

## Innovative Rovenstine Lecture by AUA Member: Dr. James Eisenach



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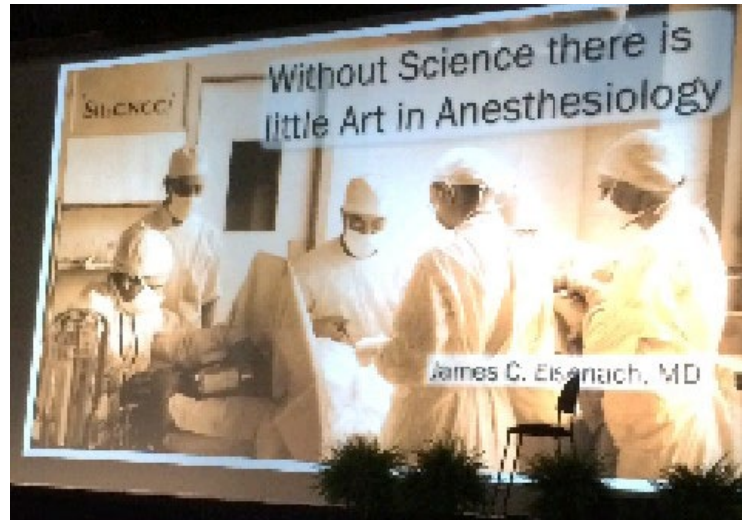
**D**r. James Eisenach, recent inductee to the National Academy of Medicine (formerly known as Institute of Medicine), has set a new bar for Emery A. Rovenstine Memorial Lectures. The focus of his talk at the ASA was the marriage of art and science in the making of a physician with a corollary assertion that science blended into a compassionate clinical practice is essential.

*“His presentation included ample reference to the accomplishments and essential foundational contributions of Dr. Rovenstine to the journal, Anesthesiology, the ASA, the ABA, and the overall practice of anesthesiology. Many historical photos were shown.”*

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A major emphasis was the role of art, perhaps interpreted not as something concrete like painting or sculpting, but rather as the inner force or motivation that drives a physician to do what he/she does rather than doing something like law or business. This inner motivation can only result in quality medical care if it is aimed by dedication to a scientific world view and to life-long learning as science advances.

He asked each person in the audience to self-reflect on his/her initial motivations for entering medicine, further emphasizing the importance of people providing role-model, influence, and impetus for such a choice. Many point to a singular life event. For Rovenstine, it was the Meus-Argonne Offensive in WWI where he observed many soldiers die of shock.

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# Innovative Rovenstine Lecture

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He discussed the role of the great works of literature in medicine, indicating that many of these works, embodied in the “Great Books” collection purchased by his father, define medicine. From this basis, a clinician then completes his capabilities by pursuing science. He reflected on how this impacts a day in the practice of an anesthesiologist, who is involved in preoperative assessment through hastening the speed of recovery from pain and disability after surgery. Yes, the anesthesiologist must have a complete understanding of the scientific foundations of Anesthesiology but also be empathic and compassionate to individual patients.

Beyond individual patients, however, anesthesiologists can have larger impacts on populations of surgical patients. He cited programs oriented to preoperative smoking cessation and programs which support exercise and meditation before surgery to then improve surgical recovery. He cited Osler at several points. Most notably describing his lecture “Aequanimitas” which disparaged quackery while recognizing the infallibility of us all and encouraging empathy for our patients.

*“Beyond individual patients, however, anesthesiologists can have larger impacts on populations of surgical patients.”*

He pointed out how easy it is to fall into a routine approach to care, rather than personalizing to each patient’s needs. For example, one might be tempted to give every patient lorazepam preoperatively. However, investigation reveals that this routine practice does not overall improve patient satisfaction and can delay recovery. It should be reserved for patients who individually really need it.



Then in a bit of theatre ... or art ... his coauthor came on stage, initially just silhouetted against the white screen, and interjected readings about the anesthesia experience through the remainder of the talk. Dr. Eisenach later identified her as Carol Cassella, MD, writer, internist, and anesthesiologist, editor of the Mind to Mind section of *Anesthesiology*. Her readings from her own books, *Oxygen*, and *Gemini*, emphasized the patient’s perspective (e.g., arousing from preoperative normal sleep even as the anesthesia and surgical teams are already in-hospital and making preparations), wondering about the anesthesiologist who he has not yet met, with articulation of the need for a compassionate anesthesiologist at this uncertain time. She also compared the patient to the hapless fly on a spider’s thread and cautioned that to the anesthesiologist this absolute control of the ebb of consciousness and breathing can become routine ... like just a job.



Eisenach reminded us that Rovenstine’s goal was to optimize the odds of survival. He indicated that that is also still a concern but not nearly as much as in that past and that now the major focus is on quality of survival (i.e., avoiding things like stroke, chronic pain and other causes of chronic postoperative disability). The new goal is disability free survival after surgery.

He concluded with a re-emphasis on the importance of science to the practice of anesthesiology and to avoid fossilization of our specialty it is mandatory to nurture and support new scientists who are developing the new knowledge in anesthesiology.

# Educational Advisory Board Report: *OpenAnesthesia*: From Humble Beginnings to Adaptive Education



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Liver Transplant,  
University of Virginia Health System  
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*OpenAnesthesia* ([www.openanesthesia.org](http://www.openanesthesia.org)) debuted in July 2009 with the generous support of the International Anesthesia Research Society (IARS) and a broad goal of advancing graduate medical education (GME) in anesthesia.<sup>1</sup> Over the past six years, *OpenAnesthesia* grew from humble beginnings as an experimental project to become a ubiquitous tool for education. By July 2012, *OpenAnesthesia*'s popularity had exploded with more than 3 million total page views and 30,000 unique visitors every month. *OpenAnesthesia* continued to introduce new online learning tools from 2011 – 2013, largely in response to user feedback.<sup>2</sup> Today, *OpenAnesthesia* receives millions of page views every year from a large, international community.

## Innovations in Learning

One of *OpenAnesthesia*'s most exciting innovations occurred in 2013 when *SelfStudy* was released, our first mobile iOS application. The wildly popular app featured crowd-sourced ABA Keywords from the *OpenAnesthesia* community and expert questions that reviewed essential core concepts. An Android version was released in 2014, and *SelfStudy* was eventually downloaded more than 60,000 times before it was discontinued in 2015.

