

John F. Hardesty, MD, Department of Ophthalmology and Visual Sciences

The John F. Hardesty, MD, Department of Ophthalmology and Visual Sciences has a strong legacy and is a national leader in clinical ophthalmology and research. It is ranked among the top ten best overall programs in the United States, and it is also considered one of the top ten best research programs by *U.S. News & World Report*. Our ophthalmology department is fourth in National Institutes of Health funding for research and has one of the nation's largest ophthalmology research faculty. The department's mission is as follows: "As world leaders in patient care, teaching and research, we strive to touch lives and preserve and restore vision through innovation and compassionate service." We hope that students will join us to enrich their medical education and to experience the collaborative culture of ophthalmology.

Although only a small percentage of physicians in the United States specialize in ophthalmology, there is no doubt that all physicians need a basic understanding of the eye and what it can reveal about a patient's condition. In a recent article published in the journal *Ophthalmology*, it was stated that "ophthalmology-related issues arise in the diagnosis and treatment of inpatients and outpatients on internal medicine, pediatrics, trauma surgery, neurology, endocrinology, neurosurgery, otolaryngology, dermatology, oncology, and rheumatology services."¹

The article went on to state that "[m]ost primary care program directors believe fewer than 50% of incoming residents have sufficient ophthalmology skills when entering the internship period of medical education. Ophthalmoscopy is one of many ophthalmic skills in which there seems to be a gap in the training of medical students. [A study] demonstrated that emergency medicine physicians often do not perform an ophthalmoscopic examination when it is indicated, and when they do, they are unlikely to detect abnormal findings. This presents a serious issue, because patients with visual impairments are more likely to be hospitalized, and from 2006 through 2011, there were 12 million eye-related emergency department visits nationwide. If they are unable to view or interpret fundus findings with either an ophthalmoscope or fundus photography, the students must know when it is necessary to refer their patients to an ophthalmologist for further evaluation." In other words, even if a physician does not plan to make ophthalmology their career, deepening their knowledge of this field will enhance their skills as a physician in any field.

At Washington University School of Medicine, ophthalmology-based instruction begins during the first year with examination of the eye and a lecture on various aspects of ocular disease. During the second year, students will receive a refresher lecture and lab on direct ophthalmoscopy as well as a lecture on ophthalmic manifestations of systemic disease and primary ocular disease. During the third year, students are given the opportunity during the surgery clerkship to spend four weeks on the ophthalmology services; in addition, there are lectures given to students during the Internal Medicine rotations. During the fourth year, a four-week intensive clinical rotation is tailored to students interested in pursuing ophthalmology as a career. Research electives are available under the guidance of numerous ophthalmology faculty members for fourth-year students.

- ¹ Graubart EB, Waxman EL, Forster SH, Giaconi JA, Rosenberg JB, Sankar PS, Goyal A, Mirza RG. Ophthalmology objectives for medical students: revisiting what every graduating medical student should know. *Ophthalmology*, December 2018; 125(12):1842-1843.

Website: <http://ophthalmology.wustl.edu>

Faculty

Our staff includes full-time university attending physicians for all subspecialties in ophthalmology, including ocular tumors, oculoplastics and uveitis. We have a very healthy mix of senior established faculty and junior members.

Alan A. and Edith Wolff Distinguished Professor and Chairman

Todd Margolis, MD, PhD (<https://ophthalmology.wustl.edu/people/todd-margolis-md-phd/>)

Pediatric Ophthalmology Director

R. Lawrence Tychsen, MD (<https://wuphysicians.wustl.edu/for-patients/find-a-physician/lawrence-tychsen/>)

Adult Ophthalmology Clinical Director

P. Kumar Rao, MD (<https://profiles.wustl.edu/en/persons/kumar-rao/>)

Ophthalmology Research Director

Peter Lukasiewicz, PhD (<https://profiles.wustl.edu/en/persons/peter-lukasiewicz/>)

Ophthalmology Director of Translational Research

Rajendra Apte, MD, PhD (<https://profiles.wustl.edu/en/persons/rajendra-apte/>)

Visit our website for more information about our faculty (<http://ophthalmology.wustl.edu/Faculty/>) and their appointments.

A

Henry W Allhoff, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD Illinois College of Optometry 1981
BA University of Missouri 1976

Navinkumar J Amin, MBBS, UNKNOWN, MS

Professor of Ophthalmology and Visual Sciences (Pending
Executive Faculty Approval) (primary appointment)
MBBS Bombay University Medical Scho 1965
UNKNOWN University of Bombay 1960
MS University of Bombay 1966

Shilpa S Amin, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MD University of MO Kansas City 1994
BA University of MO Kansas City 1994

Usha P Andley, MS, PHD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
Assistant Professor of Biochemistry and Molecular Biophysics
MS Delhi University 1972
BS Delhi University 1970
PHD Jawaharlal Nehru Univerisity 1977

