

Final Program

AUA 64th Annual Meeting | May 4-5, 2017

Grand Hyatt Washington, Washington, DC



Hosted by

Johns Hopkins Medicine and University of Maryland School of Medicine



Welcome to the AUA 64th Annual Meeting!

Welcome to the AUA 64th Annual Meeting, co-hosted by Johns Hopkins Medicine and the University of Maryland School of Medicine, May 4-5, in the nation's capital, Washington, DC. The Educational Advisory Board (EAB), Scientific Advisory Board (SAB), and the Host Institutions, Drs. Robert R. Gaiser, Y.S. Prakash, Colleen Koch, and Peter Rock have developed a compelling program with valuable insight into current discoveries in academic anesthesia and the practice as a whole.

Here are some of the highlights of this year's Annual Meeting:

Thursday, May 4

The **Scientific Advisory Board (SAB)** will highlight original research in the clinic and laboratory during two **Oral Sessions I and II**, and the first of two **Moderated Poster Discussion Sessions** where attendees and abstract presenters will exchange ideas on a wide range of original research. The first **EAB Program Panel Part I: The Science of Assessment of Clinical Performance** will discuss the application of clinical performance and performance assessment in academic anesthesia. Johns Hopkins Medicine and the University of Maryland School of Medicine will share what makes their programs unique during two panels, **Host Program Panel I and II**. Plus, be sure to relax and meet your colleagues from the United Kingdom, who are joining us for the second year, for an evening of networking at the **British Journal of Anaesthesia & Anaesthetic Research Society Reception**, from 6:30 pm to 8:00 pm.

Friday, May 5

Friday includes two more engaging **SAB Oral Sessions III and IV** and offers an opportunity to hear from your colleagues about their research at the second **Moderated Poster Discussion**. The **EAB Program Panel Part II, The Evidence Behind the "Hot" Topics in Anesthesia**, will focus on a variety of learning methods such as the flipped classroom, space learning and test-enhanced learning. The **President's Panel** will aim to answer the important question, **Hypoxia is Not Always Bad for You?** Be sure to sign-up to attend the **Social Event Reception**, hosted by Johns Hopkins Medicine and University of Maryland School of Medicine, at the home of the world's largest and most significant collection of aviation and space artifacts, the Smithsonian's National Air and Space Museum.

Saturday, May 6 - Aligned Meeting Day at the IARS Annual Meeting

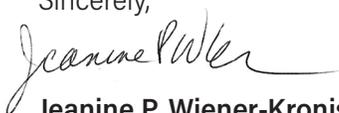
Stay an extra day and attend the Aligned Meeting Day sessions at the IARS 2017 Annual Meeting, included with your AUA registration fee.

Aligned Meeting Day Sessions include:

- **T.H. Seldon Memorial Lecture with Dr. Victor J. Dzau, MD** – 8:00 am - 9:00 am
- **AUA Symposium: Recognizing the "Painful" Truths of the Opioid Abuse Epidemic** – 9:30 am - 12:30 pm
- **IARS Scholars' Program** – 9:30 am - 6:00 pm, *requires an additional \$50 fee*
- **IARS Alignment Reception** – 6:00 pm to 7:30 pm

I am certain you will find the educational and networking opportunities, available at the AUA Annual Meeting, to be thought-provoking and rewarding while experiencing some of the meaningful history, beauty, and culture of our nation's capital, Washington, DC! I look forward to sharing this time together!

Sincerely,



Jeanine P. Wiener-Kronish, MD
President, Association of University Anesthesiologists (AUA)



Welcome from Your Co-Hosts

Dear Colleagues:

We are excited to co-host our Annual AUA Meeting in Washington, D.C. As the local co-hosts, we would like to welcome you to Baltimore and Washington and provide recommendations for local Washington, DC and Baltimore attractions.

May is the best time of the year in Baltimore (Charm City)! Baltimore, home of your host institutions, is only a 45 minute train ride from Washington's Union Station, using either MARC (commuter) or Amtrak service. Did you know that Baltimore's Fort McHenry, birthplace of the National Anthem and penned by Francis Scott Key, defended the Baltimore Harbor during the War of 1812? Baltimore is home to the last Civil War vessel afloat, the USS Constellation. The Baltimore Museum of Art, founded in 1914, has the largest holdings in the world from the artist Henri Matisse. You can tour American writer Edgar Allen Poe's House and Museum and learn more of his life and death in Baltimore. Ride a water taxi and explore centuries-old seafaring neighborhoods of Fells Point, Canton, Locust Point and Baltimore's Inner Harbor. Look blacktip reef sharks in the eye at the National Aquarium, visit the Science Center, catch a college lacrosse game, or bet on a thoroughbred at old Pimlico! The Orioles will be at home at Camden yards the weekend of the AUA and IARS Annual Meetings. On May 5-7, they play the White Sox. On May 8-9, the Washington Nationals visit Baltimore for a 4-game at home and away series with the Orioles.

Washington, DC is among the most beautiful cities in the USA. Our nation's capital is situated along the Potomac River and has countless museums, monuments, neoclassical buildings, and gardens. Of note, the Smithsonian's National Museum of African Art celebrated their historic opening of the National Museum of African American History and Culture in September 2016. This is a gem! We encourage you to visit. Visit the following links for updated information on "things to do" in Washington - food, wine, cultural events, history and more: travel.nationalgeographic.com/travel/city-guides/free-baltimore-traveler/; and washington.org/things-do-washington-dc With the influx of young government and tech workers, Washington has turned into a "foodie-paradise." A quick search of the internet will reveal many unexpected gustatory delights, including many traditional, ethnic or contemporary cuisines. The individual museum websites will provide you with updated gallery information and exhibits. Please take advantage of the many sightseeing opportunities, museums, monument government buildings and landscape vistas provided by our nation's capital.

