As pressure ramps up on perioperative teams to more efficiently and cost-effectively deliver better clinical outcomes, the UCSF Department of Anesthesia and Perioperative Care is playing a central role in successfully meeting these challenges.

The Enhanced Recovery After Surgery (ERAS) program incorporates best practice guidelines in perioperative surgical care. Anesthesiologist Lee-lynn Chen, MD, and colorectal surgeon Ankit Sarin, MD, MHA, piloted this approach in colorectal surgery in 2013. Their success, as evidenced by patient outcomes measures, has spawned interest in developing ERAS pathways for other surgical disciplines, including gynecological oncology, benign gynecological procedures, orthopedic surgery and head and neck surgery.

Enhanced Recovery After Surgery Program Yields Results, Broad Interest

Comprehensive Best Practices

Rooted in ideas developed in Europe, ERAS deploys a multidisciplinary team of surgeons, anesthesiologists, pain management specialists, nurses, dietitians and other professionals. Their goals are to optimize patients’ health prior to surgery, follow a set protocol for medications and fluid management during surgery and implement post-operative evidenced-based interventions that accelerate recovery following surgery. UCSF is one of the first medical centers in the US to test the ERAS concept.
in colorectal surgery and Chen sees it as the starting point for the development of a perioperative surgical home for a wide range of procedures.

On a monthly basis, the ERAS group reviews all aspects of the pathway and constantly updates the protocol. Prior to surgery, the perioperative team tries to optimize patients’ health through diet, exercise and medication management. “We might even send particularly frail patients to a rehabilitation clinic prior to surgery in order to improve their health status – allowing patients to start at a higher baseline,” says Chen.

For colorectal surgeries, an innovative, pre-operative bowel preparation for ERAS pathway patients includes drinking a clear sugary liquid for carbohydrate loading two hours prior to surgery. This method is unlike the traditional bowel preparation that required patients to not eat or drink in the eight hours before surgery.

“Some studies have shown this [ERAS protocol intervention] increases patient satisfaction, makes patients less catabolic, increases the motility of the bowels post-surgery, reduces postoperative ileus and improves fluid management,” says Chen. He adds that a better-prepared patient allows for following the best practice recommendation of using less than two liters of intraoperative fluids, as well as for using non-opiate pain medications to manage post-operative pain.

Most ERAS patients engage in eating solid foods and are up and about one day after surgery. In addition, patients are active participants in their recovery, drawing on audiovisual aids and written handouts. After discharge, they have convenient access to their medical team through an online patient portal and central phone number.

“The idea [of creating an ERAS pathway] is to standardize best practices and decrease variability, which results in improved outcomes. In our colorectal pilot, we decreased length of stay by approximately two days and decreased readmits,” says Chen. Both measures are widely accepted markers for reductions in complications.

In fact, patient postoperative pain scores were reduced, patient satisfaction improved and the ability to meet key milestones occurred more rapidly. “They eat sooner, walk sooner, have Foley’s removed sooner…each milestone is moved up by a couple of days,” says Chen.

**Expanding Across UCSF**

When the program demonstrated positive results in colorectal surgery, the door opened to expand to other services. ERAS began to grow as part of the Caring Wisely initiative at UCSF, which allowed for collaborations with the aforementioned surgical teams. And when the American Society of Anesthesiologists asked for participants to help study and refine the concept of a perioperative surgical home, the UCSF team began contributing its ERAS findings. ERAS is now a nationwide effort.
Message from the Chair
Continuing Our Legacy as a Leader

I am deeply honored to have been selected by Dean Talmadge King as the fifth Chair of the Department of Anesthesia and Perioperative Care at UCSF. I have spent my entire career in the Department, arriving as a first-year resident in 1990, and look forward to finishing my career in San Francisco. In the last year, I have become a scholar of the history of the Department. Our legacy is storied, starting with the establishment of the Department of Anesthesia and Perioperative Care at UCSF when in 1958, Stuart Cullen was recruited to San Francisco from Iowa. Although the original intent was that Anesthesia would be a division of the Department of Surgery, Cullen wisely refused, and the Dean agreed that Anesthesia would be established as an independent department. Cullen soon recruited reinforcements, including John Severinghaus, Bill Hamilton, Ted Eger, George Gregory, and Sol Shnider, who quickly put the department on the map as a research and clinical powerhouse.

When Stuart Cullen became Dean of the School of Medicine in 1966, he recruited Bill Hamilton from Iowa to become Chair. Hamilton led the Department through the tumultuous 70’s and 80’s, bringing in key recruits such as Ron Miller, Mike Cahalan, and many others. Hamilton also appointed Morley Singer to lead the new Intensive Care Unit. Our Department continues to lead or co-lead the ICU’s at SFGH, Moffitt/Long, and Mission Bay, with nearly 30 board-certified anesthesia intensivists. Under Hamilton’s stewardship, the Department thrived.

In 1984, Ron Miller became the Department’s 3rd Chair, leading an era of tremendous growth and scientific and educational achievement. Ron’s leadership established UCSF as the clear leader internationally in anesthesia research and education. In addition to Bill Young and Jeanine Wiener-Kronish, perhaps his most important recruit was Mark Rosen, who led the residency program for over 20 years, identifying and nurturing an extraordinary group of trainees, in addition to his own distinguished career in obstetric anesthesia. Mark’s key role is now in the capable hands of Manny Pardo, ably assisted by Melissa Patrick (see page 9).

