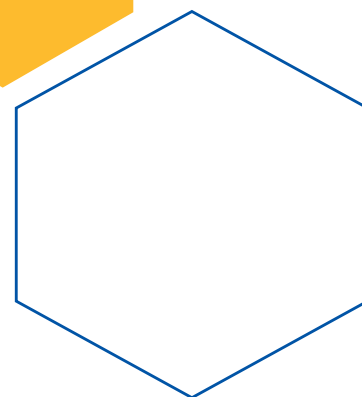


**WINTER 2021 EDITION**  
**UCLA DEPARTMENT OF ANESTHESIOLOGY & PERIOPERATIVE MEDICINE**



David Geffen  
School of Medicine

**UCLA** Health



# Open Circuit

**EDITOR: KAREN SIBERT, MD, FASA**  
**ASSISTANT EDITOR: SHEVAUGHN MARCHESE**

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## WITH YOUR HELP THROUGH GIVING...

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COVER PHOTO:

Drs. Christine Trieu and Jure Marijic, cardiac anesthesiologists, volunteered their time on January 22 to give vaccinations to the public at the LA Forum

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# From the Chair's Desk

By Maxime Cannesson, MD, PhD | Chair



## Dear colleagues, alumni, and friends –

As I am writing these lines, the number of patients impacted by Covid-19 finally is starting to decrease in Los Angeles County in

general and at UCLA. We hope we are nearing the end of a massive surge that has tested the resilience of the Los Angeles medical system to its extreme limits. It also tested our resilience as a department and our resilience as individuals. Some of us have lost loved ones to this disease. The least affluent parts of our own community have been disproportionately harmed.

For all of us, it has affected the way we work, the way we live, the way we play, and the way we rest. It will have a long-lasting impact on our lives and on society in general. I believe that since the day it was established by Dr. John Dillon in 1951, our department could never have been exposed to the level of stress it has endured, day in and day out, over the past 12 months. And still we have thrived, and we are better prepared for the future today than we have ever been.

As we have navigated every challenge that has been thrown at us each day, we have built the foundation on which the future of our department will stand. This foundation is strong and will help us compete with the other top departments of anesthesiology in the world. Our core values and guiding principles are reflected in an inclusive culture of professionalism, collegiality, respect, and mutual support. We are committed to patient-centered care and integrated practice, to ongoing improvement of the quality and efficiency of the care we deliver, and to excellence in absolutely all aspects of academic medicine: patient care, research, education, and community engagement.

We rely on the framework of trust, accountability, and open dialogue we have created. Our pledge to each other is to adapt to changes in a manner consistent with our core values and with the health and well-being of our department's physicians, trainees, nurses, and staff. We firmly believe that we are stronger as a team than as individuals, and that our excellence in patient care is the product of our collective expertise. Our diversity makes us strong; the more diverse and inclusive we are, the stronger we become.

The challenges we have been through these past 12 months have been innumerable. But

looking back, we are stronger today in all aspects of the missions we serve.

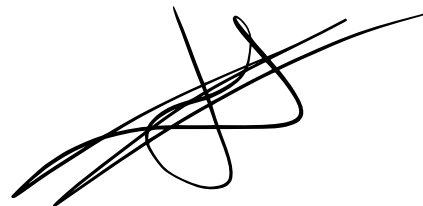
Our clinical services have grown. We have grown our practices in the community and have diversified. Our department has led the way in ensuring the quality and safety of perioperative services for the whole UCLA system since the beginning of the COVID-19 crisis. We have served the least affluent in our own community through our engagement with Martin Luther King Jr. Community Hospital and Antelope Valley Hospital in the operating rooms, the obstetrical suites, and the intensive care units. We have maintained the highest quality of care in our UCLA hospitals and clinics and at our affiliated organizations.

Our research accomplishments are reflected by the number of major publications and grants we secured despite all the obstacles of the past year. We are now #6 in the country for NIH funding and are very close to breaking into the top-five tier. We are proud to have on our faculty a strong group of established basic science researchers together with an up-and-coming group of clinician scientists. We have consolidated our research efforts around four main themes, all supported by solid basic science and clinical foundations: cardiovascular research; organ protection research; neurosciences and the mechanisms of anesthesia; and biocomputing and health informatics research.

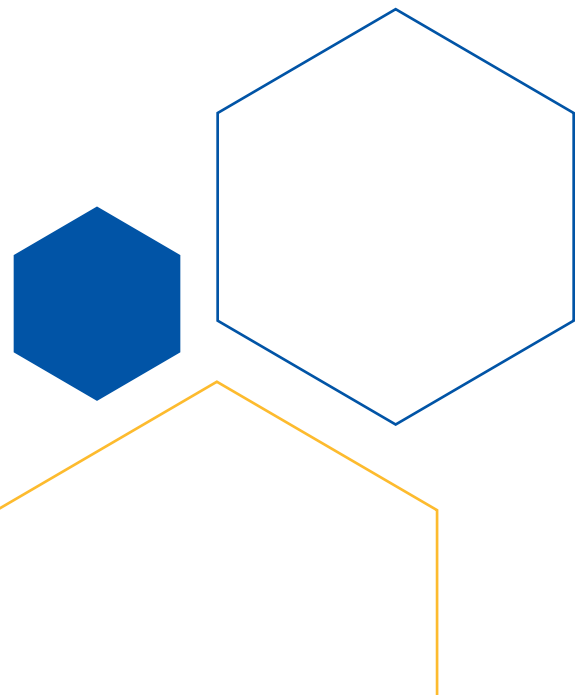
Our commitment to excellence in education has been steadfast. We are just concluding a fully virtual recruitment season and have been

impressed by the quality of our applicants. We have augmented our education leadership team to support all facets of our educational programs even more. Though we do not yet have the results of the match, I am confident we are going to recruit some of the most talented medical students in the country.

Though no one can foretell the future, and another surge in COVID cases could test us again, we will continue to work together for the good of all. Thank you to everyone in this outstanding department – physicians, nurses, and staff – for all that you do every day. Words are inadequate. It is an honor to serve as your chair.



**Maxime Cannesson, MD, PhD**



# A Word From the Editor

By Karen Sibert, MD, FASA



As I write, today is February 15, and for UCLA it's the Presidents' Day holiday. Of course, that means that for many of our faculty, fellows, residents, and nurse anesthetists, it's another day on call – at

Reagan, Santa Monica, and the Martin Luther King Jr. Community Hospital – taking care of emergencies, births, and the seemingly endless stream of critically-ill COVID patients in our intensive care units.

Looking back at Presidents' Day a year ago, February 17, 2020, no one could possibly have imagined how the world would change. We had heard of the novel coronavirus originating in Wuhan, China. Some people thought it would turn out to be just another nasty variant of flu. Others speculated that it might be comparable to the SARS outbreak of 2002, which spread quickly over 29 different countries but was soon contained, killing fewer than 1000 people worldwide.

How wrong we were. How much can the world change in a week?

I took a long-planned flight to New York City early in the morning on March 11, 2020, checking into a hotel near Broadway and looking forward to seeing my two daughters.

We had hors d'oeuvres at a hotel bar by Grand Central Station, and dinner at a 7th Ave. restaurant. The next day, I drove out to Shelter Island to see my grandsons. By March 16, when I boarded the flight to come home, all the New York restaurants and bars had closed. Broadway had gone dark. The plane was half empty, and some passengers were wearing masks. In Los Angeles, our department had started daily crisis planning to formulate policies and procedures to cope with an already lethal pandemic.

Today, I can't quite make peace with the idea that we've entered a "new normal". It doesn't feel normal to wear a mask whenever I leave



**UCLA Anesthesiology @UC...** · 6m ···

Our team spent their day off helping give [#COVID](#) vaccinations at LA Forum! Thanks to Chief CRNA Shelly Anderson, Dr Mary Keyes & Dr Joe Hong! [#HealthcareHeroes](#) [@UCLAHealth](#) [@CannessonMaxime](#) [@CSAHQ](#) [@CMAdocs](#) [#VaccinesWork](#) [@DrPanMD](#) [#MedTwitter](#)



the house. It doesn't feel normal not to enjoy our favorite neighborhood restaurants, and to see movies only in our living room.

One aspect of life hasn't changed, though. Our department members continue to do a remarkable job of working together and supporting each other during this unprecedented pandemic. Our residents smile behind their N95 masks, and make plans to record Zoom videos of their research for the upcoming Scientific Evening. Faculty members have won grants and published landmark articles. Some of us have even spent precious days off volunteering to give COVID vaccinations to the Los Angeles public.

In this issue of *Open Circuit*, we're honored to showcase our department's considerable achievements since last summer. Read about our critical care faculty's contributions to patient care in the ICUs at Martin Luther King and Antelope Valley. See how our Education Office faculty and staff have creatively managed to give medical students a "virtual" inside look at our department, and arranged for residents to host "virtual happy hours" before interview days. And don't miss the photos of our family members (human and animal), who make all the work worthwhile!

**Karen Sibert, MD, FASA**



Cars in vaccination line at the LA Forum





Dr. Joe Hong at his vaccination station



Drs. Kapur and Cannesson in Orlando, 2019

# Highlights from #ANES2020

Our department had much to celebrate at the October virtual ASA Annual Meeting! Though none of us could attend personally due to the pandemic, many more faculty, fellows, and residents than usual were able to see and hear lectures and research presentations thanks to the entirely virtual format.

One special highlight: Our former chair, **Patricia Kapur, MD**, received ASA's highest recognition, the Distinguished Service Award, in a presentation on Sunday morning, October 4! We had hoped to congratulate her personally by holding a reception, but had to content ourselves with a special Grand Rounds presentation

on October 7, attended by Dr. Kapur via Zoom from Philadelphia.

We are also celebrating the nomination of our distinguished faculty member and Vice Chair **Dan Cole, MD, FASA**, past ASA and CSA President, for next year's ASA Distinguished Service Award!

The Wood Library's Patrick Sim Forum on the History of Anesthesiology is always a fascinating session at the annual ASA meeting, but this year it proved especially so with a landmark lecture by **Selma Calmes, MD**, former UCLA faculty and chair of the Olive View-UCLA

Department of Anesthesiology. She spoke about the remarkable early 20th century history of Dr. Mary Botsford, who practiced anesthesiology in the Bay Area. Dr. Botsford fostered the careers of other women in anesthesiology from the early 1900s to the 1930s, when women physicians were abruptly pushed out of the field and male physicians took over.

## Stellar Research Presentations

Our prior interim chair, **Barbara Van de Wiele, MD**, introduced Dr. Kapur at the virtual Grand Rounds, and explained that we sent her a very special gift — a box filled with photos and congratulatory cards from many of her former colleagues and trainees. Dr. Kapur then joined us in watching outstanding research presentations from our faculty and residents.

Among our many ASA presentations, the department had the privilege of hearing eight selected abstracts at the October 7 Grand Rounds:

Department of Anesthesiology and  
Perioperative Medicine Grand Rounds  
October 7, 2020

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ASA Best of Basic Science Abstract

**In Vivo Knockdown of Snail is a Novel  
Therapeutic Strategy for Right  
Ventricular Failure**



Varina R. Clark, B.S., Nicole Yin, M.D., Somanshu Banerjee, Ph.D., John  
F. Park, M.D., Ph.D., Michael Zargari, Emma Said, Darnell Bagsik,  
Gregory Fishbein, M.D., Louis A. Soddic, M.D., Ph.D.,  
Soban Umar, M.D., Ph.D.

**Soban Umar, MD, PhD**  
Assistant Professor in Residence  
Associate Program Director, Resident Research



ASA "Best of Basic Science" winning abstract

1. The work of medical student **Varina Clark** and her mentor **Soban Umar, MD, PhD**, was named the "ASA Best of Basic Science Abstract". Their topic, presented at Grand Rounds by Dr. Umar, is: "In vivo knockdown of Snail is a novel therapeutic strategy for right ventricular failure."
2. **Mansoureh Eghbali, PhD**, presented her group's work: "CXCR3 antagonist rescues pulmonary hypertension in female rats by blocking sex-dependent chemokine effects."

3. Regional anesthesiology specialist **Pamela Chia, MD, MS**, who joined our faculty this summer, presented her research: "*Ipack* block has no additional benefit to patients who receive an adductor canal catheter and intraarticular injection for total knee arthroplasty."
4. CA-3 resident **Xuezhi Dong, MD, MPH**, presented his work with mentor **Laleh Jalilian, MD**, on the growing use of telemedicine as a result of the COVID-19 pandemic. Their project is titled: "Geospatial information system analysis of telemedicine pain management program before and after COVID 'Safer at Home'."
5. **Michela Ottolia, PhD**, discussed her laboratory's work demonstrating that "Inhibition of the Na<sup>+</sup> - Ca<sup>2+</sup> exchanger by intracellular Na<sup>+</sup> is essential for normal cardiac function."
6. **Riccardo Olcese, PhD**, presented his laboratory's work, titled: "The molecular basis of the voltage dependence of skeletal muscle contraction."
7. **Nirav Kamdar, MD, MBA**, presented a remarkable case study describing how he and resident **Dane Saksa, MD, MBA**, used telemedicine to track the preoperative management of a challenging patient: "Telemedicine-based perioperative management of pheochromocytoma in a patient with Von Hippel Lindau disease."
8. CA-3 Resident **Bryant Hong, MD**, described how residents benefited both during residency and later in practice from simulation training in the use of PPE during high-risk patient care: "Using high-fidelity simulation for the training of airway management of patients with emerging infectious disease."

Congratulations to Dr. Kapur, Dr. Calmes, and all our department's presenters for their hard work and signal accomplishments!

# ANESTHESIOLOGY 2020

American Society of Anesthesiologists Annual Meeting

October 2–5, 2020 – Washington, DC | VIRTUAL



## SPECIAL SESSIONS

### SPE25 - Best of Abstracts: Basic Science

#### BOS06 - In Vivo Knockdown of Snail is a Novel Therapeutic Strategy for Right Ventricular Failure

Varina R. Clark, BS, Nicole Yin, MD, Somanshu Banerjee, PhD, John F. Park, PhD, Michael Zargari, Student, Emma Said, Student, Darnell Bagsik, Student, Gregory Fishbein, MD, Louis A. Saddic, MD, PhD, Soban Umar, MD, PhD

#### BOS07 - CXCR3 Antagonist Rescues Pulmonary Hypertension in Female Rats by Blocking Sex-dependent Chemokine Effects

Christine Cunningham, BS, Soban Umar, MD, PhD, Min Li, PhD, Mitali Doshi, BS, Gregoire N. Ruffenach, PhD, Jason Hong, MD, Haley Hrnacir, BS, Arthur P. Arnold, PhD, Mansoureh Eghbali, PhD

### SPE05 - APSF Panel: Ten Patient Safety Issues We've Learned from the COVID Pandemic

Daniel J. Cole, MD - The Critical Importance of Developing National Guidelines

### SPE07 - FAER Diversity Panel: Diversity in the Physician Scientist Workforce: Now and in the Future

Daniel J. Cole, MD – Lead Speaker

### YI03 - Young Investigator: Clinical Science

#### YI03-2 - Ipack Block Has No Additional Benefit to Patients Who Receive an Adductor Canal

#### Catheter and Intraarticular Injection for Total Knee Arthroplasty

Pamela Chia, MD, MS, Eva K. Boyd, MD, Natale Naim, MD, Tristan Grogan, MS, Delara B. Brandal, MD, Lisa K. Lee, MD, Kelsey Wang, MD, Peter Y. Jin, MD, Alice Y. Li, MD, Shabnam Majidian, DO

UCLA Department of Anesthesiology & Perioperative Medicine

### Background

- **iPACK Block:** Interspace between the popliteal artery and posterior capsule of the knee
- **Hypothesis:** iPACK block will decrease opioid consumption in patients who also receive an adductor canal catheter (ACC) and intraarticular injection for TKAs

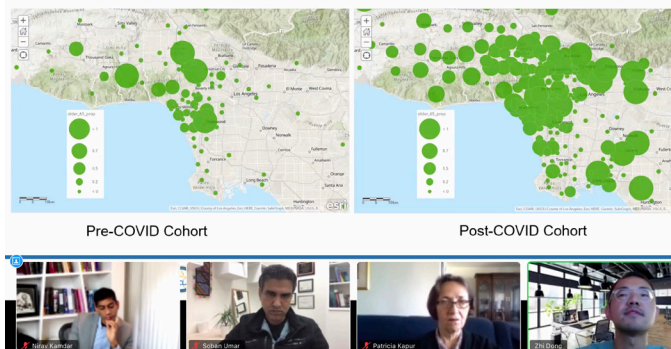
Dr. Pamela Chia presents the iPACK block

## ORAL PRESENTATIONS

### OR19-1 - Perioperative Medicine I

#### A1016 - Geospatial Information System Analysis of Telemedicine Pain Management Program Before and After COVID "Safer At Home" Implementation

Xuezhi Dong, MD, PMPH, Irene Wu, MD, Jakun W. Ing, MD, Erin Thomas, BS, Michael Simkovic, JD, Tristan Grogan, MS, Anne Lin, MD, Nirav V. Kamdar, MD, MBA, Laleh Jalilian, MD

**Results: Proportion of Patients  $\geq$  Age 65**

Dr. Zhi Dong shows how much telemedicine use increased post-COVID

Michael Zargari, Chih-Ming Ho, PhD, Jure Marijic, MD, Maxime Cannesson, MD, PhD, Soban Umar, MD, PhD, Jacques Neelankavil, MD