Best,

Colleen Koch, MD, MS, MBA
Mark Rogers Professor of Anesthesiology
and Critical Care Medicine,
Anesthesiologist-in-Chief,
Johns Hopkins Medicine
Baltimore, Maryland

Peter Rock, MD, MBA, FCCM
Helrich Professor and Chair
Departments of Medicine,
Surgery and Anesthesiology
University of Maryland School of Medicine



Welcome

Association of University Anesthesiologists International Anesthesia Research Society Society of Critical Care Anesthesiologists 2017 Annual Meetings

May 4, 2017

As Mayor of the District of Columbia, I am pleased to welcome participants and members of the Association of University Anesthesiologists (AUA), the International Anesthesia Research Society (IARS), and the Society of Critical Care Anesthesiologists (SOCCA) to the nation's capital for your 2017 Annual Meetings.

The AUA, IARS and SOCCA 2017 Annual Meetings bring together the leaders in anesthesiology to exchange ideas and information with the goal of improving patient care around the world.

I am delighted that you have chosen Washington, DC, to host your event this year. While you are here, I invite you to enjoy all that our city has to offer and I encourage you to visit our museums, monuments, restaurants and diverse neighborhoods.

On behalf of the residents of the District of Columbia, I wish you a successful event.

A handwritten signature in black ink that reads 'Muriel Bowser'.

Muriel Bowser
Mayor, District of Columbia





Continuing Medical Education (CME) Information

Activity Overview

Findings from new research and the evolution of anesthesiology practice based on emerging evidence create an inherent gap between existing practice and new practice models. The purpose of the Association of University Anesthesiologists (AUA) 64th Annual Meeting is to provide an evidence-based and clinically-oriented educational activity that will improve competence and performance in the anesthesiology specialty, resulting in improved patient care and outcomes.

Target Audience

The AUA 64th Annual Meeting is designed to address the continuing medical education needs of anesthesiologists, anesthesiologists-in-training, and anesthesia investigators in academic, clinical and laboratory settings.

Educational Objectives

As a result of participating in this live CME activity, learners will be able to:

- Describe the latest developments in education research, measuring knowledge in the field of anesthesia.
- Consider recent research findings relative to anesthesiology and evaluate their application to the learner's professional practice.
- Develop strategies for integrating new knowledge and behaviors into their professional practice.
- Evaluate gaps in their knowledge, behavior, and patient outcomes that may result in a need for additional education and training.

Accreditation Statement

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the International Anesthesia Research Society (IARS) and the AUA. The IARS is accredited by the ACCME to provide continuing medical education for physicians.

CME Credit

The International Anesthesia Research Society (IARS) designates this live activity for a maximum of 14.5 *AMA PRA Category 1 Credits*.™ Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Claiming CME Credit

The IARS will provide online program evaluation and session tracking to support claiming CME credit immediately following the close of the live activity. Meeting participants will have 45 days post-meeting to claim CME credit.

Disclosure

The International Anesthesia Research Society (IARS) makes every effort to develop CME activities that are independent, objective, and scientifically balanced presentations of information. The IARS has implemented mechanisms requiring everyone in a position to control content to disclose all financial relationships with commercial interests. Disclosure of any or no relationships is made available in advance of all educational activities. The IARS evaluates, and if necessary, resolves any conflicts of interest prior to the start of the activity. Individuals who refuse or fail to provide the required disclosures are disqualified from being a planning committee member, teacher, or author of CME, and cannot have control of, or responsibility for, the development, management, presentation or evaluation of the CME activity.

It is IARS policy that an employment relationship with a commercial interest presents an inherent conflict of interest that cannot be resolved successfully with respect to CME activities. Therefore, employees of commercial interests are prohibited from serving in any position to control CME content (planner, reviewer, presenter, speaker, moderator, etc.).

Disclaimer

The information provided in this CME activity is for continuing education purposes only and is not meant to substitute for the independent medical judgment of a healthcare provider relative to diagnostic and treatment options of a specific patient's medical condition.

Commercial Support

This CME activity is supported entirely by the Association of University Anesthesiologists (AUA). There is no commercial support for this activity.



Planning Committee and Program Faculty

Planning Committee

Robert R. Gaiser, MD

Chair, Educational Advisory Board
Professor and Chair, Anesthesiology,
University of Kentucky Health Care, Lexington, Kentucky

Colleen Koch, MD, MS, MBA, FACC

Co-Chair, Host Institution, AUA 64th Annual Meeting
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Critical Care Medicine and Anesthesiologist-in-Chief,
Johns Hopkins Medicine, Baltimore, Maryland

Y.S. Prakash, MD, PhD

Chair, Scientific Advisory Board
Chair, Division of Anesthesia Research; Vice
Chair, Department of Anesthesiology, Professor of
Anesthesiology, Professor of Physiology, Mayo Clinic,
Rochester, Minnesota

Peter Rock, MD, MBA, FCCM

Co-Chair, Host Institution, AUA 64th Annual Meeting
Professor, Anesthesiology, and
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University of Maryland School of Medicine,
Baltimore, Maryland

Jeanine P. Wiener-Kronish, MD

President, Association of University Anesthesiologists
Henry Isaiah Dorr Professor of Research and Teaching
in Anaesthetics and Anaesthesia,
Department of Anesthesia, Critical Care and
Pain Medicine, Harvard Medical School,
Anesthetist-in-Chief, Massachusetts General Hospital,
Boston, Massachusetts