In 2009, after 25 years of careful stewardship, Ron Miller handed the reins of the Department to Mervyn Maze, arriving from Imperial College in London. Mervyn continued to grow the Department, and added his own impressive research resume to our already robust programs. Importantly, Mervyn helped us navigate the wrenching loss of Bill Young, one of the most prolific researchers and mentors in the country. When Mervyn began a sabbatical in 2014, I was asked by then Dean Sam Hawgood to serve initially as Acting, and then Interim, Chair.

CAN YOU FIND and name two department chairs in this 1966 photo of the Anesthesia and Perioperative Care Department? Answers on page 12.
This newsletter reflects the bright future of the Department, while honoring the past. Marty Bogetz provides a poignant look at our Ambulatory Surgery Center (ASC), also known as “Martyworld” where many of us fondly remember our time as residents, working in a uniquely high-functioning and patient-centered environment (page 10). We describe our highly successful Early Recovery After Surgery (ERAS) program, which represents the best in modern perioperative care, and is the foundation of the so-called Perioperative Surgical Home. Lee-lynn Chen and Ankit Sarin, Assistant Professor of Clinical Surgery, are revolutionizing the care of surgical patients at our new hospital in Mission Bay. Marc Stuerer gives us an update from San Francisco General Hospital, a world-leader in trauma care and research. You’ll find that trauma care has changed substantially in recent years, with greatly improved patient outcomes. Art Wallace tells us that the San Francisco VA Hospital continues as the flagship hospital in the VA system, and is leading the way in providing cost-effective care for our Veterans.

Research is alive and well in the Department. An innovative residency pathway developed by Manny Pardo and Judith Hellman, the Research Scholars Pathway, is paying great dividends. Examples of the benefit of early investment in clinician-scientists is demonstrated by the extraordinary success of two of our residents, Liz Whitlock and Catherine Chen, both of whom will join the faculty. As residents, they have had very high-profile publications, showcasing the Department’s strength in clinical research. Jeff Sall is highlighted for his work in what is perhaps the most important, and controversial aspect of current anesthetic practice: does exposure of young children to anesthesia and surgery cause long-lasting learning or cognitive defects. This is a critical question to answer, and will impact any anesthesia provider anesthetizing young children.

A glance at a departmental photo from the 1960’s on the previous page shows an almost entirely white, male, faculty. Building diversity in a department is a journey, and hard work. For example, if one takes the passive approach of relying on the “pipeline” of medical students to fill the residency class, and subsequently the faculty, then the diversity of the residents and faculty will be, at best, the same as the pipeline. By valuing diversity in seeking out the best young trainees and faculty, we can build a workforce that reflects the unique diversity of the Bay Area. A great example is Charlene Swift, who joined the faculty in September, featured on page 9. We are fortunate to have the support of Renee Navarro, Professor of Anesthesia and Vice Chancellor for Diversity and Outreach, and Dean Talmadge King, as partners in our journey.

I am sobered by the challenge of leading this great Department. We have unprecedented challenges and opportunities. As UCSF Health expands into a large Health Care System with an Accountable Care Organization and widespread affiliations in the Bay Area, the scope of clinical services will continue to grow. It is more important than ever that the faculty, residents, and staff appreciate the importance of our legacy as a leader in academic anesthesiology; I am fully committed to nurturing our clinical, research, and educational missions. I have been fortunate in my own academic career to have visited most of the “leading” anesthesia programs around the country and internationally. That experience has only confirmed in my mind that the UCSF Department of Anesthesia and Perioperative Care is unrivalled. It is the people: the residents, faculty, and staff that convince me that we will continue to be so. As the 5th Chair, I look forward to partnering with those people into a bright future.

— Michael Gropper, MD, PhD

“By valuing diversity in seeking out the best young trainees and faculty, we can build a workforce that reflects the unique diversity of the Bay Area.” — Michael Gropper, MD, PhD

CAN YOU NAME the faculty member who appears in both the 1966 (page 3) and the 2015 (below) department photos? Answer on page 12.
**Marc Steurer, MD, DESA**

**Ask the Expert**

Trauma care has changed over the last 15 years. What do those changes imply for the unique challenges trauma anesthesiologists face?

Marc Steurer, MD, DESA, is director of Trauma Anesthesiology at San Francisco General Hospital and president of the Trauma Anesthesiology Society.

When victims of car or industrial accidents, violent crime and so on arrive at the hospital, trauma anesthesiologists are responsible for damage control resuscitation – keeping these patients alive until the trauma surgeon can stop the bleeding.

In the past, our first concern tended to be the correction of low blood pressure, so we’d infuse liberal amounts of crystalloids and the blood pressure would rise. The problem was that we were often inducing sites that had stopped bleeding to bleed again. We probably lost a good number of patients we should have saved.

Now we know that until the surgeon gets bleeding under control, we can accept low blood pressures as a human response to surviving trauma and that our primary goal is to quickly weaken the causes of patients bleeding out. In addition, when we do give fluids, we have to use our best clinical judgment as to the right mix of packed red blood cells, fresh frozen plasma, platelets and, at times, medication to achieve resuscitation and support the patient in his or her ability to form clots.

