

Message from Chris Fox, MD

Interim Chair, Department of Emergency Medicine



The UCI School of Medicine's Department of Emergency Medicine is committed to providing patient-centered, efficient care; applying leading-edge skills to combat serious illness and injury; training the next generation of emergency medicine experts, and conducting innovative research to prevent injury and disease.

We are the detectives of medicine, with laboratory testing, bedside care ultrasound, and advanced imaging at our fingertips. Combined with a patient's history and physical exam, these tools allow us to deduce what is wrong and gain the satisfaction of seeing the benefits of our treatment in real time.

In the course of a year, UCI Health Emergency Medicine Services receives over 50,000 patient visits. The department has the only Orange County Emergency Department observation unit.

We are the entry point for Orange County's only Level I adult trauma center, Level II pediatric trauma center and Regional Burn Center. We care for more than 5,000 trauma patients and more than 300 burn patients a year. We also receive patients en route to the UCI Health Comprehensive Stroke and Cerebrovascular Center, as well as to Orange County's designated cardiac receiving center. We have specialists standing by at all times to dissolve and remove

blood clots that cause heart attack and stroke.

We are one of only eight designated comprehensive emergency departments in California. In addition, we have access to immediate consultations with UCI Health experts in 25 medical and surgical specialties and subspecialties, making our Emergency Department by far the most accomplished source of emergency care in the region.

Our faculty members are top-notch clinicians, teachers and researchers who focus on ways to prevent injury and disease. Our areas of special expertise include medical education, toxicology, emergency ultrasound, wilderness medicine, infectious disease, public health/injury prevention, international emergency medicine, medical informatics, geriatric medicine and pre-hospital/disaster medicine.

We train tomorrow's outstanding clinicians and leaders by providing research opportunities and mentorship, germane didactics, focused simulation sessions and intensive bedside teaching.

Each year, at least one in every three Americans visits an emergency department, with 128 million visits nationwide. The emergency department has become the epicenter of U.S. medicine. We know that our emergency department at UC Irvine Medical Center is the place where diagnoses are made and treatments are given that make a difference, and where patients from all walks of life receive outstanding care from dedicated doctors.

A handwritten signature in black ink, appearing to read 'John Chris Fox'.

Chris Fox, MD

Innovative 7th annual UltraFest hosts over 250 attendees

UCI School of Medicine held its 7th annual UltraFest on February 3, 2018 — a free, hands-on and interdisciplinary ultrasound symposium.

Originally created by a Class of 2012 School of Medicine student, UltraFest was designed to make ultrasound education accessible for the medical students in the area.

This year, UCI had the privilege of hosting more than 250 attendees from a variety of interdisciplinary backgrounds, including physicians, nurse practitioners, medical students, physician assistant and nursing students.

"We are very fortunate to have ultrasound education thoroughly incorporated into our preclinical years here at UCI, and we wanted to continue to provide an opportunity for both future and current health professionals to learn practical ultrasound applications, while also gaining hands-on practical skills" said Savannah Gonzales, a second-year medical student who helped coordinate the event with fellow student Angela Allen.

Students had the opportunity to learn both basic and advanced techniques in several specialties, as well as to try their hand at a variety of ultrasound-based procedures using high-fidelity training tools. They also were able to practice their skills by taking part in a realistic simulation training session.

"Ultrasound and simulation really make our medical education here unique," said Luke Walls-Smith, a second-year medical student who helped organize the training. "Simulation provides a hands-on way for us to practice and solidify our skills in a safe and supportive environment." UltraFest was made possible through the efforts of medical students, ultrasound manufacturers and more than 30 faculty members from a variety of specialties including emergency medicine, OB/GYN, anesthesia, cardiology, pathology and pediatrics.

Our local physician instructors were joined by many attendees who traveled from all corners of the world to volunteer their time and expertise. Well-known instructors flew in from New York, Stanford and Sacramento. We were

also honored to have instructors from the United Kingdom, Spain, Brazil and South Korea.

"Ultrasound knows no languages or boundaries," said Dr. Shadi Lahham, UCI director of Emergency Ultrasound. "It's amazing watching so many people from different fields, medical specialties and countries come together to teach and learn ultrasound. This is what ultrasound in medical education is all about."

The day concluded with a two-hour competition designed as a fun and interactive way for students to test new skills. Adopted from a model often implemented at the resident level, Sonogames consisted of a variety of stations ranging from "Ultrasound Taboo" to "Scanning Under Fire."

"The enthusiasm with which students and instructors participated in the games was a testament to the excitement that ultrasound brings to UCI as we continue to embrace new technology to lead us into the future of medicine," said Allen, the event co-coordinator.

The goal of Ultrafest is a final opportunity to practice point-of-care ultrasound, giving students more confidence to better use ultrasound in their future education and practice.



Steep learning curves at MammothEM conference

In March 2018 the Department of Emergency Medicine (EM) of the UCI School of Medicine kicked off the 37th annual Mammoth Mountain Emergency Medicine Conference in Mammoth Lakes, California. This four-day conference presented a broad range of emergency medicine topics to over 150 healthcare professionals, including EM physicians, nurses, nurse practitioners, physician assistants, paramedics, EMTs and medical students. During the opening night reception, Dr. Megan Boysen Osborn, the conference chair, gave a warm welcome that filled the room with energy and was well received by enthusiastic participants eager to learn (and hit the slopes).

