

# Open Circuit

EDITOR: KAREN SIBERT, MD

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# From the Chair's Desk

By Aman Mahajan, MD, PhD

We are delighted to present a new edition of our department's newsletter, highlighting some of the exciting work being done by our faculty and staff. Our program spans multiple clinical and laboratory sites, engaged in all kinds of research, teaching, and patient care activities across Los Angeles. As our department has grown, keeping in frequent contact with each other and communicating about all the activities in the department can be challenging. We hope this publication will help bridge those gaps!

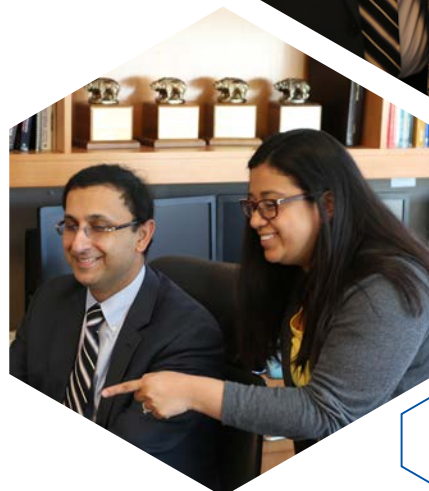
When residents and fellows graduate and leave UCLA, they become our alumni, and we very much want them to stay connected with us. Our alumni are not only our friends and colleagues; they are a valuable resource for networking and mentorship for our upcoming residents and fellows. We encourage all our alumni to stay in touch, and please let us know what you're doing by sending in news, updates and photos for our "Where are you now?" feature.

I want to extend special thanks to our alumni who continue to support our endeavors with generous donations. We are deeply grateful in particular to Leonard Walts, MD, who trained generations of UCLA residents, and has recently made a remarkably generous gift to support the continued academic growth of the program. Over the past ten years, state educational

appropriations to the University of California system have fallen more than \$1 billion in inflation-adjusted dollars. From 2003 to 2015, the National Institutes of Health (NIH) lost 22 percent of their capacity to fund research. Despite these challenges, with the generosity of our donors, our innovative work will continue to flourish.

Our vision is for UCLA's Department of Anesthesiology and Perioperative Medicine to become the best in America. Our academic purpose is to create new knowledge that results in better patient care. We're improving control of pain, and reducing the use and abuse of addictive opioid medications. We're teaching future anesthesiologists about reducing risk and improving outcomes. We believe that top-tier research and innovation are the keys to thriving in today's competitive healthcare environment.

We hope you enjoy the newsletter!



## IMAGES

TOP: Dr. Mahajan and Chief Administrative Officer Stephanie Fisher

BOTTOM: Dr. Mahajan confers with Carla Gonzalez, Assistant to the Chair

# Types of ACOs

	Number	Percentage
-sided)	411	95%
-sided)	6	1%
-sided)	16	4%
tment 	45	10%



# UCLA Goes to the ASA

Our faculty and residents were busy everywhere at this year's ASA annual meeting, ANESTHESIOLOGY 2016, in Chicago – presenting lectures and abstracts, taking part in panel discussions, attending caucus meetings, and representing California anesthesiologists at the ASA House of Delegates.

For Daniel Cole, MD, Clinical Professor, the meeting capped a hectic year of service as ASA President. Dr. Cole called the meeting to order on Saturday morning, October 22, recognizing the contributions of Robert Stoelting, MD, the president of the Anesthesia Patient Safety Foundation (APSF). “He has changed lives, and it has been a personal honor of mine to stand in his shadow,” Dr. Cole said.

Dr. Cole then introduced the [keynote speaker](#), Harvard Business School Professor Michael Porter, pointing out that once in a generation, major forces produce disruption as they are currently doing in health care. Porter's work, Dr. Cole said, has defined modern business and health care strategy. “We must lead the way in making value the overarching goal, so that all organizations can master the value proposition,” Dr. Cole said.

At the meeting of the House of Delegates on Wednesday morning, Dr. Cole passed the medal of the ASA Presidency on to Jeffrey Plagenhoef, MD, who will serve for the 2016-17 term.

Soban Umar, MD, PhD, who joined the faculty after completing training at UCLA last year, won the coveted award for “Best Abstract of the Meeting” in basic science. Dr. Umar and his co-authors, Shannamar Dewey, PhD, Ali Navid Said, BSc, Aldrin Gomes, PhD, and Mansoureh Eghbali, PhD, earned the honor for their work on severe pulmonary hypertension and right ventricular dysfunction.



Dr. Dan Cole presents the ASA Distinguished Service Award to Dr. Alex Hannenberg

Louis Saddic, MD, PhD, joined our department in July as a fellow in cardiovascular anesthesia after completing his residency training at Brigham and Women's Hospital in Boston. Dr. Saddic received resident honors at the ASA's Celebration of Research for his work defining a novel class of RNA molecules that function during the ischemic response in human heart tissue.

A full list of [all the UCLA faculty and resident presentations](#) may be found on our department website.

## NO MORE “TOWN VS. GOWN”

Aman Mahajan, MD, PhD, our department chair, took part in two back-to-back panel discussions on the premise, “Town vs. Gown is a Dated Concept: The Academic Private Model of Perioperative Care.” He pointed to the example of hybrid automobiles powered by electricity as well as gasoline. “Hybrids





Dr. Louis Saddic receives a resident research award from Dr. Evan Kharasch, editor of Anesthesiology

exist to accomplish unmet needs,” Dr. Mahajan said, and academic and private partnerships exist for the same reason. They can provide economies of scale and scope, and give academic practices an edge in an era when consolidation in the marketplace is driving competition.

At UCLA, for example, a new partnership with the Department of Medicine places anesthesiologists who specialize in chronic pain in community clinics, working directly with primary care physicians. They provide diagnostic as well as interventional services in the clinics, in an effort to improve population health by early treatment of painful conditions before they evolve into opioid addiction or chronic pain.

“These are not training sites; it’s a private/academic hybrid model,” Dr. Mahajan said. The vision is to expand services and sites in order to increase operating margin and department reserves, he said. In turn, research and clinical innovation projects can expand, and academic faculty will be able to pursue NIH and other funding. While clinical care provides 85 percent of the revenue for most academic centers, Dr. Mahajan said, UC Health

is different. It has a higher percentage of gifts, contracts, and grants, while practice income represents less than 60 percent of overall revenues.