Our primary goal is to get these patients to the OR as quickly as possible – to be pragmatic and not delay care. The patient’s arrival is not the time for inserting another line, doing another test or hooking up another monitor, which is why clinical judgment is so important. We’re often flying without instruments and rely on sound clinical judgment that can prevent us from under- or over-resuscitating and causing circulatory overload, creating an hypercoagulable state with subsequent thrombosis or overdoing red blood cells that can lead to organ failure and infections.

Once the surgeon stops the hemorrhaging, we can slow down and go to more sophisticated medicine: deploy more monitors and specific tests that provide more information on cardiovascular status and better gauge volume, oxygen-carrying capacity and coagulation status so we can adapt accordingly and tailor the resuscitation to the patient’s current need and situation.

It’s no later than this point that we also begin administering anesthetics so the patient is comfortable and, if at all possible, won’t have a lasting memory of the pain he or she experienced while under our care. This is still more art than science and sometimes there’s an understandable hesitancy about giving too many anesthetics too early because of concerns about decreasing cardiac output and blood flow. Yet another of the things we now believe is that proper use of anesthetics could potentially prevent post-traumatic stress disorders related to the patient’s initial resuscitation, which occurs more frequently than one might expect.

Once the patient is in the ICU, we become especially attentive to avoiding complications like multi-organ failure, sepsis, pulmonary embolisms or any form of thrombosis. Avoiding these complications depends on team-based care, which is especially important in the trauma setting. Good communication between surgical and anesthesia teams matters during a given case and, more generally, when we work on things like quality improvement, so that the movement among clinical settings and clinical decisions are carefully coordinated from the time the patient arrives.

Our need to facilitate research that supports evidence-based change in trauma anesthesia and to disseminate best practices is what’s behind the creation a couple of years ago of the Trauma Anesthesiology Society. The society has become an important platform for trauma anesthesiologists around the globe, and for advancing the field in education, research and clinical care.

Trauma remains the most common cause of death for all patients beneath the age of 45. Those who survive often suffer significant physical, emotional and financial burdens. As a central part of the trauma team that includes trauma surgeons, emergency medicine physicians, nursing staff and others, trauma anesthesiologists can play an important role in preventing or mitigating negative outcomes – and ensuring positive ones.
Innovative Residency Successfully Fosters the Careers of Emerging Clinician-Researchers

The UCSF Department of Anesthesia and Perioperative Care created its Research Scholars Track with the goal of helping promising residents jumpstart their careers as clinician-researchers. Given the productivity of the initial cohorts – including 2015 publications in the New England Journal of Medicine and British Medical Journal – it’s hard to view the program as anything less than an unqualified success.

“By creating flexible, protected time for research and making sure residents are paired with mentors and projects that are exciting to them and meet their career goals, we help young researchers get to the point where they’re publishing and/or achieving significant findings by the end of their residency,” says Judith Hellman, MD, who directs the research track.

Hellman – who recently won the 2015 International Anesthesia Research Society’s Frontiers in Anesthesia Research Award – emphasizes that the department has intentionally selected individuals for this track who can excel in both clinical and research arenas. “Clinical competence helps them to be successful research-wise, and gives them credibility within the department and discipline,” she says.

Vast Opportunities Support Broad Interests

She also notes that this year’s prestigious, lead author publications by residents Catherine Chen, MD, MPH (New England Journal of Medicine) and Elizabeth Whitlock, MD, MSc (British Medical Journal) exemplify how the department’s support and flexibility – the department is open to a broad range of basic, clinical, translational and policy research – can lead to early success.

Chen – who came to medicine after spending time as an investment-banking analyst and who earned her MPH during medical school – arrived with a keen interest in health services research. Drawing on UCSF’s vast resources, she found a mentor in R. Adams Dudley, MD, MBA, one of the country’s leading health services researchers.

The two zeroed in on the suspected overuse of preoperative testing for minor surgeries. They conducted a study that found physicians were not following evidence-based guidelines for preoperative testing in cataract surgery – a procedure that 1.7 million Medicare beneficiaries undergo each year.

continued on next page
guidelines – on which the major professional societies have agreed for more than a decade – recommend that for most cataract surgeries, routine preoperative testing is unnecessary.

“It’s an outpatient procedure that typically takes less than 20 minutes. A large, randomized, controlled trial found no real differences in cancellations, complications or negative outcomes when those tests were done” says Chen. “But many physicians still routinely order testing.”

In fact, after reviewing Medicare data from about 440,000 patients undergoing cataract surgery in 2011, Chen found that there had been virtually no change in the number of tests physicians ordered or the percentage of patients tested compared to 20 years ago.

“The take-home message is that it’s not about how sick or how old patients are, but the practice patterns of some physicians result in the overuse of these unnecessary tests,” says Chen.

Whitlock also did data analysis, but in her case, she used hospital billing and administrative data for 1.6 million adult patients to understand the relationship between perioperative transfusion and perioperative stroke and heart attack.

“My research interests are in re-examining practices we take for granted, but which have plausible connections to adverse perioperative reactions,” says Whitlock. “Perioperative transfusion is extremely common and is generally assumed to be safe, but it is a modifiable risk factor and our study found that even one unit of packed red blood cells is associated with increased odds of perioperative ischemic stroke and/or heart attack.”