**OR03-2 – Chronic and Cancer Pain II****A3021 - Evaluation of a Pain Clinic Telemedicine Initiative at a Major Academic Medical Center**

Laleh Jalilian, MD, Irene Wu, MD, Jakun W. Ing, MD, William Jon Thi, BS, Lindsay Brooker, BS, Michael Simkovic, JD, Esq, Tristan Grogan, MS, Anne Lin, MD, Nirav V. Kamdar, MD, MBA

**eABSTRACT POSTER PRESENTATIONS****OR09-1 - Experimental Circulation I****A1049 - Oxidized Lipids Induce Pulmonary Hypertension by Triggering Cytotoxic T-cell Activation and Endothelial Cell Apoptosis**

Gregoire Ruffenach, PhD, Ellen O'Connor, BS, Christine M. Cunningham, BS, Le Shu, PhD, Shuchita Tiwari, PhD, Xia Yang, PhD, Aldrin Gomes, PhD, Srinivasa Reddy, PhD, Mansoureh Eghbali, PhD

**A1051 - Transcriptomic Analysis of Right Ventricle from Pulmonary Hypertension Rats Identifies Emt in Human Right Ventricular Failure**

John Park, MD, PhD, Varina R. Clark, BS, Tiffany M. Williams, MD, PhD, Michael Zargari, BS, Emma Said, BS, Jason Hong, MD, MPH, Louis A. Saddic, MD, PhD, Soban Umar, MD, PhD

**A1052 - Aspirin Regulates Cardiac Fibroblast Activation and Contributes to Reactive Interstitial Cardiac Fibrosis**

Lejla Medzikovic, PhD, Laila Aryan, BA, Gregoire N. Ruffenach, PhD, Mansoureh Eghbali, PhD

**OR08-2 – Equipment, Monitoring and Engineering Technology II****A2018 – Artificial Intelligence Enabled Control of Hemodynamic Responses by Vasopressors and Narcotics in Cardiac Surgery Patients**

Daniel Garcia, MD, PhD, Jinyoung Brian Jeong, BS,

**EA09-1 – Experimental Circulation I****A4103 – The Regulation of the  $\text{Na}^+$ -  $\text{Ca}^{2+}$  Exchanger by Cytosolic  $\text{Na}^+$  Modulates Action Potential Duration and  $\text{Ca}^{2+}$  Homeostasis**

Kyle Scranton, BSc, Namuna Panday, PhD, Marina Angelini, PhD, Rui Zhang, MD, Sabine Lotteau, PhD, Scott John, PhD, Riccardo Olcese, PhD, Joshua I. Goldhaber, MD, Michela Ottolia, PhD

**A4104 – Functional Consequences of  $\alpha_2\delta$  and  $\gamma$  Subunits Association on the Human  $\text{Ca}_v1.1$  Skeletal Channel Voltage Dependence**

Federica Steccanella, PhD, Marina Angelini, PhD, Nicoletta Savalli, PhD, Riccardo Olcese, PhD

**A4105 - Late L-type Calcium Current as a Target for a New Antiarrhythmic Drug Strategy**

Marina Angelini, PhD, Arash Pezhouman, MD, Nicoletta Savalli, PhD, Marvin Chang, MD, PhD, Guillaume Calmettes, PhD, Federica Steccanella, PhD, Antonios Pantazis, PhD, Hrayr S. Karagueuzian, PhD, James N. Weiss, MD, Riccardo Olcese, PhD

**A4106 - Inhibition of the  $\text{Na}^+$  -  $\text{Ca}^{2+}$  Exchanger by Intracellular  $\text{Na}^+$  Is Essential for Normal Cardiac Function**

Kyle Scranton, BSc, Federica Steccanella, PhD, Namuna Panday, PhD, Soban Umar, MD, PhD, Mansoureh Eghbali, PhD, Joshua I. Goldhaber, MD, Scott John, PhD, Riccardo Olcese, PhD, Ariel Escobar, PhD, Michela Ottolia, PhD

#### **A4110 - The Molecular Basis of the Voltage Dependence of Skeletal Muscle Contraction**

Marina Angelini, PhD, Nicoletta Savalli, PhD, Federica Steccanella, PhD, Marino DiFranco, PhD, Stephen C. Cannon, MD, PhD, Riccardo Olcese, PhD

#### **EA14-3 - Patient Safety and Practice Management III**

##### **A4203 - Deaths from Illicit Use of Propofol in Los Angeles County, 2007-2019**

Gundappa Neelakanta, MD, Selma H. Calmes, MD, Christopher Rogers, MD, Lucas Jonathan, MD

#### **EA17-1 - Respiration - Basic and Clinical Science**

##### **A4291 - Transcriptomic Analysis of Thoracic Spinal Cords in Experimental Pulmonary Hypertension Reveals Novel Targets**

Asif Razee, MSc<sup>1</sup>, Jason Hong, MD<sup>2</sup>, Varina R. Clark, BS<sup>2</sup>, Soban Umar, MD<sup>3</sup>.

#### **EA19-1 - Perioperative Medicine I**

##### **A4305 - Comparison Of Point-of-care Ultrasound Imaging to Computed Tomography Imaging for Frailty Evaluation Via Psoas Diameter Assessment**

Elyse Guran, MD, Davinder S. Ramsingh, MD, Sumit P. Singh, MD, Cecilia Canales, MD, MPH, Julian Hinson, MD, Matthew Holsclaw, MD, Matthew Alschuler, MD, Gary R. Stier, MD

### **MEDICALLY CHALLENGING CASE PRESENTATIONS**

#### **MCC10 - Medically Challenging Cases**

##### **MC2007 - Intraoperative Diagnosis and Management of Euglycemic Diabetic Ketoacidosis**

John Shin, MD, Christian Seger, MD, Libing Wang, MD, Hanning Xing, BS

##### **MC2026 - Perioperative Case of the Blues**

Tracie Lo, MD, Zarah D. Antongiorgi, MD, Susana Vacas, MD, PhD

##### **MC2031 - Balancing Metabolic Goals in a Hyponatremic Patient Undergoing Liver Transplant**

Michael Lin, MD, Matthew C. Daly, BS, Christine T. Nguyen-Buckley, MD

##### **MC2087 - Telemedicine-based Perioperative Management of Pheochromocytoma in a Patient with Von Hippel Lindau Disease**

Dane Saksa, MD, MBA., Brian Shuch, MD, Timothy Donahue, MD, Lucas Cusumano, MD, Run Yu, MD, Cathrina Alapag, BA, Nirav V. Kamdar, MD, MBA

#### **MCC03 - Medically Challenging Cases**

##### **MC1328 - Dihydropyridine Calcium Channel Blocker Overdose Treated with Veno-arterial-venous Extracorporeal Membrane Oxygenation**

Bryant Hong, MD, Wolf Kratzert, MD, Samuel Hong, MD

##### **MC1353 - Acute Intraoperative Right Ventricular Failure During Orthotopic Liver Transplant**

Liam Sullivan, MD, Christine T. Nguyen-Buckley, MD

#### **MCC09 - Medically Challenging Cases**

##### **MC1910 - Difficult Airway Management in a Complex Ventilator-Dependent Congenital Pediatric Patient**

Amy Nguyen, MD, Johanna C. Schwarzenberger, MD

#### **MCC12 - Medically Challenging Cases**

##### **MC2135 - Epidural Hematoma and Spinal Cord Compression after Epidural Labor Analgesia: A Case Report**


Ava Socik, MD, Parisa Partownavid, MD


##### **MC2179 - Use of Erector Spinae Plane Block for Post-operative Pain Management in Video-Assisted Thoracoscopic Surgery (VATS)**

Mariam Sarwary, MD, Pamela A. Chia, MD, Eva K. Boyd, MD

##### **MC2181 - Neuraxial Anesthesia for Total Knee Arthroplasty in Severe Aortic Stenosis: A Low-dose Approach with CSE**

Jeffrey Kim, MD, MS, Natale Naim, MD

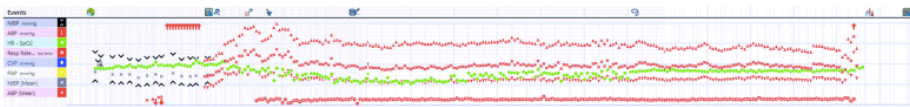

**Neuraxial Anesthesia for Total Knee Arthroplasty in Severe Aortic Stenosis – A Low Dose Approach with CSE**  
 Jeff Kim MD, Natale Naim MD  
 Department of Anesthesiology & Perioperative Medicine, David Geffen School of Medicine, UCLA



**CASE**

**HPI**  
83F with a h/o severe AS (AVA 0.8 cm<sup>2</sup>, mean gradient 34 mm Hg) with normal biventricular function, RA and GERD, presented for revision of left total knee arthroplasty. Patient declined TAVR prior to surgery.

**Day of Surgery**  
Monitors: ASA monitors, pre-procedure arterial line  
Access: 2 peripheral IVs  
Plan:  
 • Liberal IVF bolus pre-operatively (10-15 cc/kg<sup>3</sup>)  
 • Phenylephrine infusion readily available  
 • CSE (L4-L5) w/ 5 mg isobaric 0.5% Bupivacaine intrathecally (4'9" 56 kg)  
 • Start Propofol sedation  
 • L Adductor Canal Catheter



**AORTIC STENOSIS**

- Pathophysiology:** LVOT obstruction → pressure overload → LVH → reduced diastolic compliance, higher MVO<sub>2</sub>, decreased subendocardial blood supply<sup>1</sup>
- Hemodynamic Goals:** avoid sudden decreases in SVR, maintain contractility, NSR, avoid hypovolemia, avoid bradycardia/tachycardia<sup>2</sup>

|              | TYPE      | TECHNIQUE  |
|--------------|-----------|--|
| Revision THA | CSAL3-L4  | Preop 0.5% Bupivacaine 2.5 mg x 2, Intraop 2.5 mg x 3, IVF 1000 mL pre-spinal, A-Line/PAC <sup>3</sup> |
| Femur ORIF   | CSA L3-L4 | Preop 2% Lidocaine 20 mg x 2, IVF 500 mL pre-spinal, A-Line/PAC <sup>3</sup>                           |
| Hip Repair   | CSAL3-L4  | 0.5% Bupivacaine 2 mg x 2, A-Line w/ SVI/SVCI <sup>1</sup>   |
| Hip Repair   | CSA L3-L4 | 0.5% Bupivacaine 2 mg x 4, A-Line w/ SVI/SVCI <sup>1</sup>   |
| Revision TKA | CSE L4-L5 | 0.5% Bupivacaine 5 mg, phenylephrine gtt, IVF 500 mL pre-CSE, A-Line                                   |

**LEARNING POINTS**

**Neuraxial Techniques in Severe AS - Safe?**

- Thought to be relatively contraindicated in patients with AS – GA often preferred
- Can be safely executed with carefully titrated dosing and close hemodynamic monitoring
- Lower dosing equally effective with less hemodynamic effects? 7.5 mg vs 15 mg of 0.5% Isobaric Bupivacaine<sup>4</sup>
- Added Benefits: improved analgesia/decreased opioid consumption, decreased rate of pulmonary complications, avoidance of laryngoscopy and use of muscle relaxant

**REFERENCES**

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 2. McDonald S. Is Neuraxial Blockade Contraindicated in the Patient with Aortic Stenosis? Reg Anesth & Pain Med 2004;29(5):496-502.  
 3. Coland C et al. Continuous Spinal Anesthesia with Invasive Hemodynamic Monitoring for Surgical Repair of the Hip in Two Patients with Severe Aortic Stenosis. Anesth Analg 1995;81:195-8.  
 4. Irlitz L et al. Low Dose of Isobaric Bupivacaine Provides Lower Incidence of Spinal Hypotension for Hip Surgery in Elderly Patients. Anesthesia, Pain & Intensive Care.

Drs. Kim and Naim show how to use continuous spinal-epidural anesthesia even with severe aortic stenosis

### MC2188 - Neuraxial Anesthesia on a Patient with a Ventriculoperitoneal Shunt Undergoing Elective Orthopedic Surgery: A Case Study

Marina Mikhael, MD, Pamela A. Chia, MD, Eva K. Boyd, MD

### Q1142 - Enhanced Recovery After Surgery - A County Hospital Pilot Initiative

Francesca Rivera Calonje, MD (Harbor UCLA)

## QUALITY IMPROVEMENT PROJECTS

### Q101 - Quality Improvement Projects

#### Q1018 - Simulation Training During the Covid-19 Era: Adapting Small Group Sessions to Remote Learning Environments

Marina Mikhael, MD, Cecilia Canales, MD, MPH, Yue Ming Huang, EdD, Christine T. Nguyen-Buckley, MD

#### Q1047 - Central Venous Catheters in Patients Receiving Electroconvulsive Therapy: A Performance Improvement Project

Christopher Little, MD, Randall Espinoza, MD, MPH, Elaine C. Liew, MD

#### Q1134 - Using High Fidelity Simulation for the Training of Airway Management of Patients with Emerging Infectious Disease

Bryant Hong, MD, Christine C. Myo, MD, Christine T. Nguyen-Buckley, MD

## PROBLEM-BASED LEARNING DISCUSSIONS

### L122. Can We Use an Opioid Antagonist for Pain Management? How Does It Work?

#### Table 11 - Can We Use Opioid Antagonist for Pain Management? How Does it Work?

Eric Hsu, MD

## 60-MINUTE PANELS

### MOCA PN305 - Telemedicine and Remote Patient Monitoring Across the Perioperative Continuum

#### Telemedicine in the preoperative period

Nirav V. Kamdar, MD

#### Telemedicine after ICU discharge

Laleh Jalilian, MD

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# “Headlines Don’t Capture the Horror We Saw”

*Dr. Kasey Grewe describes the pandemic in New York City*



Kasey Grewe, MD, one of our critical care fellows, on December 6 published an [article in the national magazine, \*The Atlantic\*](#), on her harrowing experiences as a third-year anesthesiology resident taking care of critically ill COVID-19 patients during the peak of the pandemic in New York City last spring.

Dr. Grewe is originally from Portland, Oregon, and went to Pomona College in Claremont before spending eight years at Columbia University as a medical student, anesthesiology resident, and finally chief resident. She joins us for her first fellowship year in Critical Care Medicine and will follow that with a second-year fellowship in Cardiothoracic Anesthesiology.

Her article in *The Atlantic*, titled “Headlines Don’t Capture the Horror We Saw”, stems from a series of emails that she sent to friends and family during the chaotic spring of 2020, when the crush of COVID patients in New York hospitals far exceeded capacity. She describes how hospitals turned operating rooms into ICUs, holding as many as four patients on ventilators. Instead of doing routine cases, anesthesiology residents functioned as intensivists managing up to 12 patients at a time.

In an email to our department, Chair Maxime Cannesson, MD, PhD, commended Dr. Grewe for writing the article.

“It conveys the courage, the strength, the selflessness, and the compassion it takes to be an anesthesiology resident in a large academic medical center during the peak of the pandemic,” he wrote. “It also speaks to all of us in Anesthesiology and Critical Care -- faculty, attending physicians, fellows, residents, CRNAs, nurses -- who engage every day at the bedside.”

“We are all very proud to be your colleagues,” Dr. Cannesson said.





# Our Intensivists Lend a Hand in Community ICUs Hit Hard By COVID

During the post-Thanksgiving COVID surge in southern California, the intensive care units (ICUs) in community hospitals have been especially hard hit by an influx of critically ill COVID patients. On January 8, Christopher Ortiz, MD, PhD, became the first of our critical care specialists to help lighten the load on Martin Luther King Jr. Community Hospital (MLKCH) by covering shifts in its overstressed ICU.

"I think we've all seen and read about what's going on in the community, at Antelope Valley and MLK," said Maxime Cannesson, MD, PhD, our department chair.

"They've been hit disproportionately compared to us. We understood they have a problem."

"We realized actually that we had workforce available from the ICU to help," Dr. Cannesson said. Though the UCLA ICUs are extremely busy, our intensivists have routinely spent days working in the regular operating rooms too, he explained. Thus, our department has the capacity to staff the OR with other faculty and staff anesthesiologists, allowing the intensivists to attend at these community hospitals, especially when the surgical volume was down due to COVID.



Martin Luther King, Jr. Community Hospital

Our department has a long-standing relationship with MLKCH, delivering anesthesia services in the operating rooms and obstetric services. Our faculty member Hamid Nourmand, MD, serves as chief of the anesthesiology program and Medical Director of Perioperative Services at MLKCH, and a number of other faculty members and nurse anesthetists rotate on clinical duty. But until January, the MLKCH ICU had been staffed exclusively with pulmonary/critical care

intensivists, who were struggling to meet the clinical demand.

In December, Dr. Cannesson contacted the Chief Medical Officer, John Fisher, MD, MBA, to offer the additional help with ICU coverage.

"He said yes, if you can, that would be great!" Dr. Cannesson recalled. Within two weeks, they worked out the details. Since Dr. Ortiz already had privileges at the hospital, there were no roadblocks to keep him from starting work right away.

### MLKCH 100% Above Capacity With COVID Patients

Dr. Fisher gave Grand Rounds to our department on January 20, and explained that in recent weeks the hospital census at MLKCH has exceeded 200 patients though the hospital has only 130 licensed beds. There have been more than 35 patients doubled up in an ICU built to accommodate 20.