Program Faculty

Lorenzo Berra, MD

Assistant Professor, Anaesthesia, Harvard Medical
School; Anaesthesia, Critical Care and Pain Medicine,
Massachusetts General Hospital, Boston, Massachusetts

John (Jack) R. Boulet, PhD

Vice President, Research and Data Resources,
Educational Commission for Foreign Medical Graduates,
Foundation for Advancement of International Medical
Education and Research, Philadelphia, Pennsylvania

Lucy Chen, MD

Associate Professor, Harvard Medical School,
Clinical Investigator, MGH Center for Translational
Pain Research, Assistant Anesthetist, Department
of Anesthesia, Critical Care and Pain Medicine,
Massachusetts General Hospital, Boston, Massachusetts

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Peter Goldstein, MD

Professor of Anesthesiology, Weill Cornell Medical
College, Cornell University, New York, New York

Joshua Epstein, PhD

Professor, Department of Emergency Medicine; Director
for Systems Science, Johns Hopkins University School of
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Michael Grocott, BSc, MBBS, MD, FRCA, FRCP, FFICM

Professor of Anaesthesia and Critical Care Medicine,
Head, Critical Care Research Area, Southampton NIHR
Respiratory Biomedical Research Unit, Head, Integrative
Physiology and Critical Illness Group, University of
Southampton, Southampton, England, United Kingdom

Tomoki Hashimoto, MD

Professor of Anesthesiology, UCSF School of Medicine,
University of California, San Francisco,
San Francisco, California



Planning Committee and Program Faculty

Program Faculty, *continued*

Douglas E. Hough, PhD

Associate Scientist & Associate Director, Master of Health Administration Program, Department of Health Policy & Management, Johns Hopkins University, Bloomberg School of Public Health, Baltimore, Maryland

Colleen Koch, MD, MS, MBA, FACC

Co-Chair, Host Institution, AUA 64th Annual Meeting

Mark C. Rogers Professor of Anesthesiology and Critical Care Medicine and Anesthesiologist-in-Chief, Johns Hopkins Medicine, Baltimore, Maryland

Adam Levine, MD

Professor, Anesthesiology, Professor, Pharmacological Sciences, Professor, Otolaryngology, Icahn School of Medicine, The Mount Sinai Hospital, New York, New York

Feroze-Ud-Din Mahmood, MBBS

Associate Professor, Anaesthesia, Harvard Medical School; Director, Vascular Anesthesia/Perioperative Echocardiography at Beth Israel Deaconess Medical Center, Anesthesiology; Beth Israel Deaconess Medical Center, Harvard Medical School; Boston, Massachusetts

Susan M. Martinelli, MD

Associate Professor, Anesthesiology, University of North Carolina School of Medicine, Chapel Hill, North Carolina

Matthew D. McEvoy, MD

Associate Professor of Anesthesiology, Division of Multispecialty Adult Anesthesiology, Vice-Chair, Educational Affairs, Vanderbilt University Medical Center, Nashville, Tennessee

Vamsi K. Mootha, MD

Investigator, Howard Hughes Medical Institute, Professor, Department of Systems Biology, Department of Medicine, Harvard Medical School; Massachusetts General Hospital, Boston, Massachusetts

Kathleen M. Neuzil, MD, MPH, FIDSA

Director, Center For Vaccine Development (CVD); Deputy Director, Institute for Global Health; Division Head, Geographic Medicine, Professor and Director, Center for Vaccine Development, Deputy Director, Institute for Global Health, University of Maryland School of Medicine, Baltimore, Maryland

Robert R. Redfield, MD

Director, Division of Clinical Care and Research, Professor of Medicine, Microbiology and Immunology, Chief of Infectious Diseases, University of Maryland, Baltimore, Maryland

Peter Rock, MD, MBA, FCCM

Co-Chair, Host Institution, AUA 64th Annual Meeting

Professor, Anesthesiology, and Dr. Martin A. Helrich Chair for Anesthesiology, University of Maryland School of Medicine, Baltimore, Maryland

Randall Schell, MD, MACM

Academic Vice-Chairman and Program Director, Professor of Anesthesiology, Surgery, and Pediatrics, University of Kentucky Department of Anesthesiology, Lexington, Kentucky

Edward Sherwood, MD, PhD

Professor, Vice Chair for Research, Vanderbilt University Medical Center, Nashville, Tennessee

Jeanine P. Wiener-Kronish, MD

President, Association of University Anesthesiologists
Henry Isaiah Dorr Professor of Research and Teaching in Anaesthetics and Anaesthesia, Department of Anesthesia, Critical Care and Pain Medicine, Harvard Medical School, Anesthetist-in-Chief, Massachusetts General Hospital, Boston, Massachusetts

What to Do in Washington, DC

Discover America's rich history in the nation's capital, Washington, DC and recall the significant moments in time where they first occurred.

Walk the two-mile green expanse of the National Mall and take in the neoclassical monuments and buildings, including the iconic ones that house the federal government's three branches: The Capitol, White House and Supreme Court.

Roam the many halls of free Smithsonian museums, paddle on the Potomac River or sit back on a double-decker tour bus and soak in the beautiful sights of the city.

Indulge in the food, wine, local breweries and funky marketplaces available in DC. From American history to culinary delicacies to cultural events, you can find it all in Washington, DC.

Make the most of your time in the nation's capital!

For more information on what to do in Washington, DC, including cultural events, historic sites, where to eat, and discovering all of DC's most unique spots, please visit washington.org.