On Day One of the conference, with tons of fresh powder waiting on the slopes, Dr. Bharath Chakravarthy of UCI and Dr. Michael Menchine of LAC+USC, got the day started with the first of their two-part series, "Cruising the Medical Literature." This annual presentation offered participants a review of the most current literature "hot off the presses." The dynamic duo focused on clinical articles, encouraged critical thinking and promoted the practice of evidence-based medicine, which truly set the tone for the rest of the conference.

While on the mountain, attendees had the opportunity to learn from a combination of lectures and hands-on activities. Distinguished speakers covered topics including "Opioid Epidemic," "Fentanyl Derivatives: The Latest Danger on the Street," "Current Updates on Spine Precautions," "Ultrasound-Guided Resuscitation," and "How to NOT ruin your career on social media," among others. The interactive sessions allowed practice of airway management using simulation models, use of bedside ultrasound with live models, virtual-reality simulation cases, and "Improvised Wilderness Rescue Techniques," with conventional items used for camping and outdoor sports.

On Day Three, Dr. C. Eric McCoy of UCI presented his unique take on "Neonatal Resuscitation: What YOU can't afford to miss." He covered critical points of emergent delivery of the newborn, neonatal resuscitation and the role of ventilation. To everyone's delight, he closed his session by sharing his musical talents, making the take-home points

memorable: <https://www.instagram.com/p/BgB4r0nAfij/>

After four days of snow and learning, Dr. Max Thompson and Dr. Inna Schniter of UCI closed the conference by paying homage to the mountain's mascot, Wooly, and reviewing "Conference Topic Highlights." Their high yield overview of conference content reinforced the importance of evidence-based medicine for optimal care in the emergency setting that will benefit attendees and patients alike. For over three decades, the Mammoth Mountain Emergency Medicine Conference has educated front line providers on the latest updates in emergency medicine care.





Air rescue helicopter doctor – Robert Katzer, MD

When he's not working in UCI Health's Emergency Department, Dr. Robert Katzer can be found volunteering as a helicopter physician with the San Bernardino County Sheriff's Department.

As an air rescue team member, Katzer acts as a flight physician working with the county public safety. The team provides needed air medical resources to San Bernardino County, which is geographically the largest county in the United States.

The team consists of volunteer emergency physicians, nurses, physician assistants and paramedics who provide medical and rescue staffing for the county's public safety rescue helicopters.

Some members are reserve sheriff deputies and others are citizen volunteers.

Mission capabilities include transporting serious trauma

or medical patients from paramedic ambulances in the field to specialty care centers, saving significant time over ground transport.

The team also performs hoist rescues in areas where there is no suitable area to land.

This also allows the insertion of medical providers into austere conditions to begin patient assessment and treatment prior to loading into the aircraft.

The county's broad terrain features often require this capability, including the mountains of the San Bernardino National forest and peaks as high as San Geronimo (11,503 feet).

The rescue helicopters used by the team include a UH-1H Huey and a Bell 212. The air rescue team responds to about 250 calls a year.

Innovative emergency medicine residency teaching modalities

Over the last five years, the faculty members of UCI's Emergency Medicine (EM) Residency Program have incorporated a variety of innovative teaching modalities to engage and educate their residents and medical students. Ten percent of the curriculum is asynchronous; residents watch online lectures, take quizzes and read important articles at their own pace. During in-person didactics, the curriculum incorporates both medical knowledge and teamwork.

A consistent theme in many of these modalities is a friendly sense of educational competition. Residents can earn badges for winning competitions or for other accomplishments, such as publishing an article or taking on a leadership position. Badges, which are displayed prominently on a leaderboard, can be earned in many ways. Winners of trivia -style weekly reading Kahoot! quizzes earn badges. In a more hands-on approach, residents can also earn a badge by doing well in a simulation competition (akin to the Society for Academic Emergency Medicine's SimWars), where they run through clinical cases or participate in splinting, CPR and intubating competitions. During scavenger hunts and escape rooms, residents answer emergency medicine-related questions to solve puzzles or obtain the next clue. Other fun learning modalities include Sonolympics, which is a combination of point-of-care ultrasound contests and trivia; the Wilderness Games with Dr. Robert Katzer is held annually at San Onofre State Beach and challenges residents on a series of wilderness-based EM cases. In the Clinical Pathologic Case (CPC) competition (akin to Council for Residency Director's CPC competition), junior residents challenge senior residents to "solve" difficult cases. The residents are scored on their clinical reasoning and presentation style.

Case-based and team-based learning often takes the place of standard lectures. When a traditional lecture is given, a concerted effort is made to create a shorter, higher impact and more hands-on lecture format. It is also a priority to expose residents to the clinical experience and opinions of physicians from other specialties and EM physicians outside

UCI. Multispecialty panels and panels made up of EM physicians from various private hospitals help residents to learn how cases are managed by different specialists and in different hospital systems.

