—ISTA pharmaceuticals. *Drugs R. D.* 2003;4(3):194-7

DOMESTIC PATENTS:

- The Smooth Muscle Chemical Pacemaker
U.S. Patent Serial Number: 08/540,456.
Formally allowed: June 13, 1996
- Selective Induction of Apoptosis to Treat Ocular Disease
U.S. Patent Application No. 10/367,038

INTERNATIONAL PATENTS:

- Australian Patent Number 685420 (1/22/98)
- European Patent Application Number 94905347.4

REPORT OF INVENTION:

- Periocular Gene Therapy: JHU Ref. 3994 (2003)

SELECTED PEER REVIEWED PUBLICATIONS:

1. Cheng Zhang C., **Gehlbach P.**, Gongora C., Cano M., Fariss R., Hose S., Nath A., Green W.R., Goldberg M.F., Zigler J.S. Jr., and Sinha D. *A Potential Role for γ - and β -crystallins in Vascular Remodeling of The Eye.* (In Press, Developmental Dynamics, 2005)
2. **Peter Gehlbach**, Stacey Hose, Cheng Zhang, Marisol Cano, Bo Lei Colin Barnstable, Morton F. Goldberg, J. Samuel Zigler, Jr., Debasish Sinha *Developmental abnormalities in the Nucl rat retina: a spontaneous mutation that affects neuronal and vascular remodeling and retinal function.* (In Submission, Neuroscience, 2005)
3. Tian J., Ishibashi K., Ishibashi K., Reiser K., Grebe R, Biswal S., **Gehlbach P. L.**, Handa J.T. *AGE-induced aging to the RPE/Choroid in the D-galactose treated mouse: A Comprehensive Transcriptional Aging Response Induced by Advanced Glycation Endproducts.* (In Re-review, PNAS Track 1, 2005)
4. Ying H.S., Louie, K., Handa J.T., Solomon S., **Gehlbach P.L.** Accidental Nd:YAG Laser-induced Choroidal Neovascularization. (In Submission, Retina, 2005)
5. Anzai K., Yoneya S., **Gehlbach P.L.**, Imai D., Wei L.L. and Mori K. *Laser Therapy Targets and Enhances Adenovirus Vector Mediated Gene Transfer in the Rat Retina.* (In Submission, IOVS, 2004)
6. Ghazi NG, DiBernardo C, Ying H, Mori K, **Gehlbach PL.** *Optical Coherence Tomography of Eenucleated Human Eye Specimens with Histological Correlation: Evaluation of the Origin of the Outer "Red Line" and Peripheral Retinal Pathology.* (In Submission, AJO, 2005)
7. Louie K, Apte R, Mori K, **Gehlbach PL** *Severe Proliferative Retinopathy In a Patient with Duchenne Muscular Dystrophy.* British Journal of Ophthalmology 2004;88:1604
8. Mori K, **Gehlbach PL**, Ito YN, Yoneya S. Decreased Arterial Dye-Filling and Venous Dilation, In the Macular Choroid, Associate with Age-related Macular Degeneration. (In submission, Retina, 2004)
9. Apte RS, DiBernardo C, Pearlman JR, Patel S, Green WR, **Gehlbach PL.** "Retinal Metastasis in a Patient With Adenocarcinoma of the Cecum." Archives of Ophthalmology, In Press for May, 2005.
10. Imai D, Yoneya S, **Gehlbach PL**, Wei LL, Mori K. Rescue From Light Induced Photoreceptor Cell Death by Intraocular Gene Transfer of Pigment Epithelium-Derived

Factor Is Associated With Reduction In Retinal Cell Apoptosis. JCP J Cell Physiol
2004 Aug 12

11. Duh EJ, Yang HS, Haller J, de Juan E, Humayun M, **Gehlbach PL**, Melia M, Pieramici D, Harlan JB, Campochiaro PA, Zack DJ. *Vitreous levels of pigment epithelium-derived factor (PEDF) and vascular endothelial growth factor (VEGF): implications for ocular angiogenesis*. AJO 2004 Apr;137(4):668-74.
12. Mori K, MD, PhD, **Gehlbach PL**, MD, PhD, Sano A, MD, Deguchi T, OP, Yoneya S, MD, PhD. *A Comparison of Epiretinal Membranes, of Differing Pathogenesis, Using Optical Coherence Tomography*. Retina 24(1):57-62, February 2004.
13. Mori K, MD, PhD, **Gehlbach PL**, MD, PhD, Yoneya S, MD, PhD Shimizu K, MD, PhD. *Asymmetry of Choroidal Venous Vascular Patterns in the Human Eye*. Ophthalmology 2004 Mar;111(3):507-12.
14. Takita H, Yoneya S, **Gehlbach PL**, Duh EJ, Wei LL, Mori K. *Intraocular Gene Transfer of Pigment Epithelium-Derived Factor Protects the Retina from Ischemic Injury by Reducing Retinal Cell Apoptosis*. Invest Ophthalmol Vis Sci 2003 Oct 44(10):4497-504.
15. Apte RA, Solomon SS, **Gehlbach PL**. *Acute Choroidal Infarction Following Subcutaneous Injection of Micronized Dermal Matrix In the Forehead Region*. Retina 2003 August 23(4):552-4.
16. Okoye G, Zimmer J, Sung J, **Gehlbach PL**, Deering T, Nambu H, Hackett S, Melia M, Esumi N, Zack DJ, Campochiaro PA. *Increased expression of brain-derived neurotrophic factor preserves retinal function and slows cell death from rhodopsin mutation or oxidative damage*. J Neurosci, 2003 May 15;23(10):4164-4172
17. **Gehlbach PL**, Demetriades AM, Yamamoto S, Deering T, Duh EJ, Yang HS, Cingolani C, Lai H, Wei L, Campochiaro PA. *Periocular injection of an adenoviral vector encoding of pigment epithelium-derived factor inhibits choroidal neovascularization*. Gene Ther. 2003 Apr; 10(8):637-46
18. **Gehlbach PL**, Demetriades AM, Yamamoto S, Deering T, Xiao WH, Duh EJ, Yang HS, Lai H, Kovesdi I, Carrion M, Wei L, Campochiaro PA. *Periocular Gene Transfer of sFlt-1 Suppresses Ocular Neovascularization and Vascular Endothelial Growth Factor-Induced Breakdown of the Blood-Retinal Barrier*. Hum Gene Ther. 2003 Jan 20; 14(2):129-41
19. Mori K, **Gehlbach PL**, Ando A, McVey D, Wei L, Campochiaro P. *Regression of Ocular Neovascularization in response to increased expression of pigment epithelium-derived factor*. Invest Ophthalmol Vis Sci. 2002 Jul;43(7):2428-34