She cautions that there are many limitations in database studies – most notably that they cannot establish causality. Yet she believes enough is known about perioperative transfusion that prior to elective surgeries, primary care physicians and anesthesiologists should at least consider intervening with patients who have anemia – a common, easily modifiable preoperative condition.

“We’ve gotten kind of cavalier about transfusion, but if my parents were having elective hip replacement and were anemic, I would want the team to correct for it preoperatively with low-risk interventions,” says Whitlock.

**The Difference the Track Makes**

Hellman is proud of accomplishments like those of Chen and Whitlock, but says, “We don’t expect everyone to graduate with a first author papers in NEJM or BMJ. The other research track residents are also thriving.”

She says there are many examples in other research areas, mentioning the accomplishments of residents Paul Riegelhaupt, MD, PhD, who is doing basic science work on potassium channels and that of Michael Bokoch, MD, PhD who is studying the role of platelets in liver transplants. All benefit from the track’s flexible support for their research time.

“What’s unique here is how integrated the research and clinical times are,” says Chen. “It’s not just one year. While I was waiting for CMS to approve my application for Medicare data, I was able to complete several required clinical rotations.”

“We’ve built in that flexibility, precisely because waiting time in research is true not only of things like Medicare data but also in other areas like human studies or animal protocols,” says Hellman.

Whitlock also appreciates the department’s support, which helped her take critical coursework and forge connections she needed outside of UCSF to pursue her work. She says, “[The department’s support] allows me to maintain a record of research productivity during residency and launches me into a better position to apply for funding.”
Research

Seeking Safer Ways to Anesthetize Newborns and Young Children

More than a million children under age five are anesthetized in the United States every year. While many of the procedures are medically necessary, various studies have begun to find associations between learning/cognitive deficits and anesthetic exposure.

Establishing whether there is a causal link – and identifying the mechanism and risk factors for such deficits – is what drives the research of Jeffrey Sall, MD, PhD, of the UCSF Department of Anesthesia and Perioperative Care. His lab is funded primarily by an NIH RO1 grant and Smart Tots, a multi-year collaborative effort of the International Anesthesia Research Society and the US Food and Drug Administration with the goal of increasing the safety of anesthetic drugs for infants and children.

Exploring Gender-Related Differences

Sall investigates concerns about the effects of anesthesia – both volatile anesthetics and IV agents – on young brains from multiple angles. His primary focus at present is to examine why certain cognitive deficits associated with anesthesia exposure – such as association and recognition memory – affect males more than females.

Having seen these differences buried in the data of large retrospective human studies, rodent studies and the initial stages of a prospective human trial, Sall is now principal investigator on an NIH RO1 grant for rodent studies that he hopes will identify the specific sex-related factors that account for the learning differences. His hypothesis is that a brief developmental difference in chloride channel expression may lead to increased male vulnerability.

“We think the anesthetics affect neuron connections and help determine which survive and which don’t during this particularly vulnerable period in development.” — Jeffrey Sall, MD, PhD

That tipping point, he says, may be the root of meaningful learning deficits that have both individual and societal costs. That’s why Sall believes it is especially important to expand the knowledge base on this topic, so among other things, physicians and families can make more informed decisions about how and when to perform a procedure that requires anesthesia. More knowledge can also drive investigations into new types of anesthetics with fewer side effects for young brains.

Already, he says, his research and that of others argues that physicians and families should at least more vigorously consider alternatives, especially whether a proposed procedure can wait until the child is older and more advanced developmentally.

“We don’t yet have a clearly defined window for which age ranges are more or less vulnerable or in what time frame anesthesia becomes unsafe,” he says. “But so far the data suggest that shorter is better and later is better.” ■
Staff Highlight
Finding a New Home at UCSF and in the Bay Area

In 2014, the winter in Chicago was particularly cold. Melissa Patrick was working as a program administrator for the anesthesia program at Advocate Illinois Masonic Medical Center – right by Chicago’s Wrigley Field says the avid sports fan – when she began googling graduate medical education positions located in warmer climates.

“This just popped up and I threw my hat in the ring,” she smiles. “This” is the position of assistant director of the department’s Education Program.

By January 2015, Patrick had won the job and she and her husband – who works in finance for a solar company – had moved across the country. They are happy to be in the department and in the Bay Area, says the Midwest native, who grew up in Prairie Du Chien, Wisconsin.

In the department, Patrick supervises all of the coordinators for the clerkship, residency and fellowship programs, her primary role being to ensure the department is in compliance with all graduate medical education (GME) and state regulations.

“The work changes every day, depending on the season,” she says. After closing the fiscal year, completing new hires and creating a new budget, Patrick was looking to ease into the residency interview season. “I’m letting coordinators know I’m available to help with things like appointment packets, access badges – just making sure everything they need is covered.”

Medical Education a Career Shift

Patrick began her working life expecting to be a high school teacher, but after one semester as a long-term sub decided that being in front of a classroom was not for her. Still, she wanted to remain involved in education and so found a job as an administrative assistant in the surgery department at the University of Wisconsin, where she worked her way up the job ladder while earning her MBA at the school.

Though she’s enjoying the move to San Francisco – she lives close to the hospital – Patrick does confess, “I miss Midwest summers... you wait nine months for three months of amazing summer and fun. And I miss football season – this waking up early for football games will take me a bit to get used to. We’re a Bears and Packers house – Big Ten football and Cubs fans too. We are learning to love the Warriors, though.”