This broad array of teaching modalities has been gradually incorporated in the program to ensure that residents have a fun and educational learning environment during their three years of residency training at UCI. We look forward to see what our inventive faculty has planned for the years to come!



Faculty news

June 1, 2018

Congratulations to Dr. Shannon Toohey, who received the 2018 Leonard Tow Humanism Award from the Arnold P. Gold Foundation.

June 1, 2018

Congratulations to Dr. Lauren Sylwanowicz, PGY-2 resident in UCI's Emergency Medicine residency program, who was inducted as a resident member of Gold Humanism Honors Society.

May 20, 2018

Congratulations to Dr. Shahram Lotfipour for being a co-author on the *New England Journal of Medicine* Publications titled "Procalcitonin-Guided Use of Antibiotics for Lower Respiratory Tract Infection"

May 16, 2018

Congratulations to Dr. Jeffrey Suchard for his award "Excellence in Teaching – Basic Sciences" in

the School of Medicine and for Pharmacology being recognized by AMSC for Excellence in Teaching.

May 16, 2018

Congratulations to Dr. Alisa Wray for her award, "Excellence in Teaching - Clinical Sciences" in the School of Medicine.

May 3, 2018

Congratulations to Dr. Bharath Chakravarthy for his recognition by CalOptima and the Association for Community Affiliated Plans (ACAP), in receiving ACAP's Leadership in Advocacy Award.

May 1, 2018

Congratulations to Dr. Justin Yanuck, PGY-2 resident at UCI Emergency Medicine residency program, for his election as Secretary-Treasurer of AAEM/RSA Board of Directors

Apr. 25, 2018

Congratulations to Dr. Sangeeta Sakaria for being selected as a Dean's Scholar

Apr. 25, 2018

Congrats to Dr. Alisa Wray for being selected as the new Director of Clinical Skills Assessment and the new Clinical Foundations course director for the School of Medicine.

Dec. 6, 2017

Dr. Chris Fox, interim chair of the Department of Emergency Medicine, tells *Smithsonian* magazine that ultrasound technology is still underused in medicine today.

Sept. 1, 2017

Dr. Michael Burns is elected a fellow of the Infectious Diseases Society of America.



New wilderness medicine fellowship

UCI is proud to open applications for its first Wilderness Medicine Fellowship. It was the only sensible next step after taking charge of a critical access island hospital, Catalina Island Medical Center, and the addition of two enthusiastic experts, Dr. Isabel Algaze and Dr. Sangeeta Sakara, joining our EMS expert, Dr. Robert Katzer. Our campus is favorably situated near the Pacific Ocean, several mountain peaks and the high desert. This environment is a perfect setting for a fellow to perfect multiple wilderness skills, such as alpinism, climbing, whitewater rafting or diving.

The goal of the fellowship is to train physicians to handle medical emergencies in austere environments. Our fellows will be able to respond to and manage the broad array of emergencies that may occur far from a hospital. We will provide a strong background in wilderness medicine skills, theory and competencies. Fellows will learn through organized didactics, projects, technical skills courses and clinical experience. We collaborate with several international projects and participation will be available upon request. During the fellowship, each trainee will develop and implement at least two longitudinal educational projects, and we offer the option of completing a master's degree in Public Health.

We believe our fellows will ultimately possess the skills to direct instructional Wilderness Medicine programs or serve

in a leadership capacity for an undergraduate/graduate medical education curriculum after training. Please visit our website: https://www.emergencymed.uci.edu/Education/wilderness_medicine.asp. We look forward to receiving your applications: <https://recruit.ap.uci.edu/apply/JPF04663>.



UCI's innovative emergency department observation unit

The UCI Health Emergency Department Observation Unit (EDOU), also known as "ED Obs", is a 20-bed wing of UC Irvine Douglas Hospital, which serves as an extension of the emergency department (ED). Opened in June 2015, EDOU is the only emergency observation unit in all of Orange County. It offers the ability to provide efficient and effective care to short-stay patients who do not meet criteria for admission to the hospital but require ongoing medical evaluation.

Patients in EDOU receive care based on the latest clinical management pathways, each of which are based on accepted evidence-based guidelines and developed by ED clinical leadership and UCI Health specialty physicians. EDOU currently has 26 active unit treatment protocols, seven of which were developed in conjunction with medical subspecialists. With these treatment protocols, over 4,000 patients a year receive care in the observation unit, avoiding costly, lengthy and risky inpatient hospitalizations.

The EDOU greatly enhances the ED's ambulatory bed

capacity and expands the scope of care and treatment that emergency medicine clinicians can provide. While in EDOU, patients have access to the full range of medical services including diagnostic imaging, continuous cardiac monitoring, access to specialist consultation as well as to the medical and nursing staff. As the needs of our patients change, EDOU will continue to evolve and its role will continue to expand to allow for our institution to provide the best emergency medical services to our community.



Update on EM medical student education and the latest techniques

Please join us in congratulating Dr. Sangeeta Sakaria, who has been appointed assistant clerkship director of the fourth-year emergency medicine clerkship.