Although the *OpenAnesthesia* learning community was very enthusiastic about *SelfStudy*, traditional approaches to learning, approaches that all treated every learner the same, were questioned. Obviously, every student is different. All students learn (and forget) at different rates. All students have different strengths and weaknesses. Accordingly, targeted instruction leads to both improved student performance and increased learning efficiency. Unfortunately, almost every educational paradigm — certainly every education program in Anesthesiology — treats all students as if they are all the same. It was asked: “Can *OpenAnesthesia* be different? Can it become better?” So for the next two years, *OpenAnesthesia*'s team concentrated on implementing novel learning techniques into a new app: An individual learning system.

At the American Society of Anesthesiologists (ASA) annual meeting in October 2015, *OpenAnesthesia* released its next

mobile App: *SelfStudyPLUS*. Under development for almost two years, *SelfStudyPLUS* promises to revolutionize education in anesthesiology. *SelfStudyPLUS* is the first adaptive learning and continuous assessment resource for anesthesiologists. Leveraging the principles of test-enhanced learning,<sup>3</sup> it delivers carefully curated questions and explanations and reports each learner's performance by subspecialty and community results to show how each learner compares to his or her peers. But *SelfStudyPLUS* isn't simply a Qbank. Designed using novel and patented innovations in technology, education, and neuroscience, *SelfStudyPLUS* continuously assesses and adapts to each learner individually. It builds upon each learner's strengths, automatically finding and filling gaps in knowledge.

Not only is *SelfStudyPLUS* an advanced educational tool, it is also designed to be fun! *SelfStudyPLUS* includes games that allow learners to test and demonstrate their knowledge against other users or to play against robots (which are tuned to operate just well enough to be a challenge).

Importantly, *SelfStudyPLUS* is not only designed simply for residents in training. *SelfStudyPLUS* is designed to be a true partner in life-long learning. It's an app that tracks your progress across your career: systematically and continuously adapting itself to you. Thus, for the anesthesiologist in practice, *SelfStudyPLUS* now offers CME. Using this revolutionary app, CME is presented the way it is supposed to be — directed to each learner's weaknesses.

## Other Learning Tools: Podcasts

As originally described in its July 2009 debut, *OpenAnesthesia* continues to feature several important tools, each designed to enhance learning. Podcast interviews are popular resources available for students and practicing anesthesiologists to access and learn.

Each month, the editorial board of *Anesthesia & Analgesia* selects an “Article of the Month” to feature from the current issue. The article's authors are interviewed and discuss the article from a general as well as an educational perspective. The interview is designed to enhance the listeners' appreciation of the primary literature. For the “Ask the Experts” podcast, a recognized expert in a particular field answers pre-submitted questions by residents (as well as students and anesthesiologists in practice) from around the world. Both interviews continue to be available on the *OpenAnesthesia* website and as a free downloadable podcast through the iTunes store (<http://apple.co/1QIqJtn>).

In July 2011, a new video podcast, “Intraoperative TEE Case of the Month” (<http://bit.ly/1MU2t9V>), was introduced. The goal of this video podcast is to teach both basic intraoperative

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# EAB Report: *OpenAnesthesia*

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transesophageal echocardiography (TEE) and cardiac anesthesia using a case-based approach. These videos, now called “TEE Rounds,” are available on the *OpenAnesthesia* website and as free downloadable video podcasts through the iTunes store.

Partnering with the Society for Obstetric Anesthesia and Perinatology (SOAP), another video podcast “Virtual Grand Rounds in Obstetric Anesthesia” was introduced in January 2014. Each month, a lecture from an internationally recognized expert in Obstetric Anesthesia is featured. The goal of this section is to provide residents and fellows in Obstetric Anesthesia monthly access to expert content. This series is available on the *OpenAnesthesia* website (<http://bit.ly/1RbdItb>) and has been used by thousands of learners.

## First Wiki in Anesthesiology, Online Courses, and E-books

*OpenAnesthesia* also featured the first Wiki in anesthesiology in 2009. The *OpenAnesthesia* Wiki can be considered an encyclopedic anesthesia textbook where all users contribute, update, and edit its content. Although *OpenAnesthesia* no longer includes a wiki, much of the website continues to rely on volunteer writers and editors.

A successful online course was also launched. Working with Drs. John Mitchell, Feroze Mahmood, and Robina Matyal (Beth Israel Deaconess Medical Center, Boston, Massachusetts),

an entire online course in Basic TEE was implemented. This course is available on the *OpenAnesthesia* website (<http://bit.ly/1QIqVcd>) and has been used by thousands of learners.

In 2015, *OpenAnesthesia* Associate Editor-in-Chief and Section Editor for Critical Care published an eBook on perioperative ultrasound, Cardiac and Critical Care Ultrasonography. This book is available for free in the iTunes store (<http://apple.co/1L05PWs>) and for \$19.99 in Amazon’s Kindle store (<http://amzn.to/1KFnLnS>).

Despite all of the advancements in technology, medical students and residents are still trained to be doctors in the same way as they have for the past 100 years. *OpenAnesthesia* is trying to break that cycle and provide learning resources that are not only effective but are also fun to use. Using innovations in technology, education, and neuroscience, *OpenAnesthesia* plans to continue to offer all students, residents, and practicing anesthesiologists valuable learning tools for years to come.

## References

1. Nemergut, E.C. “[OpenAnesthesia.org](http://OpenAnesthesia.org): Graduate Medical Education on the World Wide Web” *Anesthesia & Analgesia* 2009; 109: 1-2.
2. Nemergut, E.C. “[OpenAnesthesia.org](http://OpenAnesthesia.org): Three Years Old and Growing Like a Weed!” *Anesthesia & Analgesia* 2012; 115: 7-9.
3. Huffmyer, J.L. and Nemergut, E.C. “Test-Enhanced Learning in Flipped Classroom” *Anesthesia & Analgesia* 2015; 121: 589-90

# Take Your AUA Membership to the Next Level!

## Apply to Serve on a Committee by Friday, January 29

The Association of University Anesthesiologists is now inviting members to join and serve on AUA committees. Represent the membership in an area of your interest and take an even more involved membership role. Submit your committee member application on or before Friday, January 29, 2016!

The following committees are currently seeking new members:

- **Scientific Advisory Board – 4 Openings!**
- **Educational Advisory Board – 2 Openings!**
- **Communications and Website Committee – 6 Openings!**

The responsibilities of these committees are as follows:

**Scientific Advisory Board:** Responsible for planning the scientific program of the AUA Annual Meeting.

**Educational Advisory Board:** Responsible for planning the educational program of the AUA Annual Meeting.

**Communications and Website Committee:** Responsible for production of and soliciting/writing contributions to the AUA newsletter and production and maintenance of the AUA

website and other technological communications. Interest in information technology a plus.