She also enjoys exploring her adopted state, having spent time in places that include Los Angeles, Sonoma, Half Moon Bay and Marin County. “Every month we try to take two weekends to see things outside of the city,” she says. “We hike a little bit, learn a little more about wine and try restaurants – we had people write down favorite restaurants in the city so we’d know where to go, but it’s hard to pick a favorite. We take all of our visitors to Sam’s Chowder House in Half Moon Bay.”

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Faculty Highlight
Swift Brings Her Talent and Passion

When Charlene Blake Swift, MD, PhD, joined the UCSF Department of Anesthesia and Perioperative Care in September 2015, she brought with her an impressive list of accomplishments for a career that is only in its early stages.

After graduating summa cum laude from Fisk University, Swift earned her MD and a PhD in Genetics and Genomics from Duke University. She trained in anesthesiology and recently completed her fellowship in cardiothoracic anesthesiology at Washington University in St. Louis.

Throughout her clinical training, Swift has combined a deep interest in technology with a passionate commitment to clinical education and diversity development – all strong interests of the UCSF Department of Anesthesia, says Department Chair Michael Gropper, MD, PhD. Swift is an active participant in the Society for Technology in Anesthesia, and her successful recruitment to UCSF brings with it a faculty recruitment grant from the Dean’s Diversity fund that will support both her training as a clinical educator and her interest in integrating technology into anesthesia education and practice.

“A combination of things drew me to UCSF,” she says. “The strong department history, the Bay Area as a technology hub, leadership that is open to bringing technology into both clinical practice and education and the opportunity to be involved with diversity efforts.”

Swift and her husband – an entrepreneur who owns and operates a business focused on distributing promotional products and logoed apparel for corporations – arrived in the Bay Area in August. In addition to her work at UCSF, she is looking forward to running on trails in the Marin headlands, spending time in Napa and Sonoma and resuming an interest in ballroom dancing.
A round 1984, when outpatient surgery was in its adolescence, UCSF decided to design and develop a unit specifically for its growing population of surgical outpatients. Perioperative leadership appreciated that the main operating room’s physical layout, workflow and administrative structure hindered efficient, cost-effective and patient-centered care. The unit would be on hospital grounds, but physically separate from the main operating rooms. Neal Cohen and Anthony Wagner, a hospital administrator, led the redesign of 12,000 square feet on the plaza level of the Ambulatory Care Center.

I was stationed at San Francisco General Hospital – where I had been tasked with developing an outpatient unit – when then Department Chair Ron Miller asked if I would be interested in applying to become medical director of the new unit.

One of the unit’s founding principles was to appreciate and continually earn the trust of patients and families who chose to have their care in the ASC. Our focus on service reflected an understanding that this care was delivered through a multitude of surgeons, ophthalmologists, pediatricians, internists, dermatologists, hematologists, oncologists, psychiatrists, pathologists and dentists. When someone needed care we tried not to hide behind the end of a shift, the end of block time or the threat of being over budget.

Preoperative, intraoperative and postoperative staff all worked under a single administrative structure. Post-Anesthesia Care Unit nurses became competent in conscious sedation and operating room (OR) nurses rotated through the preoperative process. I remain extremely proud that practices put into place by the nursing staff, support staff and anesthesiologists served and continue to serve as a model for all UCSF perioperative venues.

Many Accomplishments
I am also proud that we pushed the limits of outpatient surgery by caring for patients that most other outpatient units wanted nothing to do with, such as the mentally handicapped, extremes of age and the seriously infirm. Our safety record was also a source of pride in that our unplanned admission rate was better than the benchmarks for the day and there were no deaths in the unit throughout its entire existence. We were unusually blessed to have long-term relationships with some of the most vulnerable patients and we strove to make such patients and families feel that our home was their home.

The ASC was also the first clinical site in the United States to routinely use the Laryngeal Mask Airway (LMA) and was one of the early adopters of propofol. UCSF programs that originated in the ASC include the in-vitro fertilization program, sports medicine, laser therapy in dermatology, electroretinography and auditory evoked potentials for children, dentistry for the mentally handicapped and outpatient electroconvulsive therapy (ECT).

Education of anesthesia residents focused on the care of the surgical outpatient and included:
- Use of the LMA family of products
- Management of ECT
- Care of the pediatric patient, including parental presence for induction and regional anesthesia
- Monitored anesthesia care
- Care of the mentally handicapped
- Regional anesthesia for sports medicine
- Efficiency
- Working in small groups with professionalism and good communication

Medical students were present in the Surgery Center from the beginning, as were learners from UCSF School of Dentistry.

I must acknowledge the expertise and contributions of the over 250 individuals who served as ASC staff. Whether one greeted patients to make them feel at home, helped ready them for surgery, cared for them in the OR, applied one’s skills to keep them safe and comfortable throughout, helped them recover, escorted them to the car, kept the instruments sterile and organized, kept the place clean, managed supplies and implants or provided the “manpower” to keep the place going – you played a continued on next page
vital role. I also acknowledge the many surgeons who earned our respect and admiration for their skills and, dare I say, friendship. I also acknowledge the scores of anesthesia faculty, CRNAs, residents and students who not only provided exemplary care, but also contributed to the education of scores of learners.