Travel Information

Washington, DC Region Airports

Airports: There are three major airports in the Washington, DC region: [Ronald Reagan Washington National Airport \(airport code: DCA\)](#), [Washington Dulles International Airport \(airport code: IAD\)](#) and [Baltimore/Washington International Thurgood Marshall Airport \(airport code: BWI\)](#). All three offer multiple U.S. and international flights daily.

Reagan National Airport is 4.2 miles from airport to hotel or a 15-minute drive. Washington Dulles International Airport is 27 miles from airport to hotel or a 32-minute drive. Baltimore / Washington International Thurgood Marshall Airport is 32 miles from airport to hotel or a 43-minute drive. Regan National Airport is accessible via its own Metro stop on the Blue and Yellow Lines. Cabs and airport shuttles are available at all three airports. All three airports also have a variety of car rental desks. Check with your preferred car rental company for more information.





Hotel Information

Headquarters Hotel

Grand Hyatt Washington
1000 H Street NW, Washington, DC, 20001

Special Hotel Rates for AUA Attendees end Friday, April 7, 2017!

The Grand Hyatt Washington is the Headquarters Hotel for the AUA 64th Annual Meeting. All Annual Meeting education sessions will be conveniently located at the hotel. Washington, DC in May is a favorite travel destination and hotel rooms sell out quickly!

[Book your hotel room today and reserve your spot at the Headquarters Hotel!](#)

Located in the heart of downtown Washington, DC, the Grand Hyatt Washington offers the convenience and comfort you seek. The hotel is a short walk to many of the sights and sounds of DC or a quick hop on the train from the Metro Center, accessed through the hotel lobby.

The AUA has secured a limited block of rooms for meeting attendees at the Grand Hyatt Washington.

The special conference rate for either single or double occupancy is \$299.

Room rates are quoted exclusive of state and local taxes, fees and assessments, currently 14.5%. Taxes are subject to change. Quoted rate will be offered, based on availability, to attendees three days before and three days after the meeting dates. The additional fee for every third and fourth occupant in a room is \$25 per person. Children under 18 stay free if staying in the same room as parents and utilizing existing bedding. Rollaway beds are complimentary.

Hotel Reservation Cancellation Policy

To avoid a one night room and tax cancellation fee, reservations must be cancelled by 3:00 pm (EST) 72 hours prior to arrival.



Special Events

Thursday, May 4

British Journal of Anaesthesia & Anaesthetic Research Society Reception

6:30 pm to 8:00 pm, Grand Hyatt Washington (1000 H Street NW)

AUA attendees are invited to attend the *British Journal of Anaesthesia & Anaesthetic Research Society* Reception on Thursday, May 4, from 6:30 pm to 8:00 pm, at the Grand Hyatt Washington. Please sign up for this event when registering for the Annual Meeting if you and/or your guest will attend. A ticket will be provided with your badge for attendance to this reception.

Friday, May 5

AUA Social Event Reception

6:30 pm to 9:30 pm, Smithsonian's National Air and Space Museum (600 Independence Ave SW)

The AUA Social Event Reception, hosted by Johns Hopkins Medicine and University of Maryland School of Medicine, will take place on Friday, May 5, from 6:30 pm to 9:30 pm, at the Smithsonian's National Air and Space Museum, home to the world's largest and most significant collection of aviation and space artifacts. The event includes a buffet dinner and drinks, as well as access to the museum. An additional fee is required to attend this special event, and a ticket will be provided with your badge for attendance to this reception. Please sign up for this special event when registering if you and/or your guest will attend.

Saturday, May 6

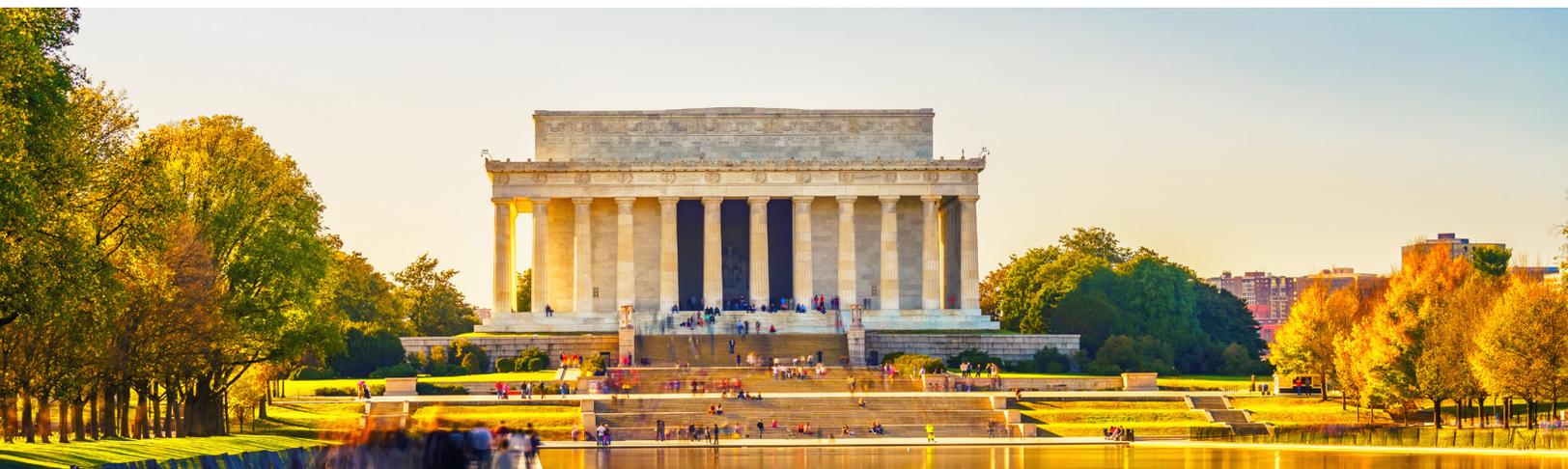
Aligned Meeting Day at the IARS 2017 Annual Meeting and International Science Symposium

The IARS Aligned Meeting Day offers AUA attendees complimentary access to cutting-edge sessions on a variety of anesthesia topics. Please sign up to attend this special program when registering. A ticket will be provided with your badge for attendance to these sessions.