The hospital turned an entire medical ward into an ICU, with two patients to a room and thick plastic sheets over the doorways (Photo/ New York Times)



"The nurses, physicians, and respiratory therapists have been overwhelmed," Dr. Fisher said, making the additional support from our department welcome indeed. The majority of MLKCH admissions have been COVID patients, both in the ICU and regular wards.

On February 8, the New York Times published a report, "[Dying of COVID in a 'Separate and Unequal' L.A. Hospital](#)", about the strain on MLKCH and the lack of essential equipment for supporting critically ill ICU patients, including adequate numbers of CRRT (continuous renal replacement therapy) machines and ECMO capability. Three of our intensivists are mentioned and quoted in the article: Drs. Vadim Gudzenko, Joseph Meltzer, and Christopher Ortiz. "It was a form of critical care I'd never witnessed," Dr. Ortiz said.

"The caseload increased to the point where two attendings are required during daytime hours to staff the ICU," Dr. Ortiz said. "We serve as that second daytime attending to allow their staff a few days off from what have been near-daily ICU shifts." Since the census has outgrown the physical ICU space on the first floor of the hospital, all ICU-level patients have been moved to a "makeshift" ICU on the fifth floor. Before that move, overflow ICU patients were housed in the PACU and emergency department.

### High-risk Population in Local Community

"It certainly has been challenging! Learning a new EMR, getting acquainted with new personnel and equipment – all of course took a few days to get used to," Dr. Ortiz said. "The acuity is very high. On my first day I had 15 patients, all of whom had COVID and were intubated, and several of whom were on hemodialysis."

The ICU patient population is predominately Hispanic, Dr. Ortiz noted, "a reflection of the local area population, but also a stark reminder of the unique susceptibility of this community to COVID infection. Many of the older patients suffer from the sequelae of chronic conditions including diabetes, kidney disease, and obesity."

Antelope Valley Hospital, a public hospital and Level II trauma center with 420 beds, located 63

miles north in Lancaster, has also seen its ICU and emergency department overrun with COVID patients since December. Though our department had no prior working relationship with Antelope Valley, our offer of help was eagerly accepted there too.

Joseph Meltzer, MD, the medical director of the UCLA Cardiothoracic ICU, has been the second intensivist to work at MLKCH and the first to cover the ICU at Antelope Valley. He described the unit as extremely busy, with a very high-acuity patient load.



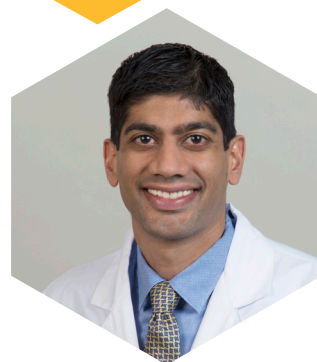
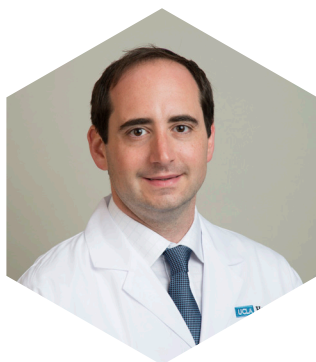
In addition to Drs. Ortiz and Meltzer, other UCLA intensivists are helping with the clinical care at MLKCH and Antelope Valley, including Vadim Gudzenko, MD, the director of our Critical Care Fellowship Program, David Boldt, MD, Laleh Jalilian, MD, and Michael Lin, MD. Other intensivists among our faculty have volunteered to pick up additional ICU shifts at UCLA to cover those going to outside ICUs as needed. Three physicians in our Critical Care Division are intensivists with emergency medicine training who also contribute to ICU coverage at Antelope Valley: Sara Crager, MD, Allison Ferreira, MD, and George Lim, MD.

"It gives me great pride to be able to help our community where it needs it the most," Dr. Cannesson said. "I think it's the right thing to do. It makes what we do extremely meaningful."

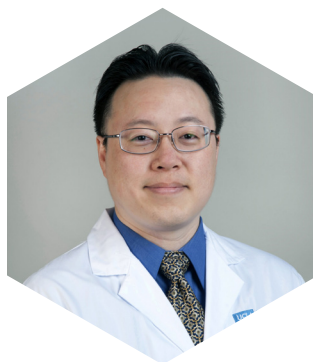
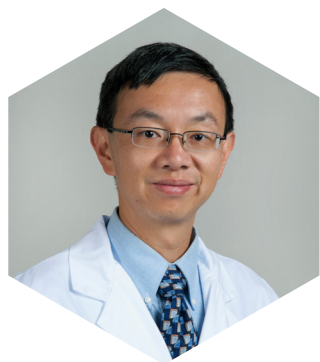
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# Faculty Awards, Honors, and Recognition — Congratulations!

## Professorial Promotions

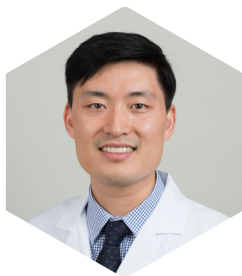


**Zarah Antongiorgi, MD, Ira Hofer, MD, Emily Methangkool, MD, MPH, and Nirav Kamdar, MD, MPP, MBA,** were promoted to the rank of Clinical Associate Professor.



**Joe Hong, MD, Karen Sibert, MD, FASA, Richard Hong, MD, and Judi Turner, MD, PhD,** were promoted to Clinical Professor.

## New Residency Program Director



**Jack Buckley, MD**, now leads our Residency Program. He is supported by new Associate Residency Program Director, **Christine Myo Bui, MD**. Our residency program continues to be supported by three additional Associate Program Directors – **Jason Lee, MD**, is the Associate Program Director for Curriculum Development; **Soban Umar, MD, PhD**, is the Associate Program Director for Scholarly Activity; and **Lauren Beck, MD**, is the Associate Program Director for Quality Improvement and Patient Safety.

## Fellowship Program Leadership



**Louis Saddic, MD, PhD**, became Associate Program Director of our Adult Cardiothoracic Anesthesiology Fellowship. **Patricia Nwajuaku, MD, MPH**, was appointed Associate Program Director of the Thoracic Anesthesiology Fellowship.

## Clinical Leadership



**Andrew Hudson, MD, PhD** was named Director of the Division of Neurosurgical Anesthesiology. Dr. Hudson took over the role recently vacated by **Joe Hong, MD**, after his recent promotion to Executive Vice Chair.

## Administrative Programs



**Zarah Antongiorgi, MD**, and **Jacques Prince Neelankavil, MD**, are Co-Directors of our Mentoring and Career Development Program.

## “Ask the Expert”: Dr. Tiffany Williams Featured In ASA Monitor

**Tiffany Williams, MD, PhD**, Assistant Professor-in-Residence, was the January guest interviewee in the ASA Monitor’s recurring feature “[Ask the Expert](#)”.

As she explained to the interviewer, cardiac anesthesiologist Zachary Deutch, MD, FASA, “The majority of my clinical duties have to do with adult cardiothoracic and congenital cardiac anesthesiology. I typically spend two days per week in the cardiac ORs caring for patients ranging in age from neonates to the extreme elderly. I have a particular interest in congenital heart disease and often spend the remainder of my clinical time caring for these patients in the cath lab and/or when they undergo non-cardiac procedures. Apart from my clinical duties, I also conduct research focused on clinical outcomes in pediatric and adult congenital heart disease patients who undergo cardiac and non-cardiac procedures.”



Dr. Williams with her patient during a mission trip to Zimbabwe

Dr. Deutch asked which procedures Dr. Williams finds most challenging. Not surprisingly, she replied: “I find neonatal cardiac cases to be the most challenging, whether it is a baby with an obstructed total anomalous venous return or a baby with hypoplastic left heart syndrome. Caring for such small and fragile patients in a high-stakes setting can be quite daunting. Even though the complexity and risk are high, the reward of a good outcome is so sweet.”

## Congratulations To Historian and Physician Dr. Jane Moon!



Congratulations to our faculty member **Jane Moon, MD**, who has been named an Associate Editor of the journal *Anesthesiology* and co-author of the recurring feature “WLM Reflections” on the history of anesthesiology and the collections at the Wood Library-Museum of Anesthesiology (WLM).

Together with Melissa Coleman, MD, of Pennsylvania State University, Dr. Moon succeeds George Bause, MD, MPH, longtime Honorary Curator of the WLM, in taking on these responsibilities for *Anesthesiology*, one of the premier journals in our field. Dr. Moon also chairs the WLM’s Archives Committee, and the CSA’s Committee on the History of Anesthesia. She has led the launch of CSA’s annual History of Anesthesia Essay Contest for residents.

Congratulating Dr. Moon, our chair Maxime Cannesson, MD, PhD commented, “This is a major accomplishment. Thank you so much for all the hard work. You make the Department shine!”

In a [special \*Anesthesiology\* article](#) published online on November 5, Dr. Bause outlined the WLM’s remarkable history, and saluted Drs. Moon and Coleman for their dedication to anesthesiology history. He described Dr. Moon’s early interest in history, inspired by her high school history teacher, and how she began her career as a physician and historian:

“After graduating *magna cum laude* from Harvard University, Cambridge, Massachusetts, with an A.B. in history and literature, she taught history at a private

high school in Dallas, Texas. Her life changed after her uncle, who lived nearby, experienced a motor vehicle accident and a prolonged stay in an intensive care unit. Visiting him convinced her of how much she felt ‘at home in the hospital setting.’ After returning to Los Angeles, she completed her medical doctorate, anesthesiology residency, and critical care medicine fellowship, all at the University of Southern California. As “a procedural field that offered the opportunity to care for critically ill patients,” anesthesiology was immediately appealing to Dr. Moon. And rather than focusing on pediatric patients as had Dr. Coleman, Dr. Moon started treating the largely geriatric population at the Greater Los Angeles Veterans Administration Medical Center. An assistant clinical professor at the University of California, Los Angeles, Dr. Moon has won both the C. Ron Stephen Essay Contest (2017) and a Paul M. Wood Fellowship (2018)...After consulting with former trustees of Guedel’s namesake museum, Dr. Moon has penned several publications about Arthur Guedel and considers herself a proud part of his historical legacy.”

When she chose anesthesiology as a specialty after having taught high school history, Dr. Moon said, “I had no idea that these two professional worlds would eventually merge.”

She taught the main US and European history survey courses for freshmen and sophomores, and electives in political philosophy and economics for juniors and seniors. “My favorite part of history is intellectual history, or the history of thought,” Dr. Moon says.

In her new role, Dr. Moon will share responsibility with Dr. Coleman for choosing images and writing “colorful vignettes” about topics related to anesthesia history for each issue of *Anesthesiology*, working with WLM staff and the journal’s editorial team.

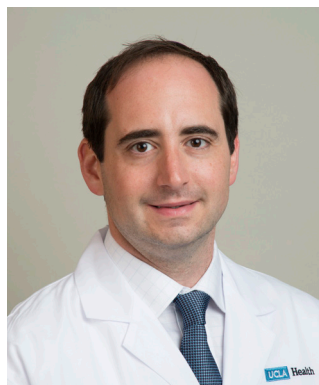
Describing Dr. Bause as “extraordinary”, Dr. Moon (@JaneMoonMD) commented on Twitter: “What enormous shoes to fill!!! @Colewoman\_MD and I are thankful beyond words to Dr. Bause for preparing us for this adventure.”

As an authority on the history of the lengthy correspondence between pioneer anesthesiologists Ralph Waters, MD, and Arthur Guedel, MD, between 1925 and 1940, Dr. Moon notes that the two “indeed had misogynistic views” and didn’t support the entry of women into their field.

Nonetheless, “their astounding devotion and efforts on behalf of anesthesiology should not be minimized,” she

believes. “My hope is that we can still maintain a sense of reverence for the hard-won achievements of past figures without judging them solely by the moral standards of today.”

## Dr. Hofer Receives NIH K01 Grant For Research in Machine Learning



Congratulations to faculty member **Ira Hofer, MD**, who has been awarded a Mentored Research Scientist Career Development Award (K01) from the National Heart, Lung, and Blood Institute at the NIH!

The five-year grant is designed by NIH to provide a period of mentored

research training for “promising junior faculty undertaking highly innovative research.” Dr. Hofer’s project is titled, “Use of machine learning on integrated electronic medical record, genetic, and waveform data to predict perioperative cardiorespiratory instability.”

Dr. Hofer explained that his grant is focused on using combined electronic health record (EHR), genetic, and waveform data in machine-learning models to predict hypotension and arrhythmias during surgery. Recently he was the lead author of an [important paper](#) published in *Nature Partner Journals (NPJ) Digital Medicine*, showing that data features routinely available at the end of surgery (including drug dosing, blood loss, and vital signs) could be used to create a deep neural network model able to predict postoperative mortality, acute kidney injury, and reintubation.

Training during the grant will provide Dr. Hofer with further background in machine learning, scientific writing, leadership training, and the analysis of genetic and genomic data. His mentors for the grant are Maxime Cannesson, MD, PhD, our department chair, and Eran Halperin, PhD, who leads UCLA’s [“Big Data Genomics Lab.”](#)

From Dr. Hofer’s research, “we can expect impactful contributions and publications leading to an independent

research program,” said Dr. Cannesson. “K awards are just the beginning of the research journey, but they are a significant first step forward, and we can expect great things from Dr. Hofer!”

Dr. Hofer earned his undergraduate degree from the University of Pennsylvania, studying both in the Wharton School and the engineering school. After a short sojourn in the finance industry, he attended medical school and completed anesthesiology residency at the Icahn School of Medicine at Mount Sinai in New York City. While at Icahn, Dr. Hofer first began to work with the department’s anesthesia information system to extract data for departmental operations, quality improvement, and research.

Upon completing his training and joining our department’s faculty, Dr. Hofer has been instrumental in developing our department’s Perioperative Medicine Division into a major center for perioperative informatics research. The bioinformatics group currently oversees all UCLA Health outcomes reporting for the operating rooms and emergency department, and is involved in multiple collaborative projects with other departments within UCLA and externally.

Dr. Hofer’s work also is supported through an award from the [Karen Toffler Charitable Trust](#), which provides funding for “promising young medical researchers, physicians, and scientists at a pivotal point in their careers.” The award enables Dr. Hofer, as a Toffler Scholar, to partner with Dr. Halperin and the Department of Computational Medicine in analyzing electronic health records with the goal of predicting complications following surgery.

## Dr. Sandra Sacks: Pain Medicine’s Key Role in Palliative Care



**Sandra Sacks, MD, MEd**, is lead author on a [November article in the ASA Monitor](#) exploring how the special expertise of anesthesiologists in interventional pain management may be of extraordinary benefit to patients in need of palliative care due to debilitating disease or facing the end of life.

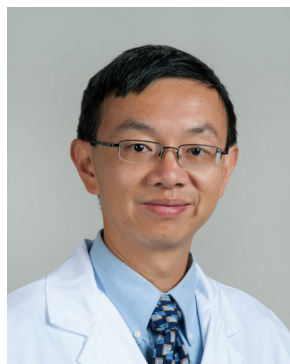
Dr. Sacks, who is a Clinical Assistant Professor in our department and a member of the ASA Committee on Palliative Care, believes that anesthesiologists “historically have not been well integrated into palliative care teams.”

Cancer care can serve as a prime example of how a multi-faceted approach involving anesthesiologists may benefit patients, Dr. Sacks and her co-authors said. “The goal of extended treatment is to help patients manage symptoms and live as well as possible for as long as possible.”

In their compelling article, “Anesthesiologists and Palliative Care – Integrating Interventional Pain Expertise into Palliative Care Teams”, Dr. Sacks and her colleagues argued that “quality care for those living with chronic debilitating conditions requires a multidisciplinary effort, with ever-evolving discussions of goals of care and effective shared decision-making in order to maintain comfort and, in no subtle terms, make life worth living.”

“We strongly advocate for an ever-increasing integration of anesthesiologists into palliative care teams,” Dr. Sacks says. “As proven in so many other clinical arenas outside the OR, we can make a world of difference.”

## Residents Initiate “Teacher of the Month” Recognition

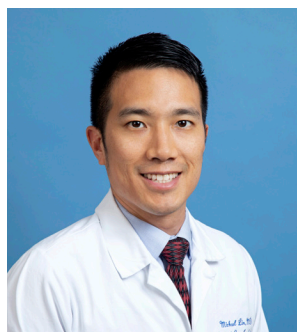


UCLA Anesthesiology residents created the new “**Teacher of the Month**” award to recognize outstanding clinician educators. The first awardee was **Joe Hong, MD**, our Executive Vice Chair. The residents said that he “is a role model anesthesiologist through his humility, wisdom, compassion and patience”.

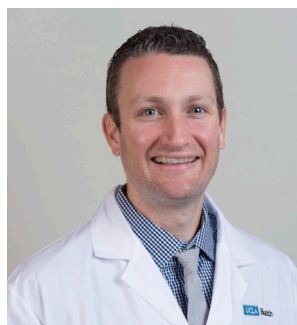
Dr. Hong has received several departmental teaching awards, including the Dillon award, Teacher of the Year, and three Excellence in Resident Teaching awards. Other awardees include **Elaine Boydston, MD, Michael Lin, MD, Andrew Disque, MD, and Christopher Wray, MD**.



**Dr. Elaine Boydston** "...takes every opportunity to create a high yield teaching moment. She delivers great nuggets of relevant information in an easy-to-understand manner. She sets the bar really high when it comes to teaching and style delivery."



**Dr. Michael Lin** "...makes resident education a priority. His lectures are engaging and informative, giving tips on real life, useful things as well as more textbook information. I really enjoy working with him and hope to work with him more in the future!"