Anesthesiologists who played a prominent role in the ASC include Fred Orkin, Barbara Gold, Gregg Garbin, Walter Way, Jeff Swisher and Laura Siedman. For almost a decade Laura provided leadership, professionalism and unrivaled expertise along with a dedication to the care of the thousands of children who came through the ASC. She served as Medical Director for its last three years.

I also must acknowledge Ron Miller for his vision and support of the Surgery Center and me for over 22 years. Michael LeBoff must be recognized for the many years he literally stood next to the residents and faculty during induction and single-handedly managed anesthesia supplies and equipment – his workroom was second to none. A number of nurses also figure prominently in the success of the Surgery Center – Betty Yalich, Deborah Frase, Catherine Win and George Gomez. George defined the ASC as its Patient Care Manager for many years. The example he set in professionalism, ethics and dedication to the unit and the institution remain unrivaled to this day.

The ASC represents virtually my entire academic and clinical life at UCSF. I think about the tens of thousands of patients I had the privilege to care for, the poignancy of illness and the grace that patients and families demonstrated in dealing with, at times, unspeakable adversity. I am indebted to all the professionals that gave the ASC its deserved reputation. Most cherished are the learners. My legacy is the small role I played in helping medical students and residents appreciate our noble specialty.

Please send any comments or a description of a Surgery Center memory to martin.bogetz@ucsf.edu.

“By finding the places we’ve been inefficient, we’ve been able to improve throughput in the San Francisco VA OR by almost 30 percent over the last ten years without spending extra money.”
— Arthur Wallace, MD, PhD

VA Update
Using Data to Create Value-Based Care

At the San Francisco Veterans Affairs Medical Center, anesthesiologists are effectively using data gleaned from a nationwide system of electronic medical records, as well as anesthesia and intensive care unit record-keeping systems to improve the access and quality of the care they deliver, says Arthur Wallace, MD, PhD, chief of the Anesthesia Service and vice chair of the UCSF Department of Anesthesia and Perioperative Care.

Wallace has helped create a national anesthesia quality improvement program – VA-AnesQIP – to study all of the patients who receive anesthesia care in the VA, for any surgical and non-surgical procedure.

Improving Quality and Efficiency
To improve efficiency and access, the program analyzes nationwide data to track things like utilization, on-time starts, and turnover times. “By finding the places we’ve been inefficient, we’ve been able to improve throughput in the San Francisco VA OR by almost 30 percent over the last ten years without spending extra money,” says Wallace. “We’ve realized, for example, that we tend to have time available at the end of day or on certain days of the week, so we’ve encouraged people to change scheduling and that’s allowed us to cut wait lists and improve access.”

Wallace says the program has also used the data to identify modifiable risk factors that affect mortality and to encourage providers to change practices to those that can save lives.

“These are simple things: for example, allowing the heart rate to be over 120 for more than five minutes quadruples the risk of dying; being aware that anti-ischemic drugs don’t work if the patient is hypotensive,” says Wallace. “We can now provide a report that shows the incidence of modifiable risk factors and then help facilities reduce risk. Practitioners want to do a good job, but just didn’t know they were an outlier on these risk factors and didn’t know how to fix the problem.”

He says the VA_AnesQIP program exemplifies the value of being at the VA where QI programs run across large populations and the primary goal is to provide the best care possible. “In a new era of computer power, we can easily do a study with ten years worth of data and three or four million people,” he says. “That’s when you can really identify and fix the problems.”
John Markley, MD, PhD
Health Sciences Assistant Clinical Professor
Joined Faculty July 2015
ADVANCED DEGREE
PhD, Immunology, Cornell/Rockefeller/Sloan-Kettering Tri-Institutional MD/PhD Program
MEDICAL SCHOOL
Weill Medical College of Cornell University
INTERNSHIP
Anesthesiology, UCSF
RESIDENCY
Anesthesiology, UCSF
FELLOWSHIP
OB Anesthesiology, Brigham and Women's Hospital

Bradley Randel, MD
Health Sciences Associate Clinical Professor
Joined Faculty July 2015
MEDICAL SCHOOL
UC Davis
RESIDENCY
Anesthesiology, Massachusetts General Hospital
FELLOWSHIP
Pediatric Anesthesiology, Children's National Medical Center
PREVIOUS EMPLOYMENT
Assistant Clinical Professor, Anesthesiology, UC Davis

Catherine Chen, MD, MPH
Health Sciences Clinical Instructor, T32 Postdoctoral Trainee
Joined Faculty August 2015
MEDICAL SCHOOL
Johns Hopkins School of Medicine
INTERNSHIP
Anesthesiology, UCSF
RESIDENCY
Anesthesiology, UCSF

Brian Gilliss, MD
Health Sciences Assistant Clinical Professor
Joined Faculty August 2015
MEDICAL SCHOOL
UCSF
INTERNSHIP
Anesthesiology, UCSF
RESIDENCY
Anesthesiology, UCSF
FELLOWSHIP
Pediatric Anesthesiology, UCSF

Vanessa Henke, MD
Health Sciences Assistant Clinical Professor
Joined Faculty June 2015
MEDICAL SCHOOL
Harvard Medical School
INTERNSHIP
Internal Medicine, Yale-New Haven Hospital
RESIDENCY
Anesthesiology, Massachusetts General Hospital
FELLOWSHIPS
Intensive Care Medicine, Stanford University School of Medicine
Cardiothoracic Anesthesiology, UCLA
PREVIOUS EMPLOYMENT
Assistant Professor of Anesthesiology, Weill Cornell Medical College