IARS Alignment Reception

6:00 pm to 7:30 pm, Grand Hyatt Washington (1000 H Street NW)

Come together and celebrate the convergence of the IARS, AUA and SOCCA Annual Meetings and meet the leaders in all subspecialties in anesthesiology in one location, Washington, DC.





Program Schedule

Thursday, May 4

- | | | | |
|--------------------------------------|---|----------|--|
| 6:00 am | - | 6:00 pm | Registration |
| 8:30 am | - | 9:00 am | Welcome from AUA President and Host Institution Chairs
Jeanine P. Wiener-Kronish, MD
Colleen Koch, MD, MS, MBA, FACC
Peter Rock, MD, MBA, FCCM |
| 9:00 am | - | 10:00 am | Scientific Advisory Board (SAB) Oral Session I
Moderators: Lucy Chen, MD, and Edward Sherwood, MD, PhD |
| Junior Faculty Research Award | | | <ul style="list-style-type: none"> • <i>Photo-Relaxation: Light Mediated Airway Smooth Muscle Relaxation</i>
Peter Yim, MD, Columbia University, New York, New York • <i>Bitter Taste Receptors in Airway Smooth Muscle Cells of a Cystic Fibrosis Mouse Model</i>
Nicholas M. Dalesio, MD, Johns Hopkins Medicine, Baltimore, Maryland |
| Junior Faculty Research Award | | | <ul style="list-style-type: none"> • <i>Implication of LDL Receptors in the Development of Pulmonary Hypertension</i>
Soban Umar, MD, PhD, University of California, Los Angeles, Los Angeles, California • <i>Spinal Cord Stimulation Reduces Ventricular Arrhythmias During Acute Ischemia Through Attenuation of Regional Myocardial Excitability in A Porcine Model</i>
Kimberley Howard-Quijano, MD, MS, University of California, Los Angeles, Los Angeles, California |
| 10:00 am | - | 11:30 am | Moderated Poster Discussion Session I |
| 11:30 am | - | 12:30 pm | SAB Oral Session II
Moderators: Lucy Chen, MD, and Edward Sherwood, MD, PhD |
| Resident Travel Award | | | <ul style="list-style-type: none"> • <i>Sensitivity to Volatile Anesthetics Predicts Postoperative Delirium</i>
Bradley A. Fritz, MD, Washington University School of Medicine, St. Louis, Missouri |

Program Schedule

Thursday, May 4, *continued*

- Margaret Wood Resident Research Award**
- ***Weak EEG α -Power During General Anesthesia as A Marker of Delirium in the PACU***
Matthias Kreuzer, PhD, Emory University, Atlanta VA Medical Center, Decatur, Georgia
 - ***Astrocyte-Specific Knockout of a Mitochondrial Protein in Mice Increases Neural Inertia***
Renjini Ramadasan Nair, PhD, Seattle Children's Research Institute, Seattle, Washington
 - ***GABA Neurons in the Rostromedial Tegmental Nucleus Modulate Arousal and Anesthetic Sensitivity in Mice***
Ken Solt, MD, Harvard Medical School, Massachusetts General Hospital, Boston, Massachusetts
- 12:30 pm - 1:30 pm All Attendee Lunch**
- 12:30 pm - 1:30 pm Educational Advisory Board Lunch**
- 12:30 pm - 1:30 pm President's Lunch**
- 1:30 pm - 3:00 pm Educational Advisory Board (EAB) Program Panel I: The Science of Assessment of Clinical Performance**
Moderator: Robert R. Gaiser, MD
- ***The Science of Clinical Performance Assessment***
John (Jack) R. Boulet, PhD
 - ***Clinical Application of Clinical Performance Assessment***
Feroze-Ud-Din Mahmood, MBBS
 - ***Performance Assessment for Re-entry***
Adam Levine, MD
- 3:00 pm - 4:15 pm Host Program Panel I**
Moderators: Colleen Koch, MD, MS, MBA, FACC and Peter Rock, MD, MBA, FCCM
- Presenters:
Joshua Epstein, PhD
Douglas E. Hough, PhD



Program Schedule

Thursday, May 4, *continued*

- 4:15 pm - 4:30 pm **Break**
- 4:30 pm - 5:45 pm **Host Program Panel II**
 Moderators: Colleen Koch, MD, MS, MBA, FACC and Peter Rock, MD, MBA, FCCM
- ***Developing and Deploying Influenza Vaccines: The Pandemic-Seasonal Interplay***
 Kathleen M. Neuzil, MD, MPH, FIDSA
 - ***The Beginning of the End of HIV - 2017***
 Robert R. Redfield, MD
- 6:30 pm - 8:00 pm ***British Journal of Anaesthesia & Anaesthetic Research Society Reception***