If you are interested in serving on one of these committees, please submit your name, email, committee of interest, a one-page cover letter outlining your interest and contribution to the committee along with a short CV to Meghan Whitbeck at [AUAmeetings@iars.org](mailto:AUAmeetings@iars.org) on or before Friday, January 29, 2016. For EAB submissions only, CV submissions should only include accomplishments since 2010. In the subject line of your email, please include the name of the committee you are applying to join.

New committee members will be notified following the submission deadline and those accepted will begin their term on the committee following the AUA 63rd Annual Meeting, May 19-20, 2016, in San Francisco, California.

For more information on the Association of University Anesthesiologists and its committees, visit [www.auahq.org](http://www.auahq.org).

**Apply to Join A Committee Today!**

# Congratulations to the New AUA Members from the Second Round of 2015 Nominations!

The following 98 qualified candidates (68 for Active Membership and 30 for Associate Membership) were elected to membership of the Association of University Anesthesiologists as part of the second round of nominations for 2015. Also, for the first time this round, nominees who are earlier in their academic careers were also able to submit applications for a new membership type - Associate Membership. The new members bring a wealth of experience in a wide range of areas that will add to the membership base. Look forward to meeting them at the AUA 63rd Annual Meeting, May 19-20, 2016 in San Francisco, California!

## ACTIVE MEMBERSHIP

**Maged Youssef Argalious, MD, MSc, MBA, Med**  
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**Raquel R. Bartz, MD, MMCI**  
Duke University Medical Center  
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**Itay Bentov, MD, PhD**  
University of Washington  
Seattle, Washington

**Jeffrey Scott Berger, MD, MBA**  
The George Washington University School of  
Medicine & Health Sciences  
Washington, DC

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**Patrick K. Birmingham, MD**  
Northwestern University Feinberg  
School of Medicine  
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Harvard Medical School  
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**Lucy L. Chen, MD**  
Harvard Medical School  
Boston, Massachusetts

**Gerard Curley, MB, BCh, BAO, MSc,  
PhD, FCARCSI, DIBICM**  
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University of Florida - Jacksonville  
Jacksonville, Florida

**Tobias Eckle, MD, PhD**  
University of Colorado School of Medicine  
Aurora, Colorado

**Xiang Ming Fang, MD**  
Zhejiang University  
Hangzhou, China

**Regina Y. Fragneto, MD**  
University of Kentucky  
Georgetown, Kentucky

**Pedro-Luis Gambus, MD, PhD**  
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**Paul S. Garcia, MD, PhD**  
Emory University School of Medicine  
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**Eric Gross, MD, PhD**  
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**Dhanesh Gupta, MD**  
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**Kazuyoshi Hirota, MD, PhD, FRCA**  
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Hirosaki, Japan

**Yuguang (Gary) Huang, MD**  
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# New AUA Members

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Boston, Massachusetts

**Peggy White, MD**  
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Gainesville, Florida

**Glenn E. Woodworth, MD**  
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Portland, Oregon

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Columbia University Medical Center  
New York, New York

**Yi Zhang, MD, PhD**  
Harvard Medical School  
Boston, Massachusetts

# UCSF Hosts AUA 63rd Annual Meeting

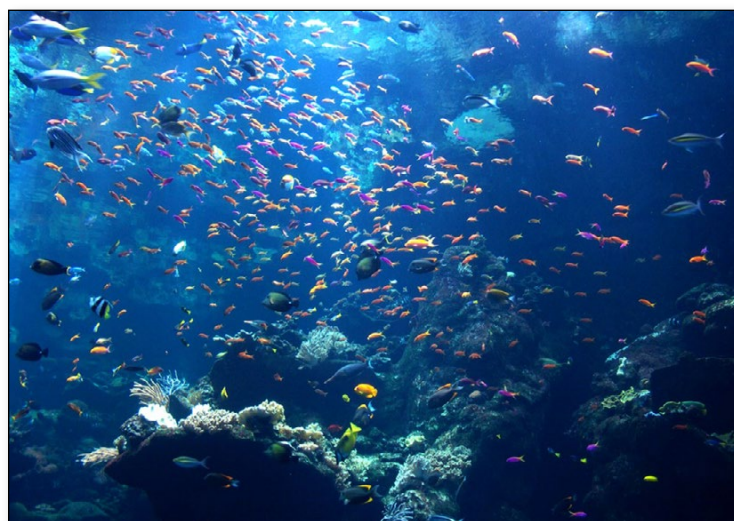


*Michael A. Gropper, MD, PhD  
Host Chair, AUA 63rd Annual Meeting  
Professor and Chair, Department of  
Anesthesia and Perioperative Care  
University of California, San Francisco  
San Francisco, California*

The UCSF Department of Anesthesia and Perioperative Care is delighted to host the Association of University Anesthesiologists 63rd Annual Meeting in San Francisco next year, from May 19-20, 2016. We are enormously proud of our department, our university, and our city, and look forward to sharing them with you. In addition to a robust program featuring education sessions focused on cutting-edge topics, we're excited to hold our May 19 social event at the **California Academy of Sciences**, "an aquarium, planetarium and natural history museum – all under one living roof." Located in beautiful **Golden Gate Park**, adjacent to **The de Young Fine Arts Museum**, the California Academy of Sciences is "home to engaging exhibits and shows, charismatic live animals from around the world, and a fascinating team of scientists and presenters working to explore, explain, and sustain the diversity of life." Other nearby Golden Gate Park attractions include, the **Japanese Tea Garden**, the **Botanical Garden at Strybing Arboretum**, and the **Conservatory of Flowers**, the oldest remaining municipal wooden conservatory in the United States.

Each of San Francisco's neighborhoods offers its own distinct culture and charm. Whether you're a foodie, an art person, or love music, we invite you to explore one of the most vibrant, diverse, and unique cities in the world. Some of the top SF attractions are listed by neighborhood:

- **North Beach:** Rich in Italian heritage, North Beach includes cabarets, jazz clubs, galleries, restaurants and gelato parlors. From the North Beach neighborhood, you can easily visit **Coit Tower** atop Telegraph Hill.
- **Chinatown:** A city within the City, Chinatown includes shops, food markets, temples and small museums, much of it taking place on Grant Street, the oldest street in San Francisco.
- **Embarcadero / Financial District:** Includes the **Ferry Building**, a vibrant public space housing a food hall, restaurants and a Farmer's Market, that is also the terminal for ferries to Marin County, Vallejo, Oakland and Alameda. The **SF Exploratorium** is located at Pier 15.



The Host Program will share some of what makes San Francisco unique during the AUA Social Event on Thursday, May 19 at the California Academy of Sciences.