20. Mori K, **Gehlbach PL**, Nishiyama Y, Deguchi T, Yoneya S. The Ultra-Late Phase of Indocyanine Green Angiography for Healthy Subjects and Patients with Age-Related Macular Degeneration. Retina 2002 June; 22(3): 309-316
21. Mori K, **Gehlbach P**, Ando A, Dyer G, Lipinsky E, Chaudhry AG, Hackett SF, Campochiaro PA. *Retina-specific expression of PDGF-B versus PDGF-A; vascular versus nonvascular proliferative retinopathy.* Invest Ophthalmol Vis Sci 2002 June; 43(6): 2001-2006
22. Mori K, **Gehlbach P**, Yamamoto S, Duh E, Zack DJ, Li Q, Berns KI, Raisler BJ, Hauswirth WW, Campochiaro PA. *AAV-mediated gene transfer of pigment epithelium-derived factor inhibits choroidal neovascularization.* Invest Ophthalmol Vis Sci 2002 June; 43(6): 1994-2000
23. Mori K, **Gehlbach PL**, Ando A, Wahlin K, Gunther V, McVey D, Wei L, Campochiaro PA. *Intraocular adenoviral vector-mediated gene transfer is increased in proliferative retinopathies.* Invest Ophthalmol Vis Sci 2002 May; 43(5): 1610-1615
24. Duh E, Yang H, Suzuma I, Miyagi M, Youngman E, Mori K, Katai M, Yan L, Suzuma K, West K, Davarya S, Tong P, **Gehlbach PL**, Pearlman J, Crabb J, Aiello L, Campochiaro PA, Zak D. *Pigment Epithelium-Derived Factor (PEDF) Suppresses Ischemia-induced Retinal Neovascularization and VEGF-induced Migration and Growth.* Invest Ophthalmol Vis Sci 2002 March; 43(3):821-829
25. Ohno-Matsuim K, Hirose A, Yamamoto S, Sakia J, Okamoto N, **Gehlbach PL**, Duh P, Hackett S, Chang M, Bok D, Zak D, Campochiaro PA. *Inducible Expression of VEGF in Adult Mice Causes Severe Proliferative Retinopathy and Retinal Detachment.* Am J of Pathol 2002 Feb; 160(2): 711-719
26. Rasmussen H, Chu KW, Campochiaro P, **Gehlbach PL**, Haller JA, Handa JT, Nguyen QD, Sung JU. *Clinical Protocol: An Open-Label, Phase I, Single Administration, Dose-Escalation Study of ADGVPEDF in Neovascular Age-Related Macular Degeneration (AMD).* Hum Gene Ther 2001 Nov; 12(16): 2029-2032
27. Gurdian SJ, **Gehlbach, PL**, Hunyor AP, Robertson JE. *Retinal Detachment Associated with Subthreshold Retinopathy of Prematurity.* J of Pediatr Ophthalmol Strabismus. 2001 Sep-Oct; 38(5):279-83.
28. Mori K, Duh E, **Gehlbach PL**, Ando A, Takahashi K, Pearlman J, Yang H, Zack D, ETTYREDDY D, BROUGH D, WEI L, Campochiaro PA. *Pigment Epithelium-Derived Factor Inhibits Retinal and Choroidal Neovascularization* J of Cell Physiol 2001 Aug; 188: 153-163.
29. Mori K, Ando A, **Gehlbach PL**, Nesbit D, Takahashi K, Goldstein D, Penn M, Chen T, Mori K, Melia M, Phipps S, Moffat D, Brazzell K, LIAU G, Dixon KH, Campochiaro PA. *Inhibition of Choroidal Neovascularization by Intravenous Injection of Adenoviral Vectors Expressing Secretable Endostatin.* Am J of Pathol 2001 July; 159(1): 313-20.

PEER REVIEWED PUBLICATIONS (Cont.):

30. Gurdian SJ, **Gehlbach PL**, Hunyor AP, Robertson JE. *Retinal Detachment Associated with Subthreshold Retinopathy of Prematurity*. Ocular Surgery News 2001; 19(15): 81-83.
31. **Gehlbach PL**, Purple RL. *A Paired Comparison of the Vascular Ligation and Increased Intraocular Pressure Models of Retinal Ischemia*. Cur Eye Res Aug 1994; 13(8): 597-602.
32. **Gehlbach PL**, Purple RL. *Enhancement of Retinal Recovery by Conjugated Deferoxamine after Ischemia-reperfusion*. Invest Ophthalmol Vis Sci Feb1994; 35: 669-676.
33. **Gehlbach PL**, Purple RL, Hallaway PE, Hedlund BE, Schultz LM. *Conjugated Deferoxamine Reduces Deferoxamine Induced Retinopathy in an Albino Rat Model*. Invest Ophthalmol Vis Sci September 1993; 34(10): 2871-2877.
34. **Gehlbach PL**, Purple RL. *An Electrical Artifact Associated With the ERG-jet™ Gold Foil Electrode*. Invest Ophthalmol Vis Sci August 1993; 34(8): 2596-2599.