## UCLA FACULTY IN ASA/CSA LEADERSHIP

Many alumni and faculty had the privilege of working with Stan Stead, MD, MBA, during his years at UCLA. We are very pleased to report that Dr. Stead was reelected for a fourth year as the ASA’s Vice President for Professional Affairs. With an unparalleled knowledge of the health care economic and political landscape, he plays a vital role in our negotiations at the federal level with legislators and regulators.

Patricia Kapur, MD, the immediate past Chair of our department, joined Jane Fitch, MD, a past president of the ASA, Asha Padmanabhan, MB, and Linda Hertzberg, MD, on a well-attended panel discussion on leadership and barriers to leadership for young physicians. Their discussion was immediately followed by the first-ever meeting of the Ad Hoc Committee on Women in Anesthesia, chaired by Dr. Hertzberg.

James Moore, MD, Clinical Professor, who chairs the ASA Committee on Performance and Outcomes Measurement (CPOM), is fast becoming a national expert on the complex MACRA law. He spoke about the role of electronic health records under MACRA in a panel discussion titled, “Total Transformation of Medicare Payment.”

Under Dr. Moore’s leadership, CPOM recommended five new quality measurements which were approved by the ASA House of Delegates:

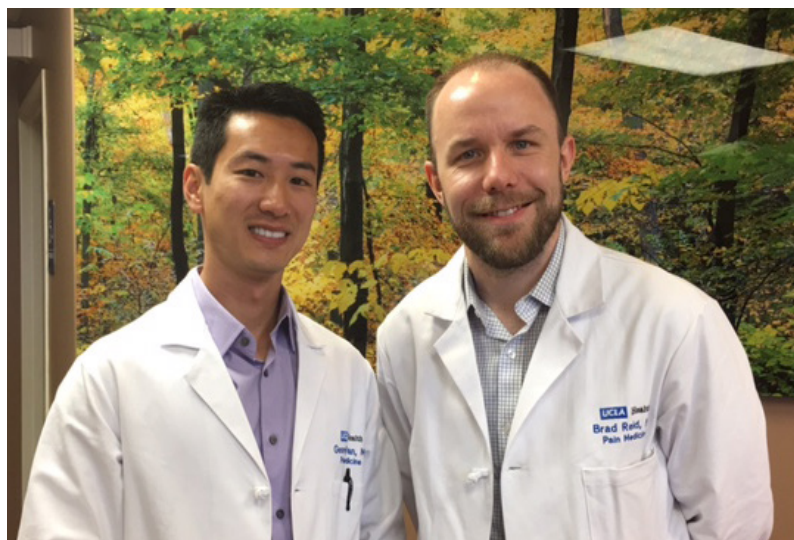
- Assessment of patients for obstructive sleep apnea;
- Treatment of hyperglycemia with insulin;
- Adherence to blood conservation guidelines for cardiac operations using CPB;
- Avoidance of baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing an outpatient procedure;
- Application of lung protective ventilation during general anesthesia.
- These measures will be submitted to CMS for approval.

Both Dr. Moore and Johnathan Pregler, MD, Clinical Professor and Director of Operative Services, are past Presidents of the CSA. Dr. Pregler is the current ASA Alternate Director for California, and chairs the Rules Committee of the Western Caucus.

UCLA boasts a preponderance of CSA officers at present:

- Karen Sibert, MD, Associate Clinical Professor and Director of Communications, serves currently as President-elect and Media Editor, and will move into the office of President in June;
- Judi Turner, MD, PhD, Associate Vice Chair for Education and Residency Program Director, is CSA’s Treasurer;
- Rita Matevosian, MD, Chief of Anesthesiology at Olive View-UCLA Medical Center, is the current Secretary;
- Philip Levin, MD, Clinical Professor and Chief Medical Officer at Santa Monica-UCLA Medical Center, is Assistant Secretary, and chairs the CSA’s Membership Committee;
- Christine Lee, MD, is the District Director for CSA District 11, which encompasses west central Los Angeles County, including Cedars-Sinai Medical Center and UCLA.

UCLA anesthesiologists who served as delegates or alternate delegates in the ASA House of Delegates include Maxime Cannesson, MD, PhD, Eric Hsu, MD, Jonathan Jahr, MD, Aman Mahajan, MD, PhD, Rima Matevosian, MD, James Moore, MD, Johnathan Pregler, MD, Jeffrey Rusheen, MD, Karen Sibert, MD, and Judi Turner, MD, PhD.



Town and gown: Drs. George Pan and Brad Reid practice pain medicine at community clinic in Santa Clarita

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# UCLA Anesthesiologists Lead ASA Brain Health Initiative

During his term as ASA President in 2015-16, Daniel Cole, MD, Professor of Clinical Anesthesiology, announced the start of a landmark ASA Brain Health Initiative, focusing on the risks especially to the aging brain that may accompany exposure to surgery and anesthesia.

Dr. Cole established a steering committee consisting of Aman Mahajan, MD, PhD, our department chair, along with:

- Lee Fleisher, MD, Chair of the Department of Anesthesiology and Critical Care at the University of Pennsylvania Health System
- Jeanine Wiener-Kronish, MD, the Chief of Anesthesia and Critical Care at Massachusetts General Hospital
- Roderic Eckenhoff, MD, Professor of Anesthesia at the University of Pennsylvania Health System, who serves as chief scientific officer.

The new brain health initiative is focusing first on the development of consensus definitions for the somewhat nebulous diagnosis of postoperative cognitive decline (POCD). As Dr. Eckenhoff wrote in the June issue of the ASA Monitor, “This work is

necessary because different research groups have used different criteria to define POCD, and often in different cognitive domains (executive function memory, etc.).”

An international group of physician anesthesiologists and basic scientists is devoting attention to understanding the multifactorial causes of POCD and delirium, looking at factors involving the patient’s underlying medical problems, the type of anesthesia, and the type of surgery. Future randomized controlled trials will try to shed light on whether any specific techniques of anesthesia management can produce better cognitive outcomes. Is total intravenous anesthesia superior to inhaled agents? Is avoidance of “deep” anesthesia better? So far, there is no conclusive evidence, and further trials are essential.

In September, a “Brain Health Summit” convened in Washington, DC, with participation from a wealth of critical stakeholder organizations, including the American College of Surgeons, the U.S. Department of Health and Human Services (HHS), the American Hospital Association, the American Geriatric Association, the Patient-Centered Outcomes Research Institute (PCORI), the National Institutes of Health (NIH), and the American Association of Retired Persons (AARP).

The coalition plans to begin two simultaneous campaigns: one to educate health care providers with a toolkit on risk factors and recognition of delirium, and a second patient-facing campaign to inform the public. Focus groups organized through the ASA will help to define what messages will best resonate with and educate the public about POCD. A timeline of 90 to 120 days is anticipated for the first white papers to appear as a product of the summit meeting.