- **Union Square:** For those who like to shop: the biggest names in retail and fashion can be found in this neighborhood. Union Square itself is a landmark park, bordered by palm trees.
- **SOMA (South of Market):** Includes nightclubs, restaurants, art hubs, Yerba Buena Gardens, and the **AT&T Park**. The state-of-the-art **UCSF Mission Bay Hospital and Campus** are also located here.
- **Castro / Noe Valley:** Known as the "gay capital of the world," the Castro neighborhood boasts pedestrian friendly streets, Victorian homes, as well as trendy stores and outdoor cafes, wrapped around the lower reaches of **Twin Peaks**.
- **Civic Center:** The home of local, state and federal government offices, along with award winning arts

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# UCSF Hosts AUA 63rd Annual Meeting

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institutions such as the **San Francisco Symphony** and the **Asian Art Museum**.

- **Hayes Valley:** Home to **SF Jazz**, unique shops, restaurants, and book stores.
- **Haight-Ashbury:** Vintage clothing, records, and books can all be found in this historic, “**Summer of Love**” neighborhood. Nearby, find the **UCSF Parnassus Campus**.
- **Fillmore:** The jazz heritage of such musical greats as Billie Holiday, Duke Ellington and Count Basie thrives in this neighborhood, where the **Bill Graham Civic Auditorium** and the **Jazz Heritage Center** are located.
- **Japantown:** The oldest of only three remaining Japantowns in the country, this neighborhood is marked by the Peace Pagoda, and includes many Japanese groceries, shops, restaurants and the Japanese bookstore **Kinokuniya**.
- **Nob Hill:** Once the home of silver kings and railroad barons, Nob Hill boasts the best views of the San Francisco Bay, and Lombard Street, the “crookedest street in the world.”
- **Marina:** Located along the city’s northern shore, the Marina, once comprised of ocean dunes, is now a residential area with shops, restaurants, the picturesque **Marina Green** and the **Palace of Fine Arts**.
- **Richmond / Presidio:** Located in the northwestern part of the city, this area encompasses the southern anchor of **Golden Gate Bridge**, **Presidio Park**, a former U.S. Army Post, and the Richmond District, the City’s second Chinatown. The area is also home to some delicious Korean and Thai cuisine. The outer Richmond also includes the **Legion of Honor** fine arts museum, plus rugged **Land’s End** and **Eagle’s Point** for outdoor activities and stunning views.
- **Sunset:** Often called, “the Avenues,” the Sunset district was once called, “the Outside Lands,” due to its sandy wilderness. This residential area is bordered by Golden Gate Park, and also includes the SF Zoo, northern California’s largest zoo, as well as Stern Grove, where free summer concerts are held.
- **Bayview:** This area is home to the former Hunter’s Point shipyard, now billed as “America’s largest artists colony,” where open studio events are held in the spring and fall. The T-Third Metro Service links this area to the rest of the city, while Candlestick Point State Recreation Area and India Basin Shoreline Park offer trails and pier fishing.
- **Mission District:** Founded in 1776 as Mission Dolores, the Mission District is San Francisco’s oldest neighborhood, and includes some of the city’s sunniest weather, new restaurants and nightspots, and the largest concentration of murals in the city.

• **San Francisco** is surrounded by a number of attractions, including:

- ~ Shasta Cascade Region      ~ East Bay / Oakland
- ~ Monterey County and Bay    ~ Lake Tahoe / Sacramento
- ~ Napa Valley                    ~ Sausalito and Marin County
- ~ Sonoma County                ~ Silicon Valley
- ~ Many Beach Communities   ~ Yosemite Region

San Francisco’s unparalleled cultural diversity has underpinned the UCSF Department of Anesthesia and Perioperative Care’s storied history of innovation in anesthesia, critical care, and pain medicine since the department’s inception in 1958 by its first chair, Stuart Cullen. For ten of the last eleven years, the Department has been ranked #1 nationally in NIH-funded research. Important discoveries by the Department include the first use of CPAP in premature infants, key contributions to the pharmacology of muscle relaxants and inhaled anesthetics, first demonstration of intraoperative transesophageal echocardiography, and many others. We have robust research programs, spanning the range from ion channel structure and function, to clinical and translational research.

Our trainees have become leaders across the country. We are particularly proud of our residency program, which provides unequalled diversity of experience in a major university medical center (Moffitt-Long Hospital), the San Francisco Veterans Hospital, San Francisco General Hospital (Trauma), Mount Zion Hospital, the UCSF Orthopedic Institute, and the brand new Benioff Children’s, Betty Irene Moore Women’s and Bakar Cancer (NIH-designated Cancer Center) Hospitals in the Mission Bay neighborhood. We offer ACGME fellowships in Critical Care Medicine, Pain Management, Cardiac Anesthesia, Obstetric Anesthesia, Pediatric Anesthesia, and many additional non-ACGME fellowships. The faculty is dedicated to teaching, nurturing, and mentoring the next generation of leaders.

The host program has adopted the theme of the UCSF campus, which is Precision Medicine. Although it’s tempting to think of precision medicine as a laboratory endeavor, we take a much broader view. At UCSF, we are driven by the idea that when the best research, the best teaching, and the best patient care converge, we can deliver breakthroughs that help heal the world. UCSF is host to four professional schools, medicine, dentistry, pharmacy, and nursing, all of which are ranked at the very top of their specialties. The host program will highlight our leadership in a number of important areas: basic laboratory discovery, translational research in neurosciences, cutting-edge care of the underserved with HIV/AIDS, and importantly, our strong commitment to building a workforce that represents the incredible diversity of the San Francisco Bay Area and California. The sessions promise to be both enlightening and entertaining.

We look forward to seeing you in San Francisco!



# SAVE *the* date

## Association of University Anesthesiologists 63<sup>rd</sup> Annual Meeting

May 19-20, 2016

Hilton San Francisco Union Square, San Francisco, California



## CALL *for* abstracts

**Submission Deadline: Friday, January 22, 2016**

Submit your original research to the AUA 63<sup>rd</sup> Annual Meeting for an opportunity to present in San Francisco!

# AUA 63<sup>rd</sup> Annual Meeting

## May 19-20, 2016

Hosted by University of California, San Francisco

Hilton San Francisco Union Square, San Francisco, California

### Schedule-at-a-Glance

Join the leading academic anesthesia educators and researchers at the AUA 63<sup>rd</sup> Annual Meeting, May 19-20, 2016, at the Hilton San Francisco Union Square in San Francisco, California for a robust program, featuring education sessions from the Educational Advisory Board, Scientific Advisory Board, and the Host Institution, University of California, San Francisco, focused on cutting-edge topics, and two days of Moderated Poster Discussion Sessions. Plus, new this year, a special Aligned Meeting Day at the IARS 2016 Annual Meeting and International Science Symposium on Saturday, May 21 with education sessions on thought-provoking topics in anesthesiology. AUA registrants may attend all Aligned Meeting Day sessions at the IARS 2016 Annual Meeting as part of their AUA registration fee.