THESIS:

Gehlbach PL. *Thesis: "The Role of Iron in Ischemia/Reperfusion Injury in The Cat Retina"*. Department of Physiology and Neuroscience, The Medical School, The University of Minnesota, Minneapolis, MN 55455 December 1994.

ACKNOWLEDGMENT IN PEER REVIEWED PUBLICATION:

1. Xiangqun Gao and Paul Talalay. *Induction of phase 2 genes by sulforaphane protects retinal pigment epithelial cells against photooxidative damage*. PNAS June 30, 2004, 10.1073/pnas.
2. Wong CG, Rich KA, Liaw LH, Hsu HT, Berns MW. *Intravitreal VEGF and bFGF produce florid retinal neovascularization and hemorrhage in the rabbit*. Curr Eye Res 2001 Feb; 22(2): 140-7.
3. Romano C, Yang W, O'Mally K. *Metabotropic Glutamate Receptor 5 Is a Disulfide-linked Dimer*. J Bio Chem Nov 1996: 271(45): 28612-28616.
4. Moehring JM, Moehring TJ. *Strains of CHO-K1 Cells Resistant to Pseudomonas exotoxin A and Cross-resistant to Diphtheria Toxin and Viruses*. Inf Imm Sept 1983; 41(3): 998-1009.

5. Didsbury JR, Moehring JM, Moehring TJ. *Binding and Uptake of Diphtheria Toxin Resistant Chinese Hamster Ovary and Mouse Cells*. Molec Cell Biol July 1983; 3(7):1283-1294

NON-PEER REVIEWED PUBLICATIONS:

Schauer BA, Purple RL, **Gehlbach PL**. *Retinal Toxicity of the Iron Chelator LI™ in an Albino Rat Model*. Submitted as a final report to Ciba-Geigy, Inc., March 1994.

BOOK CHAPTERS:

1. Mori K, **Gehlbach PL**. *Antiangiogenic Gene Therapy: Prospects for Human Application*. Peyman, Meffert, Chou, Conway (eds.) Vitreoretinal Surgical Techniques, 2nd ed., Martin Dunitz, Ltd. 2005.
2. Ying H., **Gehlbach PL**. *Intraocular Foreign Body-nonmagnetic, Chemically Inert*. Fraunfelder and Roy (eds.) Current Ocular Therapy, 6th ed., WB Saunders Co, 2005
3. **Gehlbach PL**, Robertson JR. *Diffuse Unilateral Subacute Neuroretinitis (DUSN)*. In Fraunfelder and Roy (eds.) Current Ocular Therapy, 5th ed., WB Saunders Co 1999
4. **Gehlbach PL**, Robertson JR. *Intraocular Foreign Body-nonmagnetic, Chemically Inert*. Fraunfelder and Roy (eds.) Current Ocular Therapy, 5th ed., WB Saunders Co, 1999

ABSTRACTS:

1. **P.L. Gehlbach**, M. Cano, S.L. Hose, R.Grebe, M.F. Goldberg, J.S. Zigler, Jr, D. Sinha. *The Nuc1 Mutation Affects the Rat Retina and Retinal Vasculature*. ARVO abstract May 1, 2005, CD ROM.
2. S.L. Hose, C.Zhang, C.Barnstable, B.Lei, **P.L. Gehlbach**, M.F. Goldberg, J.S. Zigler, Jr., D.Sinha. *Developmental Defects in Nuc1 Retina Affect Normal Physiological Function*. Association for Research in Vision and Ophthalmology abstract May 1, 2005, CD ROM.
3. M.d. V. Cano, S.L. Hose, C.Gongora, J.S. Zigler, Jr, **P.L. Gehlbach**, D.Sinha. *Modulation of Nuclear Factor Proteins That Control the Expression of CIITA by Cannabinoids*. Association for Research in Vision and Ophthalmology abstract May 2, 2005, CD ROM.
4. J.S. Zigler, C.Zhang, M.Arora, S.L. Hose, **P.L. Gehlbach**, M.F. Goldberg, D.Sinha. *Upregulation of Lens VEGF in a Rat Model With Persistent Hyaloid Vasculature*. Association for Research in Vision and Ophthalmology abstract May 3, 2005, CD ROM.

ABSTRACTS (Cont.):

5. *A Possible Function of β - and γ -Crystallins in Vascular Remodeling.* D.Sinha, C.Gongora, C.Zhang, S.L. Hose, A.Nath, W.R. Green, **P.L. Gehlbach**, J.S. Zigler, Jr., M.F. Goldberg. Association for Research in Vision and Ophthalmology abstract May 3, 2005, CD ROM.
6. *I.Kawasaki, S.Yoneya, N.Takata, **P.L. Gehlbach**, T.Awata, K.Mori Vascular Endothelial Growth Factor Gene C-634G Polymorphism Is Associated With Age-Related Macular Degeneration.* Association for Research in Vision and Ophthalmology abstract May 3, 2005, CD ROM.
7. *N.G. Ghazi, C.Dibernardo, H.Ying², K.Mori, **P.Gehlbach**. Optical Coherence Tomography of Eenucleated Human Eye Specimens With Histological Correlation: Evaluation of the Origin of the Outer "Red Line" and Peripheral Retinal Pathology.* Association for Research in Vision and Ophthalmology abstract May 4, 2005, CD ROM.
8. *M.Arora, C.Gongora, S.L. Hose, **P.L. Gehlbach**, M.F. Goldberg, D.Sinha, J.S. Zigler, Jr. Altered Expression of Aquaporin 1 in a Mutant Rat With Ocular Developmental Abnormalities.* Association for Research in Vision and Ophthalmology abstract May 4, 2005, CD ROM.
9. *S.P. Herretes, O.Suwan-apichon, J.M. G. Reyes, A.Pirouzmanesh, M.Cano, Y.Yu, **P. Gehlbach**, R.S. Chuck, A.Behrens, E.J. Duh. Pigment Epithelium-Derived Factor Inhibits bFGF-Induced Corneal Neovascularization in Mice.* Association for Research in Vision and Ophthalmology abstract May 4, 2005, CD ROM.