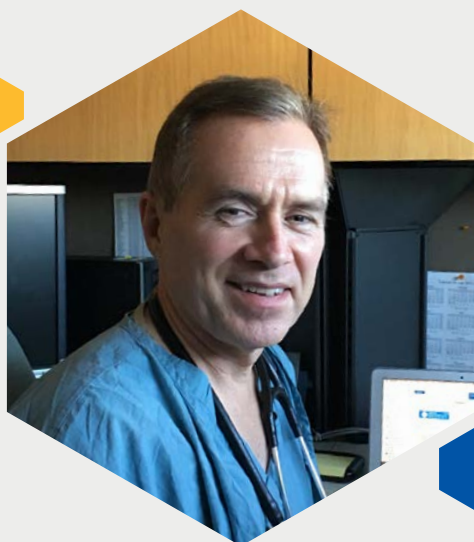


IMAGE  
Dr. Cole in his UCLA office



# Sound Waves in Santa Monica

By Prince Neelankavil, MD

## GOT ULTRASOUND??

Together with the Loma Linda University Department of Anesthesiology, we co-sponsored the first annual Perioperative and Point-of-Care Ultrasound Conference in September at the Loews Hotel in Santa Monica. The conference was attended by over 80 highly motivated anesthesiologists and allied health care professionals from across the country.

The goal of the conference was to teach non-cardiac anesthesiologists the fundamentals of ultrasound, and the practical aspects of image acquisition and interpretation. Both surface ultrasonography and transesophageal echocardiography were utilized. The majority of the time was spent at hands-on teaching stations, to the delight of the participants.

The conference was highly successful, thanks to the excellent organizational work by my co-chairs, Kimberly Howard-Quijano, MD, MS, and Davinder Ramsingh, MD, of Loma Linda, and the first-rate lectures and teaching by our UCLA faculty members: John Anderson-Dam, MD, Andrew Disque, MD, MS, Vadim Gudzenko, MD, Reed Harvey, MD, Jonathan Ho, MD, Wolf Kratzert, MD, Jure Marijic, MD, Emily Methangkool, MD, Komal Patel, MD, Ali Salehi, MD, and Sumit Singh, MD.

There has been a call to action from echocardiography experts across the country to train non-cardiac anesthesiologists with point-of-care (POC) ultrasound. This technique enables the user to perform rapid evaluation at the bedside of a patient who is unstable from a cardiopulmonary standpoint. POC ultrasound can give an instant view of right

and left ventricular function, valvular function, lung pathology including pneumothorax, and the presence of tamponade. In addition, surface ultrasound may be used to evaluate the presence or absence of free fluid in the abdomen, and correct positioning of the endotracheal tube.

We would like to extend special thanks to the chairs from UCLA and Loma Linda, Aman Mahajan, MD, PhD, and Robert Martin, MD, for their generous support. If you missed this year's event, or would like to attend again, we hope you will mark your calendar for the second annual Perioperative and Point-of-Care Ultrasound Conference, to be sponsored again by UCLA and Loma Linda in Santa Monica in September, 2017.



### IMAGES

Dr. Vadim Gudzenko demonstrates pulmonary ultrasound

Dr. Prince Neelankavil teaches echo assessment of the left ventricle

Participants appreciated details in 3D images of the mitral valve



# Our First-Ever Cardiovascular Theme Symposium

By **Thomas Vondriska, PhD**

The inaugural [Cardiovascular Theme Symposium](#) was held on September 2 at the new Luskin Conference Center on the UCLA campus. This event featured lectures from leaders in cardiovascular medicine and science from around the country, including Donald Heistad, MD (Iowa), Joseph Hill, MD, PhD (UT Southwestern), Jake Lusic, PhD (UCLA), Hanna Mikkola, MD, PhD (UCLA), Eric Olson, PhD (UT Southwestern), Marlene Rabinovitch, MD (Stanford), Gordon Tomaselli, MD (Johns Hopkins), Douglas Vaughan, MD (Northwestern), and Karol Watson, MD, PhD (UCLA).

The Symposium was the first scientific conference sponsored by the UCLA Cardiovascular Theme, an interdepartmental effort in the David Geffen School of Medicine to expand clinical, translational, and discovery programs in cardiovascular medicine. The event was attended by about 375 scientists, clinicians, and trainees from UCLA, and featured a packed poster session and presentation of 90 abstracts.

Gregoire Ruffenach, PhD, a visiting post-doctoral researcher in the laboratory of Mansoureh Eghbali, PhD, was one of the seven abstract winners who are graduate students or clinical/research fellows. The event featured key participation by anesthesiology faculty members Kimberly Howard-Quijano, MD, MS, Mansoureh Eghbali, PhD, Christoph Rau, PhD, Yibin Wang, PhD, Thomas Vondriska, PhD, and Riccardo Olcese, PhD.



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#### IMAGE

Gregoire Ruffenach, PhD, took honors for his research abstract

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# Perioperative Genomics: Next-Generation Medicine

By Louis Saddic, MD, PhD, and Aman Mahajan, MD, PhD

UCLA Health earlier this year announced the creation of a new [institute for precision medicine](#), a key piece of a larger precision health venture within the UCLA [Clinical and Translational Science Institute](#) (CTSI). Our department has become a vital partner in the implementation of this program, particularly in the realm of [cardiovascular precision medicine](#).

One of the core proposals of precision health will be to study perioperative genomics, integrating genomic information into the diagnostic and therapeutic management of patient care. While the field of genetics looks at the structure and function of single genes, genomics studies genes and their interrelationships to identify their combined influence on the growth, development, and pathology of the entire organism – in this case, the patient.

Starting soon, each patient who presents to our preoperative assessment clinic or is admitted for same-day surgery will be asked to donate a blood sample to be used for genomic analysis. The sheer size and diversity of the UCLA health system will provide the resources necessary to collect and preserve the samples, store large data files, and link high-powered genetic analysis of the samples with outcomes data from our electronic health record system.

As perioperative physicians, we face new challenges to patient care in an era of constrained resources, more procedures needed by patients with complex and critical illnesses, and an aging population. Genomics has the potential to provide us with the tools necessary to anticipate how each individual patient will respond to the numerous stresses and pharmacological exposures of the perioperative period.

We will be able to study the responses of patients with different genetic subtypes to commonly used pain medications, anesthetics, antihypertensive medications, and anticoagulants. If we can understand the contribution of the genetic makeup to the outcomes of our patients, we will truly be able to personalize their care, choosing the best medication every time.

