Johns Hopkins
Retinal Degenerations and
Clinical Electrophysiology
Course 2020

January 31–February 1, 2020
Baltimore, Maryland

Check out our mobile app CloudCME.
Organization Code: HopkinsCME

Early Bird Rates Available
The Wilmer Eye Institute
Johns Hopkins School of Medicine
Presents

Johns Hopkins Retinal Degenerations and Clinical Electrophysiology Course 2020
January 31–February 1, 2020

Mount Washington Conference Center
Baltimore, Maryland

This activity has been approved for AMA PRA Category 1 Credits™.
DESCRIPTION
This two-day course is designed to provide an update on the latest exciting
and cutting-edge developments in the field of retinal degeneration, repair,
and regeneration. The course covers recent advances in retinal stem cells
and gene therapy, retinal implants, and pharmacotherapy. The program
also includes a refresher course on visual electrophysiology for clinicians
and researchers.

WHO SHOULD ATTEND
This activity is intended for ophthalmologists, optometrists, researchers,
trainees, and fellows.

OBJECTIVES
After attending this activity, the participant will demonstrate the ability to:
• Review recommendations from the International Society of Clinical
Electrophysiology of Vision (ISCEV) regarding visual neurophysiology
testing.
• Analyze retinal stem cell and gene therapy clinical trials.
• Identify the latest developments in the field of retinal degeneration,
repair and regeneration.

ACCREDITATION STATEMENT
The Johns Hopkins University School of Medicine is
accredited by the Accreditation Council for Continuing
Medical Education (ACCME) to provide continuing medical
education for physicians.

CREDIT DESIGNATION STATEMENT
The Johns Hopkins University School of Medicine designates this live
activity for a maximum of 16.75 AMA PRA Category I Credits™. Physicians
should claim only the credit commensurate with the extent of their
participation in the activity.

OTHER CREDIT
COPE approval is pending.

POLICY ON PRESENTER AND PROVIDER DISCLOSURE
It is the policy of the Johns Hopkins School of Medicine that the presenter
and provider globally disclose conflicts of interest. The Johns Hopkins
School of Medicine CME has established policies that will identify and
resolve conflicts of interest prior to this educational activity. Detailed
disclosure will be made prior to presentation of the education.

General Information

REGISTRATION
January 31, 2020 • 7:00 am – 8:00 am, 12:30 pm – 1:30 pm
February 1, 2020 • 7:00 am – 8:00 am

LOCATION
Mount Washington Conference Center
5801 Smith Avenue, Suite 1100
Baltimore, Maryland 21209
Toll Free: (800) 488-8734
Phone: (410) 735-7964
Fax: (410) 735-4907

City close and country quiet, the Mount Washington Conference Center
and its historic Octagon is a distinctive destination for meetings and
events. Nestled among the hills just beyond the city limits of Baltimore, it
combines over a century of educational traditions with progressive design
and technology, creating an ideal setting for communicating and sharing
ideas.

Overnight accommodations are available and must be reserved by
January 1, 2020. Please call (410) 735-7964 and mention the Wilmer
Degeneration/Regeneration Conference to receive the standard guest
room rate of $109, plus taxes. Check-in is 3:00 PM. Check-out is 11:00 AM.
Directions and campus parking information are available on our website
under the Contact Us tab at HopkinsCME.cloud-cme.com. On-site
complimentary parking is available.

Johns Hopkins is smoke-free
FEES
Register Online: hopkinscme.cloud-cme.com/default.aspx?P=5&EID=23954

Methods of Payment: We require full payment prior to the start of the activity. On-site payments by credit card only. The registration fee includes instructional materials, continental breakfast, refreshment breaks and lunches.

<table>
<thead>
<tr>
<th>Registration Fees:</th>
<th>Early Bird Rates Until 12/31/19</th>
<th>Regular Rates After 12/31/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Electrophysiology Course (Jan 31, Half Day – Part I)</td>
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<td>$250</td>
</tr>
<tr>
<td>Retinal Degeneration Course (Jan 31, Half Day – Part II and Feb 1, Full Day)</td>
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<td>$500</td>
</tr>
<tr>
<td>Day 1 / Day 2 Bundle</td>
<td>$585</td>
<td>$685</td>
</tr>
</tbody>
</table>

LATE FEE AND REFUND POLICY
A $50 late fee applies to registrations received after 5:00 p.m. ET on January 25, 2020. A handling fee of $50 will be deducted for cancellation. An additional fee may apply for cancellation of other events, including workshops and social activities. Refund requests must be received by fax or mail by January 25, 2020. No refunds will be made thereafter. Transfer of registration to another Johns Hopkins activity in lieu of cancellation is not possible.