K.Mori, A.Okuda, T.Ito, H.Takita, D.Imai, S.Yoneya, **P.L. Gehlbach**, L.L. Wei.
10. *Empty E1⁻, E3⁻, E4⁺ and Empty E1⁻, E3⁻, E4⁻ Adenoviral Vectors Inhibit Retinal Neovascularization.* Association for Research in Vision and Ophthalmology abstract May 5, 2005, CD ROM.
11. *H.Takita, D.Imai, S.Yoneya, **P.L. Gehlbach**, L.L. Wei, K.Mori. An Empty E1⁻, E3⁻, E4⁻ Adenoviral Vector Ameliorates Light-Induced Photoreceptor Degeneration.* Association for Research in Vision and Ophthalmology abstract May 5, 2005, CD ROM.
12. *Bruder J.T., Chen P., Kroeger K., Hamilton M., Carrion M., Brough D.E., Wei L.L., King C.R., Campochiaro P.A., **Gehlbach P.L.** Evaluation of High-Capacity Adenovectors for Delivery of PEDF to the Eye.* The Molecular Biology of Tumor Viruses Meeting in Madison, WI. 7/13-18/2004.

ABSTRACTS (Cont.):

13. Bruder JT, Chen P, Kroeger K, Hamilton M, Carrion M, Brough D, Wei LL, King CR, Campochiaro PA, **Gehlbach PL**. *Persistent PEDF Expression Following Intravitreal Administration of High-Capacity Adenovectors*. American Society of Gene Therapy Meeting, Minneapolis, MN, June, 2004.
14. Tian J., Ishibashi K., Ishibashi K., Grebe R., Reiser K., Deering T., **Gehlbach P.**, Handa J.T.. *Ultrastructural, Functional, and Transcriptional changes during AGE-induced aging to the RPE-Bruch's membrane-choriocapillaris in the D-galactose treated mouse*. ARVO abstract 2004, CD ROM
15. **Gehlbach P.**, Deering T. , Callahan K., Carrión M.E., Hamilton M.M., Wei L., Campochiaro P.A. *Periocular Gene Product Delivery of Pigment Epithelium-derived Factor Induces Regression of Ocular Neovascularization*. ARVO abstract 2004, CD ROM
16. Wei LL, C. King CR, Brough D, McVey D, Carrionn M, Hamilton M, Harris B, **Gehlbach P**, Mori K, Campochiaro P *Application of Native Ocular Antiangiogenic Factor, PEDF, for Ocular Neovascular Diseases*. *Angiogenesis 2004 Feb 6-7, Miami FL*
17. **Gehlbach P**, Wei L, Carrion M, Mori K, Campochiaro P *Antiangiogenic Gene Delivery for Retinal and Choroidal Neovascularization* Western Eye Research Conference Sept 14-17, Laguna Beach, CA
18. Shibuya M, Mori K, **Gehlbach PL**, Yoneya S. *Watershed Zone May or May Not Exist in the Macular Choroid in Normal Human Eyes*. ARVO abstract 2003, CD ROM
19. Anzai K, **Gehlbach PL**, Shibuya M, Yoneya S, Wei LL, Mori K. *Both Laser Photocoagulation and Photodynamic Therapy Enhance Gene Transfer in the Rat Retina Mediated by Adenoviral Vector*. ARVO abstract 2003, CD ROM
20. Demetriades A-M, Lu L, **Gehlbach PL**, Liu H, Duh E, Wei L, Campochiaro P. *Transscleral Delivery of Proteins by Periocular Gene Transfer*. ARVO abstract 2003, CD ROM
21. Okoye GS, Zimmer J, Sung J, **Gehlbach PL**, Deering, T, Nambu H, Hackett, S, Esumi N, Zack DJ, Campochiaro PA. *Increased Expression of Brain-Derived Neurotrophic Factor Preserves Retinal Function and Slows Cell Death from Rhodopsin Mutation or Oxidative Damage*. ARVO abstract 2003, CD ROM
22. Yamamoto S, Artemov D, Bhujwalla Z, **Gehlbach PL**. *Application of Magnetic Resonance Microimaging to the Quantitative Assessment of Blood-Retinal Barrier Permeability, in Transgenic Mice*. ARVO abstract 2003, CD ROM

ABSTRACTS (Cont.):