Researchers in precision medicine expect to find that patients will fit into different genomic categories. The goal is to use the preoperative blood samples, together with tissue samples collected at the time of surgery, to identify groups of patients at particular risk for complications such as stroke, myocardial infarction, acute kidney injury, bleeding, arrhythmias, cognitive decline, and sepsis. Once the genetic variants are identified, the data can be used to develop better care strategies, including the appropriate preoperative medical management, degree of surgical invasiveness, plan for intraoperative anesthesia, and level of post-operative care.

“That is what we are trying to do with our approach to cardiovascular disease at UCLA: assign patients to the right group so that we can accurately diagnose and treat their conditions and thereby dramatically improve quality of life and survival,” says Thomas Vondriska, PhD, one of our department’s top researchers in precision medicine. By discovering the molecular signatures of health and disease, we can then use this high-resolution information to care for patients more effectively.

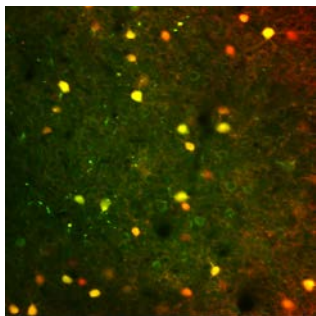
Anesthesiologists will face a major challenge in assimilating genomic information into the current model of perioperative health care. But we feel there is great promise in overcoming these challenges and providing even better care to our patients. Our department is proud to play a pivotal role in developing precision health care at UCLA as we acknowledge the tremendous impact of genomics on the future of medicine.

# Our Research Superstars

Randolph Steadman, MD, MS, has been awarded a grant from the U. S. Department of Defense (DOD) for “Design of a Screen-Based Simulation for Training and Automated Assessment of Teamwork Skills”. The project capitalizes on the resources of our state-of-the-art Simulation Center, which celebrates its 20th anniversary this year. Yue Ming Huang, EdD, and faculty from the Department of Surgery and the Center for Advanced Surgical and Interventional Technology (CASIT) are collaborating with Dr. Steadman on the project.

The goal is to build a screen-based simulation for team training and assessment. While a player builds and works with an online team, an automated assessment engine will make inferences about the player’s ability to identify and apply core teamwork skills. Though the DOD is chiefly interested in the training of highly effective military teams, Dr. Steadman believes that screen-based simulation offers great promise for the future training of medical teams as well.

Andrew Hudson, MD, PhD, has received a prestigious grant from the National Institute of General Medical Sciences for mentored research. The NIH K08 grant will support four years of protected time for Dr. Hudson to study the impact of anesthetics on the nervous system, with the longer term goal of understanding how recovery of consciousness from anesthesia occurs.



Dr. Andrew Hudson’s glow-in-the-dark mouse neurons

Using a mouse model, Dr. Hudson is investigating how individual neuron populations within the brain cortex show changes in electrical activity at different anesthetic depths. His research model causes the neurons to fluoresce when they are stimulated. By selectively

targeting and intervening in these neuron populations, he hopes to achieve “a causal investigation of the changes in the brain that lead to unconsciousness from anesthesia, and the resulting recovery of consciousness after anesthesia.”



Dr. Kimberly Howard-Quijano studies the nervous system’s effects on the heart

Kimberly Howard-Quijano, MD, MS, has won a Foundation for Anesthesia Education and Research (FAER) grant to study sudden cardiac death and ventricular tachyarrhythmias. Imbalances in the nervous system are known to play a large role in triggering these arrhythmias.

Surprisingly, interventions that affect the spinal cord – such as spinal cord stimulation and epidural anesthesia – may be therapeutic for cardiac arrhythmias. Working with normal subjects first, and then with patients who have suffered heart attacks, Dr. Howard’s research will study the effect of spinal cord stimulation on heart rhythms, and she hopes to expand understanding of how spinal neuromodulation therapies work.

Soban Umar, MD, PhD, is the winner of a FAER Mentored Research Training Grant, a two-year grant awarded to junior faculty members. He is studying idiopathic pulmonary fibrosis (IPF), a progressive disease with a poor prognosis that often leads to a need for lung transplantation. IPF patients who develop pulmonary hypertension have even worse outcomes.



Dr. Soban Umar in his laboratory



Dr. Umar and his mentors, Aman Mahajan, MD, PhD, and Mansoureh Eghbali, PhD, have developed the first model of combined pulmonary fibrosis and pulmonary hypertension in rats, effectively simulating the human disease. Their goal is to devise a novel therapy, specifically studying a molecule called microRNA 125b-3p. This molecule may serve as a biomarker for disease progression, and may also serve as a therapeutic target for treatment.



New device secures ETTs firmly

A UCLA anesthesiology team, led by Nir Hoftman, MD, tested a novel device for securing endotracheal tubes, and learned that it works far better than securing the tubes with tape of any kind. The new device has the potential to improve the safety and security of endotracheal tubes for patients in the operating room, the ICU, or the emergency department. Authors Jack Buckley, MD, Adam Brown, MD, John Shin, MD, Kirsten Rogers, BA, and Nir Hoftman, MD, published the results of their prospective clinical trial of the Haider Tube-Guard® in the May issue of *Anesthesia & Analgesia*. Dr. Hoftman described using the device as “like putting a key in a lock. Once it’s turned, you can’t pull it out.”

Two of our department’s remarkable scientists — Mansoureh Eghbali, PhD, and Thomas Vondrisk, PhD — are the winners of the only two grant awards this year from UCLA’s Clinical and Translational Science Institute (CTSI). They are studying two major cardiac problems that affect thousands of patients: pulmonary hypertension and atrial fibrillation.



Dr. Thomas Vondrisk and Dr. Mansoureh Eghbali, CTSI grant winners

Dr. Eghbali and her colleagues have identified a key molecule that controls the production of oxidized lipids, and is reduced in the lungs and blood of patients with pulmonary hypertension. They hope to develop a new blood test that can aid early detection. Dr. Vondrisk’s research is studying how changes in genetic material over time correlate with disease incidence and progression. Specifically, his team is looking at DNA methylation, and how this marker may predict the severity of atrial fibrillation in response to an environmental stress.

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# Mining “Big Data” to Improve Patient Care

By Nirav Kamdar, MD, MPP

Big data and informatics are the recent buzzwords of technology. Our department isn't straying from embracing the rising technological tide of big data – instead, we are focusing on it, and advancing the infrastructure for ourselves and for the entire UCLA Health system. Led by three faculty members – Ira Hofer, MD, James Moore, MD, and Eilon Gabel, MD – the UCLA anesthesia informatics nexus is working constantly to improve patient care, provide analytics to the health system, and advance research and education.

