The Edward S. Harkness Eye Institute Presents

**PRECISION OPHTHALMOLOGY™ 2018**

Optimizing the Refractive Status of the Eye

**FRIDAY, NOVEMBER 30**

The University Club
1 West 54th Street, New York City

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Program Chairs:
Leejee H. Suh, MD • Danielle Trief, MD, MSc • Stephen L. Trokel, MD

Keynote Speakers:
Andrei Tkatchenko, MD, PhD • Edward E. Manche, MD
Francis W. Price Jr., MD • Raymond M. Stein, MD, FRCSC

Columbia Ophthalmology

New York-Presbyterian
Welcome. This is Columbia Ophthalmology’s Third Annual Precision Ophthalmology Meeting. The theme for this year’s event is “Optimizing the Refractive Status of the Eye,” and is a forum of key thought leaders who will present updates and strategies to optimize the clinical treatment of anterior segment conditions like Keratoconus, Myopia, Refractive Surgery, Ocular Surface Diseases, Corneal Transplantation, and Cataract Surgery. The collaborative efforts of the clinicians and scientists who will be presenting in this meeting will provide a lively, engaging, and very educational experience for everyone in attendance.

George “Jack” Cioffi, MD
Jean and Richard Deems Professor of Ophthalmology
Edward S. Harkness Professor of Ophthalmology
Chair, Department of Ophthalmology
Ophthalmologist-in-Chief, NewYork-Presbyterian Hospital/Columbia University Medical Center

PROGRAM CO-CHAIRS

Leejee H. Suh, MD
Miranda Wong Tang Associate Professor of Ophthalmology
Director, Cornea & Refractive Surgery Service
Director, Cornea Fellowship Program

Danielle Trief, MD, MSc
Assistant Professor of Ophthalmology

Stephen L. Trokel, MD
Professor of Ophthalmology
PRECISION OPHTHALMOLOGY 2018
OPTIMIZING THE REFRACTIVE STATUS OF THE EYE

The University Club
1 West 54th Street, New York, NY

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JONAS LECTURE
Andrei Tkatchenko, MD, PhD
Columbia University
“Pharmacogenomics Pipeline for Anti-Myopia Drug Development: A New Path to Myopia Cure”

DEVOE LECTURE
Edward E. Manche, MD
Stanford Eye Laser Center and Professor of Ophthalmology in the Stanford University School of Medicine
“Modern Keratorefractive Surgery with LASIK, SMILE and PRK”

DUNNINGTON LECTURE
Francis W. Price Jr., MD
Price Vision Group
“Changing Expectations on Refractive End Points with Transplant Surgery: How the Bars Seem to Rise Faster Than Our Technology”

AND SPECIAL GUEST
Raymond E. Stein, MD, FRCSC
Bochner Eye Institute
“Topography-guided PRK and Corneal Cross-linking: Lessons Learned Over 10 Years”
LEARNING OBJECTIVES

1. Obtain a better understanding of how to manage progressive keratoconus, and identify the future of crosslinking treatments.

2. Obtain a better understanding of the basic science of myopia and methods that are being utilized to intervene in myopia progression.

3. Identify different methods of refractive surgery and the future/emerging technologies and indications for surgery.

4. Identify the latest in ocular surface research, dry eye imaging, medical contact lenses, and various corneal transplantation techniques.

5. Analyze the current state of cataract surgery with knowledge in surgical calculations, laser platforms, and how to manage challenging cataract cases.

ACCREDITATION STATEMENT

The Columbia University Vagelos College of Physicians and Surgeons is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA CREDIT DESIGNATION STATEMENT

The Columbia University Vagelos College of Physicians and Surgeons designates this live activity for a maximum of 7.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
CME: FACULTY DISCLOSURES

DISCLOSURES

Before the program, all faculty will disclose the existence of any financial interest and/or other relationship(s) (e.g. employee, consultant, speaker’s bureau, grant recipient, research support, stock ownership or any other special relationship) they might have with a) the manufacturer(s) of any commercial product(s) to be discussed during their presentation and/or b) any commercial contributor to this activity. When unlabeled uses are discussed, these will also be indicated.

Lama A. Al-Aswad, MD, MPH
None

James D. Auran, MD
Contracted Research
Carl Zeiss Meditec, Inc.

Steven E. Brooks, MD*
None

Royce W.S. Chen, MD
Consulting Fees
Carl Zeiss Meditec, Inc., Alimera Sciences, Inc., and Allergan PLC

George A. Cioffi, MD
None

George J. Florakis, MD
Ownership Interest & Payment for writing material
Ironwood Medical Information Technologies

Y. Shira Kresch, OD
None

Edward E. Manche, MD*
Ownership Interest
Seros Medical, LLC
Consulting Fees
Fees received for promotional services
Johnson & Johnson Vision
Contracted Research
Ownership Interest
RxSight, Inc., Seros Medical, LLC, and Veralas, Inc.