Rajendra Apte, PHD, MD

Paul A. Cibis Distinguished Professor of Ophthalmology and
Visual Sciences (primary appointment)
Professor of Developmental Biology
Professor of Medicine
PHD University of Texas Southwest 1997
MD University of Bombay 1993

B

Alexander Steven Barsam, MBA, MD

Instructor in Ophthalmology and Visual Sciences (primary
appointment)
BS University of California 2010
MBA University of Miami 2015
MD University of Miami 2016

Steven Bassnett, PHD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
Professor of Cell Biology and Physiology
PHD University of East Anglia 1987
BS University of Wales 1982

Paul Douglas Becherer, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD School Not Listed 1975
BA Southern Illinois University 1971

Stanley C Becker, PHD, MA, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
PHD Washington Univ in St. Louis 1951
BA Washington Univ in St. Louis 1948
MA Washington Univ in St. Louis 1950
MD University of Chicago 1955

William L Becker, MD, MA

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BA Earlham College 1982
MD Washington Univ in St. Louis 1987
MA Washington Univ in St. Louis 1987

Gregg Jonathan Berdy, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BA Duke University 1979
MD Saint Louis University 1983

Paul M Bernier, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BS Indiana State University 1983
OD University of Missouri 1987

Anjali Maruti Bhorade, MD

Associate Professor of Ophthalmology and Visual Sciences
(primary appointment)
Associate Professor of Occupational Therapy
MD University of Chicago 1999

Frank Joseph Bier, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD University of MO St Louis 1984
BS University of Missouri 1979

Ronald C Bilchik, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BS University of Toledo 1963
MD Washington Univ in St. Louis 1967

Mark Gerald Birkmann, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BA University of Missouri 1988
OD University of Missouri 1992

Andrew N Blatt, MA, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MA Washington Univ in St. Louis 1991
BA Duke University 1987
MD Washington Univ in St. Louis 1992

Kevin Jay Blinder, MD

Professor of Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD University of MO Kansas City 1985

James C Bobrow, MD

Professor of Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD Johns Hopkins University Medic 1970
BA Yale University 1966

George M Bohigian, MD

Professor of Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD Saint Louis University 1965
BA Washington Univ in St. Louis 1961

Bernita Born-Wolf, BN, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BN Saint Louis University 1978
OD University of MO St Louis 1987

Paul J Botelho, MD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
MD Boston University 1992
BA Holy Cross College 1988

Rebekah Arletta Braslow, MD

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD Yale University 1987
BS Stanford University 1981

Sean Michael Breit, MD

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD Ohio State University 2002

Larry G Brokering, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD Illinois College of Optometry 1972

Marc Richard Brown, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD School Not Listed 1980
BA University of Missouri 1974

Nancy M Buchser, MD

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD University of Miami 2007

Dean B Burgess, MD

Professor Emeritus of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BA Occidental College 1963

MD University of California 1967

C**Carmen F Castellano, OD**

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BS Illinois College of Optometry 1980
BA University of MO St Louis 1977
OD Illinois College of Optometry 1982

Earl S Changar, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD School Not Listed 1957

Shiming Chen, MS, PHD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
Professor of Developmental Biology
BS Beijing University 1981
MS Beijing Medical University 1984
PHD State University of New York 1992

Brian Stewart Clark, PHD

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
Assistant Professor of Developmental Biology
PHD Medical College of Wisconsin 2013

Bruce H Cohen, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MD Johns Hopkins University 1980
BA Harvard University 1976

Nicholas J Colosi, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MD Saint Louis University 1968
BA La Salle University 1964

Pamela Ann Coslick-Fada, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD University of Missouri 1987

Steven Michael Couch, MD

Associate Professor of Ophthalmology and Visual Sciences
(primary appointment)
MD University of MO Kansas City 2006

John Bruce Crane II, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD University of MO St Louis 1991
BA William Jewell College 1987

Philip L Custer, MD

Professor of Ophthalmology and Visual Sciences (primary appointment)

MD Vanderbilt University 1978

BS Vanderbilt University 1974

D

David L Davidson, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

OD School Not Listed 1964

Alicia Beatriz De Maria Leiva, PHD

Instructor in Ophthalmology and Visual Sciences (primary appointment)

PHD Universidad de la Republica 2002

John James Deguire, MD

Instructor in Ophthalmology and Visual Sciences (primary appointment)

MD University of Illinois 1988

BA Washington Univ in St. Louis 1983

Paul E Diehl, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

OD Illinois College of Optometry 1959

E

John Robert Eigenbrodt, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

BS Southern Ill Univ Edwardsville 1985

OD University of Missouri 1988

Lawrence W Ernst, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

OD University of Missouri 1990

F

Raymond F Fada Jr, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

BS University of Michigan 1984

OD University of Missouri 1989

Adam Ross Fedyk

Instructor in Clinical of Ophthalmology & Visual Sciences (primary appointment)

Robert M Feibel, MD

Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)

MD Harvard University 1969

BA Johns Hopkins University 1965

Thomas A Ferguson, PHD, MS

Professor of Ophthalmology and Visual Sciences (primary appointment)