23. **Gehlbach PL**, Deering T, Yamamoto S, Oshima Y, Nambu H, Callahan K, Wei L, Campochiaro PA. *Duration of Antiangiogenic Effect Following Periocular Delivery of Ad.PEDF.11 in Mice with Laser-Induced Choroidal Neovascularization (CNV)* ARVO abstract 2003, CD ROM
24. Callahan KP, **Gehlbach PL**, Demetriades A, Lu L, Yamamoto S, Deering T, Liu H, Wei L, Campochiaro PA. *Adenoviral-Vectored TGF- β 1 Does Not Inhibit Retinal or Choroidal Neovascularization.* ARVO abstract 2003 CD ROM
25. Imai D, Takita H, Yoneya S, **Gehlbach PL**, Wei LL, Mori K. *Rescue of Light Induced Photoreceptor Cell Death by Intraocular Gene Transfer of Pigment Epithelium-Derived Factor by Reducing Retinal Cell Apoptosis.* ARVO abstract 2003 CD ROM
26. Deering TG, **Gehlbach PL**, Okoye G, Callahan K, Hauswirth WW, Campochiaro PA. *Retinal Function 10 Months After Intraocular or Periocular Injection of AAV-CBA-PEDF.* ARVO abstract 2003 CD ROM
27. Carrion ME, Hamilton M, Harris B, Brough D, **Gehlbach PL**, King R, Wei L. *Ocular Sublocalization and Pharmacokinetics of Expression of Pigment Epithelium-Derived Factor in Murine Eyes Following Adenovirus-Based Intravitreal Gene Delivery.* ARVO abstract 2003 CD ROM
28. Takita H, Imai D, Yoneya S, **Gehlbach PL**, Wei LL, Mori K. *Intraocular Gene Transfer of Pigment Epithelium-Derived Factor Protects the Retina from Ischemia Reperfusion Injury by Reducing Retinal Cell Apoptosis.* ARVO abstract 2003 CD ROM
29. Deering TG, **Gehlbach PL**, Yamamoto S, Campochiaro PA. *Induction of VEGF Expression in Neonatal Mice Results in Vascular Proliferation in the Inner Retina.* ARVO abstract 2002, CD ROM.
30. Demetriades A-M, **Gehlbach PL**, Yamamoto S, Deering T, Ng EW, Kovesdi I, McVey D, Wei L, Campochiaro PG. *Periocular Injection of an Adenoviral Vector Expressing the Extracellular Portion of Vascular Endothelial Growth Factor Receptor-1 (Adsf1.10) Inhibits Choroidal Neovascularization (CNV).* ARVO abstract 2002, CD ROM.
31. Arai, S-I, Sadda SR, Walton CJ, Grebe RR, **Gehlbach PL**, Humayun MS, deJuan, Jr. E. *Evaluation of Synapse Formation at the Graft-host Interface in Transplanted RD Mice.* ARVO abstract 2002, CD ROM.

ABSTRACTS (Cont.):

32. **Gehlbach PL**, Yamamoto S, Demetriades AM, Ng EW, Duh EJ, Deering T, McVey D, Lisa WL, Campochiaro PA. *Periocular Adenovirus-mediated Delivery of pigment Epithelium-derived Factor Inhibits Choroidal Neovascularization*. ARVO abstract 2002, CD ROM.
33. Yamamoto S, **Gehlbach PL**, Xiao W, Deering T, Oshima Y, Mori K, Campochiaro PA. *Characterization of Double Transgenic Mice with Inducible Expression of VEGF in the Retina*. ARVO abstract 2002. CD ROM
34. Mori K, **Gehlbach PL**, Nishiyama Y, Deguchi T, Yoneya S. *The ultra-late phase of indocyanine green angiography for healthy subjects and patients with age-related macular degeneration*. Retina. 2002 Jun;22(3):309-16
35. Mori K, **Gehlbach PL**, Ando A, Wahlin K, Gunther V, McVey D, Wei L, Campochiaro PA. *Intraocular adenoviral vector-mediated gene transfer in proliferative retinopathies*. Invest Ophthalmol Vis Sci. 2002 May;43(5): 1610-5
36. Duh EJ, Yank HS, Suzuma I, Miyagi M, Youngman E, Mori K, Katai M, Yan L, Suzuma K, West K, Davarya S, Tong P, **Gehlbach PL**, Pearlman J, Crabb JW, Aiello LP, Campochiaro PA, Zack DJ. *Pigment epithelium-derived factor suppresses ischemia-induced retinal neovascularization and VEGF-induced migration and growth*. Invest Ophthalmol Vis Sci. 2002 Mar;43(3):821-9
37. Ohno-Matsui K, Hirose A, Yamamoto S, Saikia J, Okamoto N, **Gehlbach PL**, Duh EJ, Hackett S, Chang M, Bok D, Zack DJ, Campochiaro PA. *Inducible expression of vascular endothelial growth factor in adult mice causes severe proliferative retinopathy and retinal detachment*. Am J Pathol. 2002 Feb; 160(2):711-9
38. Rasmussen H, Chu KW, Campochiaro P, **Gehlbach PL**, Haller JA, Handa JT, Nguyen QD, Sung JU. *Clinical Protocol: An Open-Label, Phase I, Single Administration, dose-escalation study of ADGVPEDF in neovascular age-related macular degeneration (AMD)*. Hum Gene Therapy. 2001 Nov1;12(16):2029-32.
39. Gurdian SJ, **Gehlbach PL**, Hunyor AP, Robertson JE. *Retinal detachment associated with subthreshold retinopathy of prematurity*. J Pediatr Ophthalmol Strabismus. 2001 Sep-Oct;38(5):279-83.
40. Mori K, Ando A, **Gehlbach PL**, Nesbitt D, Takahashi K, Goldstein D, Penn M, Chen CT, Mori K, Melia M, Phipps S, Moffat D, Brazzell K, Liao G, Dixon KH, Campochiaro PA. *Inhibition of choroidal neovascularization by intravenous injection of adenoviral vectors expressing secreted endostatin*. Am J Pathol. 2001 Jul; 159(1):313-20.