**Dr. Andrew Disque**, "...is an excellent role model and educator. I really appreciate how approachable he is and his fund of knowledge. He takes the concepts that we read about in the books and uses them as teaching points that apply to the clinical situation in front of us. Even as a CA-3, I am still learning

an immense amount from him and appreciate how he continues to push me to explore new techniques and ways of approaching patient care."



**Dr. Christopher Wray** "...is a master clinician and educator. His exceptional management of complex patients is grounded in logic, evidence and experience. He prioritizes resident education and his explanations are clear and concise, allowing ample opportunity for questions and clarifications. Despite all of his

talents, Dr. Wray is incredibly patient, approachable and down to earth. Dr. Wray is the kind of clinician I would want for my family member and the kind of clinician we should all aspire to be."

## Our Editorial Writers Have Strong Opinions



Dan Cole, MD, FASA

Dan Cole, MD, FASA, our Vice Chair for Professional and Business Development, and Karen Sibert, MD, FASA, Director of Communications, are longtime members of the Editorial Board of the *ASA Monitor*, the official publication of the American Society of Anesthesiologists.

This year, the *Monitor's* new editor, Steve Shafer, MD, invited both of them to contribute regular "op-ed" columns.



Dr. Sibert at ASA advocacy meeting, 2018

Since Dr. Cole is a noted expert in neuroanesthesiology, and the founder of the ASA's Brain Health Initiative during his term as ASA President in 2015, it should come as no surprise that his column is called "Your Patient's Brain". Sometimes inviting guest co-authors to contribute, Dr. Cole tackles varied topics such as the difficult decision whether or not to pursue aggressive surgical treatment for an elderly family member who may be at high risk for postoperative cognitive dysfunction.

Dr. Cole appeared as a guest in November on the ASA's podcast, "[Central Line](#)" to discuss brain health and the financial costs of postoperative cognitive dysfunction. Most recently, in the January issue, Dr. Cole addressed the subject of neurologic invasion by the

novel coronavirus, and COVID's potential for serious "downstream consequences" on population health.

Dr. Sibert, a past president of the CSA, elected to title her bimonthly column "Peering Over the Ether Screen", which gives her portfolio to comment on any and all trends in the profession of anesthesiology. She has written about the unique challenges to women's careers of school closures and other consequences of the COVID pandemic. She has posed the question, "Is It Time to Unionize?", and most recently critiqued the role of multiple-choice testing in residency education.



In its December edition, *Anesthesiology News* announced Dr. Sibert's appointment to its Editorial Advisory Board. She has appeared as a guest on its podcast, "The Etherist", discussing whether or not there will be a shortage of anesthesiologists in the future, and in October published a lead commentary, "[Practice Without Fear: Advice for Residents on the Future of Our Profession](#)." With a circulation of more than 50,000, *Anesthesiology News* is the most widely read publication in the field.

## Innovation in Medical Technology – Our Faculty Score UCLA Grant Awards

Two of our faculty members – Laleh Jalilian, MD, and Soban Umar, MD, PhD – are among the winners of grant funding from the recent UCLA Health Innovation – Med Tech – Challenge.

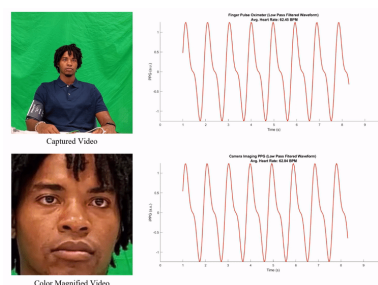
Dr. Jalilian's research – a collaborative effort between anesthesiology and the Visual Machines Group laboratory of Achuta Kadambi, PhD – grew out of recognition that the technology for contactless estimation of heart rate from facial videos is less accurate with darker skin tones. The authors noted in their abstract, "Heart rate (HR) is an essential clinical measure for the assessment of cardiorespiratory instability. Since communities of color are disproportionately affected by both COVID-19 and cardiovascular disease, there is a pressing need to deploy contactless HR sensing solutions for high-quality telemedicine evaluations."

The researchers have developed "a novel physics-driven algorithm that boosts performance on darker skin tones in our reported data" through creation of a telemedicine-focused remote vital signs dataset. "Our method reduces errors due to lighting changes, shadows, and specular highlights and imparts unbiased performance gains across skin tones, setting the stage for making medically

### Diverse RPPG: Camera-based Heart Rate Estimation for Diverse Subject Skin Tones and Scenes

Pradyumna Chari<sup>1</sup> Krish Kabra<sup>1</sup> Doruk Karinca<sup>1</sup> Soumyarup Lahiri<sup>1</sup> Diptav Srivastava<sup>1</sup> Kimaya Kulkarni<sup>1</sup> Tianyuan Chen<sup>1</sup> Maxime Cannesson<sup>2</sup> Laleh Jalilian<sup>2</sup> Achuta Kadambi<sup>1,3</sup>

Department of Electrical and Computer Engineering<sup>1</sup> Department of Anesthesiology and Perioperative Medicine<sup>2</sup> California NanoSystems Institute, University of California, Los Angeles, USA<sup>3</sup>



The proposed method uses small variations in skin color, as well as novel physics guided techniques to estimate the heart rate in a skin tone robust manner. The plots show low pass filtered versions (containing the first and second harmonics of the estimated pulse rate) of both the ground truth and estimated pulse waveforms to visualize the similarity.

inclusive non-contact HR sensing technologies a viable reality for patients of all skin tones."

The team will use the \$8000 from the UCLA Innovation Fund to advance their research, with new projects in contactless respiratory rate estimation. Their project was also recently awarded a \$50,000 COVID Research Award from the Samueli School of Engineering.








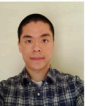
Dr. Umar's project – "Artificial Intelligence Enabled Control of Blood Pressure in High-Risk Surgery Patients – is a joint effort among the fields of cardiothoracic anesthesiology, engineering, bioinformatics, and basic science. The collaborators include Daniel Garcia, MD, PhD, Jinyoung Brian Jeong, BS, Michael Zargari, BS, Chih-Ming Ho, PhD, Jure Marijic, MD, Maxime Cannesson, MD, PhD, and Jacques Neelankavil, MD.

They developed a three-dimensional phenotypic response surface (PRS) depicting the mean arterial blood pressure response to phenylephrine and fentanyl administration. The planar shape of the PRS suggested

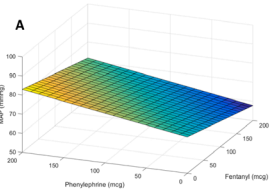
that fentanyl and phenylephrine act independently, enabling effective control of MAP. The team's \$8,000 award will make it possible to further this research.

Dr. Jalilian is also part of a research team with Ashley Kita, MD, of the UCLA Department of Head and Neck Surgery, studying the question of whether thermal imaging via video can be applied to outpatient sleep studies. This team won an Innovation Challenge award of \$15,000 to support their research.

**The Team: Experts in Anesthesiology, Engineering, Artificial Intelligence, and Precision Medicine**

|  |   |  |   |
|--|---|--|---|
|             |              |                                       |  |
| <small>Soban Umar MD, PhD<br/>(Assistant Professor in Residence,<br/>Anesthesiology)</small> | <small>Daniel Garcia MD, PhD<br/>(Alumnus CT Anesthesia<br/>Fellowship, UCLA DME PhD)</small> | <small>Jacques Neelankavil MD<br/>(Associate Professor, Anesthesiology<br/>and Director of Cardiac Anesthesia)</small> | <small>Jure Marjic MD<br/>(Professor, Anesthesiology)</small>                     |
|             |              |                                       |  |
| <small>Maxime Cannesson MD, PhD<br/>(Professor and Chair, Anesthesiology)</small>            | <small>Chih-Ming Ho, PhD<br/>(Distinguished Research Professor, MAE)</small>                  | <small>Michael Zargari BS<br/>(Researcher, Anesthesiology)</small>   | <small>Jinyoung Brian Jeong BS<br/>(Development Engineer, MAE)</small>            |

**The Solution: AI-PRS**



**A**

**B**

$$E(C) = x_0 + \sum_{i=1}^N x_i c_i + \sum_{i=1}^N x_{ii} c_i^2 + \sum_{i=1}^{N-1} \sum_{j=i+1}^N x_{ij} c_i c_j$$

- Three-dimensional phenotypic response surface (PRS) depicting mean arterial blood pressure (MAP) response to phenylephrine and fentanyl administration.
- The planar shape of the PRS suggested that fentanyl and phenylephrine act independently. This important finding enables us to have a simple and effective control of the MAP.

## Southern California “Super Doctors” 2021

Once again, five members of our faculty are among the 26 anesthesiologists who’ve been honored in the 2021 list of Southern California “Super Doctors”.

Ihab Ayad, MD, Swati Patel, MD, Karen Sibert, MD, FASA, Joel Stockman, MD, and Barbara Van de Wiele, MD, were nominated by their peers as “colleagues to whom they would go if they or a loved one were seeking medical care.” The nominees were then evaluated by a review panel on criteria including peer recognition, awards, and other accomplishments, and the list was finalized.



Dr. Natalie Naim injects local anesthetic for a popliteal block

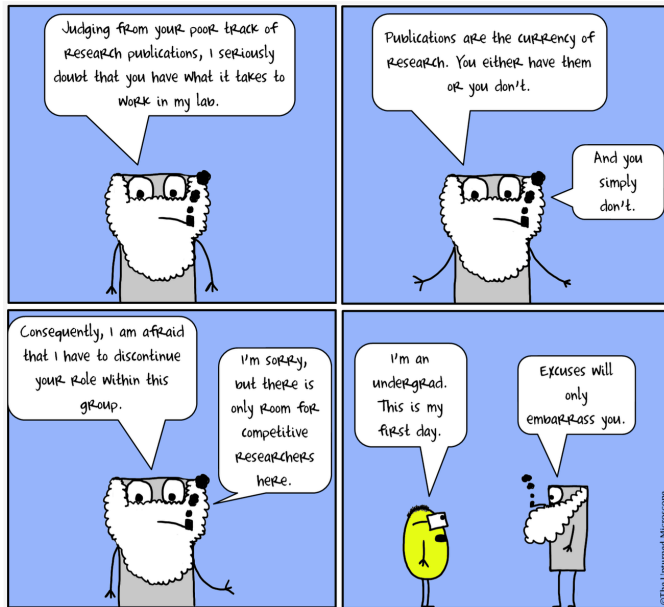
Natalie Naim, MD, was one of only four physicians to make the list of “Rising Stars” in anesthesiology, limited to physicians who have been licensed for less than ten years.

**Congratulations to all our honorees!**



Dr. Cannesson checks out the list of SoCal Super Doctors

# Selected Recent Publications

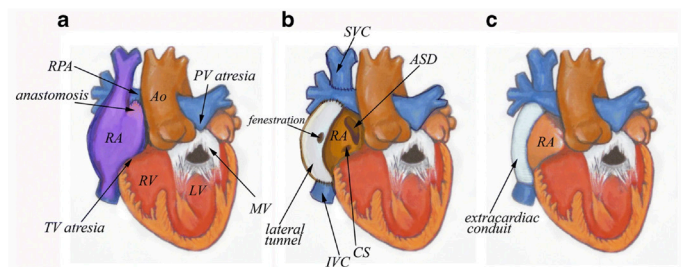


**Editor's note:** Our department continues its tradition of academic accomplishment with these recent publications. Every citation selected for mention here illustrates the results of months or years of work, and of course represents the authors' successful responses to multiple editors' questions and requests for revision. Congratulations to all our accomplished authors! For a more comprehensive view of our publications in clinical and basic science research, please visit the website for [UCLA Anesthesiology & Perioperative Medicine](https://www.uclaanesthesia.org/).

1. Reardon L, Lin J, VanArsdell G, Lubin L, Marijic J, Williams T, Wray C, Meltzer J, Gudzenko V, Kratzert W, Neelankavil J, et al. **Orthotopic Heart and Combined Heart Liver Transplantation: The ultimate treatment option for failing Fontan physiology.** Springer: *Current Transplantation Reports*. Published online February 4, 2021. <https://doi.org/10.1007/s40472-021-00315-4>

This is a comprehensive update on failing Fontan physiology and the role of heart and combined heart and

liver transplantation in the current era. Single ventricle physiology encompasses a series of rare congenital cardiac abnormalities that are characterized by absence of or hypoplasia of one ventricle. This effectively results in a single ventricular pumping chamber. These abnormalities are rarely compatible with long-term survival if left without surgical palliation in the first few years of life. The long-term consequences of the Fontan operation are predominantly related to chronic central venous hypertension and the multi-organ consequences thereof. Patients with single ventricle physiology represent a special sub-segment of congenital cardiac transplants and are arguably the most challenging patients considered for transplantation.



Major Fontan subtypes- A) The early era of the Fontan operation included the right atrium (RA) within the Fontan circuit, usually with the right atrial appendage used as an anastomosis between the RA and right pulmonary artery (RPA). These types of RA-PA Fontan operations were performed in the 1970's and 1980's and were supplanted in the 1990's by the lateral tunnel Fontan (B) which often included a small fenestration. It consists of an intra-atrial baffle from the inferior vena cava (IVC) to the RPA. The superior vena cava (SVC) is connected directly to the RPA (Glenn shunt), hence this is a total cavopulmonary connection that still includes the posterior wall of the right atrium within the Fontan circuit. C) The extra-cardiac Fontan is the most widely performed Fontan sub-type since the late 1990's and consists of a Gore-tex conduit from the inferior vena cava to the RPA, the right atrium is not included in the Fontan circuit

2. Bhaswati R, Vacas S, Ehlert L, Kumar R, et al. **Brain Structural Changes in Patients with Pulmonary Arterial Hypertension.** *J Neuroimaging* 2021; 0:1-8. First published: 09 February 2021 <https://doi.org/10.1111/jon.12840>

Patients with pulmonary arterial hypertension (PAH) frequently present with anxiety, depression, autonomic, and cognitive deterioration, which may indicate brain changes in regions that control these functions. However, the precise regional brain injury remains unclear. The authors collected high-resolution MRI images from 9 PAH and 19 healthy subjects. PAH patients showed significant gray matter injury and brain tissue changes in sites that regulate cognition, autonomic, and mood functions.

*These findings indicate a brain structural basis for functional deficits in PAH patients.*

3. Jahr J, Guinn N, Lowery D, et al. **Blood Substitutes and Oxygen Therapeutics: A Review.** *Anesthesia & Analgesia*: January 2021 - Volume 132 - Issue 1 - p 119-129 [doi: 10.1213/ANE.0000000000003957](https://doi.org/10.1213/ANE.0000000000003957)

*Despite the exhaustive search for an acceptable substitute to erythrocyte transfusion, neither chemical-based products such as perfluorocarbons nor hemoglobin-based oxygen carriers have succeeded in providing a reasonable alternative to allogeneic blood transfusion. However, there remain scenarios in which blood transfusion is not an option, due to patient's religious beliefs, inability to find adequately cross-matched erythrocytes, or in remote locations. In these situations, artificial oxygen carriers may provide a mortality benefit for patients with severe, life-threatening anemia. This article provides an up-to-date review of the history and development, clinical trials, new technology, and current standing of artificial oxygen carriers as an alternative to transfusion when blood is not an option.*

4. Methangkool E, Cole D, Cannesson M. **Progress in Patient Safety in Anesthesia.** *JAMA*: Dec. 22/29, 2020; Vol. 324 No. 24; 2485-6. <https://doi.org/10.1001/jama.2020.23205>

*The World Health Organization has noted that adverse events attributable to unsafe care are among the 10 leading causes of death and disability in the world, leading it to conclude that patient safety should be a global health priority. This "Viewpoint" article describes historical perspectives of patient safety in anesthesiology and future directions of patient safety in anesthesiology and perioperative medicine. The authors conclude that in the future, "it will be imperative to take full advantage of innovative technologies, strategically apply system integration across the full episode of care, and capitalize on the power of artificial intelligence to eliminate preventable harm."*

5. Epstein R, Hofer I, Salari V, Gabel E. **Successful Implementation of a Perioperative Data Warehouse Using Another Hospital's Published Specification from Epic's Electronic Health Record System.** *Anesthesia & Analgesia*: 2021 Feb 1;132(2):465-474. [doi: 10.1213/ANE.0000000000004806](https://doi.org/10.1213/ANE.0000000000004806)

*Many hospitals have replaced their legacy anesthesia information management system with an enterprise-*

*wide electronic health record system. Integrating the anesthesia data within the context of the global hospital information infrastructure has created substantive challenges for many organizations. A process to build a perioperative data warehouse from Epic was recently published from UCLA, but the generalizability of that process is unknown. We describe the implementation of their process at the University of Miami (UM). The data schema developed at UCLA proved to be a practical and scalable method to extract information from the Epic electronic health system database into the perioperative data warehouse in use at UM. Implementing the process developed at UCLA to build a comprehensive perioperative data warehouse from Epic is an extensible process that other hospitals seeking more efficient access to their electronic health record data should consider.*

6. Saksa D, Shuch B, Donahue T, Kamdar N, et al. **Telemedicine-Based Perioperative Management of Pheochromocytoma in a Patient With Von Hippel Lindau Disease: A Case Report.** *Anesthesia & Analgesia Practice*: January 2021; Vol. 15, Issue 1, p. e01378. [doi: 10.1213/XAA.0000000000001378](https://doi.org/10.1213/XAA.0000000000001378)

*The authors present the case of a young woman with Von Hippel Lindau (VHL) disease who underwent a combined pheochromocytoma resection along with pancreaticoduodenectomy. Her preoperative management, including effective alpha-blockade, was conducted remotely via telemedicine video visits, patient-entered vital sign data, and secure messaging between physicians and patient. Similar remote management was undertaken before a subsequent pheochromocytoma resection while the patient was pregnant, and both surgeries had positive outcomes. This represents the first time that telemedicine and mobile health monitoring have been successfully used for preoperative alpha-blockade in a high-acuity patient before a complex multivisceral surgery.*

7. Park J, Clark V, Williams J, Saddic L, Umar S, et al. **Transcriptomic Analysis of Right Ventricular Remodeling in Two Rat Models of Pulmonary Hypertension.** *Circulation: Heart Failure*: Published online ahead of print, Feb. 5, 2021. <https://doi.org/10.1161/CIRCHEARTFAILURE.120.007058>

*Right ventricular (RV) dysfunction is a significant prognostic determinant of morbidity and mortality in pulmonary arterial hypertension (PAH). Despite the importance of RV function in PAH, the underlying*

molecular mechanisms of RV dysfunction secondary to PAH remain unclear. We aim to identify and compare molecular determinants of RV failure using RNA sequencing of RV tissue from 2 clinically relevant animal models of PAH. Transcriptomic signature of RV failure in monocrotaline and Sugen with hypoxia models showed similar gene expressions and biological pathways. Targeting specific molecular mechanisms responsible for RV failure in monocrotaline and Sugen with hypoxia models may identify novel therapeutic strategies for PAH-associated RV failure.