Associate Professor of Pathology and Immunology

BA Kent St University 1974

PHD University of Cincinnati 1982

MS Kent St University 1976

Kurt W Finklang, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

BS University of Missouri 1977

OD State University of New York 1981

Frank Donald Fontana, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

OD Illinois College of Optometry 1950

Bruce S Frank, MD

Assistant Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)

BS Mass Inst of Technology (MIT) 1972

MD Washington Univ in St. Louis 1976

G

Carrie S Gaines, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

BS University of Missouri 1984

OD University of Missouri 1988

Lawrence A Gans, MD

Assistant Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)

BA Columbia University 1972

MD Case Western Reserve Univ 1977

Stephen M Garnett, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

BS Indiana University Bloomington 1978

OD Indiana University Bloomington 1980

James M Gordon, MD

Assistant Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)

MD University of Minnesota 1966

BA University of Minnesota 1962

Mae Etsuko Gordon, PHD, MS

Professor of Ophthalmology and Visual Sciences (primary appointment)

Professor of Biostatistics

BA Portland St University 1967

PHD Univ of Wisconsin Madison 1979

MS Univ of Wisconsin Madison 1970

Kenneth O Green, MD

Assistant Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)
BS Saint Louis University 1956
MD University of Missouri 1960

Kevin William Greuloch, MD

Instructor in Ophthalmology and Visual Sciences (primary appointment)
MD University of Michigan 1999
BS University of Notre Dame 1995

Steven J Grondalski, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
OD Penn College of Optometry 1987
BA Saint Louis University 1983

H**George J Harocopos, MD**

Associate Professor of Ophthalmology and Visual Sciences (primary appointment)
Assistant Professor of Pathology and Immunology
BA Harvard University 1995
MD University of Virginia 2000

Alexander D Harris, OD, MA

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
BA University of Evansville 1969
OD University of Missouri 1986
MA Washington Univ in St. Louis 1972

Charles R Harris, PHD

Instructor in Clinical Ophthalmology and Visual Sciences (primary appointment)
BS University of Missouri 1970
PHD University of MO Columbia 1971

Lynn M Hassman, PHD, MD

Assistant Professor of Ophthalmology & Visual Science (primary appointment)
BS Evangel University 2002
PHD University of Virginia 2010
MD University of Virginia 2012

William L Herbold, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
BS School Not Listed 1967
OD School Not Listed 1967

James R Hoekel, OD

Instructor in Ophthalmology and Visual Sciences (primary appointment)
BS University of MO Columbia 1990
OD University of MO St Louis 1994

Augustine Richard Hong, MD

Assistant Professor in Ophthalmology and Visual Sciences (primary appointment)
BA University of Illinois 2004
MD University of Illinois Chicago 2009

Jing-Wei Huang, MD

Professor of Ophthalmology and Visual Sciences (primary appointment)
MD National Taiwan University 1981

Douglas Lee Huff, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
BS School Not Listed 1980
OD So Cal College of Optometry 1981

I**Michael J Isserman, MD**

Assistant Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)
BA Harvard University 1971
MD Washington Univ in St. Louis 1975

J**Jeffrey H Jacob, OD**

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
BA University of Missouri 1975
BS So Cal College of Optometry 1978
OD So Cal College of Optometry 1980

Sharon Leslie Jick

Instructor in Clinical Ophthalmology and Visual Sciences (primary appointment)

K**Stephen A Kamenetzky, MD1, MD**

Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)
MD1 School Not Listed 1970
BA Washington Univ in St. Louis 1967
MD Washington Univ in St. Louis 1970

Michael A Kass, MS, MD

Bernard Becker Professor of Ophthalmology and Visual Sciences (primary appointment)
Senior Associate Dean for Human Research Protection
MS Northwestern University Med 1966
MD Northwestern University 1966
BS Northwestern University 1963

Vladimir Jivkov Kefalov, PHD

Bernard Becker and Janet R Becker Distinguished Professorship in Ophthalmology (primary appointment)
Professor of Neuroscience
PHD Boston University 1999

Deborah Lynn Kerber, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD University of Missouri 1992
BS Southeast Missouri St Unvers 1986

Daniel Kerschensteiner, MD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
Professor of Biomedical Engineering (Courtesy)
Professor of Neuroscience
MD Georg August University 2004

Sangeeta Khanna

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)

William F Kiefer Jr, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BA Princeton University 1967
OD Illinois College of Optometry 1975
BS Illinois College of Optometry 1973

Mark Alan Kleindorfer, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BS Indiana University Bloomington 1977
OD Indiana University Bloomington 1979

Vivian Marie Kloke, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BS Mckendree College 1986
OD University of Missouri 1990

Harry L Knopf, MD

Professor of Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD Harvard University 1967
BA Harvard University 1963

Ronald Joseph Knox, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD School Not Listed 1956

Thomas Errol Kraemer, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD Indiana University Bloomington 1972
BA Millikin University 1968
BS Indiana University Bloomington 1970

L

Robert Louis Lamberg, MD

Associate Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BS University of MO St Louis 1972