Robyn Hilles, MD
Health Sciences Clinical Instructor, Per Diem
Joined Faculty July 2015
MEDICAL SCHOOL
Columbia University College of Physicians and Surgeons
INTERNSHIP
Anesthesiology, UCSF
RESIDENCY
Anesthesiology, UCSF

Lindsey Huddleston, MD
Health Sciences Assistant Clinical Professor
Joined Faculty July 2015
MEDICAL SCHOOL
UCSD
INTERNSHIP
Anesthesiology, UCSF
RESIDENCY
Anesthesiology, UCSF
FELLOWSHIP
Critical Care Medicine, UCSF

Michael Lipnick, MD
Assistant Professor of Clinical Anesthesia
Joined Faculty October 2015
MEDICAL SCHOOL
UCSF
INTERNSHIP
Internal Medicine, Brigham and Women's Hospital
RESIDENCY
Anesthesiology, UCSF
FELLOWSHIP
Anesthesia Critical Care Medicine, UCSF

Solmaz Poorsattar Manuel, MD
Health Sciences Clinical Instructor
Joined Faculty September 2015
MEDICAL SCHOOL
UCSF
INTERNSHIP
Internal Medicine, Kaiser Permanente San Francisco
RESIDENCY
Anesthesiology, Massachusetts General Hospital, Harvard School of Medicine

Michael Lipnick, MD
Assistant Professor of Clinical Anesthesia
Joined Faculty October 2015
MEDICAL SCHOOL
UCSF
INTERNSHIP
Internal Medicine, Brigham and Women's Hospital
RESIDENCY
Anesthesiology, UCSF
FELLOWSHIP
Anesthesia Critical Care Medicine, UCSF

Bradley Randel, MD
Health Sciences Associate Clinical Professor
Joined Faculty July 2015
MEDICAL SCHOOL
UC Davis
RESIDENCY
Anesthesiology, Massachusetts General Hospital
FELLOWSHIP
Pediatric Anesthesiology, Children's National Medical Center
PREVIOUS EMPLOYMENT
Assistant Clinical Professor, Anesthesiology, UC Davis

Candace Shavit, MD
Health Sciences Clinical Instructor
Joined Faculty September 2015
MEDICAL SCHOOL
Sackler School of Medicine
INTERNSHIP
Anesthesiology, UCSF
RESIDENCY
Anesthesiology, UCSF
FELLOWSHIP
Anesthesia, UCSF

Devon Smith, MD
Health Sciences Assistant Clinical Professor
Joined Faculty July 2015
MEDICAL SCHOOL
University of Michigan
INTERNSHIP
Anesthesiology, UCSF
RESIDENCY
Anesthesiology, UCSF
FELLOWSHIP
OB Anesthesiology, UCSF

ANSWERS:

UCSF Department of Anesthesia and Perioperative Care | Anesthesia News | Fall 2015 | 12
Charlene Swift, MD, PHD  
Health Sciences Assistant  
Clinical Professor  
Joined Faculty August 2015  
ADVANCED DEGREE  
PhD, Genetic and Genomics,  
Duke University  
MEDICAL SCHOOL  
Duke University  
RESIDENCY  
Anesthesiology, Washington University  
FELLOWSHIP  
Cardiothoracic Anesthesiology,  
Washington University  

Jessica Tashjian, MD  
Health Sciences Assistant  
Clinical Professor  
Joined Faculty July 2015  
MEDICAL SCHOOL  
Duke University  
RESIDENCY  
Anesthesiology,  
University of Virginia Health System  
FELLOWSHIP  
Cardiothoracic Anesthesiology, UCSF  

Arthur Wood, MD  
Health Sciences Assistant  
Clinical Professor  
Joined Faculty August 2015  
MEDICAL SCHOOL  
Harvard Medical School  
INTERNSHIP  
Internal Medicine, Stanford University  
RESIDENCY  
Anesthesiology,  
Brigham and Women’s Hospital  
FELLOWSHIPS  
Pain Management, Stanford University  
Clinical Excellence Research,  
Stanford University  

Visiting Faculty  

Benn Lancman, MBBS,  
MHumFac, FANZCA  
Visiting Clinical Instructor  
ADVANCED DEGREE  
Master of Human Factors and Safety Management Systems, University of South Australia  
MEDICAL SCHOOL  
Monash University  
INTERNSHIP  
Bankstown Hospital, NSW  
RESIDENCY  
Royal Prince Alfred Hospital, Australian & New Zealand College of Anaesthetists  
FELLOWSHIP  
Anaesthetic Fellow, Melbourne Health  

New Residents  
CLASS OF 2018  

Charles (Phil) Aguilar  
Andrew Bishara  
Robert Caughey  
Vikram Fielding-Singh  
Scott Grubb  
Jessica Hartnett  
K. Elliot Higgins  
Jason Lang  
Esther Lee  
Michael Lubrano  
Revati Nafday  
Anne Park  
Alec Peniche  
Marci Pepper  
Sonny Sabhlok  
Alison Schultz  
Lisa Sun  
Ana Valdez  
Thanh-Giang (Tina) Vu  
Angela Wight  
Michael Wu  
Jane Yu  
Tina Yu
The NIH Pain Consortium has selected UCSF as a designated Center of Excellence in Pain Education (CoEPE). Under the direction of Mark Schumacher, Chief, Division of Pain Medicine in the Department of Anesthesia and Perioperative Care, the UCSF CoEPE will join other centers to serve as hubs for the development, assessment, and distribution of pain management curriculum resources. The UCSF CoEPE will draw together a diverse faculty from our medical, dental, nursing, and pharmacy schools, to enhance and improve the teaching of health care professionals about pain and its treatment. Further, the CoEPEs plan to assess the success of their pain teaching programs and disseminate their results to the general health care education field.