Sakaria joined the UCI Department of Emergency Services in 2017 as an assistant clinical professor. She began her teaching career in 2005 as a second-grade bilingual teacher in the South Bronx. During that time, she simultaneously completed a master's degree in Science in Teaching (MST), with a focus on bilingual elementary education, at Pace University. Although she left the classroom, Sakaria could not leave teaching entirely. Throughout medical school at Indiana University and a residency at the University of Chicago, she taught students and residents junior to her in lectures and bedside clinical teaching. She stayed on at the

University of Chicago for two years as teaching faculty, while also working at a semi-academic trauma center and affiliated community hospital. Sangeeta loves teaching all levels of learners and helping them to develop their knowledge base and clinical skills and to build their careers.

Medical students gave our EM clerkship the highest score among other clerkships last year. Our team tailored all education sessions to engage the millennial learners so they can learn and have fun at the same time. We incorporate a variety of teaching techniques, including team-based learning, flipped classroom, Kahoot!, differential diagnosis games and task training. In the near future, we also plan to use virtual reality to enhance our students' learning experience.



Anteater emergency medical services

Last fall a small group of dedicated undergraduate UCI students who are also licensed Emergency Medical Technicians (EMT) got together to form the student group Anteater Emergency Medical Services (AEMS). They reached out to the Department of Emergency Medicine for direction and guidance. The department established an MOU with AEMS detailing that Dr. Robert Katzer or a designated faculty member would provide medical direction to the group. The group recruited about 15 EMT members. AEMS' mission includes providing standby basic life-support medical care and life-saving education to the campus community. They have not yet reached an MOU with the campus to provide standby medical services at on-campus events, but members have taught more than 600 students, staff and other community members the Stop-the-Bleed course on hemorrhage control, including tourniquet application and wound-packing. AEMS has great potential to serve the campus community and join the more than 250 US colleges with EMS organizations.

It may also provide our residents an opportunity to teach prehospital care providers and develop leadership skills in managing EMS personnel. Finally, AEMS will develop a new connection between the Emergency Department at the Medical Campus, and the main campus community. With support from the university and ongoing student interest, this group has the potential to strengthen the Emergency Department's relationship with main campus and provide the opportunity for student healthcare providers to care for their community members on-campus.

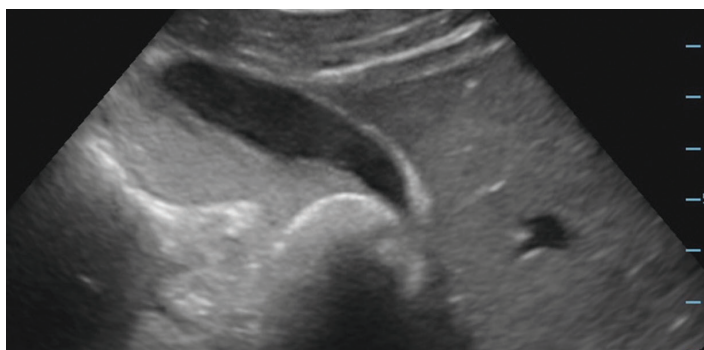


Role of point-of-care ultrasound in clinical care

Point-of-care ultrasound has been an integral part of UCI Health Emergency Medicine Services since 2003. In the emergency department, this technology can help guide resuscitation, monitor critically ill patients and help improve the safety of emergency procedures. Furthermore, this life-saving imaging modality is radiation free, portable and it can provide an instant diagnosis.

As ultrasound machines have become more compact and portable, UCI Health has become a leader in point-of-care ultrasound. Currently, all medical students at the UCI School of Medicine have a four-year ultrasound training curriculum that introduces them to basic and advanced ultrasound skills. The emergency department residency program also boasts a three-year ultrasound training curriculum focused on emergency medicine ultrasound. Additionally, all 22 UCI Health ED faculty are trained and credentialed in point-of-care ultrasound.

As part of the UCI mission – Discover. Teach. Heal. – discovery has been a critical component in emergency ultrasound. Over the last decade, nearly 100 peer-reviewed publications have demonstrated novel techniques of ultrasound and validated the latest trends in emergency ultrasound. Currently, we offer an Emergency Ultrasound Fellowship and several ultrasound fellowship-trained faculty now practice emergency medicine at UCI Health.



Translational laboratory studies: nicotinic receptors and adolescent substance use

Current studies in the lab of Shahradd Lotfipour, PhD, include identifying the role of a *Chrna6*C123G polymorphism (rs2304297) in influencing adolescent substance use and down-stream mechanisms mediating the effects. The lab is testing the hypothesis that having a GG genotype for the alpha6 nicotinic acetylcholine receptor (nAChR) increases the chances for an individual abusing drugs.

Relevance: The findings are of importance as the genetic change in alpha6 nAChRs is found in the 3'-untranslated region (UTR), an important genomic region regulating stability and expression of the receptor. Nicotinic receptors are critical for the modulation of chemicals in the brain that influence drug reward and motivated behavior, including dopamine. Thus, alterations in the genetic code of alpha6 nAChRs could influence expression and/or function of these receptors with downstream mechanisms leading to brain and behavior modifications impacting substance-use vulnerability. These consequences could be particularly prevalent during adolescence, a time when alpha6 nAChRs have been shown to have increased expression levels in dopaminergic neurons.