MD Washington Univ in St. Louis 1976

Paul Arthur Lapoint, AA, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
AA Harris Stowe St College 1959
OD School Not Listed 1963
BS School Not Listed 1963

Andrew R. Lee, MD

Assistant Professor of Ophthalmology & Visual Sciences
(Pending Executive Faculty Approval) (primary appointment)
MD Washington Univ in St. Louis 2013

Steven F Lee, MD

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD University of Maryland 1987
BS University of Maryland 1983

Scott W Lewis, BS1, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BS1 So Cal College of Optometry 1975
BS University of Illinois 1968
OD So Cal College of Optometry 1977

James Walter Lieber, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BS Wayne State University 1976
OD Illinois College of Optometry 1981

Anthony J Lubniewski, MD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
BS University of Florida 1980
MD University of Florida 1985

Gregg T Lueder, MD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
Professor of Pediatrics
BS Iowa State University 1981
MD University of Iowa 1985

Peter David Lukasiewicz, PHD

Janet and Bernard Becker Professor of Ophthalmology (primary
appointment)
Professor of Neuroscience
PHD University of Michigan 1984
BS Brown University 1977

M

Robi N Maamari, MD

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
MD University of CA Irvine 2014

Lisa Marie Mackey, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BA University of Kansas 1989
OD University of Missouri 1993

Todd P Margolis, MD, PHD

Alan A and Edith L Wolff Distinguished Professor (primary
appointment)
Head of the Department of Ophthalmology and Visual Sciences
MD University of CA San Francisco 1984
BS Stanford University 1977
PHD University of CA San Francisco 1983

Mary Kay Migneco, OD, BS1

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
BS University of Missouri 1986
OD University of MO St Louis 1991
BS1 University of Missouri 1986

Barry David Milder, MD

Associate Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MD Washington Univ in St. Louis 1973
BS Mass Inst of Technology (MIT) 1969

Duane L Mitzel, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BS University of California 2000
MD Washington Univ in St. Louis 1977

Eugene James Mobley, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD Northern Illinois University 1950

Robert L Mobley, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD Illinois College of Optometry 1958

Cynthia L. Montana, PHD, MD

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
BS University of Virginia 2005
PHD Washington Univ in St. Louis 2014
MD Washington Univ in St. Louis 2014

Joshua L. Morgan, PHD

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
Assistant Professor of Neuroscience
PHD Washington Univ in St. Louis 2007
BA Florida Southern College 2001

Robert F Munsch, MD

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD Saint Louis University 1977
BA University of Colorado Boulder 1974

Raymond I Myers, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD Indiana University Bloomington 1970
BS University of Notre Dame 1966

N**Randall Earl Nacke**

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)

Matthew Newman, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MD Columbia University 1959
BA Vanderbilt University 1956

Paul F Nichols III, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BA University of California 1978
MD University of California 1982

O**Judith Mosinger Ogilvie, PHD, PHD1, MA**

Adjunct Research Assistant Professor of Ophthalmology and
Visual Sciences (primary appointment)
PHD Harvard University 1983
PHD1 Harvard University 1983
MA Harvard University 1978
BS Brown University 1976

P**Jeffrey Robert Padousis, MD**

Instructor in Clinical Ophthalmology and Visual Science (primary
appointment)
BA Vanderbilt University 1995
MD Saint Louis University 2000

Anjali K Pathak, MD1, MD

Associate Professor of Ophthalmology and Visual Sciences
(primary appointment)
MD1 West Virginia University 1997
BS West Virginia University 1993
BA West Virginia University 1993
MD West Virginia University 1997

John Craig Perlmutter, MD

Associate Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MD Cornell University 1971

BA Queens College 1967

Kisha Deslee Piggott, MD, PHD

Assistant Professor of Ophthalmology and Visual Sciences
Ophthalmology and Visual Sciences (primary appointment)
MD Emory University 2011
PHD Emory University 2009
BS Spelman College 2003

R

Rithwick Rajagopal, MD

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
MD New York University 2007

Mark S Rallo, OD

Instructor in Ophthalmology and Visual Sciences (primary
appointment)
BS Saint Louis University 1986
OD University of Missouri 1990

Prabakar Kumar Rao, MD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
MD University of Southern Calif 1995
BA University of CA San Diego 1991

V. Nathan Ravi, MS, MD, PHD

Professor of Ophthalmology and Visual Sciences (primary
appointment)
Professor of Energy, Environmental and Chemical Engineering
MS University of Bombay 1975
MD University of Miami 1988
PHD Virginia Tech 1980
BS University of Bombay 1972

Margaret Mary McGlynn Reynolds, MD

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
MD Cornell University 2014
BS Creighton University 2010

Michael Dennis Rohde, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD University of Missouri 1987
BS Valparaiso University 1983

Louis J Rosenbaum, MD

Associate Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
BA University of Michigan 1959
MD Washington Univ in St. Louis 1963

Mark A Rothstein, MD

Assistant Professor of Clinical Ophthalmology and Visual
Sciences (primary appointment)
MD University of Utah 1991