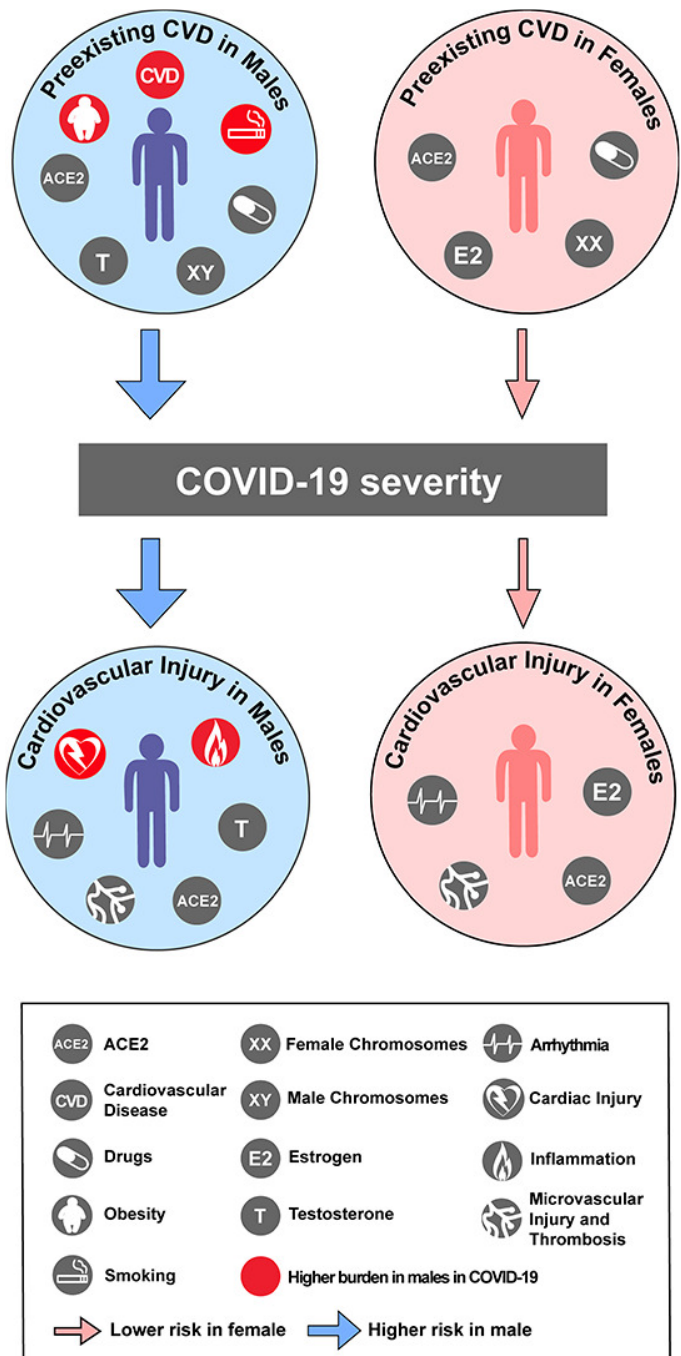
8. Wingert T, Grogan T, Cannesson M, Sapru A, Ren W, Hofer I. **Acute Kidney Injury and Outcomes in Children Undergoing Noncardiac Surgery: A Propensity-Matched Analysis.** *Anesthesia & Analgesia*. 2021 Feb 1;132(2):332-340. doi: [10.1213/ANE.0000000000005069](https://doi.org/10.1213/ANE.0000000000005069)

Acute kidney injury (AKI) has been well documented in adults after noncardiac surgery and demonstrated to be associated with adverse outcomes. We report the prevalence of AKI after pediatric noncardiac surgery, the perioperative factors associated with postoperative AKI, and the association of AKI with postoperative outcomes. In children undergoing noncardiac surgery, postoperative AKI occurred in 3.2% of patients. Several factors, including intraoperative hypotension, were significantly associated with postoperative AKI in univariable models. After adjustment, only ASA status was found to be significantly associated with AKI in children after noncardiac surgery. Postoperative AKI was found to be associated with significantly higher rates of mortality and 30-day readmission in multivariable, time-varying models with propensity-matched controls.

9. Medzikovic L, Cunningham CM, Li M, Amjadi M, Hong J, Ruffenach G, Eghbali M. **Sex differences underlying preexisting cardiovascular disease and cardiovascular injury in COVID-19.** *J Mol Cell Cardiol*. August 2020; 148:25-33. <https://doi.org/10.1016/j.yjmcc.2020.08.007>

The novel 2019 coronavirus disease (COVID-19), resulting from severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection, typically leads to respiratory failure in severe cases; however, cardiovascular injury is reported to contribute to a substantial proportion of COVID-19 deaths. Preexisting cardiovascular disease

(CVD) is among the most common risk factors for hospitalization and death in COVID-19 patients, and the pathogenic mechanisms of COVID-19 disease progression itself may promote cardiovascular injury, increasing risk of in-hospital death. Sex differences in COVID-19 are becoming more apparent as mounting



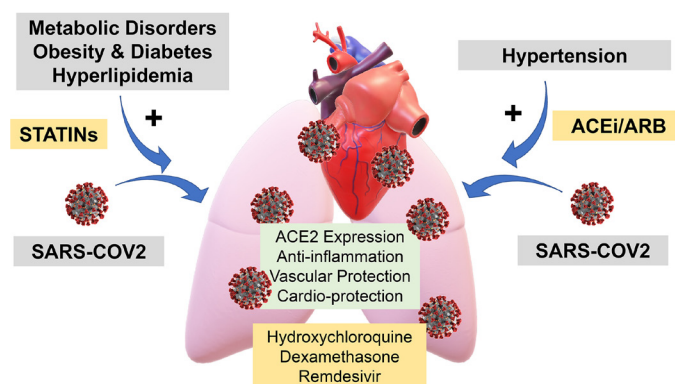
data indicate that males seem to be disproportionately at risk of severe COVID-19 outcome due to preexisting CVD and COVID-19-related cardiovascular injury. In this review, we provide a basic science perspective on current clinical observations in this rapidly evolving field and discuss the interplay among sex differences, preexisting CVD, and COVID-19-related cardiac injury.

- Awar A, Seger C, Umar S, et al. Medical education in the COVID-19 era: **Impact on anesthesiology trainees**. *J Clin Anesth*. 2020 Nov; 66: 109949. Published online 2020 Jun 1. doi: [10.1016/j.jclinane.2020.109949](https://doi.org/10.1016/j.jclinane.2020.109949)

The authors discuss the many changes to didactic education and hands-on training that have resulted, by necessity, from the pandemic. They conclude: "It is our hope that this pandemic, despite its many costs, has provided an avenue of rapid growth in Anesthesiology training. Engaging online learning environments may supplant the banal slide presentation. System-level committee participation and the structured wellness of our trainees may remain central foci of residency training. Our trainees are uniquely positioned to lead in this pandemic (and the next). Training programs have responded broadly to the stresses of COVID-19, and these actions should serve as guides for needed national standards and objectives that will guide the future of Anesthesiology training."

- Wang Y, Foo R, Thum T. **Using "old" medications to fight new COVID-19: Re-purposing with a purpose**. *J Mol Cell Cardiol*. 2020; 146:41-42. <https://doi.org/10.1016/j.jymcc.2020.07.005>

Despite rapid scientific progress in the discovery of the cellular and molecular details for the pathogenesis of COVID-19, there are still no specific new therapies that have been approved to either prevent or treat COVID-19 in clinics. However, new insights towards the pathogenesis of COVID-19 have led to many efforts to repurpose existing drugs for the disease. Statistical analyses showed both ACEi/ARB and statins were found to be associated with a significant reduction in death and adverse outcome in hospitalized COVID-19 patients. For ACEi/ARB, several other studies have also reported either neutral or protective benefits. For statins, the first report from the Hubei cohort has not been confirmed by others. Nevertheless, it is emerging that several therapies originally approved to treat pre-



existing conditions may bring clinical benefits to reduce death and severe complications in COVID-19 patients (Fig. 1). The putative SARS-CoV-2 entry receptor ACE2 is widely expressed in the cardiovascular system which has been suggested to play a key role in mediating the cardiovascular harm of the virus.

- Hofer I, Cheng D, Grogan T. **A Retrospective Analysis Demonstrates That a Failure to Document Key Comorbid Diseases in the Anesthesia Preoperative Evaluation Associates with Increased Length of Stay and Mortality**. *Anesthesia & Analgesia*: January 15, 2021 - Volume - Issue - 10.1213/ANE.0000000000005393 doi: [10.1213/ANE.0000000000005393](https://doi.org/10.1213/ANE.0000000000005393)

The design of EHRs can make it hard for clinicians to easily find, review, and document all of the relevant data, leading to documentation that is not fully reflective of the complete history. We hypothesized that the incidence of undocumented key comorbid diseases (atrial fibrillation [afib], congestive heart failure [CHF], chronic obstructive pulmonary disease [COPD], diabetes, and chronic kidney disease [CKD]) in the anesthesia preoperative evaluation was associated with increased postoperative length of stay (LOS) and mortality. For all diseases except chronic pain, the missed documentation was associated with a longer LOS. For mortality, the discrepancy was associated with increased mortality for afib, while the differences were insignificant for the other diseases. For each missed disease, the odds of mortality increased 1.52 (95% confidence interval [CI], 1.42-1.63) and the LOS increased by approximately 11%, geometric mean ratio of 1.11 (95% CI, 1.10-1.12).

# Our Residency Program and Recruitment Season 2020-21

By the Residency Program Leadership Team

This has been an eventful year for the UCLA Anesthesiology Residency Program! With the ongoing pandemic, we have continued to find innovative ways to accomplish our many activities.



Drs. Cris Vallera (faculty), Krista Cascia (OB anesthesia fellow), and Samru Abraha (CA-2) enjoying lunch outside

In July, 2020, we welcomed Maxime Cannesson, MD, PhD, as our new Chair. He quickly demonstrated his commitment to our educational mission by supporting an expansion of our education leadership. Dr. Cannesson continues to be engaged, along with other department leaders, with virtual and in-person meetings with residents and other education-related activities. He has also increased the ability of our Chief Residents (Azad Hirpara, MD, Jeffrey Kim, MD, and Libing Wang, MD) to represent trainee interests and participate in our Executive Committee discussions.

In September 2020, Judi Turner MD, PhD, was named Vice Chair for Education after serving for nearly a decade as Residency Program Director. Our new Residency

Program Director and Chair of Residency Recruitment, Jack Buckley MD, is working hard to keep lines of communication open with our residents by leading numerous resident townhalls and monthly Education Steering Committee meetings. This year he expanded our team of dedicated faculty reviewing residency applications, and required that all reviewers complete training in “Implicit Bias and Holistic Review”, led by Vice Chair for EDI, Jennifer Lucero, MD, MA.

Associate Residency Program Director Christine Myo Bui, MD, is working closely with both Drs. Buckley and Turner and has been active in resident recruitment and all aspects of our residency program, including our VA-based internship, during this historic year. She continues to be a role model of professionalism, working as a



Getting vaccinated!

senior member of our liver transplant team and providing care to ECT patients in the Resnick Neuropsychiatric Hospital.

Lauren Beck, MD, is our newest addition to the Residency Leadership Team as APD for Resident Quality Improvement and Patient Safety. Dr. Beck completed residency at Icahn School of Medicine at Mt. Sinai and a fellowship in Perioperative Medicine at UCLA.

Soban Umar, MD, PhD, continues to lead our outstanding resident research efforts as APD for Resident Scholarly Activity. Jason Lee, MD, continues as APD for Resident Didactics and Curriculum Development working with Dr. Turner and a cadre of committed residents.

In 2020, we enjoyed a successful fellowship match where 15 of our 24 seniors matched into competitive fellowships in Cardiothoracic Anesthesiology, Critical Care Medicine, Obstetric Anesthesiology, Pain Medicine,

Pediatric Anesthesiology, and Regional Anesthesiology & Acute Pain Medicine. We are proud that two-thirds of our graduating residents are choosing fellowships. Other residents are joining prominent academic and private practice groups around the country where we know they will represent our department well. Many thanks to Lucine Torosian, Fellowship Program Coordinator, and Susan Kim, Associate Fellowship Program Coordinator, for their support and guidance of our residents applying to fellowships!

In this time of intellectual curiosity, resident research was prolific and innovative. In addition to our many virtual presentations at ANESTHESIOLOGY 2020, here are additional highlights from our residents:

- Christian D. Seger, MD, CA-2, was lead author of the article, "A Novel Negative Pressure Isolation Device for Aerosol Transmissible COVID-19," published in Anesthesia & Analgesia in September 2020. This

Just starting their CA-1 year in 2018!



new device is designed to contain aerosolization of infectious particles during procedures such as endotracheal intubation and CPR.

- Ceci Canales MD, MPH, CA-2, tackled important topics with her publication in *Anesthesia & Analgesia* in May 2020, “Science Without Conscience is but the Ruin of the Soul: The Ethics of Big Data and Artificial Intelligence in Perioperative Medicine.”

Due to the pandemic, recruitment this season has been entirely virtual, offering advantages and challenges. In the fall, we held our first-ever Virtual Open House to introduce medical students to our program. We gave presentations highlighting education, research and innovative programs, and numerous faculty and residents participated in break-out rooms to discuss resident life, equity and diversity, and living in Los Angeles. The program attracted nearly 150 medical students who signed in from across the country. Read more about it in this issue of *Open Circuit* on p. 34.



CA-3 Aanchal Prakash and her fresh sourdough loaf

Given the inability of applicants to tour in person, we have worked to increase our social media presence to highlight the best aspects of our residency program and life in Los Angeles. Thanks to the efforts and leadership of Dr. Myo Bui and Lucine Torosian, we have magnified our social media presence on Instagram ([ucla\\_anesthesiology\\_reslife](#)) and YouTube.



Trevor Ideta and Clara Vu scored in top 10% on ABA 2020 BASIC exam

We created a new residency recruitment video, where Drs. Cannesson and Turner made guest appearances together with residents Ceci Canales, Azad Hirpara, and Jeff Kim. Watch it on our department’s YouTube channel: [UCLA Anesthesiology Residency Program](#). We’re adding videos about our fellowship programs too.



Happy Lunar New Year!

In 2020, we saw a 10% increase in residency applicants, and we will interview 20% more applicants than usual this year. Our interviewees have really made an effort to connect with us, showing that it is possible to get a sense of the applicant's personality through a video call.



Residents Ali Subat and Sara Navab show off their vaccine band-aids

They have clearly taken time to do online research, and many have demonstrated significant knowledge about our program prior to the interview day. We have updated our website's Education section numerous times this year, with the continuing help of staff members Shevaughn Marchese and Darnell Bagsik.

One of the biggest challenges of virtual interviews is how to highlight our greatest asset – interactions with our residents. Fortunately, our staff – Residency Program Coordinator, Lucelva Mendez, Associate Residency Program Coordinator, Areli Gonzalez, and Medical School Clerkship Coordinator, Jessyka Delgado – rose to the challenge and arranged more than 40 Zoom sessions with applicants. Our Chief Residents and the Resident Recruitment Committee, led by Aanchal Prakash, CA-3, and Jacob Melendrez, CA-2, made sure that we had enthusiastic residents available to meet with all of our interviewees in a virtual social hour the day before interviews.

We decided to keep the structure of our interview day the same, with three faculty members and one chief resident interviewing each applicant. Dr. Cannesson

met with nearly every interviewee this year! Using Zoom has been smoother than expected, thanks to several administrative staff members – Darnell Bagsik, Quenesha Caballero, and Elizabeth Suh – who made sure that our simultaneous Zoom interview sessions ran seamlessly and efficiently.

Feedback from applicants so far is that our virtual experience has been very similar to in-person interviews. While we do hope for a return to normalcy, having Zoom options for the future will be a consideration. The obvious advantage is that applicants don't have to spend the money and time to travel to Los Angeles. While this recruitment season has been a challenge, we have learned new ways to highlight the strengths of our program. All in all, we are excited and optimistic about this year's match!