Friday, May 5

- 6:00 am - 6:00 pm **Registration**
- 8:00 am - 9:00 am **SAB Oral Session III**
 Moderators: Peter Goldstein, MD, and Tomoki Hashimoto, MD
- ***CX3CR1+ Cells in the PNS Play A Key Role in Development of Neuropathic Pain in Mice***
 Jianguo Cheng, MD, PhD, Cleveland Clinic, Cleveland, Ohio
 - ***Corticostriatal Circuit Regulates Acute and Chronic Pain in Rodents***
 Jing Wang, MD, PhD, New York University School of Medicine, New York, New York
- Junior Faculty Travel Award in Perioperative Medicine**
- ***A Randomized Trial of Perioperative Gabapentin to Promote Pain Resolution and Opioid Cessation in a Mixed Surgical Cohort***
 Jennifer Hah, MD, MS, Stanford University, Stanford, California
 - ***Dezocine for Opioid Addiction in A Rat Morphine Dependence Model***
 Renyu Liu, MD, PhD, University of Pennsylvania, Philadelphia, Pennsylvania

Program Schedule

Friday, May 5, *continued*

9:00 am - 9:15 am Break

9:15 am - 10:15 am **SAB Oral Session IV**

Moderators: Peter Goldstein, MD, and Tomoki Hashimoto, MD

Resident Travel Award

- ***Clinical Study of Non-Invasive Venous Waveform Analysis (NIVA) for Prediction of Fluid Responsiveness in Spontaneously Breathing Subjects***
Richard B. Boyer, MD, PhD, Harvard Medical School, Massachusetts General Hospital, Boston, Massachusetts
- ***How Can We Safely Reduce 50% of Patient Monitor Alarms in the Surgical Intensive Care Unit?***
Peter Hu, PhD, University of Maryland, Baltimore, Baltimore, Maryland

Junior Faculty Travel Award in Pediatric Anesthesia

- ***Age at Exposure to Anesthesia in Children and Mental Disorder Diagnosis***
Caleb Ing, MD, MS, Columbia University, New York, New York
- ***Perioperative Decline in High Density Lipoprotein Particles is Associated with Increased Risk of AKI After Cardiac Surgery***
Loren Smith, MD, PhD, Vanderbilt University Medical Center, Nashville, Tennessee

10:15 am - 10:30 am Break

10:30 am - 12:00 pm **EAB Program Panel II: The Evidence Behind the “Hot” Topics in Anesthesia**

Moderator: Robert R. Gaiser, MD

- ***Flipped Classroom***
Susan Martinelli, MD
- ***Test Enhanced Learning: Stop Studying and Take a Test!***
Randall Schell, MD, MACM
- ***Spaced Learning***
Matthew McEvoy, MD



Program Schedule

Friday, May 5, *continued*

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|----------|---|---------|--|
| 12:00 pm | - | 1:00 pm | All Attendee Lunch |
| 12:00 pm | - | 1:00 pm | Scientific Advisory Board Lunch |
| 12:00 pm | - | 1:00 pm | Junior Faculty, Fellow, Resident and Medical Student Lunch
Tables will be reserved for junior faculty members, fellows, residents and medical students and their sponsoring chair. AUA Council Members will also be present. |
| 1:00 pm | - | 2:30 pm | Moderated Poster Discussion Session II |
| 2:30 pm | - | 2:45 pm | Break |
| 2:45 pm | - | 4:45 pm | President's Panel: <i>Hypoxia is Not Always Bad for You?</i>
Moderator: Jeanine P. Wiener-Kronish, MD

Panelists:

<ul style="list-style-type: none"> - <i>Oxygen and Humans: The Good, The Bad and The Ugly?</i>
Michael Grocott, BSc, MBBS, MD, FRCA, FRCP, FFICM - <i>Hypoxia and Damaged Mitochondria: Good News</i>
Vamsi K. Mootha, MD - <i>Mitochondrial Disorders: Towards a Therapy from Thin Air</i>
Lorenzo Berra, MD |
| 4:45 pm | - | 5:45 pm | AUA Annual Business Meeting |
| 6:30 pm | - | 9:30 pm | AUA Social Event Reception
<i>Hosted by Johns Hopkins Medicine and University of Maryland School of Medicine</i>
Smithsonian's National Air and Space Museum (600 Independence Ave SW) |

Program Schedule

Saturday, May 6

Aligned Meeting Day at the IARS 2017 Annual Meeting

The following sessions are part of the IARS 2017 Annual Meeting and International Science Symposium. AUA registered attendees are invited to attend these IARS sessions as part of their AUA registration fee.

- | | | | |
|----------------|---|-----------------|--|
| 7:30 am | - | 8:00 am | Welcome and Opening Remarks |
| 8:00 am | - | 9:00 am | T.H. Seldon Memorial Lecture: Vital Directions in Health and Medicine in Uncertain Times
Victor J. Dzau, MD, President, National Academy of Medicine, Chancellor Emeritus and James B. Duke Professor of Medicine, Duke University, Durham, North Carolina |
| 9:00 am | - | 9:30 am | Break |
| 9:30 am | - | 12:30 pm | AUA Symposium: <i>Recognizing the "Painful" Truths of the Opioid Abuse Epidemic</i>
Moderator: Y.S. Prakash, MD, PhD, Chair, Scientific Advisory Board, Chair, Division of Anesthesia Research; Vice Chair, Department of Anesthesiology, Professor of Anesthesiology, Professor of Physiology, Mayo Clinic, Rochester, Minnesota