BA Williams College 1986

Michael B Rumelt, MD

Assistant Professor Emeritus of Clinical Ophthalmology and
Visual Sciences (primary appointment)
BS Lamar University 1962
MD Washington Univ in St. Louis 1966

Philip A Ruzycski, PHD

Assistant Professor of Ophthalmology and Visual Sciences
(primary appointment)
PHD Washington University in St. L 2018
BS Davidson College 2008

S

Scott Geoffrey Sagett

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)

Jonathan C Schell, MD

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)
BS Saint Louis University 2001
MD Saint Louis University 2005

Frederick W Schwagger, OD, BS1

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
BS Illinois College of Optometry 1957
OD Illinois College of Optometry 1957
BS1 Washington Univ in St. Louis 2000

Christopher G Seep, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD University of MO St Louis 1984
BA University of Missouri 1971

David Brian Seibel, OD

Adjunct Instructor in Ophthalmology and Visual Sciences
(primary appointment)
OD University of Missouri 1987

James Banks Shepherd III, MD

Associate Professor of Ophthalmology and Visual Sciences
(primary appointment)
BA Amherst College 1992
MD Columbia University 1997

Priya Saigal Shetty, MD

Instructor in Clinical Ophthalmology and Visual Sciences
(primary appointment)
MD University of Michigan 2007

Arsham Sheybani, MD

Associate Professor of Ophthalmology and Visual Sciences
(primary appointment)
MD Washington Univ in St. Louis 2008

Steven M Shields, MD

Assistant Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)

BS Washington Univ in St. Louis 1981

MD Washington Univ in St. Louis 1986

Alan Shiels, PHD

Professor of Ophthalmology and Visual Sciences (primary appointment)

Professor of Genetics

BS School Not Listed 1979

PHD University of London 1983

Howard Newton Short, MD

Instructor in Clinical Ophthalmology and Visual Sciences (primary appointment)

MD Saint Louis University 1978

BA Washington Univ in St. Louis 1974

Erin Gwen Sieck, MD

Assistant Professor of Ophthalmology and Visual Sciences (primary appointment)

MD University of MO Kansas City 2015

BA University of MO Kansas City 2013

Carla J Siegfried, MD

Jacquelyn E and Allan E Kolker M.D. Distinguished Professor of Ophthalmology (primary appointment)

BA University of MO Kansas City 1989

MD University of MO Kansas City 1989

Charles D Signorelli, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

BS School Not Listed 1957

OD School Not Listed 1957

Claud Randall Snowden, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

OD Illinois College of Optometry 1974

BS Illinois College of Optometry 1972

Craig H Sorce, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

BA Southern Illinois University 1988

OD University of Missouri 1992

Florentina Soto Lucas, PHD

Associate Professor of Ophthalmology and Visual Sciences (primary appointment)

PHD University of Alicante 1992

Mark H Spurrier, MD

Instructor in Clinical Ophthalmology and Visual Sciences (primary appointment)

MD Washington Univ in St. Louis 1980

BA Kansas State University 1976

Joseph Steska, OD

Instructor in Ophthalmology and Visual Science (primary appointment)

OD Illinois College of Optometry 2009

Michael Vincent Stock, BE1, MD, BE

Instructor in Ophthalmology and Visual Sciences (primary appointment)

BE1 Vanderbilt University 2008

MD Washington Univ in St. Louis 2012

BE Vanderbilt University 2008

James F Strieter, OD, MBA

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

OD School Not Listed 1954

MBA Southern Ill Univ Edwardsville 1988

BS School Not Listed 1953

Leanne Denise Stunkel, MD

Assistant Professor of Ophthalmology & Visual Science (primary appointment)

Assistant Professor of Neurology

BA Johns Hopkins University 2008

BA Johns Hopkins University 2008

MD Cornell University 2014

Brian Patrick Sumner, OD

Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)

OD Illinois College of Optometry 1978

Kenneth V Swanson

Instructor in Clinical Ophthalmology and Visual Sciences (primary appointment)

T

Paul M Tesser, PHD, MD

Associate Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)

PHD State Univ of NY Stonybrook 1990

BS Mass Inst of Technology (MIT) 1981

MD State Univ of NY Stonybrook 1991

Matthew A Thomas, MD

Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)

MD Harvard University 1991

BS Harvard University 1977

Linda Mei-Lin Tsai, MD

Professor of Ophthalmology and Visual Sciences (primary appointment)

MD Northwestern University 1995

BA Northwestern University 1990

Robert Lawrence Tychsen, MD

Professor of Ophthalmology and Visual Sciences (primary appointment)

John F Hardesty MD Distinguished Professor of Ophthalmology and Visual Sciences
Professor of Neuroscience
Professor of Ophthalmology and Visual Sciences in Pediatrics
BS Georgetown University 1975
MD Georgetown University 1979

V

Gregory Paul Van Stavern, MD
Professor of Ophthalmology and Visual Sciences (primary appointment)
Professor of Neurology
MD Pennsylvania State University 1993
BS La Salle University 1989