Victor Osnos, CA-1 – It's not easy being green!



# Our First-Ever Virtual Open House For Medical Students

For the first time ever, the pandemic in 2020 made it impossible for medical students interested in anesthesiology to visit the UCLA Health campus in person and tour our department. In response, Judi Turner, MD, PhD, our Vice Chair for Education, and the faculty and staff of the Education Office staged our first Virtual Open House via Zoom in September. More than 180 medical students signed on for an inside look at our program, the application process, and resident life.

## Who are we?



- 25 Residents per year
- Fellowships in Cardiothoracic, Critical Care, Liver, Neuro, OB, Pain, Pediatric, Pediatric Cardiac, Perioperative, Regional and Acute Pain Medicine, Thoracic, Basic Science and Clinical Research
- 130 Clinical Anesthesiology Faculty
- 22 Attending Anesthesiologists
- 38 CRNAs
- 8 NIH funded lab groups and top 5 in total funding
- Support Staff

DEPARTMENT OF  
ANESTHESIOLOGY

“Obviously, I wish you could be here to visit us and meet with our clinicians, researchers, educators, residents, chief residents, staff – all the people who are part of our amazing department,” said Maxime Cannesson, MD, PhD, our department chair, in opening remarks. “It’s sad that you’re not here, but the good thing is that it allows a lot of you to have the opportunity to get a sense of our department.”

The UCLA Department of Anesthesiology and Perioperative Medicine is “one of the best departments in the country, and also one of the youngest anesthesiology programs,” Dr. Cannesson said, with “amazing clinical care” delivered at Ronald Reagan Medical Center, Santa Monica Medical Center, Martin Luther King Jr. Community Hospital, and sites across the greater Los Angeles community.

“For residents, that’s an opportunity to get engaged with the whole of Los Angeles,” Dr. Cannesson said. “We want residents who seek opportunities. We want you to become leaders in our specialty.”

## New Education Leadership Team

Dr. Cannesson introduced Dr. Turner, who has served as the residency program director for the past eight years. Recently promoted to Vice Chair for Education, Dr. Turner has created a dynamic education leadership team consisting of:

- Jack Buckley, MD, now Residency Program Director
- Christine Myo Bui, MD, Associate Program Director
- Jason Lee, MD, Associate Program Director for Didactics
- Soban Umar, MD, PhD, Associate Program Director for Resident Research
- Lauren Beck MD, Associate Program Director for Quality Improvement and Patient Safety
- Satya Patel, MD, Associate Program Director for Anesthesia Interns.

## Resident & Fellow Awards and Grants



**Brittney Burton M.D.**  
– 2020 American Society of Anesthesiologists Mentoring Award  
– The Digital Divide: Race and Ethnicity with use of Preoperative Tele-Anesthesia Consultation



**Colby Tanner M.D.**  
– FAER Scholar  
– Cardiothoracic and Liver Transplantation – Post operative outcomes



**Delara Brandal M.D.**  
– American Society of Regional Anesthesia and Pain Medicine Young Investigator Award  
– Development and Implementation of a Clinical Decision Support (CDS) Tool for Prescribing Opioids at Discharge from the Hospital



**Nicole Yin M.D.**  
– Early Career Investigator Award from the Society of Cardiovascular Anesthesiologists

Dr. Buckley explained that the residency is a categorical program. “Everybody that does residency with us will also do their internship here,” he said. “We have fellowships in everything you can think of.” He noted that



Chief residents 2020

the department has 130 clinical anesthesiology faculty members involved in resident teaching, and research opportunities in eight NIH-funded laboratory groups.

Medical students always want to know what a department is looking for in terms of residency recruitment, Dr. Buckley said. But there's no quick answer.

"We do a holistic review of every file," Dr. Buckley explained. "We see you as a whole picture, as opposed to 'Step' scores or anything else." The department values excellence across a spectrum of accomplishment, he explained, whether academic excellence, work history, research, or other endeavors, and seeks to learn how an applicant's experiences "changed you as a person." Each applicant interviews with three faculty members and one resident, and is welcome to connect later with residents to learn more about the program and get answers to any questions.

Dr. Myo Bui highlighted the achievements of residents in recent years including research awards, grants, and peer-reviewed publications. Dr. Lee reviewed specifics of the didactic program, and Dr. Umar explained how the department supports resident research with an infrastructure to link residents with faculty mentors.

"We have systems in place for residents to do high-quality research," Dr. Umar explained, with seed grants

and dedicated time for research. One pathway for clinician scientists, the [Anesthesiology Resident Scholars Program](#), provides financial support and a year of fellowship experience.

Jennifer Lucero, MD, MA, who is our Vice Chair for Equity, Diversity, and Inclusion (EDI) and the medical school's Associate Dean for Admission, spoke about combating structural racism and the development of EDI committees in every department including our own. "Anesthesia is at the forefront, leading the way in this," she said.

## Innovation

At the beginning of the Open House, Dr. Cannesson spoke about the future of anesthesiology and how this is tied to innovation "that comes from faculty but also from residents and trainees." At UCLA, innovation is translated into clinical practice and the process of getting new ideas from concept to market.



**Nirav Kamdar, MD, MPP, MBA**, heads these efforts as the Clinical Director of the [UCLA Biodesign Program](#), which offers a fellowship program for residents and graduates. The program provides leadership and

innovation training for the entrepreneurs and health-tech leaders of tomorrow, combining clinical immersion and business development within a broad entrepreneurial ecosystem at UCLA.

“One of the unique things about UCLA is that it’s one of the handful of campuses that’s within walking distance between a health center, a fabulous school of business, an engineering school, and a school of design,” Dr. Kamdar explained. “We call it ‘Silicon Beach’. That’s where innovation comes together in one piece and that’s what we call biodesign.”

### Frequently-asked Questions

After the faculty presentations, Dr. Buckley and Dr. Turner fielded questions asked in advance by the medical student audience.

**Where do residents go after graduation?** Between 40-50% of residents do fellowship training, 40-50% go into private practice, and another 10% go to work in academic practice. “Every one of our residents who wants to do a fellowship gets a fellowship in the specialty they desire,” Dr. Buckley said. Many graduates stay in southern California by choice, but others accept positions across the country.

### What are strong points of the UCLA program?

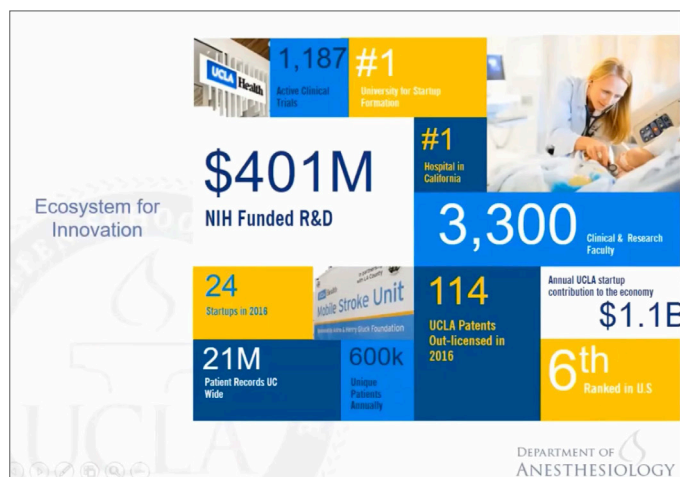
- Unusual, complex cases
- Good relationships between residents and faculty
- Good relationships with surgical colleagues
- Pleasant experience coming to work every day
- Resources that department leadership devotes to the residency program in terms of time and money.

**What is the culture of the program?** Culture evolves over time, but every faculty member at UCLA takes pride in



Dr. Turner with resident call team (Pre-COVID)

being an outstanding clinician, Dr. Turner noted. Of the speakers at the Open House, all work clinically and most were on call the night before the event. Both faculty and residents feel empowered to speak up when necessary, which makes UCLA a safer place to get anesthesia care as well as a friendly place to work with an emphasis on wellness.



### Breakout Sessions

The medical students were divided into smaller groups to give each one an opportunity to attend three breakout sessions:

- Resident life
- Equity, diversity, and inclusion
- Education, research, and global health

The sessions were led by chief residents Azad Hirpara, Jeff Kim, and Libby Wang, together with residents Samru Abraha, Hugo Cardona, Ceci Canales, Zhi Dong, Ryan Gamlin, John Kleinman, Jonathan Dahan, Dane Saksa, Brittany Burton, Aanchal Prakash, Sebastian Kwon, Bryant Hong, Jake Melendrez, Ramita Rahimian, Susan Alaei, Brian Park, Emma Huebner, Sara Arastoo, Jordan Francke, Emily Walters, Sam Jiang, Nick Bacher, and Brock Gamez.

Participating fellows included Drs. Krista Cascia, Elizabeth Feenstra, and Colby Tanner. The faculty members who took part were Drs. Zarah Antongiorgi, Marisa Hernandez-Morgan, and Sophia Poorsattar.

### Feedback?

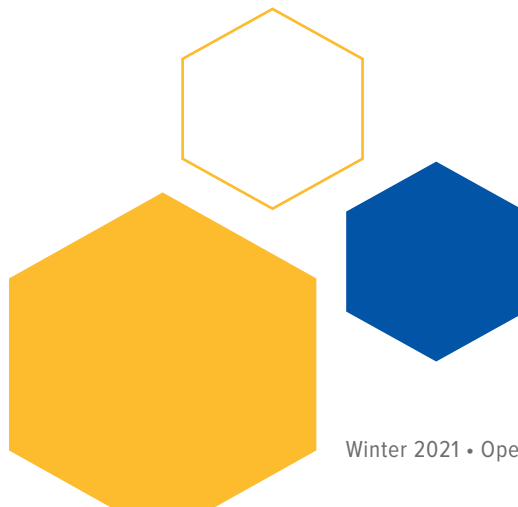
One medical student commented that the “supportive

and friendly culture comes across virtually.” Another appreciated “being able to see the residents have rapport with each other during the breakout rooms.”

Dr. Hirpara, one of the chief residents, observed that during their interviews some applicants reported that they decided to apply to UCLA after taking part in the Virtual Open House. Others cited the department’s dedication to equity and diversity as a positive factor.

Dr. Buckley said, “I think we should do it again next year in roughly the same format even if we do in-person interviews.” He and the other program directors extended sincere thanks to staff members Lucelva Mendez, Areli Gonzalez, and Jessyka Delgado for all their work in planning and hosting the event.

To watch the Open House presentations, please visit the [UCLA Anesthesiology YouTube](#) channel.



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# Residents Reflect On Training During a Pandemic

By Nicole Andonian, MD, Jeff Kim, MD, and Christian Seger, MD

**Editor's note:** We asked some of our residents for their thoughts on the sudden disruption in their residency training last year with the onset of the COVID pandemic. Here are reflections from Drs. Nicole Andonian, Jeff Kim, and Christian Seger.)

## CA-3 Nicole Andonian, MD



Dr. Nicole Andonian in full PPE – just another day at work in 2020

My personal experience with COVID started with canceling a global health trip to Armenia hours before I was set to fly out. That was a sign of the upheaval that was to come over the next ten months (and counting). Not to mention the inability to plan ahead, the lack

of control, the isolation, and all the other things that changed in all our lives. Fast-forward to 2021 and I miss ripping my surgical mask off at the end of every case, sitting mask-less and less than six feet away from my co-residents and attendings at work, and the endless social events that once filled my calendar.

Nevertheless, I can say I grew and learned a lot in 2020. The pandemic really tested our patience and our skills, which resulted in more self-confidence, especially as CA-3s. I also found the start of the pandemic, when we were in the emergency planning phase, truly illuminating. It turns out that in a relatively unprecedented pandemic, attendings do not know more than residents. We all are in this together and figuring it out together. Our fears are all shared, the playing field (scarily) level. I learned it is always ok to ask for help. And that many smart minds are often (but not always) better than one. But you still need someone to be the ultimate decision maker and steer the ship (huge thank-you to Dr. Van de Wiele and Dr. Cannesson for their guidance!).

Additionally, my cancelled global health trip that was supposed to focus on breast cancer in Armenia has now morphed into a larger-scale effort to improve different aspects of healthcare in Armenia, centered around COVID care. A large team at UCLA has gathered tons of supplies and will be initiating a mobile COVID care unit to treat patients needing oxygen therapy at home.

As we come upon one year of dealing with the novel coronavirus, it is funny to think of a time where we could walk to our cars after work without masks on, and

meet our co-residents for happy hour. The love and camaraderie within our department has only grown, and for that, we should be endlessly proud. We stuck together. We learned. We experimented. We grew. We had each other's backs. And maybe most importantly, I believe we have become not just better clinicians, but stronger people because of this.

### Chief Resident Jeff Kim, MD

Social distancing and other challenges that COVID-19 has brought upon us may have physically kept us apart from one another (I really miss our anesthesia family lunches outside), but the way in which our leadership, faculty, and residents have responded and adapted to the pandemic has certainly brought us a lot closer together as a department.

Libby, Azad, and I have been taken aback by how supportive our co-resident colleagues have been of one another throughout the past year. We've been inspired by their active initiative in leading donning/doffing seminars and basic ICU principles/airway workshops for our surgical colleagues at the start of the pandemic. We are amazed by how many of our co-residents volunteered to help out our medicine colleagues in the MICU, without much notice at all, serving in roles that were not necessarily clearly defined (even over the holidays!).



Time and time again, our co-residents have shown their support for each other - constantly advocating

on another's behalf, as well as covering a myriad of last-minute call shifts we needed help in filling. The selflessness we saw from our co-residents who even volunteered their vacation weeks to help out makes us proud of the culture that has been cultivated, and proud to be members of this residency.

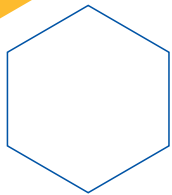
### CA-2 Christian Seger, MD



My experience as a trainee in the year of COVID was shaped heavily by the vision of faculty educators who sought to involve trainees in establishing our department's readiness and response. Development of "SLACC" (suction-assisted local aerosol containment chamber), a negative-pressure "intubation box" conceived with Drs. Nir Hoftman, Soban Umar, and Jure Marijic, began in March 2020 as the virus hit Manhattan. Dr. Nirav Kamdar simultaneously enlisted me to help research our early UV germicidal irradiation protocols for N95 reuse. Involvement in these projects enriched residency beyond my expectations, regardless of the project's eventual outcome.

Other residents delved into administration, research, surge planning, and peer support. These educational experiences would not have existed as urgently and meaningfully in "normal" times. Thank you, educators, for helping trainees to capitalize upon the opportunities you've found amid this pandemic.

*(The SLACC intubation box developed by Dr. Seger and colleagues is described in their publication in Anesthesia & Analgesia, published online on June 11, 2020: [www.ncbi.nlm.nih.gov/pmc/articles/PMC7302060/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7302060/))*



# Neuroanesthesiology Fellowship Program Gains Recognition

Our Division of Neurosurgical Anesthesiology has achieved a long-awaited goal: three-year accreditation of the fellowship program by the International Council on Perioperative Neuroscience Training (ICPNT). The experience of trainees in the UCLA fellowship program, under the direction of Susana Vacas MD, PhD, now is recognized to meet criteria and standards set by the ICPNT and the Society for Neuroscience in Anesthesiology and Critical Care (SNACC).

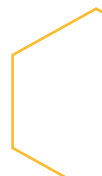
Congratulations to our neuroanesthesia faculty on this accomplishment! Accreditation of a fellowship program is a complex process that involves demonstrating that the program offers a curriculum for knowledge and procedural objectives based on competencies approved by ICPNT. Only 12 other fellowship programs in the U.S. enjoy this distinction. While our program has been in existence for years as a non-ACGME fellowship, our faculty welcomed the challenge of demonstrating that it meets the high standards of ICPNT and SNACC.

In collaboration with colleagues from neurosurgery, neurophysiology, critical care, radiology, neurology and nursing, our neuroanesthesia division provides care for adults and children undergoing a wide variety of diagnostic and therapeutic procedures



for the treatment of neurologic disorders. These include intracranial aneurysms and arteriovenous malformations, stroke, epilepsy, brain tumors, hydrocephalus, spastic cerebral palsy, Chiari malformation, movement disorders, and diseases of the spine.

Our neuroanesthesia division helped make history in 2002 when two anesthesiology teams, coordinated by Barbara Van de Wiele, MD, brought safely through surgery a set of conjoined twins who were fused together at the head. Dr. Van de Wiele was our chief of neurosurgical anesthesiology at the time, and worked closely with our chief of pediatric anesthesiology, Swati



Patel, MD, to care for the little girls – known as the “two Marias” – during their successful 23-hour surgery.

Today, Andrew Hudson, MD, PhD, has just been named the new Division Chief, succeeding Joe Hong, MD. Other division faculty include Drs. Jack Buckley, Dan Cole, Victor Duval, Eilon Gabel, Kianusch Kiai, Natalie Moreland, Carsten Nadjat-Haiem, John Shin, Scott Vandiver, and Keren Ziv.