ABSTRACTS (Cont.):

41. Mori K, Duh E, **Gehlbach PL**, Ando A, Takahashi K, Pearlman J, Mori K, Yang HS, Zack DJ, ETTYREDDY D, BROUGH DE, WEI LL, Campochiaro PA. *Pigment epithelium-derived factor inhibits retinal and choroidal neovascularization.* J Cell Physiol. 2001 Aug; 188(2):253-63.
42. Mori K, Duh E, **Gehlbach PL**, Ando A, Takahashi K, Pearlman J, Yang H, Zack D, ETTYREDDY D, BROUGH D, WEI L, Campochiaro PA. *Increased Expression of Pigment Epithelium-Derived Factor Inhibits Retinal and Choroidal Neovascularization.* Invest Ophthalmol Vis Sci March 2001; 42(4):S126.
43. Duh E, Mori K, **Gehlbach PL**, Pearlman J, Yang S, Zak D, ETTYREDDY D, BROUGH D, WEI L, Campochiaro PA. *In Vivo Expression of Pigment Epithelium-Derived Factor by Adenovirus-mediated Gene Therapy.* Invest Ophthalmol Vis Sci March 2001; 42(4):S506.
44. **Gehlbach PL**, Mori K, Ando A, Gunther V, Brough D, Wei L, Campochiaro PA. *Adenovirus Mediated Reporter Gene Transfer In Normal and PDGF Transgenic Mice.* Invest Ophthalmol Vis Sci March 2001; 42(4):S506.
45. Rooney SM, **Gehlbach PL**. *Self-induced Yawning Stimulates Aqueous Tear Production.* Invest Ophthalmol Vis Sci March 2000; 41(4):S67.

ABSTRACTS (Cont.):

46. **Gehlbach PL**, Hiner CJ, Klein ML. *Comparison of Binocular vs. Monocular Interpretation of Fluorescein Angiograms In Neovascular Age Related Macular Degeneration.* Invest Ophthalmol Vis Sci March 1999.
47. **Gehlbach PL**, Thomas MA. *Surgical Treatment of Choroidal Neovascular Membranes Associated with Angioid Streaks.* Invest Ophthalmol Vis Sci March 1997; 38(4): S658.
48. Thomas MA, **Gehlbach PL**. *Subretinal Endolaser Photocoagulation of A Recurrent Juxtafoveal Neovascular Membrane in Presumed Ocular Histoplasmosis Syndrome.* Invest Ophthalmol Vis Sci March 1997; 38(4):S658.
49. **Gehlbach PL**, Izumi Y, Olney JW, Romano C. *Developmental Expression of N.M.D.A. Receptor Subunits and N.M.D.A.-mediated Toxicity in Rat Retina.* Invest Ophthalmol Vis Sci Feb 1996 37(3):1051.

ABSTRACTS (Cont.):

50. Park TS, Beetsch JW, Gonzales AR, Shah RG, Maceren RG, Lee YB, **Gehlbach PL**, Gidday JM. *Deferoxamine Inhibits Asphyxia-induced Increases in Leukocyte Adherence And Vascular Permeability.* Soc for Neurosci Nov 1996.
51. Anderson ML, **Gehlbach PL** Purple RL. *Comparison of Two Different Synthetic Oxygen Carriers in the Isolated Perfused Eye of the Cat.* Invest Ophthalmol Vis Sci March 1995; 36(4):104.
52. Schauer BA, Purple RL, **Gehlbach PL**. *Retinal Toxicity of the Iron Chelator 1,2-Dimethyl-3-Hydroxypyrid-4-One, (L1), In an Albino Rat Model.* Invest Ophthalmol Vis Sci March 1995; 36(4):163.
53. **Gehlbach PL**, Purple RL. *Enhancement of retinal recovery by conjugated deferoxamine after ischemia-reperfusion.* Invest Ophthalmol Vis Sci. 1994 Feb; 35(2):669-76
54. **Gehlbach PL**, Purple RL. *Conjugated Deferoxamine Enhances Recovery Following Ischemia and Reperfusion Injury in the Cat Retina.* Invest Ophthalmol Vis Sci March 1993; 34(4):1430.
55. Purple RL, **Gehlbach PL**. *A Paired Comparison of Post Ischemic Recovery in Two Models of Experimental Retinal Ischemia.* Invest Ophthalmol Vis Sci March 1993; 34(4):1433.
56. **Gehlbach P.L.**, Schultz LM, Purple RL, Hedlund BE, Hallaway PE. *Conjugated Deferoxamine Reduces Deferoxamine Induced Retinal Toxicity In An Albino Rat Model.* Invest Ophthalmol Vis Sci March 1992; 33(4):1069.
57. **Gehlbach P.L.**, Hoey M. *Enhancement of Guinea Pig Duodenal Motor Activity by Application of a "Gastrointestinal Chemical-Pacemaker".* Submitted to the 1993 A.C.S. Meeting, The Surgical Forum.
58. **Gehlbach PL**, Hebert JC, Pilcher DB, *The Use of Tobramycin Impregnated Polymethyl-methacrylate Beads in Treating Vascular Prosthetic Material Infections: An Animal Model.* Presented at the 1986 Annual University of Vermont Surgical Research Forum, Second Place Honors

PRESENTATIONS:

1. **Gehlbach P.L.**, Cano M., Hose S., Zigler S. Jr., Goldberg, M.F., Sinha, D.. *Nucl: A Novel Spontaneous Mutation Affecting Vasclar and Neuronal Architecture in the Retina.* The 64th Wilmer Residents Clinical Meeting. April 23, 2005.