Gary Lee Vogel, OD
Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
BA University of Iowa 1970
OD Ohio State University 1977

David Edward Vollman, MD
Associate Professor of Ophthalmology and Visual Sciences (primary appointment)
MD Ohio State University 2006

W

James J Wachter, OD
Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
OD Illinois College of Optometry 1991
BA Saint Louis University 1987
BS Illinois College of Optometry 1990

Donald E Walter Jr, OD
Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
BS University of Houston 1971
OD University of Houston 1972

William Lee Walter, MD
Assistant Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)
MD Ohio State University 1954
BA De Paul University 1950

Stephen R Waltman, MD, MBA
Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)
BS Mass Inst of Technology (MIT) 1961
MD Yale University 1964

Stephen Alan Wexler, MD
Professor of Clinical Ophthalmology and Visual Sciences (primary appointment)
MD University of Michigan 1982
BS University of Michigan 1977

Richard Harris Wieder, MD
Associate Professor of Ophthalmology and Visual Sciences (primary appointment)
MD University of Illinois 1986
BS University of Illinois 1982

Philip Raymond Williams, PHD
Assistant Professor of Ophthalmology and Visual Sciences (primary appointment)
Assistant Professor of Neuroscience
PHD Washington Univ in St. Louis 2009

Michael L Wolf, OD
Adjunct Instructor in Ophthalmology and Visual Sciences (primary appointment)
OD University of Missouri 1987
BS University of Missouri 1979

Ming-Fong Agnes Wong, MD, PHD
Adjunct Professor of Ophthalmology and Visual Sciences (primary appointment)
MD McGill University 1994
BA Boston University 1990
PHD University of Toronto 2001

Research Electives

Ophthalmology and Visual Sciences Research Electives

During the fourth year, opportunities exist for many varieties of advanced clinical or research experiences.

Further descriptions of our research labs can be found on the Vision Core Researchers webpage (<http://vrcore.wustl.edu/residentstudentresearchopportunities/RSROHome/>).

Usha P. Andley, PhD
1114-C McMillan
Phone: 314-362-7167

Molecular basis of cataract; the function of molecular chaperones in cataract; proteomics, imaging and biochemical studies on cell culture and mouse models for crystallin gene mutations linked with cataract; testing drugs to inhibit cataract.

Rajendra S. Apte, MD, PhD
apte@vision.wustl.edu

Innate immunity and immune effector mechanisms in the retina; oxidative stress and cell death; models of developmental angiogenesis and neovascularization; inflammation and photoreceptor survival; macular degeneration.

Steven Bassnett, PhD
1114 McMillan
Phone: 314-362-1604

Eye development; stochastic models of lens growth; stem cell biology; age-related cataract; UV-induced somatic mutation; ocular manifestations of Marfan syndrome; cell death suppression on the optic axis; cell biology of transparent tissues.

Anjali Bhorade, MD

Phone: 314-362-5343

Evaluating the effect of glaucoma on visual function in older adults in the home; understanding the relationship between vision and driving in older adults with glaucoma.

Shiming Chen, PhD

618 McMillan

Phone: 314-747-4350

Our primary interests are molecular mechanisms regulating photoreceptor gene expression and the implications in understanding photoreceptor development and disease. We are focusing on three transcription factors (CRX, NRL and NR2E3) linked to photoreceptor degenerative diseases. Molecular genetics and biochemical approaches are used to identify the regulatory pathways associated with each factor. Mouse models are used to understand why mutations in these factors cause disease and to develop therapeutic strategies, including AAV gene therapy.

Steven M. Couch, MD

couch@vision.wustl.edu

Orbital inflammatory diseases; surgical techniques and novel treatments of periocular/orbital disease.

Susan M. Culican, MD, PhD (Adjunct Professor)

culican@wustl.edu

Clinical: Development of a low-cost, simple visual function task for screening for macular disorders in the primary care setting.

Education: Examination of the utility of assessment tools for evaluating resident clinical progression during residency training; development of new metrics to gauge resident progress.

Philip L. Custer, MD

custer@vision.wustl.edu

Enucleation and anophthalmic socket disorders; orbital fractures and implants; hemorrhagic complications during oculoplastic procedures.

Thomas A. Ferguson, PhD

1207 McMillan

Phone: 314-362-3745

Molecular basis of immune tolerance and how apoptotic cells tolerate the immune response; role of immune privilege in the pathogenesis of eye diseases such as age-related macular degeneration; role of basal autophagy in the cells of the eye by using the cre-loxP system to delete essential autophagy genes from specific cell types in the eye.

Mae Gordon, PhD

Phone: 314-362-3716

Ocular hypertension; glaucoma; keratoconus; adenoviral conjunctivitis; randomized clinical trial methodology; patient-reported outcome measures and measurement reliability.

George J. Harocopos, MD

harocopos@vision.wustl.edu

Age-related cataract; ophthalmic pathology.