Launched in August, 2013, when Dr. Hofer left the Mount Sinai Health System in New York City to join the UCLA faculty, the informatics team has built a robust infrastructure in a very short time. The team is tracking patient data across the health system, and has achieved remarkable innovations in the difficult task of extracting data from Care Connect, UCLA's Epic-based electronic medical record (EMR).

The informatics team provides data analytics for patient care and clinical performance across the entire perioperative environment. The team now includes Drew Cheng, MD, who divides his time between informatics and clinical anesthesiology, and Vali Salari, PhD, whose doctorate is in computer science.

During the period of early growth, the team first created a sophisticated data extraction infrastructure to advance clinical research. This “data mart”, as the team described it in a [June, 2016, publication](#) in *Anesthesia and Analgesia*, allows centralized definitions with simplified reporting of perioperative data on a variety of metrics, and simplifies the code required to extract data. This innovation has allowed the team to lead the health system's expertise for data extraction from Epic locally and nationally.

One major innovation made possible by Dr. Gabel's informatics code focuses on using data to give clinician feedback with guidelines and outcomes. He began his proof-of-concept work by providing post-operative nausea and vomiting (PONV) guidelines built into Care Connect, with the goal of optimizing clinical care and reducing PONV. Now anesthesiologists receive periodic updates on rates of PONV in their patients compared to the department's overall rate. Other real-time decision support tools within the EMR are in development to assist with patient care.

The cardiovascular research of Thomas Vondrisk, PhD, links genomics to clinical informatics contained within the data mart. In a [visionary article just published](#) in *Circulation Research*, Dr. Vondrisk and his co-authors outlined a future for “precision medicine”, where molecular insights from a diverse population can help physicians to tailor the treatment process for each individual. “We envision a natural hybrid,” the authors wrote, “wherein discovery science and clinical trials coincide in the same health systems and patient populations.”

The informatics team has generated a pipeline to cultivate and mentor residents within the UCLA anesthesia program to advance a pathway in informatics for an academic medical career. Theodora Wingert, MD, is this year's fellow in informatics. While the team has largely trained current residents for this research transition, the aim is to grow the educational mission to include applicants from other institutions.



Drs. Eilon Gabel, Ira Hofer, Theodora Wingert, James Moore, Drew Cheng, and Vali Salari at informatics HQ

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# “Prehabilitation” – The Next Step in Readiness for Surgery

By Victor Duval, MD

In the two years since the Preoperative Evaluation and Planning Center (PEPC) was created, it has expanded to the point where we now evaluate more than 15,000 cases per year. The Center’s purpose traditionally has been to make certain that patients with complex medical issues who need surgery or interventional procedures at UCLA Health have had all the evaluation they need, and are ready to undergo their treatment.

The next phase of PEPC’s development will add components of “prehabilitation” – the optimization of preoperative condition – based on the unique needs of each patient. Our plan is to work with surgical services and UCLA’s network of primary care physicians to improve patient health well in advance of surgery, in the hope of achieving better outcomes. Working in conjunction with UCLA’s new precision medicine initiative, we will move from a model that simply helps patients survive surgery to one that improves patients’ health throughout the entire process of preparation.

The new preoperative pathways will include:

- smoking cessation
- improving nutritional status
- optimal control of diabetes
- treatment of anemia
- management of chronic pain
- physical conditioning aimed at reducing frailty
- addressing anxiety and psychosocial needs

We have already begun working with our orthopedic colleagues, colorectal surgeons, and urologists. Over the coming months, we will develop and strengthen partnerships with surgical schedulers, geriatrics, medicine, hematology, nutrition, physical therapy, social work, and pharmacy.

Outcomes will continue to be measured in terms of cancellations, OR delays and turnover times. New metrics will also include perioperative complications, length of stay, post-discharge disposition, readmissions, surgeon satisfaction, and patient-reported outcomes.

## THE HISTORY OF PEPC

In the initial phase of PEPC’s development, we set out to work with our colleagues in anesthesiology, surgery, and medicine to help coordinate perioperative care. We created a robust system to alert the anesthesia schedulers well in advance about patients with unique or challenging medical problems, so that they could make appropriate staff assignments suited to the individual patient’s needs, and so that the staff could be acquainted ahead of time with the patient’s history.

We have been able to demonstrate progress by showing that patients evaluated by PEPC staff are less likely to have their procedures canceled on the day of surgery. As markers of success, surgeon satisfaction and referrals to PEPC are on the rise.

***"The vision of UCLA Health  
is to heal humankind..."***



## PRE-OPERATIVE EVALUATION AND PLANNING CENTER



Cecilia Gomez, George Brown, Lisa Tritico, NP, Randi Hissom, Zaira Salazar, Mariesa Buhl, NP, and Victor Duval, MD

In the Center's two locations – one in Westwood and one in Santa Monica – cases are initially screened by the Santa Monica clinic's 12 registered nurses and three nurse practitioners. Complex cases that need further attention are identified and referred to the Westwood site, where an attending anesthesiologist and a resident are on duty, for further review and in-person evaluation when indicated. These physicians also see patients with complex medical problems who are referred by their surgeons for advance consultation.

In the next phase, we will strive to understand each patient's goals, needs, values, and lifestyle. We will seek to prepare patients for surgery not just from the medical standpoint, but also to address their physical and emotional needs in the context of their social support structure. The goal is to achieve the "triple aim" of providing better care, at a lower cost, and to improve overall health.

The vision of UCLA Health is to heal humankind, one patient at a time, by improving health, alleviating suffering, and delivering acts of kindness. Our new model for PEPC, we hope, will serve as an example of what can be accomplished through collaborative efforts focused on improving patient outcomes.





#### IMAGES

Residents enjoy the annual summer retreat at Huntington Beach

CA-1 resident Sam Hong practices bronchoscopy at the Simulation Center

Our new class of interns

RIGHT: Residents Timothy Walsh, Andrew Sumarto, Anastasia Kwon, Yuichiro Hayashi, Curtis Darling, and David Liu celebrate at our 2016 graduation

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# Residency Training in the OR and Beyond

**By Emily Methangkool, MD, and Judi Turner, MD, PhD**

Our educational program enjoyed a transformative year in 2015-2016. This year, we expanded our categorical internship class from 22 residents to 25 residents, and we expect to have 100 residents by 2018. We have also recruited highly accomplished candidates to our fellowship programs, including two fellows in regional anesthesia, four in chronic pain, four in cardiac anesthesia, three in critical care, and one each in clinical research and liver transplantation.