Panelists: <ul style="list-style-type: none"> • <i>Understanding and Responding to the Intersecting Issues Related to Pain and Opioid Misuse</i>
Wilson Compton, MD, MPE, Deputy Director, National Institute on Drug Abuse, Bethesda, Maryland • <i>FDA's Role in Addressing the Opioid Epidemic</i>
Ellen Fields, Deputy Director, Division of Anesthesia, Analgesia, and Addiction Products (DAAAP), Office of New Drugs, Center for Drug Evaluation and Research, FDA, Silver Spring, Maryland • <i>Frontlines of the Opioid Epidemic</i>
Lynn Webster, Vice President of Scientific Affairs, PRA Health Sciences, Immediate Past President, American Academy of Pain Medicine, Raleigh, North Carolina |



Program Schedule

Saturday, May 6, *continued*

- ***Mechanisms of Opioid Abuse: Dissecting Necessary from Unnecessary Need***

Mary Jeanne Kreek, MD, Senior Attending Physician, Patrick E. and Beatrice M. Haggerty Professor, Laboratory of the Biology of Addictive Diseases, The Rockefeller University, New York, New York

6:00 pm - 7:30 pm **IARS Alignment Reception**

AUA Attendees Invited to Attend
Grand Hyatt Washington

Scholars' Program

The Scholars' Program requires pre-registration and an additional \$50 fee to attend.

9:30 am - 10:30 am **Scholar-01: Introduction to the Translational Research Continuum**

Presenter:

Lisa Guay-Woodford, MD, Associate Vice President for Clinical and Translational Science, George Washington University, Washington, DC

10:45 am - 11:45 am **Scholar-02: Keynote Session: Rigor and Reproducibility Across the Translational Spectrum**

Panelists:

- ***Trouble in the Laboratory: Problems with Rigor and Precision***

James Eisenach, MD, President, FAER,
Immediate Past Editor-in-Chief, *Anesthesiology*

- ***Reproducibility Crisis in Scientific Research***

Steven L. Shafer, MD, Professor of Anesthesiology, Perioperative and Pain Medicine, Stanford University School of Medicine, Stanford, California; Adjunct Associate Professor of Bioengineering and Therapeutic Sciences, University of California, San Francisco, San Francisco, California; Immediate Past Editor-in-Chief, *Anesthesia & Analgesia*



Program Schedule

Saturday, May 6, *continued*

12:00 pm - 1:00 pm **Scholar-03: Plenary Session I: Expanding Our Horizons in Anesthesiology Research Training**

Panelists:

- ***Developing Skills in Commercialization: Adapting Elements of the NSF I-CORPs Program to Create A Customized Program for Academic Physicians***

Connie Chang, MBA, Managing Director, Fast Forward Medical Innovation, University of Michigan Health System, Ann Arbor, Michigan

- ***The Challenges of Building Diversity in Academic Anesthesiology***

Paloma Toledo, MD, MPH, Assistant Professor of Anesthesiology, Northwestern University Feinberg School of Medicine, Chicago, Illinois

1:00 pm - 2:00 pm **Scholar-04: Lunch Session: Inspirational Tales of Career Success**

Panelists:

Oluwaseun Johnson-Akeju, MD, Assistant Professor, Anaesthesia, Harvard Medical School; Anaesthesia, Critical Care and Pain Medicine, Massachusetts General Hospital, Boston, Massachusetts

- ***Anesthesia, Informatics & Health Policy: My Unexpected Journey to Nashville***

Jesse Ehrenfeld, MD, MPH, Associate Professor of Anesthesiology, Bioinformatics, Surgery, and Health Policy; Director of Education Research, Vanderbilt Office of Health Sciences Education; Associate Director, Anesthesiology & Perioperative Informatics Research Division, Vanderbilt University Medical Center, Nashville, Tennessee; Chair, Massachusetts Committee on LGBT Health, Chair, Massachusetts General Hospital LGBT Employee Resource Group, Member, Board Committee on Quality at Fenway Community Health Center



Register Early and Save!

Online Registration Rates
End Friday, April 21!



Program Schedule

Saturday, May 6, *continued*

- 2:00 pm - 3:30 pm Scholar-05: Small Group Breakout Sessions**
- Small group sessions for scholars (mock study session, how to write a career development grant, diversity workshop for T32 directors and other research leaders)
- 3:30 pm - 4:00 pm Coffee Break**
- 4:00 pm - 5:00 pm Scholar-06: Plenary Session II: Precision Medicine: What Anesthesiology Can Contribute**
- Panelists:
- ***Pharmacogenomics in Anesthesiology***
Debra A. Schwinn, MD, Associate Vice President for Medical Affairs, Professor of Anesthesiology, Pharmacology & Biochemistry, University of Iowa, Iowa City, Iowa
 - ***The National Precision Medicine Initiative***
Sachin Kheterpal, MD, MBA, Associate Professor of Anesthesiology, University of Michigan Health System, Ann Arbor, Michigan; Member, NIH Advisory Panel on Precision Medicine
- 5:00 pm - 6:00 pm Scholars' Program Moderated Mentor-Trainee Reception**
- Grand Hyatt Washington
- Based on rigorous evaluation of both mentors' skills and trainees' needs, goal-directed interactions will be catalyzed.



Save on registration rates for the AUA 64th Annual Meeting and guarantee a spot in the sessions you want to attend!

For information, visit auahq.org/aua-annual-meeting

REGISTRATION FORM

AUA 64th Annual Meeting | May 4-5, 2017

Grand Hyatt Washington, Washington, DC

[Register Online Today! auahq.org](http://www.auahq.org)

Page 1

First Name _____ Middle Name _____ Last Name _____
 MD DO PhD Other _____ Organizational Title _____

Institution / Organization _____
 Home Work Mailing Address _____

City _____ State _____ Postal Code _____

Country _____
 Home Work Cell Phone _____ Email _____

SPECIAL SERVICES REQUIRED. Please specify: _____

The registration fee includes the Educational Advisory Board Program, Scientific Advisory Board Program, Host Program, meeting syllabus, coffee breaks, Thursday and Friday lunches, the *British Journal of Anaesthesia* & Anaesthetic Research Society Reception on Thursday, and the Aligned Meeting Day sessions taking place at the IARS 2017 Annual Meeting on Saturday, May 6 (see session options below).