Andrew Huang, MD, MPH

106 McMillan

Phone: 314-362-0403

Ocular surface stem cell biology; molecular therapy for corneal dystrophies and corneal neovascularization; oxidative stress of corneal endothelium; clinical research on dry eye and ocular surface disease.

Humeyra Karacal, MD

karacal@vision.wustl.edu

Treatment of uveitis; prevention of cataracts with antioxidants; antioxidants in age-related macular degeneration; retinal imaging and analysis using data mining techniques; designing operating room equipment to facilitate ophthalmic surgery.

Michael A. Kass, MD

kass@vision.wustl.edu

Principal Investigator of the Ocular Hypertension Treatment Study; diagnosis, treatment and public health aspects of glaucoma.

Vladimir Kefalov, PhD

625 McMillan

Phone: 314-362-4376

Our primary interests are photoreceptor neurobiology and retinal degeneration. We are a sensory neurobiology lab interested in the function of mammalian rod and cone photoreceptors. In addition, we are interested in the mechanisms of neurodegeneration in the retina, and we are working on developing pharmacological and gene therapy tools for preventing photoreceptor cell death.

Daniel Kerschensteiner, MD

kerschensteinerd@vision.wustl.edu
(kerschensteinerd@vision.wustl.edu)

Our primary interest is in understanding the principles that guide the assembly of neural circuits and deciphering the way they process information. We hope to identify features of the retinal circuit architecture that perform particular computations and characterize how they arise during development. We will then probe underlying mechanisms of circuit assembly and function through genetically targeted manipulations of specific cells in the retina.

John T. Lind, MD, MS

lindj@vision.wustl.edu

Glaucoma education; resident education; pharmacologic and surgical treatment of glaucoma; ophthalmic microbiology.

Gregg T. Lueder, MD

lueder@vision.wustl.edu

Retinoblastoma; eye misalignment (strabismus); retinopathy of prematurity; abnormal tearing; nasolacrimal disorders; cataracts; glaucoma.

Peter Lukasiewicz, PhD

1003C McMillan
Phone: 314-362-4284

Neurotransmitters; synapses; retinal function in health and disease; retinal information processing.

Todd P. Margolis, MD, PhD

margolist@vision.wustl.edu

Cellular and molecular mechanisms that regulate herpes simplex infection neurons; inexpensive telemedicine for reducing blindness in underserved populations.

Josh Morgan, PhD

jlmorgan@wustl.edu

Our primary interest is in the synaptic connectivity of visual circuits. Our goal is to understand the structure, development and pathology of the synaptic connectivity that gives rise to vision. Our core approach is to reconstruct neural circuits in the retina and visual thalamus using large-scale 3D electron microscopy.

John R. Pruett Jr., MD, PhD

pruettj@wustl.edu

We use fMRI to study the development of large-scale functional brain networks in infants at risk for autism spectrum disorder. We are specifically interested in fMRI correlates of visual joint attention. Our collaborative projects involve fMRI studies of visual-motor integration.

Kumar Rao, MD

rao@vision.wustl.edu

Surgical and medical therapies for disorders of retina and choroid; novel intraocular markers in uveitis and lymphoma; ultrasound therapy for choroidal melanoma.

Nathan Ravi, MD, PhD, MS, FAAO

ravi@vision.wustl.edu

Our research is directed toward understanding the pathophysiology of presbyopia and developing medical or surgical treatments for this condition.

Alan Shiels, PhD

1128 McMillan
Phone: 314-362-1637
shiels@vision.wustl.edu

Our primary interest is in the molecular genetic mechanisms underlying cataract, glaucoma and associated eye disorders. Specifically, we are interested in the following: (1) genome-wide linkage analysis and targeted (exome, amplicon) sequencing for the discovery of causative or susceptibility genes; and (2) genotype-phenotype and functional expression studies of naturally occurring and gene-targeted mouse models to characterize pathogenic mechanisms.

Carla J. Siegfried, MD

siegfried@vision.wustl.edu

Our research is focused on ocular oxygen metabolism and the development of open-angle glaucoma. We are studying how the oxygen gradient in the eye is altered in disease states as well as noninvasive methods of measuring corneal oxygen consumption.

Florentina Soto, PhD

sotolucasf@vision.wustl.edu

Studies in our laboratory aim to identify the molecular basis of dendrite and axon lamination and synapse formation during development and in the adult retina. In addition, we investigate how these molecules could be involved in the development of retinal pathologies, including retinal degeneration.

Larry Tychsen, MD

2S89 Eye Clinic, St. Louis Children's Hospital
Phone: 314-454-6026

Principal Investigator of NIH-funded studies of visual brain maldevelopment and repair in infant primates as well as of clinical studies of visuomotor abnormalities in cerebral palsy and pediatric refractive surgery.

Gregory P. Van Stavern, MD

vanstavern@vision.wustl.edu

Neuroimaging of the visual pathways; idiopathic intracranial hypertension; evidence-based medicine and clinical decision making; using the visual system as a model to study neurologic disorders.

Courses

Curriculum courses for Ophthalmology and Visual Sciences are listed below (p. 13).