We have introduced a number of nonclinical opportunities for our residents. For the first time, our CA-3 residents are completing a required Practice Management rotation. The CA-3 resident works with the OR Director at our UCLA-Santa Monica Hospital for two weeks, learning to supervise junior residents and nurse anesthetists, run the board, coordinate schedules, and navigate the “ins and outs” of OR management.

As payments shift from volume to value, quality improvement (QI) has become an increasingly important focus in medical practice. We have a large number of residents involved in QI work, and this year initiated a didactic program, introducing them to the fundamentals of conducting a QI project.

This fall, we hosted our first “Resident Research Roundtable,” a forum for our faculty researchers to share their work with the residents, and recruit residents with an interest in working on specific research projects. We also initiated a formal residency research track, which enables selected residents to spend a significant portion of their residency on a large-scale research project.

This year, our residents participated in numerous outside interests also. Sepehr Rejai, MD, and Ajit Rai, MD, MS, are currently our resident delegates to the CSA and ASA. Rachel Steckelberg, MD, MPH,

was awarded the Society for Education in Anesthesia Health Volunteers Overseas Fellowship, and rotated in Ho Chi Minh City, Vietnam, for four weeks. Steven Tu, MD, traveled to Hangzhou, China, to rotate for four weeks at our sister institution at Zhejiang University School of Medicine. Since the beginning of our partnership with Zhejiang University, we have sent five residents to work and learn in Hangzhou. Myro Figura, MD, a budding entrepreneur, secured an invitation to attend the Health 2.0 conference in San Francisco. With the increasing focus on promoting physician wellness and preventing physician burnout, our Resident Wellness Committee has done a fantastic job engaging our residents. The committee has organized social outings as well as monthly treats for our residents. In addition, we have held joint wellness activities with faculty, including hiking, cycling classes, and a “take your family to work” day. Our UCLA resident family has expanded, adding eight new babies in 2015-2016! Our newly established Resident Recruitment Committee has been integral in planning applicant activities and creating an informative video for applicants.

Among our goals this year will be to establish educational funds for global health initiatives, set up additional research tracks, and obtain complementary funding. Overall, we have had a very successful year and are looking forward to an even better year in 2016-2017!





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# Unique Anesthesia Care for Eye Surgery



**By Elaine Liew, MD, FRCA, and Brittany Countryman, CRNA**

UCLA was very well represented at the most recent annual meeting of the Ophthalmic Anesthesia Society (OAS), held on September 9 to 11 in Chicago. Our own Zhuang Fang, MD, MS, the society's president for 2015-16, co-chaired the meeting of healthcare professionals involved in ophthalmic anesthesiology, surgery, and nursing.

Elaine Liew, MD, FRCA, presented a lecture on Takotsubo cardiomyopathy, also known as “broken-heart syndrome”, in patients undergoing eye surgery. Faculty members from the Jules Stein Ophthalmology Department – Robert Goldberg, MD, Catherine Hwang, MD, and Tara McCannel, MD, PhD – all gave excellent lectures on some of the special procedures we do here at UCLA that are not common at outside facilities, such as plaque radiotherapy for choroidal melanoma, and oculoplastic surgery. The meeting also featured a hands-on cadaver lab on orbital anatomy, and how to relieve a retrobulbar hemorrhage.

The meeting sparked lively debate among the attendees on a variety of issues:

- Whether fasting is necessary for patients undergoing cataract surgery with topical anesthesia only;
- The pros and cons of using neuromuscular blockade in a case with an LMA;
- The extent of preoperative assessment necessary before eye surgery;
- Joint Commission requirements for sterility.

At another very interesting session, Suzette Goucher, Director of Risk Management at the University of Utah, and her team presented a mock malpractice trial in which the anesthesiologist and surgeon were both sued. The premise of the case was that a patient agreed to undergo cataract surgery under topical anesthesia with no sedation, but became nauseated and retched without warning, causing a tear in the posterior capsule and subsequent hemorrhage.

The team demonstrated tactics used by lawyers in litigation for medical malpractice cases. Lawyers may make use of a jury's most primitive instincts for safety and self-preservation, and try to trap the defendant into agreeing with a safety premise that contradicts the defendant's conduct during patient care. For example, an attorney might get a defendant to agree that safety is always the highest priority, that headache may be a symptom of a brain tumor, and that CT scans may diagnose brain tumors. That line of questioning may lead to an accusation that the physician ignored safety by failing to order a CT scan after a patient complained of headache.

The risk management team pointed out that “safety” doesn't always equate with reasonable standards of medical care. They recommended that physicians and nurses never answer vague questions in absolute terms, whether talking with a patient or an attorney. Using phrases such as “It depends on the exact circumstances” or “not always” is a wiser option.

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## IMAGE

The eye of Horus, an ancient icon of medicine, evolved into the abbreviation “Rx” used today





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#### IMAGES

Drs. Elaine Liew and Zhuang Fang at Jules Stein  
Dr. Zhuang Fang presides at the 2016 OAS meeting  
Ophthalmologist Catherine Hwang, MD, Brittany Countryman, CRNA, Zhuang Fang, MD,  
and Jacquelyn Culbertson, CRNA

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# Keeping Ourselves Healthy and Resilient

By Keren Ziv, MD

## With all growth comes change and challenges.

Our department has transformed from a relatively close-knit group of physicians working in a single location into a group of more than 100 clinical faculty members, more than 100 residents and fellows, and nearly 40 nurse anesthetists providing anesthesia, perioperative medicine, and critical care services at multiple sites. The combination of working at greater distances from one another, along with the increasingly stressful daily practice of medicine, motivated us to begin a UCLA Anesthesiology Wellness Initiative.

First, we surveyed department members about their needs and interests. The agreed-upon objectives of the initiative are:

- To improve work/life balance
- Enhance social satisfaction at work and at home
- Boost physical fitness and health
- Increase resilience, and the ability to cope with stress.

With the support of our chair, Aman Mahajan, MD, PhD, we have begun rollout of the program with a well-received host of social and educational activities.

On the social side, we hosted a “New Faculty Meet and Greet” event, and we’ve taken a SoulCycle spin class. Our families joined us on a visit to the UCLA Planetarium, and Victor Duval, MD, and John Anderson-Dam, MD, hosted a “Take your kids to work” activity where the youngsters learned how to intubate a manikin. We’ve taken a weekend hike to Paradise Falls in the Santa Monica Mountains, led by Hamid Nourmand, MD. These events have given us opportunities to meet new colleagues, rekindle old friendships, and take some time to relax and connect outside of the work environment.