The AUA Social Event Reception on Friday, May 5 from 6:30 pm – 9:30 pm, is an additional fee. Please see below for more information on this special event for AUA attendees. For Spouse/Partner registrants who will only attend the AUA Social Event, please see AUA Social Event Reception registration below.

Spouse/Partner Registrants are not eligible for CME credits or eligible for access to the Aligned Meeting Day sessions and Scholars' Program at the IARS Annual Meeting.

Member Registration Fees	Early Rec'd by 3/10	Regular Rec'd 3/11 – 4/21	Onsite Rec'd 5/4 – 5/5	Amount Paid
<input type="checkbox"/> Member General Registration	\$400	\$425	\$450	
<input type="checkbox"/> Member Spouse (Full Meeting, no CME provided) Name: _____	\$250	\$275	\$300	
Non-Member Registration Fees				
<input type="checkbox"/> Non-Member General Registration Member Sponsor Name: _____	\$450	\$475	\$500	
<input type="checkbox"/> Non-Member Spouse (Full Meeting, no CME provided) Name: _____	\$300	\$325	\$350	
<input type="checkbox"/> Scholar (please check level) <input type="checkbox"/> Fellow <input type="checkbox"/> Resident <input type="checkbox"/> Student <input type="checkbox"/> Other (specify) _____	\$300	\$325	\$350	
Subtotal Member Registration Fees				

British Journal of Anaesthesia & Anaesthetic Research Society Reception: Thursday, May 4, 6:30 pm – 8:00 pm

Seating is limited. The BJA and ARS Reception requires pre-registration. Complimentary with registration. Please register below if you and/or your guest will attend. A ticket will be provided with your badge for attendance to this reception.

British Journal of Anaesthesia & Anaesthetic Research Society Reception Registration (Select all that apply)
 Member Spouse Non-Member Scholar # of tickets _____

AUA Social Event Reception: Friday, May 5, 6:30 pm – 9:30 pm

Seating is limited. The AUA Social Event requires pre-registration. Fee required with registration. Please register below if you and/or your guest will attend. A ticket will be provided with your badge for attendance to this reception. For Spouse/Partner registrants who will only attend the AUA Social Event, please select this option below.

AUA Social Event Reception Registration (Select all that apply)	FEE	AMOUNT PAID
<input type="checkbox"/> Member <input type="checkbox"/> Non-Member <input type="checkbox"/> Spouse # of tickets _____	\$50 each	
<input type="checkbox"/> Scholar # of tickets _____	\$25	
Subtotal AUA Social Event Registration Fees		

Aligned Meeting Day: Saturday, May 6

Seating is limited. The IARS Aligned Sessions require pre-registration. Complimentary with registration. Note: If you are planning on registering for the full IARS Annual Meeting, you do not need to select the Aligned Meeting Day Sessions here. Please register for them with your IARS meeting registration. Refer to the IARS Preliminary Program posted at iars.org for details on these Aligned Meeting Day Sessions.

Aligned Meeting Day Sessions: Saturday, May 6	Time	# of Seats Reserved
<input type="checkbox"/> T.H. Seldon Memorial Lecture Vital Directions in Health and Medicine in Uncertain Times	8:00 am - 9:00 am	
<input type="checkbox"/> AUA-IARS Symposium Recognizing the "Painful" Truths of the Opioid Abuse Epidemic	9:30 am - 12:00 pm	
<input type="checkbox"/> Scholars' Program Education Sessions \$50.00 Seating is limited. Pre-registration and a non-refundable \$50.00 fee is required. Please check all sessions you will attend below. All sessions are included with the \$50.00 fee.		
<input type="checkbox"/> Scholars' Education Program	9:30 am - 5:00 pm	
<input type="checkbox"/> Scholars' Program Mentor-Trainee Reception	5:00 pm - 6:00 pm	
Subtotal Aligned Meeting Day Fees		

Special Needs: Please specify _____

Total Registration Fees Included with this Form	\$
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Method of Payment (US dollars)

Check payable to AUA (US funds) enclosed

Please charge my Visa MasterCard American Express Discover

Cardholder Name _____

Credit Card # _____

Exp. Date _____

CVV _____

Signature _____

To receive the discounted early registration rate, your registration form and payment must be received at the AUA by March 10, 2017. Pre-registration ends on April 21, 2017. After this date, you may register onsite in Washington, DC.

Register online at aiahq.org or mail completed form and your payment in U.S. funds to the following address:

Orchid.Events, 175 S West Temple, Suite 30, Salt Lake City UT, 84101 | 888-665-1371 | fax 801-355-0250 | iarsmeetings@orchid.events

Annual Meeting Registration Cancellation Policy:

All cancellations to meeting registrations must be submitted in writing by email: iarsmeeting@orchid.events or fax: 801-355-0250.

Registrations cancelled on or before Friday, April 21, 2017 will be refunded, less a \$50 processing charge.

Registration fees will not be refunded if cancelled after Friday, April 21, 2017.

Final Program

AUA 64th Annual Meeting | May 4-5, 2017

Grand Hyatt Washington, Washington, DC



For more information, visit auahq.org/aua-annual-meeting.org