#### Thursday, May 19, 2016

7:00 am – 5:30 pm	<b>Registration</b>
8:00 am – 8:15 am	<b>Welcome from AUA President and Host Institution Chair</b> Thomas J. J. Blanck, MD, PhD Michael A. Gropper, MD, PhD
8:15 am – 9:15 am	<b>SAB Oral Session I</b>
9:15 am – 9:30 am	<b>Break</b>
9:30 am – 10:30 am	<b>SAB Oral Session II</b>
10:30 am – 12:00 pm	<b>Moderated Poster Discussion Session I</b>
12:00 pm – 1:15 pm	<b>Lunch</b>
1:15 pm – 4:15 pm	<b>Host Program Session</b> <b>Panelists:</b> Joe Derisi, PhD; Stephen L. Hauser, MD; Diane Havlir, MD; Talmadge E. King, Jr., MD
4:15 pm – 4:30 pm	<b>Break</b>
4:30 pm – 5:30 pm	<b>AUA Annual Business Meeting</b>
6:30 pm – 9:30 pm	<b>AUA Social Event Reception</b> California Academy of Sciences (55 Music Concourse Dr., San Francisco)

#### Friday, May 20, 2016

7:00 am – 5:30 pm	<b>Registration</b>
8:00 am – 9:00 am	<b>SAB Oral Session III</b>
9:00 am – 9:15 am	<b>Break</b>
9:15 am – 10:15 am	<b>SAB Oral Session IV</b>
10:15 am – 11:45 am	<b>Moderated Poster Discussion Session II</b>
11:45 am – 1:00 pm	<b>Lunch</b>
1:00 pm – 2:30 pm	<b>EAB Program I: The Science of Communication</b> <b>Moderator:</b> Robert Gaiser, MD <b><i>The Science of Hand-off Communication</i></b> Meghan Lane-Fall, MD, MSHP <b><i>The Science of Communication among Professionals</i></b> Rebecca D. Minehart, MD <b><i>Evidence-Based Approach to Feedback</i></b> Calvin Chou, MD

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# AUA 63<sup>rd</sup> Annual Meeting

## Schedule-at-a-Glance, *continued*

2:30 pm – 4:00 pm:	<b>EAB Program II: Publication of Education Research</b> <b>Moderator:</b> Robert Gaiser, MD <i>Education Research: How to Get Started</i> Davinder Ramasingh, MD <i>Closing the Loop: A Look at Education Research</i> Alex Macario, MD, MBA <i>How to Publish Education Research</i> Maxine Papadakis, MD
4:00 pm – 4:15 pm	<b>Break</b>
4:15 pm – 5:45 pm	<b>President's Panel: How to Produce Successful Researchers</b> <ul style="list-style-type: none"> <li>• <b>Basic Science Research: Columbia University</b> George Gallos, MD; Charles W. Emala, MD</li> <li>• <b>Translational Research: University of Pennsylvania Health System</b> Mark D. Neuman, MD; Lee A. Fleisher, MD</li> <li>• <b>Clinical Research: Vanderbilt University Medical Center</b> Frederic T. (Josh) Billings, MD, MSCI; Warren S. Sandberg, MD, PhD</li> <li>• <b>Educational Research: Massachusetts General Hospital</b> Rebecca D. Minehart, MD; Keith H. Baker, MD, PhD</li> </ul>
6:00 pm – 7:30 pm	<b>British Journal of Anesthesia &amp; Anaesthetic Research Society Reception Hilton San Francisco Union Square (333 O'Farrell Street, San Francisco)</b>

Saturday, May 21, 2016

Aligned Meeting Day at the IARS 2016 Annual Meeting and International Science Symposium

7:30 am – 8:00 am	<b>Welcome to the Aligned Meeting Day</b>
8:00 am – 9:00 am	<b>T.H. Seldon Memorial Lecture</b> <i>Reproducible Research: Impact in the Evidence-Based Decision Making</i> John P.A. Ioannidis, DSc, MD
9:00 am – 9:30 am	<b>Break and Exhibits</b>
9:30 am – 12:00 pm	<b>Celebration of the Science of Anesthesiology Symposium:</b> <b>Protective Lung Ventilation in the Operating Room</b> <b>Panelists:</b> Marcelo Gama de Abreu, MD, MSc, PhD, DESA Marcos F. Vidal Melo, MD, PhD
12:00 pm – 1:00 pm	<b>Lunch-on-Your-Own</b>

Continued on Page 12

# AUA 63<sup>rd</sup> Annual Meeting

## Schedule-at-a-Glance, *continued*

1:00 pm – 4:00 pm	<p><b>AUA, IARS, and SOCCA Science Symposium</b>  <b>State of the Art Review: Endothelial Glycocalyx Practice and Critical Care Medicine</b>  <b>Moderator: Randal Dull, MD, PhD</b></p> <p><b>Panelists:</b></p> <p><b>Endothelial and Glycocalyx Damage in Trauma – Drivers of Coagulopathy</b>          Sisse Ostrowski, MD, PhD</p> <p><b>The Glycocalyx, Barrier Regulation and Resuscitation</b>          Randal Dull, MD, PhD</p> <p><b>Hyaluronan and Circulating Tumor Cell Metastatic Potential</b>          Patrick Singleton, PhD</p> <p><b>Glomerular Glycocalyx Degradation in Septic Kidney Injury</b>          Eric Schmidt, MD</p> <p><b>The Glycocalyx in Acute Lung Injury</b>          Jean-Francois Pittet, MD</p>
1:00 pm – 2:30 pm	<p><b>Scholars' Panel: Research in the 21st Century</b></p> <p><b>Choosing A Scientific Research Question That Inspires Passion and Creates Impacts</b>          Judith Hellman, MD</p> <p><b>Opportunities on the Horizon: Current Trends in Academic Anesthesiology</b>          Alex Evers, MD</p> <p><b>Collaborative Research: Tapping into the CTSA Network</b>          Jennifer Grandis, MD</p>
2:45 pm – 4:15 pm	<p><b>Scholars' Dynamic and Interactive Small Group Sessions</b></p> <p><b>Presenters:</b></p> <p><b>Mock Study Section</b>          Max Kelz, MD, PhD</p> <p><b>Interactive Workshop on Designing A Clinical Trial</b>          Anke Winter, MD, MSc</p> <p><b>Independent Discussion for Scientific Manuscripts</b>          Ben Julian A. Palanca, MD, PhD, MSc</p> <p><b>Grant Writing Session</b>          Laure Aurelian, M. Sc, PhD</p>
4:15 pm – 5:00 pm	<p><b>Scholars' Panel: Showcasing Career Trajectory of Young Anesthesiology Leaders</b></p> <p><b>Panelists:</b></p> <p><b>Building A Career in Perioperative Comparative Effectiveness Research</b>          Mark Neuman, MD, MSc</p> <p>Eric R. Gross, MD</p> <p>May Hua, MD</p>
5:00 pm – 6:00 pm	<p><b>Scholars' Program Reception – AUA and SOCCA attendees invited</b>  <b>Hilton San Francisco Union Square (333 O'Farrell St, San Francisco)</b></p>
6:00 pm – 7:30 pm	<p><b>IARS Welcome Reception – AUA and SOCCA attendees invited</b>  <b>Hilton San Francisco Union Square (333 O'Farrell St, San Francisco)</b></p>