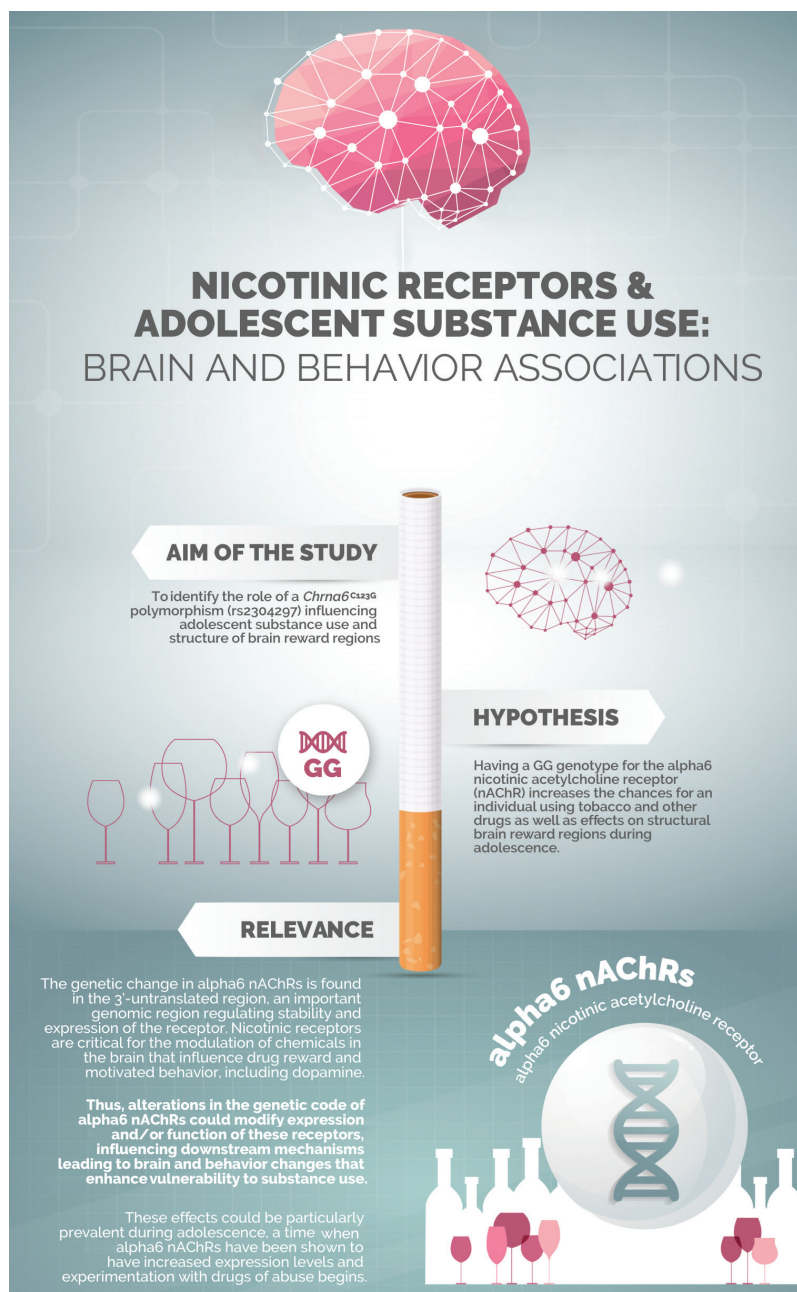
Previous results: Our previous work has demonstrated that a genetic change in the *Chrna6* gene (encoding alpha6 nicotinic receptors) associated with drug use and increased striatum volume during human adolescence. In these studies, both alleles must be present to influence adolescent substance use and structural brain effects. If a C allele is inherited from one or both parents, adolescent substance use and brain structure are not altered.

Current direction: To identify the mechanisms mediating the human results, our current studies have developed a 3'UTR humanized alpha6 nAChR mutant rat line. Using this line, we propose to assess the impact of this genetic polymorphism in substance-use behavior.

Precision: The precision of the current studies is that alpha6 nAChR subunits are highly expressed in brain reward regions, including the ventral tegmental area dopaminergic neurons that send projections to dorsal and ventral striatum.

Innovation: Our innovative study results would provide translational evidence for the relationship between brain, behavior and genetics that may influence substance use. This research may discover novel mechanisms for distinct nicotinic receptors influencing substance use.

An infographic of the work can be viewed at: <https://lotfipourlab.org/inforgraphics/>. For more information about the Lotfipour lab, please visit: www.lotfipourlab.org.