SYLLABUS
The syllabus will be accessible online and via your mobile device in the CloudCME App prior to the activity.

HOW TO OBTAIN CREDIT
Post activity, an online evaluation will be available to attendees to evaluate the activity and individual presentations and to identify future educational needs. Upon completion of the evaluation, the learner must attest to the number of hours in attendance. Credits earned will be added to the learner’s transcript and immediately available for print. The last day to access the evaluation and attest to your credits is March 17, 2020.

An outcome survey will be sent to all physician attendees within two months post activity to assist us in determining what impact this activity had on the learner’s practice.

AMERICANS WITH DISABILITIES ACT
The Johns Hopkins School of Medicine fully complies with the legal requirements of the ADA and the rules and regulations thereof. Please notify us if you have any special needs.

TO REGISTER OR FOR FURTHER INFORMATION
Register Online: hopkinscme.cloud-cme.com/aph.aspx?P=5&EID=23954

Register by Phone: 410-502-9636
Register by Fax: 866-510-7088
Confirmation/Certificates/Transcripts: 410-502-9636
General Information: 410-955-2959
E-mail the Office of CME: cmenet@jhmi.edu
Follow us on Twitter: twitter.com/HopkinsCME
Facebook: facebook.com/HopkinsCME

Check out our mobile app CloudCME.
Organization Code: HopkinsCME

For website and CloudCME mobile app technical difficulties, email: cmetechsupport@jhmi.edu

For general information, please visit the activity webpage at hopkinscme.cloud-cme.com/aph.aspx?P=5&EID=23954
# Program

## Clinical Electrophysiology Course (Half Day – Part I)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00</td>
<td>Registration, Breakfast and Exhibits</td>
<td></td>
</tr>
<tr>
<td>8:00</td>
<td>Welcome, Introduction and Conference Goals</td>
<td>Fernando Arevalo, MD, PhD; Mandeep Singh, MD, PhD</td>
</tr>
<tr>
<td>8:05</td>
<td>Origins of the Electroretinogram</td>
<td>Laura Frishman, PhD, FAAO, FARVO</td>
</tr>
<tr>
<td>8:30</td>
<td>Full-Field Electroretinography</td>
<td>Janet Sunness, MD</td>
</tr>
<tr>
<td>8:55</td>
<td>The Electronegative Electroretinogram</td>
<td>Stephen Tsang, MD, PhD</td>
</tr>
<tr>
<td>9:20</td>
<td>Multifocal Electroretinogram and Visual Evoked Potential</td>
<td>Mary Johnson, PhD</td>
</tr>
<tr>
<td>9:55</td>
<td>Refreshment Break and Exhibits</td>
<td></td>
</tr>
<tr>
<td>10:10</td>
<td>Perimetry and Micropereimetry</td>
<td>Robert Chun, OD</td>
</tr>
<tr>
<td>10:35</td>
<td>Visual Electrophysiology in Children</td>
<td>Jefferson Doyle, MD, PhD, MHS, MA</td>
</tr>
<tr>
<td>11:00</td>
<td>SCEV Standards for Visual Electrophysiology</td>
<td>Laura Frishman, PhD, FAAO, FARVO</td>
</tr>
<tr>
<td>11:25</td>
<td>Clinical Cases</td>
<td><em>Moderator</em>: Mandeep Singh, MD, PhD</td>
</tr>
<tr>
<td>12:35</td>
<td>Lunch and Exhibits</td>
<td></td>
</tr>
</tbody>
</table>