*\*Preliminary schedule and speakers subject to change*

# Call for Abstracts for the AUA 63rd Annual Meeting

## Submission Deadline is Friday, January 22, 2016

The AUA Abstract Submission Site is now open for the AUA 63rd Annual Meeting, May 19-20, 2016 in San Francisco, California. Take advantage of the opportunity to submit your abstract today for a chance to showcase your original research at the AUA 63rd Annual Meeting. **The submission deadline is Friday, January 22, 2016.**

### The AUA Annual Meeting Offers Multiple Awards for Residents and Junior Faculty Members:

- \* **The \$1,000 Margaret Wood Resident Prize for Research Excellence** will be presented to the author of the best research paper submitted by a resident or fellow and will be selected for an oral presentation at the Scientific Advisory Board (SAB) sessions.
- \* **Two Junior Faculty Research Awards**, emphasizing the work of academic anesthesiologists at the beginning of their careers, will be chosen for oral presentation at the SAB sessions.
- \* **Two Resident Travel Awards** will be awarded to the top scoring resident abstracts, including a \$1,000 travel award for each winner, judged by the SAB and chosen for oral presentation at the SAB sessions.

\* A prize will also be given for the best clinical science and best basic science poster presentation based on feedback from those attending the poster sessions.

The AUA encourages clinical and basic science abstracts, as well as those devoted to the advancement of anesthesia education. Authors chosen for oral presentations will also be expected to present a related poster.

### New! A Special Aligned Meeting Day on Saturday, May 21 at the IARS 2016 Annual Meeting

AUA attendees may take advantage of an additional educational opportunity at the Aligned Meeting Day on Saturday, May 21 at the IARS 2016 Annual Meeting and International Science Symposium in San Francisco, California. AUA registrants are invited to attend the Aligned Meeting Day as part of their registration to the AUA 63rd Annual Meeting.

Triple your educational opportunities in San Francisco! Take advantage of three days of education programs at the IARS, AUA and SOCCA Annual Meetings – together for the first time in one location!

For more information or to submit your abstract today, visit <https://auahq.org/2016-abstracts>.

SAVE *the* date



## AUA 63<sup>rd</sup> Annual Meeting

May 19-20, 2016

Hilton San Francisco Union Square  
San Francisco, California

### REGISTER TODAY!

Join the world's leading academic anesthesia educators and researchers in San Francisco, California for a robust education program, featuring original investigations in the clinic and laboratory, cutting-edge developments in methods for teaching anesthesia, and new advancements in the art and science of anesthesiology.

Plus, AUA registrants may take advantage of a special Aligned Meeting Day on Saturday, May 21 at the IARS 2016 Annual Meeting and International Science Symposium as part of their AUA registration.

CALL *for* abstracts

**Submission Deadline: Friday, January 22, 2016**

Submit your original research to the AUA 63<sup>rd</sup> Annual Meeting for an opportunity to present in San Francisco!



For more information, to register or submit abstracts, visit [auahq.org](http://auahq.org).

# Triple Your Educational Opportunities in San Francisco! IARS, AUA and SOCCA Annual Meetings are Together for the First Time in One Location!

For the first time this year, all attendees to the AUA, IARS and SOCCA Annual Meetings will have the opportunity to take advantage of a special **Aligned Meeting Day on Saturday, May 21 at the IARS 2016 Annual Meeting and International Science Symposium**. The thought leaders in the field will present a wide selection of robust education sessions highlighting pioneering topics in anesthesia, celebrating advances in education, science, research and the art of anesthesiology. Don't miss the spirited IARS Alignment Reception to end the Aligned Meeting Day on a high note! All AUA and SOCCA Registrants are invited to attend the Aligned Meeting Day education sessions and reception as part of their registration fee for the AUA and SOCCA Annual Meetings.

## Aligned Meeting Day Highlights Include:

### T.H. Seldon Memorial Lecture

**Saturday, May 21, 8:00 am to 9:00 am**

#### *Reproducible Research:*

#### *Impact in Evidence-Based Decision Making*

Opening Session Presenter John P.A. Ioannidis, DSc, MD, the C.F. Rehnborg Chair in Disease Prevention at Stanford University, has designed, steered and participated in influential randomized trials (in particular, the major trials that changed decisively the management and outcome of HIV infection, but also trials in nephrology, and in antibiotic use in the community), and large international consortia that have helped transform the efficiency of research in diverse fields of genomic, molecular and clinical epidemiology. *The Atlantic* selected Dr. Ioannidis as the Brave Thinker scientist for 2010, claiming that he "may be one of the most influential scientists alive." Join him at the T.H. Seldon Memorial Lecture as he reveals his influential contributions to the advancement of epidemiology and clinical research.