Western Journal of Emergency Medicine published by the Department of Emergency Medicine achieves notable growth on the 2017 SJR and Scopus Citescore rankings

The *Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health* (WestJEM), published by the Department of Emergency Medicine at the University of California Irvine, is one of the few fully open-access emergency medicine journals, and now ranks 16 of 78 EM journals worldwide, per the newly released Scimago Journal Rank (SJR) statistics for 2017. This represents a notable jump from WestJEM's 2016 SJR ranking of 25 out of 80 EM journals. The SJR website provides an overview of how WestJEM compares with its EM peers.

In addition, the 2017 Scopus CiteSource rankings list WestJEM at 20 of 77 EM journals. At the Scopus website information on the h-index, as well as graphs documenting WestJEM's development, can be found.

WestJEM continues its 10-year history of growth with the dedicated work of editor-in-chief, Dr. Mark Langdorf, professor of Clinical Emergency Medicine at UCI, and the journal's editorial board. The journal is extending its scope and reach throughout the United States and the world.

Its founders recognize that the journal could not have achieved this degree of scholarly influence without the constant support of its authors, section editors, editorial board and three major sponsors – the California ACEP, the American College of Osteopathic Emergency Physicians and the California Chapter Division of AAEM.

As its subtitle indicates, WestJEM focuses on the integration of population health with emergency care. The journal is indexed in all major medical databases, including MEDLINE and PubMed, and is a member of the Open Access Scholarly Publishers Association.

WestJEM's companion journal, *Clinical Practice and Cases in Emergency Medicine (CPC-EM)*, has just been indexed in PubMed and PubMed Central. Its inaugural issue was published in January 2017.

The journal's 1,572 abstracts are found on the PubMed website. To submit a new article, visit our website at www.WestJEM.org.

Emergency Medicine physician extends the mission of UCI Health beyond the boundaries of the university



Meet Dr. Eric McCoy

Dr. Eric McCoy is an associate professor of emergency medicine at the UCI School of Medicine who has been extending the school's mission of in the fields of simulation and evidence-based medicine. He graduated from UCSF with a concentration in medical education and he completed a residency in emergency medicine at UC Irvine Medical Center. McCoy subsequently pursued fellowship training in Emergency Medical Services/ Disaster Medical Sciences at UCI while simultaneously pursuing a master's in Public Health in health policy and management at UCLA. He has had teaching experiences that span physics, MCAT preparatory courses, anatomy, physiology, paramedic courses, ECG workshops, and educational-and fellowship-training programs. His training and experience has brought him national and international recognition in the fields of simulation and evidence-based medicine.

Simulation

McCoy is the fellowship director for Southern California's first Emergency Medicine Simulation fellowship training program. Since its inception in 2013, the medical simulation fellowship program has grown at a tremendous pace. The program offers advanced training in simulation teaching, curriculum design, educational program implementation, research and study design for graduates of accredited emergency medicine residency programs.

He has also created an international medical simulation fellowship-training program for physician educators who aspire to build simulation programs at home institutions in their respective countries. Fellows graduating from the program have been able to assume leadership roles in residencies, simulation centers and healthcare institutions.

McCoy provides educational offerings in the form of large group lectures and workshops at the International Meeting on Simulation in Healthcare. At this conference, he introduced a unifying definition for a new niche in simulation, called telesimulation, to the simulation community. Telesimulation is a novel educational delivery method that leverages telecommunication and simulation resources for the education, training and/or assessment of learners at an off-site location. As director of Emergency Medical Services (EMS) for UC Irvine Medical Center, he also provides educational content on the use of simulation in EMS. He provides workshops on how to implement concepts of evidence-based medicine to design strong simulation-research study protocols. Scholarly work that has resulted from the fellowship training program includes randomized controlled trials to evaluate the effectiveness of simulation as compared to conventional modalities for the education and training of healthcare providers. McCoy serves as the chair of the Education Subcommittee for the Emergency Medicine section at the Society for Simulation in Healthcare, where he is currently working with colleagues from around the world on creating a simulation book for healthcare educators. McCoy's commitment to education and contributions to the field of simulation through his original research, educational offerings at national/international meetings and the fellowship program has allowed him to extend his educational work well beyond the boundaries of UCI.

Evidence-based medicine

McCoy's skill at converting complex concepts into content that is engaging, fun and informative has gained him recognition from the very institution where evidence-based

continued on next page

Continued from “:Emergency Medicine physician extends the mission of UCI Health beyond the boundaries of the University”

medicine was born – McMaster University in Ontario, Canada. While enrolled in an evidence-based medicine workshop at McMaster University, he developed knowledge to contribute to his students’ education. Dr. Gordon Guyatt, director of McMaster’s evidence-based medicine workshop, coined the term “evidence-based medicine” and is recognized as one of the leaders of evidence-based medicine. He personally invited McCoy to return in an educator role for the evidence-based medicine workshops at McMaster. McCoy accepted and now returns every year

to provide educational offerings and serves as faculty lead for Emergency Medicine at the internationally recognized program for teaching evidence-based medicine to healthcare professionals.

McCoy’s commitment to providing the highest quality experience for his students has allowed him to extend the UCI School of Medicine’s teaching mission around the world.