## Retinal Degeneration Course (Half Day – Part II)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:35</td>
<td>Genetic Testing</td>
<td>Carolyn Applegate, MGC</td>
</tr>
<tr>
<td>2:05</td>
<td>Retinitis Pigmentosa</td>
<td>Gislin Dagnelie, PhD</td>
</tr>
<tr>
<td>2:35</td>
<td>Gyrate Atrophy</td>
<td>David Valle, MD</td>
</tr>
<tr>
<td>3:05</td>
<td>Genetic and Cellular Basis of Color Vision</td>
<td>Jeremy Nathans, MD, PhD</td>
</tr>
<tr>
<td>3:35</td>
<td>Refreshment Break</td>
<td></td>
</tr>
<tr>
<td>3:55</td>
<td>Cone Dysfunction and Dystrophies</td>
<td>Matthew Simonovic, MB, BChir, PhD, FRANZCO</td>
</tr>
<tr>
<td>4:25</td>
<td>Stargardt Disease: Lessons from the ProgStar Study</td>
<td>Xiangrong Kong, PhD</td>
</tr>
<tr>
<td>4:55</td>
<td>Best Disease</td>
<td>Stephen Tsang, MD, PhD</td>
</tr>
<tr>
<td>5:25</td>
<td>Autoimmune Retinopathy</td>
<td>Hatrice Nida Sen, MD, MHS</td>
</tr>
<tr>
<td>5:55</td>
<td>Adjourn</td>
<td></td>
</tr>
</tbody>
</table>

## Acknowledgement

Applications for commercial support from health care related industries are pending. A complete list of contributors will be provided in the syllabus. Please note that commercial support received is solely for the educational component of the activity and will not be used to provide food and beverage.

**Please note:** The Physician Payments Sunshine Act was enacted by Congress to increase public awareness of financial relationships between drug and medical device manufacturers and physicians. In compliance with the requirements of this Act, the commercial supporter’s of this activity may require the Johns Hopkins School of Medicine to report certain professional information (such as name, address, National Provider Identifier (NPI), and State License number) of physician attendees who receive complimentary food and beverage in conjunction with a CME activity. The commercial supporter is required to submit the collected data to the Centers for Medicare and Medicaid Services which will then publish the data on its website.
### Retinal Degenerations Course (Full Day)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00</td>
<td>Registration, Breakfast and Exhibits</td>
</tr>
<tr>
<td>8:00</td>
<td>Welcome, Introduction and Conference Goals</td>
</tr>
<tr>
<td></td>
<td>James Handa, MD</td>
</tr>
<tr>
<td>8:05</td>
<td>Vitamin A Therapy</td>
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<tr>
<td></td>
<td>Robert Massof, PhD</td>
</tr>
<tr>
<td>8:35</td>
<td>Retinal Prosthesis: Current Status</td>
</tr>
<tr>
<td></td>
<td>Fernando Arevalo, MD, PhD</td>
</tr>
<tr>
<td>9:05</td>
<td>Antioxidant Treatment for Retinitis Pigmentosa</td>
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<tr>
<td></td>
<td>Peter Campochiaro, MD</td>
</tr>
<tr>
<td>9:35</td>
<td>Refreshment Break and Exhibits</td>
</tr>
<tr>
<td>10:00</td>
<td>Gene Therapy: Concept &amp; Basic Science</td>
</tr>
<tr>
<td></td>
<td>Daniel Lipinski, PhD</td>
</tr>
<tr>
<td>10:30</td>
<td>Clinical Development of Retinal Gene Therapy</td>
</tr>
<tr>
<td></td>
<td>Alun Barnard, BSc, PhD</td>
</tr>
<tr>
<td>11:00</td>
<td>Leber Congenital Amaurosis Gene Therapy</td>
</tr>
<tr>
<td></td>
<td>Jason Comander, MD, PhD</td>
</tr>
<tr>
<td>11:30</td>
<td>Keynote Lecture: “Ocular Albinism: Bench to Bedside”</td>
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<tr>
<td></td>
<td>Brian Brooks, MD, PhD</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch and Exhibits</td>
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<tr>
<td>1:20</td>
<td>Choroidal and Vascular Regeneration</td>
</tr>
<tr>
<td></td>
<td>Gerard Lutty, PhD</td>
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<tr>
<td>1:50</td>
<td>Retinal Organoids</td>
</tr>
<tr>
<td></td>
<td>Robert Johnston Jr., PhD</td>
</tr>
<tr>
<td>2:20</td>
<td>Retinal Pigment Epithelium Transplantation: Concepts and Basic Science</td>
</tr>
<tr>
<td></td>
<td>Kapil Bharti, PhD</td>
</tr>
<tr>
<td>2:50</td>
<td>Retinal Pigment Epithelium Transplantation: Clinical Trials</td>
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<tr>
<td></td>
<td>Marco Zarbin, MD, PhD, FACS</td>
</tr>
<tr>
<td>3:20</td>
<td>Photoreceptor Transplantation</td>
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<tr>
<td></td>
<td>Mandeep Singh, MD, PhD</td>
</tr>
<tr>
<td>3:50</td>
<td>Refreshment Break</td>
</tr>
<tr>
<td>4:10</td>
<td>Safety and Regulation of Retinal Stem Cell Therapy</td>
</tr>
<tr>
<td></td>
<td>Thomas Albini, MD</td>
</tr>
<tr>
<td>4:40</td>
<td>Retinal Stem Cell Therapy Progress in South America</td>
</tr>
<tr>
<td></td>
<td>Rubens Belfort Jr., MD, PhD, MBA</td>
</tr>
<tr>
<td>5:10</td>
<td>Antisense Oligonucleotide Therapy</td>
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<tr>
<td></td>
<td>Bart Leroy, MD, PhD</td>
</tr>
<tr>
<td>5:40</td>
<td>Gene Editing: Concepts and Clinical Application</td>
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<tr>
<td></td>
<td>Donald Zack, MD, PhD</td>
</tr>
<tr>
<td>6:10</td>
<td>Closing Remarks</td>
</tr>
<tr>
<td></td>
<td>Fernando Arevalo, MD, PhD; Mandeep Singh, MD, PhD</td>
</tr>
</tbody>
</table>