Irene H. Maumenee, MD
None

David Paik, MD
Receipt of Intellectual Property Rights/Patent Holder
Columbia University

Lisa Park, MD
None

Francis W. Price Jr., MD*
Fees received for promotional services
Ownership Interest

David Ritterband, MD*
None

Suzanne W. Sherman, OD FAAO
None

Ronald H. Silverman, PhD
Royalty & Receipt of Intellectual Property Rights/Patent Holder
Cornell Research Foundation
Ownership Interest
ArcScan Inc.

Raymond M. Stein, MD, FRCSC
None

Leejee H. Suh, MD
Consulting Fees
Allergan PLC, and Shire PLC

Andrei Tkatchenko, MD, PhD
Patent Pending
Targeting select signaling pathways for the treatment of nearsightedness

Danielle Trief, MD, MSc
None

Stephen L. Trokel, MD*
None

Sinisa Vukelic, PhD
Ownership Interest
Clarity Vision Technologies

* Indicates that the speaker intends to discuss unlabeled uses of commercial product, or an investigational use of a product not yet approved for this purpose. The speaker will disclose this information during his/her presentation.
FRIYDAY, NOVEMBER 30TH, 2018

7–8 a.m.  Registration and Breakfast
8–8:05 a.m.  Welcome and Opening
George (Jack) A. Cioffi, MD

SESSION I  Keratoconus: The Future is Now
8:05–8:15 a.m.  Genetics of Keratoconus and Keratoglobus
Irene H. Maumenee, MD
8:15–8:25 a.m.  Crosslinking (CXL) in Clinical Practice:
                Pearls from a Decade of CXL at Columbia University
                Leejee H. Suh, MD
8:25–8:35 a.m.  Pediatric Crosslinking: How Young Should We Be Crosslinking?
                Danielle Trief, MD, MSc
8:35–8:45 a.m.  New Imaging of Keratoconus
                Ronald H. Silverman, PhD
8:45–8:55 a.m.  The Future of Crosslinking (CXL)
                David Paik, MD
8:55–9:15 a.m.  PANEL DISCUSSION: “Pearls and Pitfalls of CXL”
9:15–9:35 a.m.  Break

SESSION II  The Myopia Epidemic
9:35–9:45 a.m.  The Myopia Control Study
                Steven E. Brooks, MD
9:45–9:55 a.m.  Contact Lens Technology in Myopia Control
                Y. Shira Kresch, OD
9:55 a.m.  Introduction of Jonas Children’s Vision Care Lecturer
         Steven E. Brooks, MD
9:55–10:25 a.m.  Jonas Lecture: Pharmacogenomics Pipeline for Anti-Myopia
                 Drug Development: “A New Path to Myopia Cure”
                 Andrei Tkatchenko, MD, PhD
10:25 a.m.  Presentation of the Appreciation Token
10:25–10:40 a.m.  PANEL DISCUSSION: “Early Intervention of Myopia Control”
10:40–11 a.m.  Break

SESSION III  The Expanding World of Refractive Surgery
11–11:10 a.m.  Topography-guided PRK and Corneal Crosslinking:
                 Lessons Learned Over 10 Years
                 Raymond M. Stein, MD, FRCSC
11:10–11:20 a.m.  Patient Reported Outcomes and Satisfaction with LASIK
                 Francis W. Price Jr., MD
11:20–11:30 a.m. Novel Femtosecond Laser Applications For Refractive Surgery
Sinisa Vukelic, PhD

11:30–11:40 a.m. Corneal Laser for Age-related Macular Degeneration: A New Discovery
Raymond M. Stein, MD, FRCSC

11:40 a.m. Introduction of the DeVoe Lecturer
Stephen L. Trokel, MD

11:40 a.m.–12:10 p.m. DeVoe Lecture: “Modern Keratorefractive Surgery with LASIK, SMILE and PRK”
Edward E. Manche, MD

12:10 p.m. Presentation of the Appreciation Token

12:10–12:30 p.m. PANEL DISCUSSION: “Choosing the Correct Procedure for Your Family Member”

12:30–1:30 p.m. Lunch and Exhibition

SESSION IV Improving Corneal Clarity: From the Surface to the Endothelium

1:30–1:40 p.m. Meibomian Gland Disease and the Ocular Microbiome
Royce W.S. Chen, MD

1:40–1:50 p.m. The Latest in Dry Eye Imaging
Stephen L. Trokel, MD

1:50–2 p.m. Pediatric Corneal Transplantation
Danielle Trief, MD, MSc

2–2:10 p.m. The Latest in Contact Lens Management
Suzanne W. Sherman, OD, FAAO

2:10–2:20 p.m. How to Transition into a Successful DMEK Surgeon
George J. Florakis, MD

2:20 p.m. Introduction of Dunnington Lecturer
Leejee H. Suh, MD

2:20–2:50 p.m. Dunnington Lecture: “Changing Expectations on Refractive End Points with Transplant Surgery: How the Bars Seem to Rise Faster than Our Technology”
Francis W. Price Jr., MD