Clinical Practice and Cases in Emergency Medicine by the Department of Emergency Medicine achieves Inclusion in Pubmed and Pubmed Central

Clinical Practice and Cases in Emergency Medicine (CPC-EM), published by the UCI School of Medicine’s Department of Emergency Medicine, has achieved a milestone—inclusion and indexing in PubMed and full-text inclusion in PubMed Central (PMC), beginning with its first issue, published March 2017. CPC-EM is an internationally recognized, fully open-access journal affiliated with the MEDLINE-indexed *Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health*.

CPC-EM, offers a wide range of patient-care case reports, images in the field of emergency medicine (EM), state-of-the-art clinicopathological cases and insightful medical legal case reports. Its editor in chief is Rick McPheeters, DO, chair of the Department of Emergency Medicine at Kern Medical in Bakersfield, CA, and an associate clinical professor of medicine at the David Geffen School of Medicine at UCLA.

CPC-EM’s founding principle is free dissemination of research and best practices to the world. It encourages submissions from junior authors, established faculty and residents of established and developing EM programs throughout the world. CPC-EM has published more than 192 papers to date in quarterly issues.

We would like to sincerely thank our authors, section editors, editorial board and our sponsors: California ACEP, American

College of Osteopathic Emergency Physicians and the California Chapter Division of AAEM, which have supported and contributed to CPC-EM.

You may view the journal index on PubMed website. To submit a new article, visit our website at www.CPCEM.org.

From bilingual teacher to emergency medicine specialist

Dr. Sangeeta Sakaria's journey began in her home state of Indiana, or as she likes to say, "the cornfields". There she developed interests in human biology and the Spanish language.

After receiving bachelor's degrees in both fields, Sakaria decided to pursue one of her earliest passions — teaching — and worked as a second-grade bilingual teacher in New York City's South Bronx. She went on to earn a master's degree in teaching with a concentration in bilingual elementary education. This training helped her develop the skills she would eventually use to build strong relationships with patients and to empower them with the knowledge to create change in their own lives.

After a few years in the classroom, Sakaria returned to her home state to start medical school at Indiana University. She was determined to unite her love of teaching with medicine, and she discovered that emergency medicine was a perfect field. It was also a significant driving force in her pursuit of academic medicine. After completing emergency medicine training at the University of Chicago, she became a faculty member and physician at the affiliated trauma center.

Sakaria next decided to move to Southern California, where she now serves as an attending physician at UC Irvine Medical Center and faculty member in the School of Medicine's Department of Emergency Medicine. She was recently named a Dean's Scholar at the medical school and teaches the clinical foundations course to medical students.

In addition to teaching medical students and residents, Sakaria's clinical interests include global health. She has a master's degree in public health from Harvard University. Sakaria has participated in several projects funded by the Pan American Health Organization (PAHO) and UNICEF to identify disease processes in underserved communities. She also has worked with local health providers to implement culturally acceptable solutions.

Sakaria is an experienced flight physician for helicopter transports of trauma and critically ill patients, including women in childbirth and neonates. She also is experienced in fixed-wing international transports of stable and critically ill patients.

Her love of the outdoors has led her to pursue diploma programs in mountain medicine, dive and marine medicine. She recently was named medical director of the emergency department at Catalina Island Medical Center in Avalon, where she works to provide round-the-clock emergency services to island residents and tourists.

Sakaria finds balance in her life in music and dancing. Her name means "song," so it's fitting that she enjoys these pursuits. She also loves playing tennis, boxing, scuba diving, sampling different foods and doing anything that involves the outdoors, such as hiking and camping.

When asked what she sees in her future, Sakaria half-jokingly says she hopes one day to have a farm, raise goats and make goat cheese. Until then, she wants to focus on teaching her residents and medical students to become better teachers, themselves, so that they, too, can empower their colleagues and patients.

Sakaria embodies the UCI Health mission: Discover. Teach. Heal. We are eager to see how she strengthens our program and the field of emergency medicine.





New faculty member brings experience in wilderness medicine

New emergency medicine faculty member Dr. Isabel M. Algaze Gonzalez was born in Puerto Rico at the same hospital where she completed her residency training in emergency medicine.

Algaze earned her bachelor of arts degree in biology from the University of Puerto Rico's Rio Piedras Campus, and her medical degree from the University of Puerto Rico School of Medicine. A natural adventurer who acquired a taste for exploring and a passion for nature early in life, Algaze also completed a two-year fellowship in wilderness medicine from Harvard Medical School at Massachusetts General Hospital in Boston.

Algaze is trained in primary hyperbaric medicine, avalanche medicine and mountain medicine, and she serves as an emergency medical team coordinator for the Pan American Health Organization (PAHO). She joined in the relief efforts after the 2010 earthquake in Haiti, and she has worked at multiple sporting events (cycling, hockey, snowboarding and free-skiing) as the site physician.

Algaze also has traveled with field experts and explorers to seven countries and nine locations as the expedition doctor for TCS World Travel and National Geographic's "Sacred Places" expedition. This experience solidified her

knowledge of the social determinants of health, travel medicine and global medicine. As part of her fellowship training, she spent three months in a remote aid post at 14,500 feet in the Khumbu region of Nepal, serving as site physician for locals, trekkers and climbers while she researched cognition in altitude and its relationship to altitude sickness.