You will receive an email notification to complete the evaluation form and to attest to the number of hours in attendance.

The registration desk will remain open during conference hours.

The Johns Hopkins School of Medicine takes responsibility for the content, quality and scientific integrity of this CME activity.

The schedule is subject to change.
Speakers

ACTIVITY DIRECTORS
Fernando Arevalo, MD PhD
Edmund F. and Virginia B. Ball Professor of Ophthalmology
Chairman, Department of Ophthalmology
Johns Hopkins Bayview Medical Center
Wilmer Eye Institute, Johns Hopkins University

Mandeep Singh, MD, PhD
Assistant Professor of Ophthalmology
Johns Hopkins Center for Stem Cells and Ocular Regenerative Medicine (STORM)
Wilmer Eye Institute, Johns Hopkins University

JOHNS HOPKINS SPEAKERS
Carolyn Applegate, MGC
Genetic Counselor
Department of Genetics, Johns Hopkins University

Peter Campochiaro, MD
George S. and Dolores Dor Eccles Professor of Ophthalmology and Neuroscience
Wilmer Eye Institute, Johns Hopkins University

Robert Chun, OD
Assistant Professor of Ophthalmology
Wilmer Eye Institute, Johns Hopkins University

Gislin Dagnelie, PhD
Associate Director, Lions Vision Research and Rehabilitation Center
Associate Professor of Ophthalmology
Wilmer Eye Institute, Johns Hopkins University

Jefferson Doyle, MD, PhD, MHS, MA
Assistant Professor of Ophthalmology and Genetics
Wilmer Eye Institute, Johns Hopkins University

James Handa, MD
Chief, Retina Division
Robert Bond Welch Professor of Ophthalmology
Johns Hopkins University

Robert Johnston Jr., PhD
Assistant Professor
Department of Ophthalmology
Johns Hopkins University

Xiangrong Kong, PhD
Associate Professor
Dana Center for Preventive Ophthalmology
Wilmer Eye Institute, Johns Hopkins University

Gerard Lutty, PhD
Director, Ocular Vasculogenesisis and Angiogenesis Laboratory
Professor of Ophthalmology
Wilmer Eye Institute, Johns Hopkins University

Robert Massof, PhD
Professor of Ophthalmology and Neuroscience
Director, Lions Vision Research and Rehabilitation Center
Wilmer Eye Institute, Johns Hopkins University

Jeremy Nathans, MD, PhD
Professor of Molecular Biology and Genetics, Neuroscience and Ophthalmology
Department of Molecular Biology and Genetics
Johns Hopkins University

David Valle, MD
Professor of Pediatrics and Ophthalmology
Director, Department of Genetics
Johns Hopkins University

Donald Zack, MD, PhD
Guerrini Professor of Genetic Engineering and Molecular Ophthalmology
Director, Johns Hopkins Center for Stem Cells and Ocular Regenerative Medicine (STORM)
Wilmer Eye Institute, Johns Hopkins University

GUEST SPEAKERS
Thomas Albini, MD
Professor of Clinical Ophthalmology
Bascom Palmer Eye Institute
Miami, Florida