### Celebration of the Science of Anesthesiology Symposium

**Saturday, May 21, 9:30 am - 12:00 pm**

#### *Protective Lung Ventilation in the Operating Room*

#### Panelists:

**Marcelo Gama de Abreu, MD, MSc, PhD, DESA**, Professor of Anesthesiology and Intensive Care, Vice-Director, Head of Research, University Hospital Carl Gustav Carus, Dresden University of Technology, Dresden, Germany

**Marcos F. Vidal Melo, MD, PhD**, Associate Professor, Anaesthesia, Harvard Medical School; Director, Cardiac Anesthesia Research, Department of Anesthesia, Critical Care and Pain Medicine, Massachusetts General Hospital, Boston, Massachusetts

**Additional panelists to be announced.**

### IARS, AUA, & SOCCA Science Symposium

**Saturday, May 21, 1:00 pm - 4:00 pm**

#### *State of the Art Review: Endothelial Glycocalyx in Anesthesia Practice and Critical Care Medicine*

**Moderator: Randal Dull, MD, PhD**, Professor of Anesthesiology, Vice Head for Research, University of Illinois at Chicago, Chicago, Illinois

#### Panelists:

**Sisse Ostrowski, MD, PhD**, Associate Professor, Copenhagen University Hospital, Copenhagen, Denmark

**Jean-Francois Pittet, MD**, Director, Division of Critical Care and Perioperative Medicine, Professor and Vice Chair, Department of Anesthesiology; Professor, Department of Surgery; Professor, Department of Cell Biology; Investigator, Center for Lung Injury and Repair, University of Alabama at Birmingham, Birmingham, Alabama; Correspondence Editor and Incoming Editor-in-Chief, *Anesthesia & Analgesia*

**Eric Schmidt, MD**, Assistant Professor of Medicine, University of Colorado, Denver, Denver, Colorado

**Patrick Singleton, PhD**, Assistant Professor of Medicine, The University of Chicago, Chicago, Illinois

### Scholars' Program

**Saturday, May 21 to Sunday, May 22**

The new IARS Scholars' Program provides valuable tips for academic success and scientific impact, cutting-edge research sessions in diverse topic areas, and mentorship opportunities for individual skills development for medical students, residents, fellows, post-docs and junior faculty members. The education program will include two days of energizing lectures on a wide range of topics of interest to scholars, dynamic and interactive sessions for small groups, a Scholars' Abstract Awards Session, and Moderated Poster Discussion Sessions plus a Scholars' Program Reception, supported by FAER's Academy of Research Mentors in Anesthesiology.

### IARS Alignment Reception

Come together and toast the educational magnetism that results when the leading minds in all subspecialties of anesthesiology join forces in one location. Join your colleagues and peers for the upbeat Alignment Reception on Saturday, May 21, from 6:00 pm to 7:30 pm, in San Francisco, California, and taste a little bit of the unique flavor that San Francisco has to offer. AUA and SOCCA Annual Meeting registrants are invited to attend this reception.

Be sure to take advantage of the Aligned Meeting Day at the IARS 2016 Annual Meeting and International Science Symposium!

For more information, visit <https://goo.gl/oXpTq7>

# Scientific Advisory Board Report: Aging-Related Postoperative Cognitive Dysfunction: Is Hypoxia at the Center of It All?



Thomas F. Floyd, MD  
Professor, Department of Anesthesiology,  
Stony Brook School of Medicine,  
Stony Brook, New York

Postoperative cognitive dysfunction (POCD) is detected with high frequency early after cardiac and major vascular and orthopedic surgery.<sup>1,2</sup>

The duration of the impairment is fortunately limited to weeks to months in most individuals<sup>3</sup> and there is very little clinical evidence for long-term impairment,<sup>4,6</sup> much less an acceleration of the onset of dementia.<sup>5,7,8</sup> The risk for cognitive impairment appears clearly to be elevated in our oldest patients,<sup>9</sup> and this elevated risk associated with aging transcends surgical subfields as it is found in both cardiac<sup>10</sup> and noncardiac surgery.<sup>5</sup>

*“If anesthesia exposure and inflammatory process are not responsible for POCD, and yet short-term POCD still occurs after both cardiac and major noncardiac surgery, then we must consider what other processes might be shared by these two arenas and which could possibly contribute to POCD.”*

In noncardiac surgery, the constant focus has been upon the role of anesthetics in the genesis of POCD. However, several high quality studies have demonstrated no difference in outcome between patients undergoing general anesthesia and regional anesthesia.<sup>11,12</sup> In cardiac surgery involving cardiopulmonary bypass, there has been great concern for the contribution of inflammatory processes to POCD. Yet, cardiac surgery patients get a double dose, as they are exposed to both prolonged anesthetics as well as the inflammatory processes. Equivalence in POCD outcomes between off-pump and on-pump subjects suggests that inflammatory process may not be involved.<sup>13</sup> And Selnes et al.,<sup>3</sup> have clearly demonstrated that older subjects experiencing even the double dose of both a prolonged anesthetic and the inflammatory processes associated with cardiopulmonary bypass, still fared no worse than nonsurgical controls at 3 month<sup>3</sup> and 6 year<sup>6</sup> evaluations.

If anesthesia exposure and inflammatory process are not responsible for POCD, and yet short-term POCD still occurs after both cardiac and major noncardiac surgery, then we must consider what other processes might be shared by these two

arenas and which could possibly contribute to POCD. And while the etiology of POCD remains something of a mystery, it is clear that the etiology intersects with aging in such a manner to exacerbate the expression of POCD in this group.

*“Anesthesiologists may be surprised to find that they are not the only specialty with a keen interest in cognitive decline.”*

Anesthesiologists may be surprised to find that they are not the only specialty with a keen interest in cognitive decline. Outside of the arena of surgery and anesthesiology, aging-related cognitive impairment is associated with or exacerbated by acute and chronic disease states. Chronic obstructive pulmonary disease, obstructive sleep apnea, cancer, heart failure, renal failure, acute and chronic anemia, lack of aerobic fitness, and cerebrovascular disease are all associated with cognitive impairment. Notably, all of these disease categories present chronic hypoxic-hypoxic, anemic-hypoxic, or ischemic-hypoxic challenges. An entire chapter is in fact dedicated to the relationship of hypoxia to cognitive failure in these disease states, ‘Neuropsychological Effects of Hypoxia in Medical Disorders’, in *Neuropsychological Assessment of Neuropsychiatric and Neuromedical Disorders*.<sup>14</sup> Even in healthy individuals, acute anemia<sup>15,16</sup> and acute mild-moderate hypoxia associated with altitude with mountaineering<sup>17</sup> and flying are known to cause cognitive impairment. The body of literature implicating even mild to moderate hypoxia in cognitive impairment is indeed rather extensive.