Algaze also cared for one of two patients first diagnosed with Irukandji-like syndrome in Puerto Rico, and she is currently collaborating with the University of Hawaii in a clinical trial studying box jellyfish stings.

Her clinical and research interests include wilderness medicine, hyperbaric medicine, dive medicine, expedition medicine, global medicine and humanitarian aid. Her goal is to continue to provide quality care to her patients and to expand knowledge in the fields of emergency and wilderness medicine. She is excited to launch and serve as co-director of the Department of Emergency Medicine's new Wilderness Medicine Fellowship.

Algaze, who is fluent in English and Spanish, enjoys hiking, swimming, spelunking, kayaking and paddle-boarding. She also does cross-country runs with her dogs.

Meet Dr. Maxwell Jen



Dr. Maxwell Jen is an emergency physician at UC Irvine Medical Center and holds the role of assistant clinical professor and associate medical director. Jen obtained his bachelor's of science degree in molecular biology at UC Berkeley, his medical degree at UCSF. He completed a residency in emergency medicine and a fellowship in clinical informatics at UCI. Currently, he is earning a master's degree in business administration at UCLA's Anderson School of Management.

Clinical informatics has become a major force in our healthcare system with the growth of electronic health record systems, outcomes-based medicine and data-driven population health decision-making. Improving our interactions with technology enables the collection, analysis and application of large-scale data to improve healthcare systems by optimizing care-delivery efficiencies, medical resource utilization and, ultimately, patient outcomes. In

essence, informatics generates the innovations that will benefit our patients, hospitals and community.

As a clinical informaticist, Jen focuses his research on the interplay between healthcare systems and the healthcare provider. Using data, he works to improve the quality, efficacy and delivery of care in the emergency department, while continuing the institution's mission to educate and train medical students and resident physicians. Jen's work has also been used internally to make changes in policy and operations within UCI Health Emergency Medical Services.

Jen's passion for academia stems from his drive for continual personal development and a desire to train the next generation of informatics-enabled physicians. He believes that submersion in an academic environment has challenged him to grow as a physician, leader and educator, and keeps him accountable and up-to-date with the latest developments and practices in medicine. Jen also believes that an effective educator is defined by the ability to effectively communicate with the student, patient or given audience. Just as a technology's effectiveness is defined by how well the user can interact with it, an educator's ability to communicate is essential.

Jen has been an asset to medical education at UCI, and his work in clinical informatics has given the emergency department invaluable insights that help better serve the population and community of Orange County and beyond.

Combining emergency medicine with new technologies to improve training



Dr. Alisa Wray's interest in the intersection of medicine and technology was sparked as an undergraduate UCI student while taking a course in ultrasound research with Dr. Chris Fox, now interim chair of the Department of Emergency Medicine.

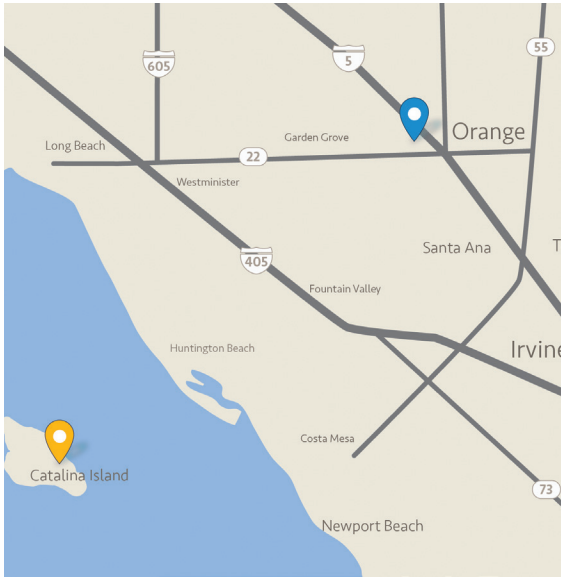
Wray went on to earn a medical degree from Tulane University School of Medicine in New Orleans, then returned to UCI for a residency in emergency medicine. Wanting to continue her training and further specialize,


Wray completed a UCI fellowship in multimedia design, education and technology due, hoping to blend her love of teaching and technology.


As a new faculty member in the Department of Emergency Medicine, Wray brings her familiarity with the program to her role as director for the Clinical Foundations III and Clinical Foundations IV courses. Wray says she finds teaching medical students and residents rewarding, especially when she can open their minds. "I love to see when things click for them and watch them grow," she says.

Working at the forefront of a constantly changing medical environment, will help to shape the future of medical education, Wray believes. Her research interests include the exploration of how different technologies and modalities affect the way students, residents and patients learn. Wray already plans to incorporate innovations into the boot camp for fourth-year medical students, as well as to completely overhaul the foundations courses. We expect her excitement and experience to bring much positive change to our department and UCI School of Medicine.

Location



 **UCI Health Emergency Medicine Medical Services**
101 The City Drive South,
Orange, CA 92868

 **Emergency Department, Catalina Island Medical Center**
100 Falls Canyon Road,
Avalon, CA 90704