Alun Barnard, BSc, PhD
Senior Postdoctoral Research Scientist
Nuffield Department of Clinical Neurosciences
University of Oxford
Oxfordshire, United Kingdom

Rubens Bellfort Jr., MD, PhD, MBA
Head Professor of Ophthalmology
Federal University of Sao Paulo
Sao Paulo, Brazil

Kapil Bharti, PhD
Earl Swatton Tenure-Track Investigator
Ocular and Stem Cell Translational Research Unit
National Center for Advancing Translational Sciences
National Eye Institute, National Institutes of Health
Bethesda, Maryland

Brian Brooks, MD, PhD
Chief, Unit of Genetic and Developmental Eye Disease
Clinical Director, National Eye Institute
National Institutes of Health
Bethesda, Maryland

Jason Comander, MD, PhD
Associate Director, Inherited Retinal Disorders Service
Massachusetts Eye and Ear Institute
Harvard University
Boston, Massachusetts

Laura Frishman, PhD, FAAO, FARVO
Professor of Ophthalmology
University of Houston College of Optometry
Houston, Texas

Mary Johnson, PhD
Associate Professor
Ophthalmology and Visual Sciences
Johns Hopkins University

Bart Leroy, MD, PhD
Director, Ophthalmic Genetics and Retinal Degenerations Clinic
Division of Ophthalmology and Center for Cellular and Molecular Therapeutics
The Children’s Hospital of Philadelphia
Philadelphia, Pennsylvania

Daniel Lipinski, PhD
Assistant Professor of Ophthalmology and Visual Sciences
Robert A. Lerner Institute for Chemical Biology
Weill Cornell Medical College
New York, New York

Hatice Nida Sen, MD, MHS
Director, Uveitis and Ocular Immunology Fellowship Program
National Eye Institute, National Institutes of Health
Bethesda, Maryland

Matthew Simonuvic, MB, BChir, PhD, FRANZCO
Associate Professor of Ophthalmology
University of Sydney
Sydney, Australia

Janet Sunness, MD
Medical Director
Hoover Low Vision
Towson, Maryland

Stephen Tsang, MD, PhD
Professor of Ophthalmology
Edward S. Harkness Eye Institute
Columbia University
New York, New York

Marco Zarin, MD, PhD, FACS
Professor and Chair, Institute of Ophthalmology and Visual Science
Rutgers New Jersey Medical School
Newark, New Jersey
Registration Form  
Johns Hopkins Retinal Degenerations and Clinical Electrophysiology Course 2020 
January 31 – February 1, 2020 

To Register: Online: hopkinscme.cloud-cme.com/aph.aspx?P=5&EID=23954 
By fax: (866) 510-7088 By phone: (410) 502-9636 
Or mail this form to the Johns Hopkins University, Office of Continuing Medical Education, 720 Rutland Avenue, Turner Room 20, Baltimore, Maryland 21205-2195. Include e-check or credit card information below.

FULL PAYMENT IS REQUIRED PRIOR TO THE START OF ACTIVITY.

☐ I am a Johns Hopkins speaker for this activity.

Please type or print clearly:

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>M.I.</th>
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</table>

Highest Degree  Primary Specialty  Hopkins Faculty/Staff Only – JHED ID

For Physicians Only: NPI – 10 digits  State License #  State of License

Organization  Mailing Address

City  State  ZIP + 4 Code  Country

Daytime Telephone  Fax Number

E-Mail (required)

☐ Check here if you wish to receive e-mail notices about upcoming CME activities.
What do you hope to learn by attending this activity?
_____________________________________________________________

Please notify us if you have any special needs.
_____________________________________________________________

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Total amount $_________________

Payment Type:

☐ JHU Faculty/Staff Only: If you are using your Tuition Remission Benefit or an ION budget, please upload your fully completed and approved form in the payment section of the online activity link above.

☐ TR Form: benefits.jhu.edu/documents/trffacandstaff.pdf

☐ ION Form: hopkinscme.edu/migration/IonRequest.pdf

☐ e-Check
Routing Number: __________________ Account Number: __________________

☐ Credit Card: ☐ VISA ☐ MASTERCARD ☐ DISCOVER ☐ AMEX
Card # __ __ __ __ - __ __ __ __ - __ __ __ __ - __ __ __ __ Exp. Date ______

Name on Card __________________ Signature and Date __________________