To improve our health and fitness, we’re learning about mindfulness and meditation, thanks to the expertise of Aviva Regev, MD, MBA. We’re taking advantage of a weekly fruit and vegetable delivery option, and joining our colleagues in charity races around Los Angeles. We’re getting ready to participate in an upcoming fitness challenge with the UC Health Wellness Program.

We’ve enjoyed talks from many speakers. At our recent Department of Anesthesia Practice Group retreat at the beach, we learned more about retirement planning. Felice Miller, PhD, gave a recent seminar in which she illuminated how to optimize



Our hiking group in Thousand Oaks





Faculty members enjoy the sun at our day-long beach retreat

our encounters with patients from many cultures and backgrounds. At a Grand Rounds lecture, Raphael Rose, PhD, explained how NASA astronauts undergo resilience training to help them cope during long-term space missions. We are looking forward to an upcoming lecture about mindful caregiving, and a series of talks in the new year concerning emotional intelligence.

Perhaps most important, we hope that the wellness initiative will help us face the inevitable need to deal with distressing, patient-related events. UCLA Health supports an institutionally integrated mental wellness program that will be available for all clinical as well as nonclinical staff and faculty. We are proud that they have chosen to partner with our department to develop and pilot this program.

We have identified a group of highly motivated attending anesthesiologists, residents, and nurse anesthetists who are willing to become trained and certified as peer support counselors. They will learn basic listening and support skills, how to identify and respond to high-risk behaviors, and how to make referrals and connections as needed to available health system resources.

By highlighting the importance of mental wellness in our stressful work environment, we can encourage one another in daily interactions, and support each other through the difficult situations that inevitably arise. Stay tuned for developments to come!



#### IMAGES

Dr. Barbara Van de Wiele and her husband, Dr. Jorge Lazareff, at Paradise Falls  
Dr. Nourmand, the trail leader, and his daughter Debbie

# Nurse Anesthetists: Active Team Members!

By Deborah Dach, MSN, CRNA

Our nurse anesthetist group has been growing during the past 12 months. Last year we hired many of our California graduates from the University of Southern California/Keck School of Medicine, Kaiser Permanente, and Samuel Merritt University schools of nurse anesthesia. This fall we doubled that number with two more of our local graduates and several experienced professionals from the east and west coasts.

Some of our new staff members – Kelly Gibson, Susana Pak, and Natasha Pyykko – were nurses at Ronald Reagan UCLA Medical Center in the operating rooms and in the cardiothoracic and liver ICUs before their anesthesia careers started. It's obviously beneficial to bring staff on board who are already familiar with the complexity of our environment and our customers. It's equally appealing to hire anesthetists from other parts of the country. They bring practice experience that may be different as well as helpful for us to learn. By the start of 2017, we will have a diverse group of 38 staff anesthetists working at all of the clinical sites.

Most recently we have added the Medical Procedure Unit, a busy GI center in the 200 Medical Plaza building, to our list of work locations. Kianusch Kiai, MD, the unit's medical director, is enthusiastic about adding nurse anesthetists to the MPU staff to help increase case throughput. Our goals are to smooth the way for patients with early preoperative evaluations, sedation aimed at prompt emergence, and efficient discharge coordination with the nursing staff.

Many nurse anesthetists have provided educational programs for UCLA nursing departments. Dominick Berkery and Emily Pinho have taught airway skills at annual competency workshops. Nick Perrenoud, Gena

Dix, and Shelly Anderson have presented pharmacology lectures that review pain management, protocols to prevent postoperative nausea and vomiting (PONV), and new drugs such as sugammadex, to PACU staff nurses.

Our course on "Procedural Sedation" is the most requested and well attended program. Erica McCall and I have taught this course together for several years. Using slides, handouts, and multiple case studies, we provide UCLA nurses with a full overview about how to care for the patient who needs sedation. Using airway mannequins from the UCLA Simulation Center, we teach proper technique for chin lift, jaw thrust, mask ventilation, and placement of oral and nasal airway devices. The evaluations from the attendees have been so positive that we've increased the class size and added Matthew Park to our instructor team.

Wellness goals have been on the "to do" list for our group for several years. Katie Emaus, who has taken "Urban Zen Integrative Therapy" training at UCLA, is our "ambassador" to wellness. She provides instruction on aromatherapy for PONV prevention as well as many other skills. Part of keeping healthy is eating well and getting plenty of exercise. Some of the staff recently attended a "foodie" and champagne workshop, organized by Shelly Anderson, and a group of energetic women took on an exercise challenge in Temecula. They trained together, and succeeded at completing a difficult obstacle course that included ropes, mud, and barbed wire! Not to be outdone, several of the men are doing the same challenge in January. We wish them good luck and suggest that they'd better start training!



## IMAGE

Nurse anesthetists Brittany Countryman, Debbie Paris-teho, Katie Emaus (top row), Lauren Fagan, Cortney Jolin (front row), ready for fitness challenge!



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# Our New Faculty Physicians

By Shevaughn Marchese



Golnaz Alemzadeh, MD, joined the department in June. Dr. Alemzadeh completed her MD at Tehran University of Medical Sciences, and trained at John H. Stroger Hospital of Cook County in Chicago. She completed a fellowship in Critical Care Medicine at Carver College of Medicine at the University of Iowa.



After completing his residency and liver transplant fellowship at UCLA, Brent Ershoff, MD, MS, was appointed Assistant Professor in Residence this year. Dr. Ershoff received his MD from the University of California, San Francisco, and recently completed a Master of Science in Clinical Research.



After completing her UCLA pediatric anesthesiology fellowship this year, Diana Hekmat, MD, joined the faculty as a Clinical Instructor. Prior to UCLA, Dr. Hekmat completed her anesthesiology residency in New York at Mount Sinai Hospital, and earned her MD at Albert Einstein College of Medicine.



Laleh Jalilian, MD, recently joined the critical care medicine team. She completed a residency in anesthesiology and pain medicine at the University of Washington, and a critical care medicine fellowship at Massachusetts General Hospital. Dr. Jalilian is originally from northern California, loves to hike and enjoy the environment, and believes it is an extremely exciting time to be in medicine.



Jason Lee, MD, joined the department this summer as a Clinical Instructor. Dr. Lee completed his anesthesiology residency at Massachusetts General Hospital – Harvard Medical School, and is a David Geffen School of Medicine alumnus. He has a special interest in medical student and resident education, and in the use of simulation in teaching.