Visit online course listings to view offerings for M50 Ophth (<https://courses.wustl.edu/CourseInfo.aspx?sch=M&dept=M50>).

First Year

Introduction to clinical ophthalmology begins during the first year with a lecture and practicum (peer exam) on taking an ocular history and performing an ocular exam. Emphasis is on ophthalmoscopy. The lectures and the practicum session will be led by Dr. Andrew Lee.

Second Year

During the second year, students will receive a refresher lecture and lab on direct ophthalmoscopy as well as a lecture on ophthalmic manifestations of systemic disease and primary ocular diseases.

Third Year

Third-Year Clerkship Opportunities

During the third year, students are given the opportunity to spend four weeks of their surgery rotation on the ophthalmology service. The students work closely with the ophthalmology residents and review the differential diagnosis of the "red eye," how to interpret an ophthalmologic consult note, and how to handle ocular emergencies. During this rotation, there is again emphasis on the use of the ophthalmoscope. Additional clinical skills introduced to rotating students include the use of the slit lamp and indirect ophthalmoscopy. All third-year students must complete the "Case Studies in Ophthalmology for Medical Students" with rotating faculty and attend the periodic "feedback/oral exam" session with Dr. Andrew Lee.

Third Year/Fourth Year

The Ophthalmology Sub-Internship Rotation occurs during this time. During the month of June prior to their fourth year, students interested in pursuing a career in ophthalmology are encouraged to complete this intensive four-week rotation. Students will have personal indirect ophthalmoscopy lenses available for use on the rotation. Formal didactic sessions and workshops will be used to teach students how to perform a detailed ophthalmic history and exam, including the mastery of advanced slit lamp techniques and indirect funduscopy. There will be an intense schedule of both live and recorded lectures delivered by ophthalmology faculty members, with post-lecture quizzes. Students will be expected to perform daily required reading. Retention and understanding of reading materials will be gauged by frequent quizzes. Students are strongly encouraged to present a case at the department's grand rounds. By the end of the rotation, students will be expected to function at the level of a first-year ophthalmology resident.

Curriculum Courses

M50 Ophth 801 Ophthalmology

This elective is for senior students who plan to apply for a residency in Ophthalmology. In accordance with any subinternship, medical students will be expected to function at the level of a beginning first-year ophthalmology resident on this rotation. The students will rotate through the resident eye clinic and the subspecialty clinics of the full time faculty of the Washington University Medical School Department of Ophthalmology and Visual Sciences (e.g., neuro-ophthalmology service, cornea/external disease service, etc.). Students may opt to check out indirect ophthalmoscopy lenses that may be used for the month to facilitate the acquisition of funduscopy skills. During the rotation, the student's responsibilities range from observation (including observing surgery) to working at a resident level and completing full eye examinations. There will be a rigorous academic curriculum for the rotation, including a weekly case presentation, bi-monthly wet lab sessions with a resident, weekly attendance at grand rounds, and a mix of medical student-oriented and resident-oriented conferences. On day one, students will receive a rotating call schedule for the entire month. A medical student is expected to be present at all times to assist the primary call ophthalmology resident during the rotation. By the end of the four-week rotation, the student is expected to be proficient in taking an ocular history and performing a complete eye exam including slit lamp biomicroscopy and indirect ophthalmoscopy. All students interested in this senior elective must meet with a Course Director in March of year WUMS-III. The final grade of the student is determined by input from the director of the particular service(s) through which the student rotated, plus the case presentations.

M50 Ophth 816 Away Rotation in Ophthalmology

This four-week elective is for senior students from medical schools across the United States who are in good standing at their home institution and who are planning to apply for a residency in ophthalmology. To enroll in this elective, students must first apply online for the elective via the visiting student

application service (VSAS). These applications will be reviewed and invitations will then be sent to individuals to enroll in the elective. Due to large demand, not all eligible away students will be accepted for the rotation. The dates for this elective are not flexible. The students will rotate through the resident eye clinic and the subspecialty clinics of the full time faculty of the Washington University Medical School Department of Ophthalmology and Visual Sciences (e.g., neuro-ophthalmology service, cornea/external disease service, etc.). In exchange for a refundable deposit, students may opt to check-out indirect ophthalmoscopy lenses that may be used for the month to facilitate the acquisition of funduscopy skills. During the rotation, the student's responsibilities range from observation (including observing surgery) to working at a resident level and completing full eye examinations. Didactics will include weekly case presentation sessions, weekly attendance at grand rounds, and a mix of medical student-oriented and resident-oriented conferences. Also, there will be medical student-oriented workshops to learn the basics of the slit lamp and indirect ophthalmoscopy. On day one, students will receive a schedule of conferences that they are expected to attend during the month. By the end of the four-week rotation, the student is expected to be proficient in taking an ocular history and performing a complete eye exam including slit lamp biomicroscopy and indirect ophthalmoscopy.

M50 Ophth 900 Research Elective - Ophthalmology

Research opportunities may be available. If interested, please contact the Department of Ophthalmology.