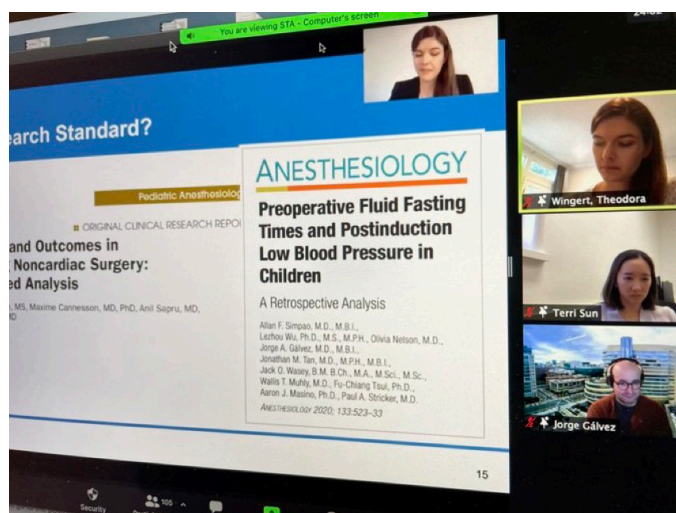
We welcome applications to our fellowship program from aspiring neuroanesthesiologists! Applicants must be able to obtain a California medical license prior to starting and are appointed as clinical instructors. For more information about the neuroanesthesiology fellowship program and the application process, please visit our [website](#).



Faculty Andrew Hudson, MD, PhD, and Susana Vacas, MD, PhD

# Our Faculty Shines At STA Annual Meeting

January's virtual annual meeting of the Society for Technology in Anesthesia (STA) featured our faculty member Ira Hofer, MD, as meeting co-chair, while other faculty members – Drs. Nirav Kamdar, Theodora Wingert, Laleh Jalilian, and Eilon Gabel – led panel discussions and presented their own research.

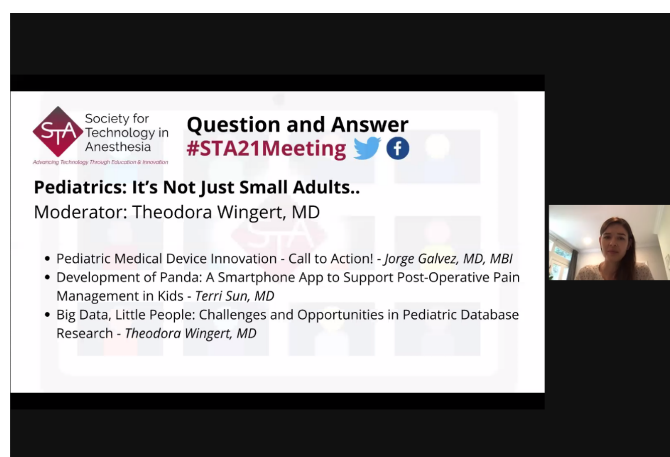


Our department chair, Maxime Cannesson, MD, PhD, took office as the society's 2021 President. An expert in physiologic monitoring, closed-loop anesthesia systems, artificial intelligence, and predictive analytics, Dr. Cannesson said his goals for the STA are to grow the membership, promote automation and clinical decision support systems in the perioperative setting, and position the society to attract a diverse group of anesthesiologists, PhDs, and industry partners.

Dr. Hofer noted that the conference hosted five panel discussions, each with a half-hour of prerecorded talks

and then a half-hour of interactive discussion led by the moderators.

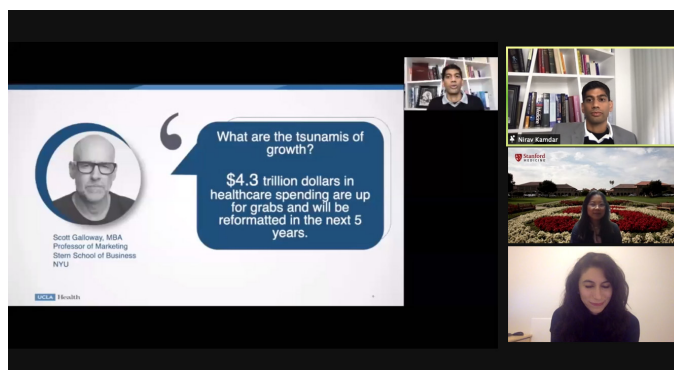
Nirav Kamdar, MD, MPP, MBA, our department's Director of Quality, led a panel discussion on telehealth titled, "Virtual Care: Did You Zoom Your Patient Yet?" The presentations included Dr. Kamdar's talk on "Telehealth: A Digital Portal to Perioperative Care". Laleh Jalilian, MD, spoke on the topic, "Virtual Care in the Health System of the Future: Digital Technologies for a Remote Future."



Theodora Wingert, MD, moderated a panel discussion concerning "Pediatrics: It's Not Just Small Adults." She commended the panelists, Drs. Jorge Galvez and Terri Sun, for outstanding presentations on pediatric medical device innovation and the development of a smartphone app for managing pediatric postoperative pain. Dr. Wingert, an expert on information technology in the medical environment, delivered a presentation

titled, “Big Data, Little People: Challenges and Opportunities in Pediatric Database Research.”

“I was really excited and honored to bring this panel to this year’s STA meeting,” Dr. Wingert said. “Pediatric research is a topic that is very near and dear to me, and unfortunately one that can sometimes lag behind that of adults.”



Drs. Nirav Kamdar, top right, and Laleh Jalilian, bottom right

In her talk, Dr. Wingert discussed some of the unique barriers and challenges in pediatric research, and why these exist. On a positive note, she said, there is reason to believe that the next few years will bring considerable progress in pediatric research.

Eilon Gabel, MD, MS, our Director of Informatics Operations, presented a poster, “A Framework for Evaluating Healthcare Machine-Learning Models: Application and Analysis Using Hospital Readmission.”

UCLA medical student Andrew Lee presented his poster, “Defining Gender and Race/Ethnicity-Specific Laboratory Reference Ranges and its Impact on Predicting Postoperative Acute Kidney Injury and Mortality Outcomes.” Dr. Hofer mentored this research project.

“While everyone at the conference missed seeing each other in person, there were silver linings,” Dr. Hofer said. “In particular, all participants liked the ability to

use the chat feature in Zoom, and there was an active conversation throughout the day. Everyone agreed that we should incorporate chat next year even if we are back in person.” Another advantage was the increase in remote attendance, he noted. “There was even one attendee who signed in from Kenya!”

The meeting also featured a “surprise” 30-minute question-and-answer session with Julian Goldman, MD, who is Medical Director of Biomedical Engineering at the Mass General Brigham Health System, and has been a Visiting Scholar in the FDA Medical Device Fellowship Program. Dr. Goldman discussed emergency changes in government regulation due to the COVID-19 pandemic, and described work on a ventilator that can be programmed remotely.

Dr. Hofer said the feedback from attendees at the virtual meeting was very positive, and Dr. Wingert called it “the most interesting, informative, interactive virtual event I’ve participated in thus far.”

Dr. Cannesson said one of his principal tasks as the new STA President will be to help navigate the challenges associated with the ongoing COVID-19 pandemic and guide planning for the next STA annual meeting, which is scheduled for January 2022, in Las Vegas. He has served on the STA Board since 2009, and is the Executive Section Editor on technology, monitoring, and computing for *Anesthesia & Analgesia*.





At "Create & Cultivate" event



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# Our Nurse Anesthesia Team Navigates the Pandemic With Hard Work and Good Cheer

By Shelly Anderson, MBA, MSNA, CRNA

The pandemic continues to cause challenges for healthcare providers, and the UCLA Nurse Anesthesia team is no exception. As the number of COVID-positive patients increases, our department's surge plan is constantly updating. The CRNA team has faced multiple challenges in preparing for the forces that pull the team in and out of the OR.

As surgical volume oscillates, the team deals with uncertainty ranging from lost days of work to working overtime. We have endured intervals of sudden schedule changes and an unpredictable work environment. CRNAs have participated in planning, educating, and collaborating with multidisciplinary teams across the UCLA campus. They are willing and able to help in any way possible to meet the increased patient demand.

We celebrated CRNA Week the last week of January 2021. The department recognizes the CRNA team for their great flexibility and commitment to the department's needs, especially COVID-19 pandemic efforts. The celebration will look different this year due to continued social distancing guidelines, but we will do our best to recognize the team remotely.

It has been six months since we had new CRNAs start at UCLA. Fortunately, we have started searching for five new positions to expand the team. We crossed many hurdles in bringing the previous interview format into the pandemic era. There was a steep learning curve to integrate the right type of technology to transition to a 100% virtual and electronic process. It was anything but smooth.

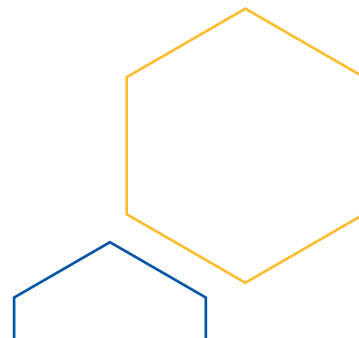
Interviewing candidates virtually lends to benefits such as not needing to travel, which decreases the time to schedule interviews, and it affords a more

casual platform. The friendlier, more convenient style is a welcome transition. We get to see people in the comfort of their homes, sometimes with a welcome interruption from a child or pet. Candidates appear more at ease, and we can communicate with them in a more approachable manner. We use Zoom for video interviews, and the breakout room feature allows multiple people to interview with a different panelist at the same time. This is one pandemic practice that we look forward to adopting, moving forward.

## Mentorship For New Graduates

This past June, we started a formal mentorship program for our new graduate CRNAs. This project is planned to help newly-hired CRNAs adjust during their school-to-work transition. Starting a new job during a pandemic proved more stressful than usual. We could not have implemented the program at a better time! The program pairs each new CRNA with two mentors. The mentors and mentees meet weekly, grabbing coffee before their clinical day.

Simson Wang, CRNA, has helped implement the program and provide clinical updates such as ultrasound and regional anesthesia management with the acute pain service. Debbie Paris Teho, CRNA Assistant Manager, and Simson meet monthly with the mentees for the first six months via Zoom to discuss topics such as procedures,



protocols, and the path to promotion, and they share difficult cases to gain knowledge and support each other. By sharing that we have all experienced challenging cases and scenarios, we can build trust and empathy to support growth. These exercises show the new staff that they are not in this alone.

Many of our staff work at Martin Luther King Jr. Community Hospital (MLKCH) in addition to the UCLA Westwood and Santa Monica campuses. MLKCH has been hit very hard with increased patients with COVID-19. The hospital runs overcapacity to meet the demand and has implemented surge plans to turn PACU beds into ICU beds. MLKCH is devoted to taking care of employees by providing testing and vaccination in addition to PPE.

South Los Angeles continues to suffer from a disproportionate burden of poor health resulting from underinvestment and lack of access to several resources. MLKCH has brought long-needed health care providers and services to South LA, working with UCLA and the National Guard, among others. The hospital strives to take care of this underserved patient population by providing care in high volume and monthly food package vouchers for patients in need. The CRNAs at MLK help take care of the COVID-positive patients in the operating room and labor and delivery, and respond to emergencies in the ICU and emergency department. 2020 has been a long, exhausting year, but we continue to attack these challenges as they arise.

The CRNA team supports the department by teaching the monthly PPE don/doff class to all members. In this course, we review COVID-19 basics and anesthesia-specific policy and procedure for successful and safe don/doff practices. We are here to ensure that all anesthesia members feel safe and supported.

Some CRNAs have volunteered with the LA County Department of Health at large vaccine centers set up throughout the county. These 10-hour days serve the community in a very different way than the current role of providing anesthesia.

Another big transition during the past few months has been to develop a leadership ladder that affords CRNAs opportunities to grow and develop new skills outside of the OR. Many of us serve on department and hospital committees. For example, Jamilla Churchill, CRNA, and Ana Armenta, CRNA, are members of the department's Equity, Diversity, and Inclusion Committee. Many more opportunities to serve on QI committees and the Advanced Practice Provider council are also available.

As part of the hospital's teaching mission, our nurse anesthetists teach nurses and physicians throughout the hospital system about various topics to improve patient care and safety. Recently, Natasha Pyykko, CRNA, and Jacqui Becerra, CRNA, worked with me to update the IR nursing team and the IR physician team on procedural sedation, emphasizing teaching points for medication profiles as well as airway intervention.

On September 11, Alan Zamora, CRNA, presented at the Ophthalmic Anesthesia Society Virtual Scientific Conference. His presentation topic was "*Monitored Anesthesia Care: A Simplified and Proven Approach.*" The conference was virtual this year due to COVID restrictions. This is the second consecutive year that Alan has presented at this conference. Furthermore, in October he joined the Board of Directors for the Ophthalmic Anesthesia Society as a Director-at-Large.

Three of our newest CRNAs spread holiday cheer by making decorative wreaths for the offices at Santa Monica and Ronald Reagan. Gloria Nakyeyune, CRNA, Gilly Quian, CRNA, and Brianna Ortals, CRNA, used their creative talents to upcycle used medication vials. John Chalabi, MD, the medical director at the Santa Monica-UCLA Surgery Center, loved it and posed for a photo with a wreath crafted from empty propofol bottles. Who knew repurposing trash could be so cute??

Our diverse women CRNAs were featured online in [Create & Cultivate 100: Find New Roads: Frontline Workers](#). The article honored healthcare workers' efforts during the pandemic. Jennifer Katsura, CRNA, Cortney Jolin, CRNA, Ana Armenta, CRNA, Emily Pinho, CRNA, Jamilla Churchill, CRNA, and Karen Hwang, CRNA, were interviewed on their nursing careers and challenges they have faced as front-line workers in a COVID environment.

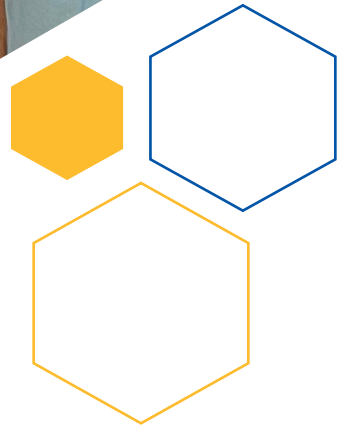
We look forward to expansion in the new year and interactive opportunities to support each other and the department. The vaccine rollout brings a glimmer of hope for all of us to return to social gatherings in person. We endeavor to find ways to work within the pandemic restrictions for teaching courses, gathering socially, and supporting each other. Our nurse anesthetists continue to find ways to support the UCLA values to ensure Integrity, Compassion, Respect, Teamwork, Excellence, Discovery, and Diversity in the work we do daily.

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#### IMAGES

TOP: Dr. Chalabi appreciates creativity!

BOTTOM: Propofol Christmas wreath



# Community Engagement in a Pandemic: UCLA Anesthesiologists Support STEMM Education For Local High Schoolers

By Sophia Poorsattar, MD

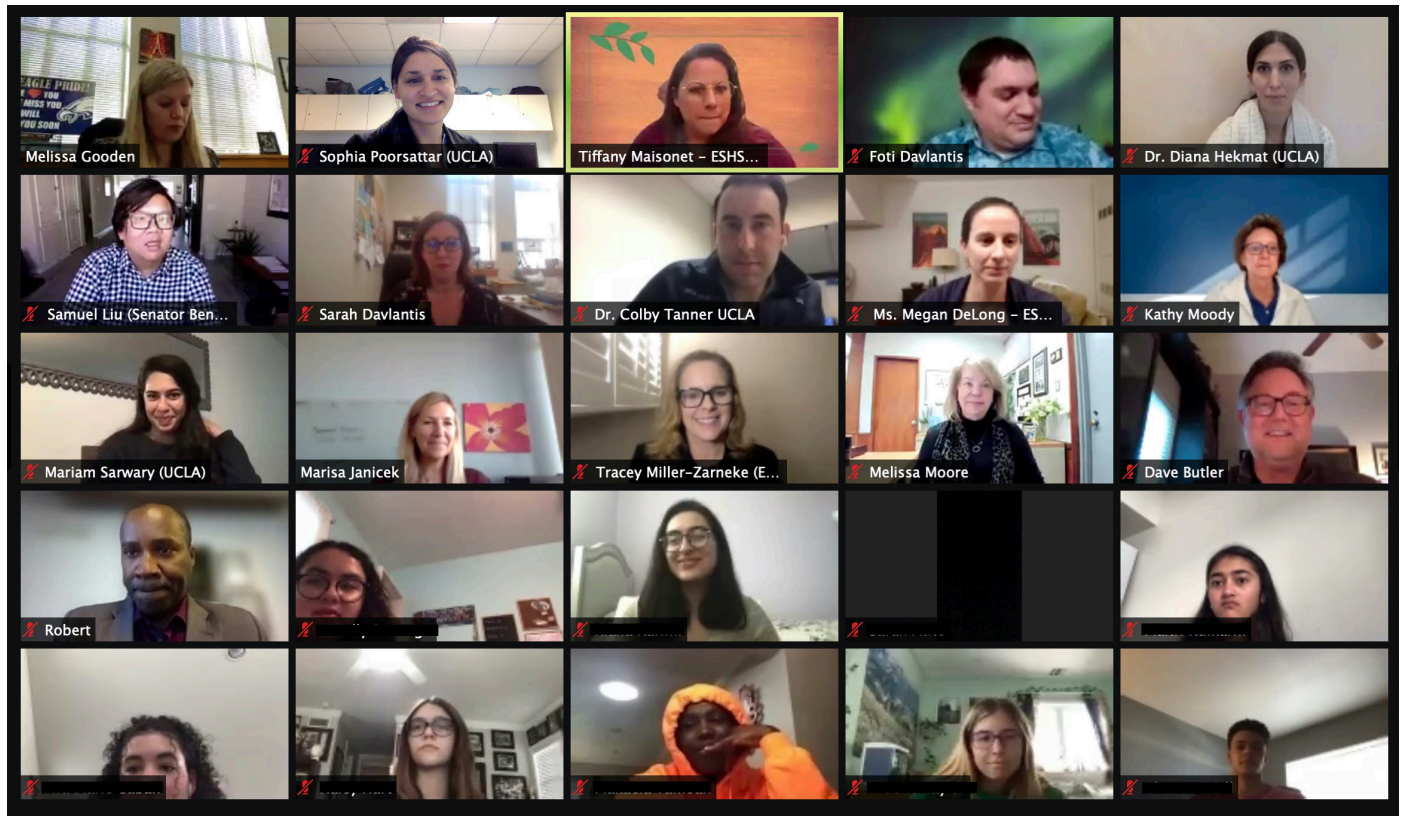
**Editor's note:** This program was spearheaded by faculty member Christine Nguyen-Buckley, MD, from 2017 to 2020, and Dr. Poorsattar was one of the first and most enthusiastic residents to visit high school classrooms with a portable intubation mannequin and an ultrasound machine in tow. Now that she has joined the faculty, Dr. Poorsattar brings her energy and Zoom expertise to revitalize the program for the virtual age! We can't thank her enough.