PRESENTATIONS (Cont.):

2. **Gehlbach P.L.**, M. Cano, S.L. Hose, R. Grebe, M.F. Goldberg, J.S. Zigler, Jr, D. Sinha. *The Nucl Mutation Affects the Rat Retina and Retinal Vasculature*. Association for Research in Vision and Ophthalmology, Presentation, May 1, 2005.
3. **Gehlbach P.L.**, M. Cano, S.L. Hose, R. Grebe, J.S. Zigler, Jr, M.F. Goldberg, D. Sinha. *A Novel Spontaneous Mutation Affecting Vascular and Neuronal Architecture in the Retina*. *The Wilmer Resident Association Meeting. Turner Auditorium, Johns Hopkins University School of Medicine, April 2005*
4. **Gehlbach P.L. Ocular Gene Therapy: Retinal and Choroidal Neovascularization**. F.A.R.M., Wilmer Ophthalmological Institute. Baltimore, MD February 21, 2003
5. **Gehlbach P.L. Clinical Skills Course**. Wilmer Ophthalmological Institute, Baltimore, MD. December 9 and 11, 2002
6. **Gehlbach P.L. Age Related Macular Degeneration: Is there a Role for Gene Therapy?** The Wilmer Macular Degeneration Center, Johns Hopkins at Green Spring Station. June 18, 2002.
7. **Gehlbach P.L. Adenovirus in Clinical Trials, Age-Related Macular Degeneration, Ocular Reading Centers and Clinical Trials, Periocular Injection of the Endogenous Inhibitors of Pathologic, Ocular Neovascularization**. GenVec, Inc. February 2002.
8. **Gehlbach P.L. Gene Therapy Update: Retinal and Choroidal Neovascularization**. Current Concepts in Ophthalmology. Baltimore, MD. December 6, 2001.
9. **Gehlbach P.L. Clinical Skills Course**: Wilmer Ophthalmological Institute, Baltimore, MD. December 10 and 12, 2001
10. **Gehlbach P.L. Ocular Gene Therapy, Diabetes**. Maryland Chapter of Juvenile Diabetes Foundation International, Baltimore, MD. November 8, 2001
11. **Gehlbach P.L. Adenovirally Vectored PEDF, Methods and Analysis: Annual Report, Multi-gene Therapy Strategies, Gene Therapy to Affect Blood Retinal Barrier Permeability Changes, Gene Therapy with Pigmented Epithelium Derived Factor and the Soluble Receptor of Vascular Endothelial Growth Factor**. GenVec, Inc. Gaithersburg, MD. October 29, 2001.
12. **Gehlbach P.L.**, Mori K, Ando A, Gunther V, Brough D, Wei L, Campochiaro PA. *Adenovirus Mediated Reporter Gene Transfer In Normal and PDGF Transgenic Mice*. Association for Research in Vision and Ophthalmology, Presentation, April 30, 2001.
13. **Gehlbach P.L. Gene Therapy in Ocular Neovascularization**. The Wilmer Resident Association. The Sixtieth Clinical Meeting, Johns Hopkins University Medical School, April 27, 2001.

PRESENTATIONS (Cont.):

14. **Gehlbach P.L.** *Session Chair: Atlantic Coast Retina Club.* Johns Hopkins University, Baltimore, MD. January 19, 2001.
15. **Gehlbach P.L.** *Enhanced Screening Techniques in Retinopathy of Prematurity* University of Wisconsin, Invited Retina Conference Speaker. May 1999.
16. **Gehlbach P.L.**, Hiner CJ, Klein ML. *Comparison of Binocular vs. Monocular Interpretation of Fluorescein Angiograms In Neovascular Age Related Macular Degeneration.* Investigative Ophthalmology & Visual Science Annual Meeting May 1999.
17. Gurdian SJ, **Gehlbach P.L.**, Hunyor PA, Robertson JE. *Retinal Detachment Associated with Subthreshold Retinopathy of Prematurity.* Investigative Ophthalmology & Visual Science Annual Meeting. May 1999.
18. **Gehlbach P.L.** *Diabetic Retinopathy: Clinical Overview and Topics in Research.* The Oregon Health Sciences University, Immunology/Molecular Biology Lecture Series. January 1999.
19. **Gehlbach P.L.**, Thomas MA. *Surgical Treatment of Choroidal Neovascular Membranes Associated with Angioid Streaks.* Association for Research in Vision and Ophthalmology, Annual Meeting, Ft. Lauderdale, FL. May 1997.
20. Thomas MA, **Gehlbach P.L.** *Subretinal Endolaser Photocoagulation of A Recurrent Juxtafoveal Neovascular Membrane in Presumed Ocular Histoplasmosis Syndrome.* Association for Research in Vision and Ophthalmology, Annual Meeting, Ft. Lauderdale, FL May 1997.
21. **Gehlbach P.L.** *Developmental Expression of N M.D.A Receptor Subunits and N M.D.A-mediated Toxicity in Rat Retina.* Association for Research in Vision and Ophthalmology, Annual Meeting, Ft. Lauderdale, FL. April 25, 1996.
22. **Gehlbach P.L.** *A Role for Iron in Retinal Ischemia/Reperfusion Injury.* Washington University in St. Louis, Department of Ophthalmology and Visual Sciences Common Research Symposium. March 1995.
23. **Gehlbach P.L.** *Ph.D. Thesis Defense: The Role of Iron in Ischemia/Reperfusion Injury in the Cat Retina.* A University of Minnesota, Physiology Seminar, December 8, 1994.
24. **Gehlbach P.L.** *Conjugated Deferoxamine Enhances Recovery Following Ischemia and Reperfusion Injury in the Cat Retina.* Association for Research in Vision and Ophthalmology, Annual Meeting, Sarasota, FL. May 7, 1993.