2:50 p.m. Presentation of the Appreciation Token

2:50–3:10 p.m. PANEL DISCUSSION: Optimizing Corneal Health

3:10–3:30 p.m. Break

SESSION V Achieving Premium Results in Today’s Cataract Surgery

3:30–3:40 p.m. Pearls for Precision Results in Refractive Cataract Surgery
Lisa Park, MD

3:40–3:50 p.m. Intraocular Lens Selection in Challenging Patients
James D. Auran, MD

3:50–4 p.m. MIGS Surgery in the Cataract Setting
Lama A. Al-Aswad, MD, MPH

4–4:10 p.m. Managing Astigmatism in Cataract Surgery
David Ritterband, MD

4:10–4:20 p.m. Femtosecond Laser Platforms for Cataract Surgery
Leejee H. Suh, MD

4:20–4:50 p.m. PANEL DISCUSSION: Challenging Cataract Case Presentations

4:50–4:55 p.m. Program Conclusion and Wrap-Up
Leejee H. Suh, MD

5–6 p.m. Cocktail Reception/Meet and Greet
The Arthur Gerard DeVoe, MD Lectureship at Columbia University was established in 1999 to honor Arthur Gerard DeVoe, MD for his extraordinary contributions to ophthalmology and vision science and to recognize his leadership of the Department of Ophthalmology at the Edward S. Harkness Eye Institute. Supported through the generosity of Joan Gilson, a former patient of Dr. DeVoe, the lectureship attracts international leaders in ophthalmology who present recent and important findings in their field.

The John H. Dunnington, MD Memorial Fund were established by Dr. Dunnington’s nephew, Walter Dunnington, in 1984. The Lectureship was introduced by The Executive Committee of the Department of Ophthalmology to perpetuate this outstanding physician’s contributions in the field of ophthalmology and to the development of the Edward S. Harkness Eye Institute.

Jonas Children’s Vision Care is a first-of-its-kind, integrated effort to prevent and treat blindness and other serious eye disorders in children that will draw upon Columbia Ophthalmology’s many strengths. Those include strong clinical care from infancy throughout life, genetic testing of individuals with eye disease for diagnosis and treatment, the resources of a wide array of laboratories, and the University’s many initiatives in an interdisciplinary field called translational research. In addition, the project will help establish a state-of-the-art pediatric ophthalmic diagnostic and imaging center at New York-Presbyterian/Morgan Stanley Children’s Hospital.
**SPEAKER BIOS**

**Andrei Tkatchenko, MD, PhD** – The main focus of Dr. Tkatchenko’s research is identification and characterization of genes and genetic networks underlying refractive eye development, as well as studies of genetic variations causing development of refractive errors. Dr. Tkatchenko recently developed a mouse model of myopia and demonstrated that mice undergo emmetropization. He also demonstrated that refractive eye development and myopia in the mouse are fundamentally similar to those in other mammals, including humans. Dr. Tkatchenko’s laboratory at Columbia University Medical Center is using classical mouse genetics, gene-targeted mouse models, and advanced systems genetics approaches to study genes and genetic networks underlying refractive eye development and myopia.

**Edward E. Manche, MD** – Dr. Manche is the Director of Cornea and Refractive Surgery at the Stanford Eye Laser Center and Professor of Ophthalmology in the Stanford University School of Medicine. He is a world renowned expert in laser and surgical techniques for vision correction, and has personally performed over 45,000 laser vision correction procedures. He is recognized as one of the top performing laser vision correction surgeons in the United States. He is honored to be listed in a number of surveys of the best physicians in the United States including: “America’s Top Doctors,” “Best Doctors in America,” “Top Doctors in Silicon Valley,” “America’s Top Ophthalmologists,” “Top 500 Doctors in the Bay Area” and “Guide to Americas Top Ophthalmologists.”

**Francis W. Price, Jr., MD** – Principal at Price Vision Group, Dr. Price has earned national and international recognition for his research and contributions in the field of ophthalmology. In the past 10 years, more than 700 corneal surgeons from more than 30 countries have attended his surgical training classes in Indianapolis. In addition, Dr. Price is regularly requested to present talks at eye meetings around the world. Indianapolis patients of Dr. Francis Price Jr. know him as a caring and gifted doctor who prioritizes their eye health and vision. But the numerous patients and physicians who travel great distances to benefit from his expertise know him as one of the top corneal specialists in the field who has published more than 160 ophthalmic articles in peer-reviewed journals and authored several cornea textbooks.

**Raymond M. Stein, MD, FRCSC** – Dr. Raymond Stein is a board-certified ophthalmologist and the Medical Director of Bochner Eye Institute. As an esteemed global leader in refractive surgery, he has been honored with numerous awards from a variety of prestigious international medical organizations, including the American Academy of Ophthalmology, the International Intraocular Implant Club and the Contact Lens Association of Ophthalmologists. Because of his commitment to advanced technologies and surgical excellence, Dr. Stein also served as the President of the Canadian Society of Cataract and Refractive Surgery.
Optimizing the Refractive Status of the Eye

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