Among the many things we've missed as the pandemic lingered on – our residents had no chance in 2020 to visit local high schools and talk to students about careers in anesthesiology and healthcare. These visits have been a highlight every year for residents and students alike.

Determined not to let COVID-19 stand in their way, our department's faculty and residents reimagined this program and made "virtual" Zoom visits to classrooms at two local public high schools in February, through our partnership with the California Society of Anesthesiology (CSA), and the nonprofit organization Project Lead the Way (PLTW).



Venice teacher Jeremy Wong with UCLA guests



Virtual visit to El Segundo HS

Since launching the partnership in 2017, our department and CSA have supported the implementation of a four-year elective biomedical curriculum developed by PLTW in three public high schools: El Segundo High School, Venice High School, and the Girls Academic Leadership Academy. The program has been so successful that it earned CSA a Component Recognition Award in 2020 from the ASA for excellence in innovation.

As a nonprofit organization, PLTW's mission is to inspire and empower students to "thrive in an evolving world" via their established learning pathways in STEMM (science, technology, engineering, medicine, mathematics) topics. The aim is not just to develop the students' technical skills, but also their ability to reason critically and creatively, communicate, and collaborate. Further, PLTW equips teachers with the training, resources, and support they need to make this happen at the classroom level.

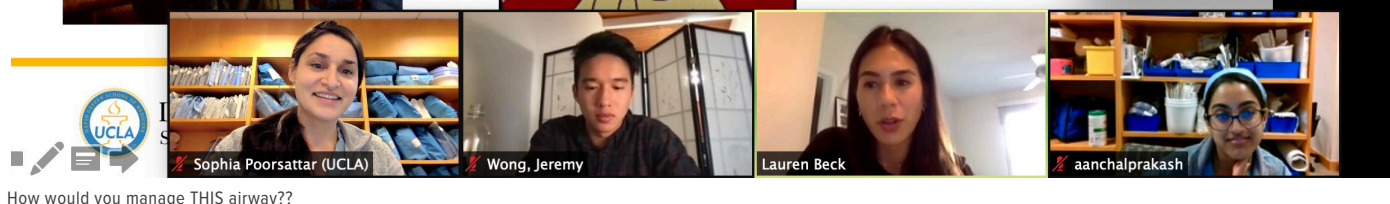
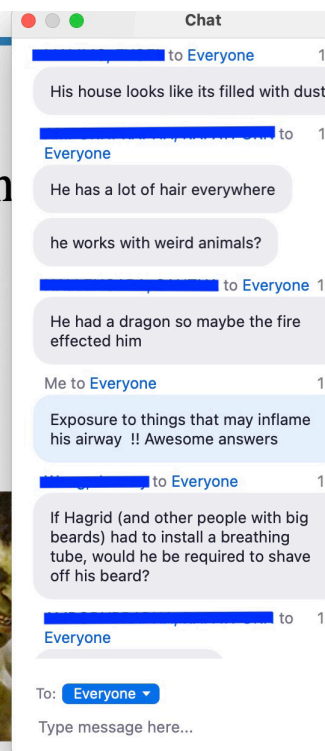
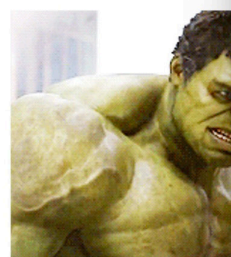
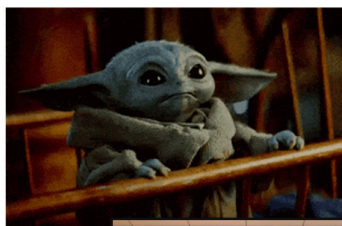
To support the application of this curriculum, CSA's role has been to help fund the biomedical pathway teacher training sessions through donations coordinated by the CSA Foundation for Education. Serving on the

Foundation's Board of Directors are several UCLA faculty, including Sophia Poorsattar, MD, Karen Sibert, MD, FASA, Jane Moon, MD, and John Shin, MD.

Our department similarly seeks to foster curiosity about biomedical topics and inspire young students to pursue education and careers in STEMM fields. Our role has been to coordinate opportunities for students in the biomedical pathway. UCLA anesthesiology residents visit classrooms and provide hands-on experience in point-of-care ultrasound and airway management. The high school students have visited the UCLA Simulation Center and the research laboratory of faculty member Soban Umar, MD, PhD.



# Describe the features of these characters that might contribute to difficulties with controlling their airways...



These engagements came to a halt last spring when hospitals became overwhelmed with COVID patients and schools were forced to close their doors. Since that time, we've learned to adapt to a new normal, and prioritized resuming this important engagement with our community members.

With the aim of maintaining our mission to provide mentorship and role models for these young aspiring scientists, our recent "virtual" visits focused first on pathways to careers in medicine and what it is like to work as an anesthesiologist. This was followed by a problem-based learning discussion on airway assessment and management, augmented with video content produced by department members Zarah Antongiorgi, MD (faculty), John Shin, MD (faculty), Colby Tanner, MD (fellow), John Kleinman, MD (resident), and Aanchal Prakash, MD (resident).

For El Segundo, our department members Lauren Beck, MD (faculty), Colby Tanner, MD (fellow), and Mariam

Sarwary, MD (resident) led this virtual program with an audience of nearly 80 students and district-wide leadership. Biomedical pathway teacher Tiffany Maisonet shared feedback from the students:

*"Thank you so much for taking the time to teach us all about the importance of anesthesiology. An opportunity like this to meet and talk to you guys was very special and we're all extremely grateful."*

*"Even through the challenges of Zoom and not being able to talk to us face-to-face, you still made the time worthwhile and exciting. ... Your work is extremely fascinating and I am glad you were able to share it with us. Thank you so much for everything that you do in the medical community."*

*"Your explanations about the different tools that you use and the importance of communication in a hospital setting were quite interesting! I truly admire your commitment and fiery passion for your careers"*

*and commitment to us! Thank you again and keep on inspiring students like us to pursue jobs in the medical field!"*

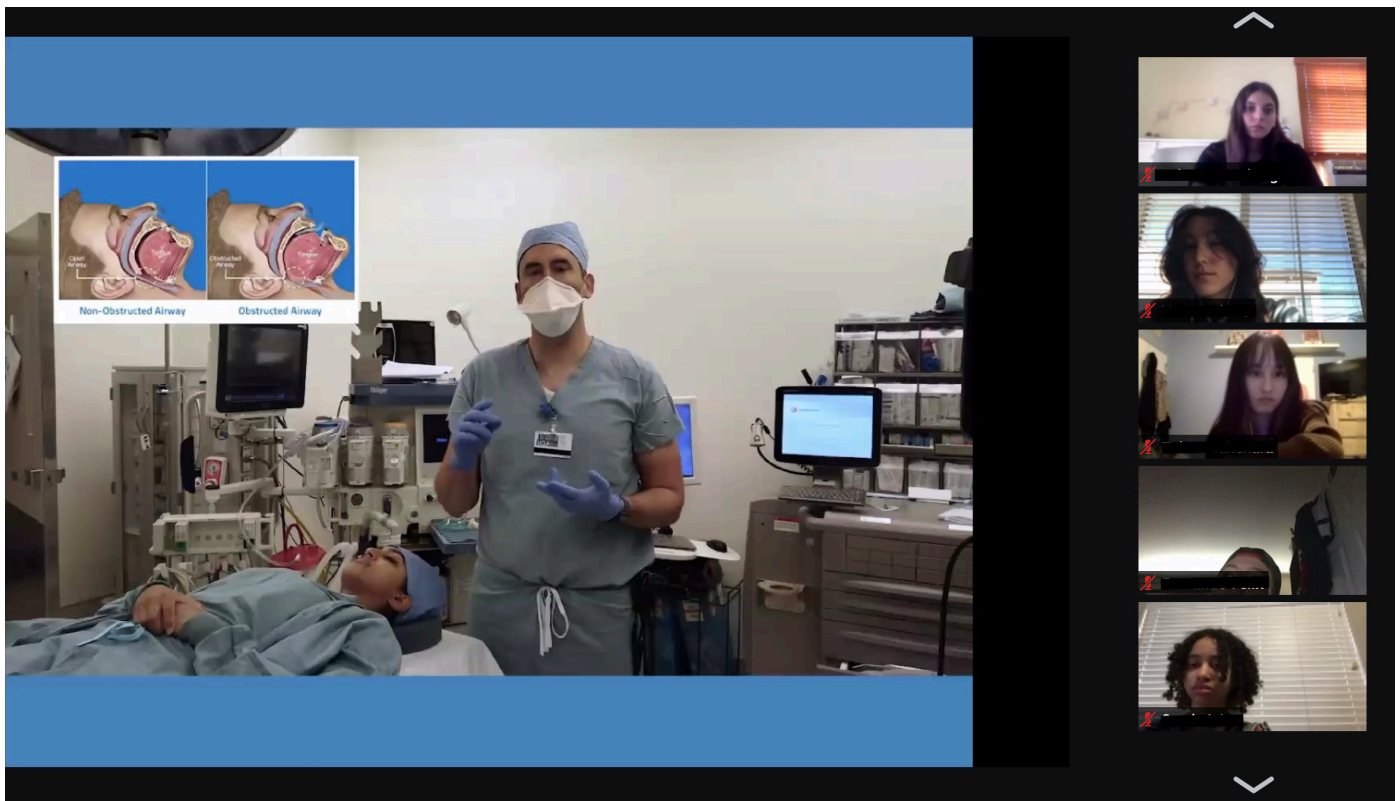
This occasion was celebrated by several additional key allies in our partnership. Joining us from El Segundo Unified School District leadership were Tracey Miller-Zarnecke, School Board President, and Melissa Moore, Superintendent. From the legislative side, we were joined by Samuel Liu from the office of State Senator Ben Allen, and Robert Pullen-Miles from the office of Assemblymember Autumn Burke. Joining us from the CSA was Executive Director David Butler.

At Venice High, our department members Elaine Boydston, MD (faculty), Lauren Beck, MD (faculty), Courtney Scott, MD (fellow), Hayley Osen, MD (resident), Andrew Sikorsky, MD (resident), and Rocky Campbell, MD (resident) led a similar virtual program in two split sessions. Biomedical pathway teacher Jeremy Wong shared personal reflections from the students after the visit:

*"I learned that the field of anesthesiology is a very meticulous field that requires the specialist to always be fully aware. I also learned that anesthesiologists monitor the patient through the whole process of surgery to make sure nothing goes wrong. I find it interesting that the anesthesiologist has to take so much into consideration. I now have a greater respect for anesthesiologists for all of the training and precision they go through."*

*"Helping the patients feel comfortable and informing them on what is to come in their surgery seems like something I would do because I know how scary it can be to have a surgery coming up and how important it is to have a doctor or someone who cares about you and is trying to help you get comfortable."*

During this time of change, we look forward to maintaining our engagement with each school's biomedical pathway program and adapting our outreach strategies to meet the need. We anticipate a visit with the students at the Girls' Academic Leadership Academy later this year.



Dr. Colby Tanner demonstrates airway techniques

# Our Administrative Staffers Work Hard Behind the Scenes

## Administrative Staff Update

By Shevaughn Marchese



### Where Did All the “Admins” Go?

The Administrative group continues to work remotely, with occasional visits to campus to take care of necessary tasks. If you visit the “administrative curve” you might encounter **Araceli “Sally” Alvarez-**

**deCordova, Quenesha Caballero or Carla Gonzalez.**

We communicate updates to faculty via colorful email reminders and the usual messaging methods.

We stay in touch with each other and maintain that “team spirit” through various means, including a daily morning check-in and a biweekly continuing education series hosted by different team members and led by **Olivia Vallejo**. We also continue to stay connected with DAPM and University colleagues through workgroups and committees at the department level and University level.



Sally Alvarez-deCordova and Quenesha Caballero working onsite.

One of the early challenges we experienced was staff overload. Some team members found that they worked longer hours than before, and those unofficial breaks that often come when we walked to and from meetings

no longer existed. Zoom meetings could now take place back-to-back with no transition time in between.

Team manager **Carla Gonzalez** and I designed **Bruin Pause Sweeps** to encourage staff to take intermittent breaks. There’s evidence that short breaks improve productivity and help prevent burnout. In addition, standing or moving during breaks can relieve tension caused by sitting for long periods. Team members can use a web sweepstakes entry form to confirm that they have taken a break and share what they did during the break. My Wellness Program colleague, **Darnell Bagsik**, randomly selects a winner at monthly all-staff meetings and distributes a token prize. Fellowship Programs manager **Lucine Torosian** won the first drawing in December.

### New Personnel



**Darnell Bagsik** officially joined our Administrative Team as an Administrative Specialist in October 2020. Darnell has been a highly visible member of our team for the past few years. In 2016, she came onboard as a Work-Study Student, contributing to projects such as Slip-Resistant Shoes, MediCal Timesheets, and Covid-19 timecards. She also plays a large role in curating our monthly Department Wellness Update.

Darnell graduated from UCLA with a BS in Biology in 2020 and aspires to be a nurse practitioner. In her downtime she likes to read, bake, and watch some of her favorite Netflix shows. Before COVID restrictions existed, she enjoyed playing paintball and singing karaoke with her friends.

# A New Plan To Recognize Outstanding Staff Contributions

By Carla Gonzalez



As the pandemic reached our community, our leadership rallied in support of transitioning our administrative staff to a remote modality. Though quite challenging, it was essential to safeguard the health and safety of our peers while keeping business continuity on

the forefront. On March 16, 2020, remote work began, and soon we missed seeing each other and our daily interactions with clinical and research staff in the hallways of RRM and CHS.

In the spirit of engagement and connection, our Chief Administrative Officer, Stephanie Fisher, put together a team that was tasked with developing a new recognition program. The **DAPM Administrative Recognition Committee** is composed of **Elizabeth Paray**, **Lucine Torosian**, **Lucelva Mendez**, and **Carla Gonzalez**.

We are excited to share the new **DAPM Administrative Staff Recognition Plan**. The plan is composed of four tiers to recognize individuals who have gone above and beyond in their work, actions, or interactions to exemplify the pillars of the Cultural North Star – ***Do what's right. Make things better. Be kind.***

The four tiers include a shout-out channel where the administrative staff can post praises for their colleagues, recognizing acts of kindness, hard work, and exemplary support. During staff meetings, we spotlight a member recognized in the shout-out channel. Our recent spotlights went to **Administrative Specialist, Darnell Bagsik** in December, and **Administrative Specialist, Araceli 'Sally' Alvarez-deCordova** in January. The

third component will be recognition during a DAPM Administrative Staff Retreat, with its first annual meeting in 2021.

The final component will be spearheaded by our Faculty Champion, **Dr. Lauren Beck**, where clinical, research, and administrative staff can nominate DAPM administrative staff who they feel have been impactful via a staff appreciation survey. Award recipients will be announced in future editions of ***Open Circuit***.

# At The End Of a Long Day (Or Night), It's Great To Come Home To Our Families and Pets!





Cockapoo Mozi, 6 months old, with Sophia Poorsattar and husband Raphael McDonnell



Charly the sheltie pup (Lorraine Lubin)



Elaine Boydston's fur babies, French bulldogs Frankie and Lola



Daniel Wong, who will turn 1 on February 21, enjoyed his first Christmas with his mom, faculty member Dr. Annie Lee!



Ginger tabby Tessa looks ready for her nap (Aria Davani and Natalie McVey)





Keanu loves watching cricket on TV and chasing birds in real life (Judi Turner)



Leela loves playing in her water bowl, and a good nap. (Judi Turner)



Leo, a Maltese, with pet parents Jason Lee and Ellen Moon



Naiya Dagher, the adorable daughter of resident Talia Dagher, was born Sept 25, 2020!



Playful foster puppy Kanga loves her tennis balls! Up for adoption via Wags and Walks (Liz Suh)



Warren J. Chae, born August 15, 2020, celebrates his first Christmas with proud mom Susana Chae!



Oliver, AKA Ollie Smalls, Debbie Paris Teho's rescue Chihuahua mix, has "spring-loaded" legs!



Foster puppy Kanga is hoping for her forever home! Up for adoption via Wags and Walks (Liz Suh)



Resident Christian Dib and 1-year-old lab Sully enjoyed a snowy day in the Angeles Crest



Tara Salehi, age 9

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# Thank you!