PRESENTATIONS (Cont.):

25. **Gehlbach P.L.** *A Paired Comparison of Post Ischemic Recovery in Two Models of Experimental Retinal Ischemia.* Association for Research in Vision and Ophthalmology, Annual Meeting, Sarasota, FL. May 7, 1993.
26. **Gehlbach P.L.** *Conjugated Deferoxamine Reduces Deferoxamine Induced Retinal Toxicity In An Albino Rat Model.* Association for Research in Vision and Ophthalmology, Annual Meeting, Sarasota, FL. May 1992; The Voyageur's Society of Neuroscience, University of Minnesota, May 1992.
27. **Gehlbach P.L.** Hoey M, Getachew J. *Doudenal motor activity initiated by a "Gastrointestinal Chemical Pacemaker, is propagated in a rabbit model of adynamic ileus.* University of Minnesota, Summer Research Forum, August 19, 1993.
28. Schauer BA, Purple RL, **Gehlbach P.L.** *Retinal Toxicity of the Iron Chelator LI™ in an Albino Rat Model.* University of Minnesota, Summer Research Forum, August 1992.

CURRENT SCHEDULE OF FREQUENTLY ATTENDED CONFERENCES:

- Weekly Wilmer Gene Therapy Vector Core Meeting
- Monthly all Gene Therapy Vector Core Meeting
- Semiannual Vector Core Advisory Panel Meeting
- Weekly Fluorescein Angiography Teaching Conference
- Weekly Grand Rounds (~twice monthly attendance)
- Monthly Morbidity and Mortality Conference
- Annual Association for Research in Vision and Ophthalmology
- Annual American Society of Gene Therapy
- National Eye Institute, Symposia on Gene Therapy
- Monthly Wilmer Research Committee Meeting
- Weekly Combined Vitreoretinal Service-Retinal Vascular Center meeting, Wilmer Eye Institute
- Quarterly All Faculty Meeting, Wilmer Eye Institute
- Quarterly Morbidity and Mortality Conference, Wilmer Eye Institute
- Bimonthly Fellows Retina Teaching Conference, Wilmer Eye Institute

ORGANIZATIONAL ACTIVITIES:

- Business plan development for the Wilmer Gene Therapy Vector Center.
- Fund Raising Committee for the Western Eye Research Council, Association for Research in Vision and Ophthalmology, (2005)
- Planning Committee for the Western Eye Research Council, Association for Research in Vision and Ophthalmology, (2005)
- Session Chair Western Eye Research Council, Association for Research in Vision and Ophthalmology, (2005)

- Panelist representing Current/Prospective K Awardees. The National Eye Institute, David G. Cogan Clinician Scientist Symposium, Natcher Conference Center. December 13-14, 2004.
- CRB2 Space Planning Committee (2004)
- American Academy of Ophthalmology, (2004-2005) Committee Member, Continuing Education and Recertification.
- American Academy of Ophthalmology,(2004-2005) Vitreoretinal, Recertification Question Design.
- Member, Wilmer Research Committee (2004)
- Member, CRBII Space Planning Committee (2003-2004)
- Wilmer Research Committee, (2003-present)
- Fund Raising Committee for the Western Eye Research Council, Association for Research in Vision and Ophthalmology, (2003).
- Planning Committee for the Western Eye Research Council, Association for Research in Vision and Ophthalmology, (2003)
- Session Chair, Gene Therapy Section, Western Eye Research Conference, (2003)
- Gene Therapy Session Chair, the Western Eye Research Council, (2003).
- Production of Wilmer, Research Associate, Web-based Orientation and Updates 2002-present.
- Session Chair Atlantic Coast Retina Conference, Baltimore, MD, (2001).

CONTINUING EDUCATION:

- **Power Point** – Johns Hopkins University, School of Information, Baltimore, MD, January 9-10, 2003.
- **Cellular and Molecular Biology of Photoreceptors in Health and Disease** Johns Hopkins University Course# 280.700 in the Visual Neuroscience Training Program, course Director Dr. Ruben Adler. January 14, 2003 – March 13, 2003.
- **Statistical Analysis for Laboratory Scientists** Professional Development Course, Wilmer Eye Institute, Johns Hopkins University School of Medicine, Director Rubin Adler Ph.D., 2003.
- **Tips and Tricks of Excel** – Johns Hopkins University, School of Information Technology, Baltimore, MD, January 17, 2003.
- **Advanced Excel** – Johns Hopkins University, School of Information Technology, Baltimore, MD, January 28-29, 2003.
- **Cultivating the Power of Emotional Intelligence** – Management and Staff Development Program, Johns Hopkins University, Dec. 1, 2003.
- **Reading Dynamics** – Management and Staff Development Program, Johns Hopkins University, Dec. 19, 2003.
- **Introduction to Excel**– School of Information Technology, Johns Hopkins University, Baltimore, MD, October 14-15, 2002.
- **Tips and Tricks of Power Point** – School of Information Technology, Johns Hopkins University, Baltimore, MD, November 15, 2002.
- **Grant Writing Workshop** – Johns Hopkins University, Baltimore, MD, November 21-22, 2002.

CONTINUING EDUCATION (cont.):

- **Intermediate Excel** – Johns Hopkins University, School of Information Technology, Baltimore, MD, December 9-10, 2002
- **Health Care & Business Theory and Practice** – Johns Hopkins University School of Professional Studies in Business and Education. BE 757 701 41 Spring Term 2004
- **Accounting for Decision Making in Medicine** – Johns Hopkins University School of Professional Studies in Business and Education. BE 757 601 41 Summer Term 2004
- **Managerial Finance For Medical Services** – Johns Hopkins University School of Professional Studies in Business and Education. BE 757 603 41 Winter Term 2004
- **Leadership/Organizational Behavior in Medical Settings** – Johns Hopkins University School of Professional Studies in Business and Education. BE 757 604 41. Spring 2005.