After completing a pain medicine fellowship at UCLA, George Pan, MD, joined our community pain medicine group as a faculty member working primarily at the Santa Clarita location. Dr. Pan is originally from Atlanta, GA, earned his MD at the Medical College of Georgia, and completed his anesthesiology residency at Emory University.



A native of Santa Monica, Aviva Regev, MD, MBA, joined the faculty as a Clinical Instructor after completing her anesthesiology residency here with us at UCLA. Dr. Regev earned her MD at New York University, and completed her MBA at UCLA while she was a resident. Dr. Regev is an expert in meditation and mindfulness training.



Bradley Reid, MD, joined the community chronic pain practice in Santa Clarita this year as a Clinical Instructor. Dr. Reid earned his MD at the University of Rochester School of Medicine & Dentistry, and completed his anesthesiology residency and pain medicine fellowship at Cedars-Sinai Medical Center.



Karen Sibert, MD, joined the faculty in February. She earned her MD at Baylor College of Medicine and completed residency and fellowship training at Yale University School of Medicine. Dr. Sibert is the current President-elect of the California Society of Anesthesiologists, and is known for her editorial writing on current topics in the fields of politics and medicine.



Soban Umar, MD, PhD, was recently appointed Assistant Professor in Residence. After earning his MD at Nishtar Medical College and PhD at Leiden University Medical Center, Dr. Umar completed his anesthesiology residency and a postdoctoral fellowship in cardiovascular research here at UCLA.



Susana Vacas, MD, PhD, was recently appointed as a Clinical Instructor. Dr. Vacas joins us from Lisbon, Portugal, where she earned her MD at NOVA Medical School, and completed residency training at the Central Hospital of North Lisbon.



Cristianna Vallera, MD, a UCLA residency alumna, returned to join the faculty this year after several years in private practice. She completed Obstetric, Regional Anesthesia, and Acute Pain fellowship training at Johns Hopkins University School of Medicine.

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# Our Far-Flung Graduates Answer the Question: Where Are You Now?

## **Molly Chung, MD, Class of 2014**

"I finished my pediatrics anesthesia fellowship in 2015, and have been working with a nice group in Torrance since then. I am currently living in Long Beach, and we are becoming a family of four in February 2017!"

## **Stacey Krueth, MD, Class of 2014**

"I completed a cardiac anesthesia fellowship at Cedars-Sinai, and passed my Advanced Perioperative Transesophageal Echocardiography boards in 2015. I started at Anesthesia Services Medical Group in San Diego, CA after fellowship graduation. I have just recently been accepted to the subgroup at Sharp Memorial Hospital in San Diego."

## **Andrew Germanovich, DO, Class of 2013**

"Other than working as a pain physician and anesthesiologist at Restore Orthopedics and Spine in Orange, CA, and Rancho Mirage, CA, I also do a few other things. I have published a paper in Pain Physician."

## **Michelle Woodfin, MD (nee Michelle Arnold), Class of 2013**

"Working as a pediatric anesthesiologist at Loma Linda University. Have a new baby girl named Justine who is now six months."

## **Jennifer Harkins, MD (nee Jennifer Dubrawski), Class of 2011**

"I moved to Tampa, Florida, on July 30th to raise two boys, four and six years old, leaving behind a wonderful practice in Mammoth Lakes. I am currently doing independent contract work at a couple of hospitals, ambulatory surgery centers and an oral surgery office. Plus, I plan to continue to work in Mammoth Lakes for 8-10 weeks a year. Over the summer, I completed the 55K Tahoe Rim Trail run, and most recently suffered through the Chicago Marathon."

## **John Bui, MD (also known as Quoc Chuong John Bui, MD), Class of 2009**

"Working with Allied Anesthesia Medical Group since 2009. Chair of St. Joseph's Department of Anesthesiology from January 2016 to present. Go to St. Joseph Hospital of Orange, Children's Hospital of Orange County, Hoag Orthopedic Institute, and Newport Center Surgical. Married. Three boys aged eight, six, and two! Love electronics, traveling and snowboarding. Run and bike when I can!"

## **Natalie Strand, MD, Class of 2009**

"I'd love to share that I have recently had two babies: Fletcher, March 19, 2015, and Hadley, June 29, 2016. Oh, and I married Nate Hill who was a blind date orchestrated by our beloved CRNA Thao!" [Editor's Note: Dr. Strand, who has Type I diabetes, is well known for winning the 2011 season of television's The Amazing Race, and using that platform to advocate for diabetic patients.]



### Hansang Noh, MD, Pain Fellowship, Class of 2008

“Currently Physician in Charge, Anesthesia Pain at Kaiser San Diego.”

### Afshin Shabanie, MD, Class of 2002

“I work with Allied Anesthesia Medical Group in Orange. I go to St Joseph Hospital and Children’s Hospital of Orange County. I am married with three children, live in Irvine, and I love the UCLA Anesthesia Department!”

### Gary Feldman, MD, Class of 1986

“Keep up the great work! I often think of my UCLA colleagues, and am so thankful I had the opportunity to go to UCLA for my undergraduate, medical school, and residency education. I’ve enjoyed a fulfilling community anesthesia practice for the last 28 years, and now look toward retirement. I enjoy my time now between Los Angeles and Nevada as I transition to Sin City for my golden years! Warm regards to all my old schoolmates and colleagues.”

### New Arrivals

#### Lena Russino, MD, CA-2 Resident

“Joe and I are beyond thrilled to announce the birth of our baby girl Valentina Mei on November 5, 6 lbs. 6 oz. and 19.5 inches. We are over the moon with happiness!”

#### Theodora Wingert, MD, Pediatric Anesthesia & Informatics Fellow

“My husband and I are pleased to introduce Lucas Sang Nguyen, born July 13, weighing 8 lbs. 2 oz. I consider myself genuinely lucky to be at an institution and within departments that are incredibly supportive!”



Dr. Stacey Krueth and her fiancé, Lahiru Collure



Dr. Andrew Germanovich specializes in pain medicine



Dr. Natalie Strand and her family



Dr. Gary Feldman enjoys Las Vegas



Dr. Theodora Wingert's baby boy, Lucas



Dr. Lena Russino's baby girl, Valentina

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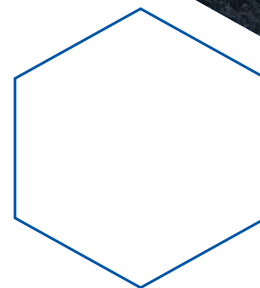
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# Thank you!