Our patients arrive for surgery, already challenged with the same disease processes described above. And major surgery, be it vascular, orthopedic, thoracic, cardiothoracic, or vascular, or abdominal, especially in aged patients, is often associated with fluid overload, acute anemia, hypoperfusion, hypoventilation, and heart failure. These hypoxic challenges do not end in the operating room. They do not end in the recovery room, and they may often extend well beyond hospital discharge. Several reports have determined that intraoperative and postoperative hypoxemia occurs with a frequency previously unrecognized. Ehrenfeld et al.<sup>18</sup> found that 6.8% of patients had an intraoperative hypoxemic event ( $\text{SaO}_2 < 90\%$ ), and 3.5% of patients had a severely hypoxemic event ( $\text{SaO}_2 < 90\%$ ) of two consecutive minutes duration or longer during surgery. In hip arthroplasty,<sup>19</sup> abdominal surgery<sup>20</sup> and cardiac surgery<sup>21,22</sup> others have found POCD to be associated with intraoperative cerebral hypoxemia. More recently, Sun et al.,<sup>23</sup> recently published the results of a prospective, blinded observational study in which pulse oximetry was recorded continuously in 1500 patients, with a mean age 64 years, for 3 consecutive days

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# Scientific Advisory Report

Continued from Page 15

postoperatively, after undergoing a wide variety of surgery (abdominal, orthopedic, prostate, spine, craniotomy), and after undergoing both general and regional anesthesia. Within this group, 21% of patients experienced  $\geq 10$  min/h where  $\text{SpO}_2$  values were  $< 90\%$  averaged over the entire recording duration, 8% averaged  $\geq 20$  min/h  $< 90\%$ , and 8% averaged  $\geq 5$  min/h  $< 85\%$ . Prolonged hypoxemic episodes were also common, with 37% experiencing  $\geq 1$  episode where  $\text{SpO}_2 < 90\%$  for  $\geq 1$  hour, 11% experienced at least 1 episode lasting  $\geq 6$  hours, and 3% recorded  $\text{SpO}_2 < 80\%$  lasting for  $\geq 30$  minutes. Finally, sleep disorder breathing was found to occur frequently after surgery in patients with<sup>24</sup> and without<sup>25</sup> a history of obstructive sleep apnea, likely contributing to postoperative hypoxemia.

*“Several reports have determined that intraoperative and postoperative hypoxemia occurs with a frequency previously unrecognized.”*

The HIF (Hypoxic Inducible Factors) transcription system<sup>26</sup> is the “master” regulator of the cellular response to hypoxia.<sup>27</sup> Under normoxia, the HIF subunits are hydroxylated by prolyhydroxylases<sup>28</sup> and subsequently degraded. Under hypoxic conditions, the activity of the prolyhydroxylases is suppressed, allowing levels of HIF to rise.<sup>29</sup> HIF is constitutively expressed in all areas of the brain, to include the hippocampus.<sup>30,31</sup> Stabilized HIF regulates the transcription of hundreds of hypoxia-responsive genes<sup>32</sup> involved in regulating a host of activities focused upon maintaining cell function and survival, to include glucose transport (Glucose transporter-1, GLUT-1), glycolysis (phosphoglycerate kinase-1, PGK-1), oxygen transport (erythropoiesis-erythropoietin, EPO), & angiogenesis (Vascular Endothelial Growth Factor, VEGF). Coincidentally, the HIF-controlled, hypoxia-driven transcriptional responses supporting cell function and survival appear to be markedly impaired by aging,<sup>33-36</sup> potentially putting aging cells and efficient cell function at risk during hypoxic stress. Even so, levels of HIF,<sup>37,38</sup> appear to be chronically elevated with aging, possibly due to the chronic disease-related hypoxic stress that accompanies aging.<sup>39</sup> Finally, the central role of the hippocampus in memory processing is well known. The exquisite sensitivity of the hippocampus to hypoxia is also well known, and this sensitivity to hypoxia is further exaggerated with aging.<sup>40</sup>

T. F. Hornbein, a giant in the field of anesthesiology and avid mountaineer, while speaking of his mountaineering exploits stated, “Absence of oxygen to the brain for even a very few minutes results in loss of consciousness and can cause permanent injury. Can the wanderer to the limits of earthbound hypoxia suffer similar harm from more prolonged exposure to milder hypoxia that does not cause loss of consciousness?”<sup>41</sup> He went on to document the acute and surprisingly persistent impact

of even mild-moderate hypoxia upon cognitive performance, even in the most physically fit.<sup>42</sup> Given the above, as with most organ systems that fail during or after surgery from hypoxia, a central role for hypoxia in POCD can hardly be dismissed, nor can the magnitude of its impact upon postoperative cognitive performance in the aged.

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## ICD-10 Bizarre Medical Codes

Find out the code for if your patient is bitten by a squirrel (W53.21XA) or a cow (W55.21) in an opera house (Y92.253).

Read more in *The Washington Post* at:  
<https://goo.gl/ljBqWB>

# AUA Member Dr. George A. Mashour Named First Anesthesiologist to Direct a CTSA Institute and Appointed to Medical School Leadership Position

George A. Mashour, MD, PhD, has been appointed Associate Dean for Clinical and Translational Research at the University of Michigan Medical School and Director of the NIH-funded Michigan Institute for Clinical & Health Research (MICHR). In his capacity as Associate Dean, Mashour guides the translational research efforts of the Medical School in close collaboration with other research leaders. As Director of MICHR, he oversees a unit that enables and enhances clinical and translational research by educating, funding, connecting, and supporting research teams across the University of Michigan and beyond. MICHR is part of the national Clinical and Translational Science Awards (CTSA) consortium, which is comprised of approximately 60 institutes across the country. According to sources at the NIH, Mashour is the first anesthesiologist to direct a CTSA institute. Mashour will continue in his roles as the Bert N. La Du Professor & Associate Chair for Anesthesiology Research, Faculty in the Neuroscience Graduate Program and Director of the NIH-funded Center for Consciousness Science at the University of Michigan Medical School.

*“As Director of MICHR, he oversees a unit that enables and enhances clinical and translational research by educating, funding, connecting, and supporting research teams across the University of Michigan and beyond.”*

He also holds faculty appointments in the Department of Neurosurgery and the Neuroscience Graduate Program.

He is an internationally recognized expert on the topics of consciousness, anesthetic mechanisms, and neurologic

outcomes of surgery. His National Institutes of Health and foundation-funded investigations include a range of approaches, from computational modeling to animal studies to clinical trials. He is recipient of numerous institutional and national awards as a researcher and educator.

After earning his MD and PhD in neuroscience from Georgetown University, Mashour completed his internship, residency, and chief residency at the Massachusetts General Hospital/Harvard Medical School. He completed a fellowship in neurosurgical anesthesiology at the University of Michigan Medical School. During his training, he was awarded two Fulbright scholarships for neuroscience research in Germany.

Read the full article at: <http://goo.gl/sASyEQ>



Dr. George A. Mashour named first anesthesiologist to direct a CTSA Institute.



The University of Michigan Board of Regents announced the appointment of an Associate Dean, Chair, and Interim Chair at the Medical School.

Intern forgets to write,  
“appreciate GI’s recs” in  
patient note; GI fellow  
inconsolable

<http://goo.gl/XHtczW>

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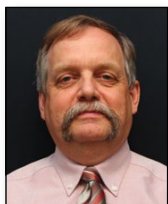
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