Lead UCSF CoEPE Faculty:
Mark Schumacher, PhD, MD
Principal Investigator
Mark Rollins, MD, PhD
School of Medicine
Lori Reisner, PharmD
School of Pharmacy
Christine Miaskowski, RN, PhD, FAAN
School of Nursing
Jon Levine, MD, PhD
School of Dentistry
Scott Steiger, MD
Interprofessional

Honors & Awards

Faculty Honors, Awards and Appointments

Philip Bickler, MD, PhD
EXTRAMURAL APPOINTMENT
Elected Member, California Academy of Sciences, 2015

Neal Cohen, MD, MPH, MS
EXTRAMURAL APPOINTMENT
Chair, Board of Directors, El Camino Hospital, Mountain View and Los Gatos, California

Anne Donovan, MD
CAMPUS HONOR
Excellence in Teaching Award, UCSF Haile T. Debas Academy of Medical Educators, 2015

Michael Gropper, MD, PhD
CAMPUS APPOINTMENT
Chair, UCSF Department of Anesthesia and Perioperative Care, 2015

Matthew Haight, DO
CAMPUS APPOINTMENT
Member, UCSF School of Medicine Faculty Council, 2014–2017

Monica Harbell, MD
CAMPUS HONOR
Excellence in Teaching Award, UCSF Haile T. Debas Academy of Medical Educators, 2015

Judith Hellman, MD, PhD
EXTRAMURAL AWARD
Frontiers in Anesthesia Research Award, International Anesthesia Research Society (IARS), 2015

Michael Lipnick, MD
EXTRAMURAL APPOINTMENT
Dive Medical Officer, California Academy of Sciences, 2015

Ronald Miller, MD
EXTRAMURAL HONOR
Miller’s Anesthesia, 8th Edition, 2015

Ramana Naidu, MD
CAMPUS APPOINTMENT
Director, Acute Pain Services, UCSF Medical Center, 2015

J. Renee Navarro, MD, PharmD
EXTRAMURAL HONOR
Extraordinary Women in STEM (Science, Technology, Engineering, and Math) Award, 2015

Hung Nguyen, MD
CAMPUS HONOR
Medical Humanism Award, UCSF Department of Anesthesia and Perioperative Care, 2015

Oliver Radke, MD, PhD
EXTRAMURAL APPOINTMENT
Chair, Department of Anesthesia and Intensive Care Medicine, Bremerhaven Trauma Hospital, Bremerhaven, Germany

Mark Rollins, MD, PhD
CAMPUS HONOR
William K. Hamilton Award for Excellence in Teaching, 2015

Jeffrey Sall, MD, PhD
EXTRAMURAL APPOINTMENT
Elected Member, Association of University Anesthesiologists

Mark Schumacher, PhD, MD
EXTRAMURAL APPOINTMENT
Pain Task Force Member, California Society of Anesthesiologists, 2015

Ahmed Shalabi, MD
CAMPUS HONOR
Ronald D. Miller Award for Excellence in Resident Mentorship, 2015

Gail Shibata, MD
CAMPUS HONOR
Excellence in Teaching Award, UCSF Haile T. Debas Academy of Medical Educators, 2015

John Turnbull, MD
CAMPUS HONOR
Excellence in Teaching Award, UCSF Haile T. Debas Academy of Medical Educators, 2015

Trainee Honors, Awards, and Appointments

Michael Bokoch, MD, PhD
CAMPUS HONOR
Jeffrey A. Katz Award for Work Ethic and Professionalism During Residency, 2015

Grant Sanders, MD
CAMPUS HONOR
Stuart C. Cullen Award for Excellence During Residency, 2015

Elizabeth Whitlock, MD, MSc
CAMPUS HONOR
Mark A. Rosen Award for Scholarship During Residency, 2015

UCSF Awarded NIH Pain Consortium Centers of Excellence in Pain Education
Peer Reviewed Publications


Uly LE, Bonaventura J, Lipnick SM, Block BA. Effect of temperature acclimation on red blood cell oxygen affinity in Pacific bluefin tuna (Thunnus orientalis) and yellowfin tuna (Thunnus albacares). *Comp Biochem Physiol A Mol Integr Physiol.* 2015 Mar;181:36-44.


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<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Title and Details</th>
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</thead>
<tbody>
<tr>
<td>Jon Matt Aldrich</td>
<td>UCSF Catalyst Program, 7/1/2015–7/1/2016 SuperAlarm $40,000</td>
</tr>
<tr>
<td>Richard Fidler</td>
<td>2015 Medical Student Anesthesia Research Fellowship Program $6,200</td>
</tr>
<tr>
<td>Michael Gropper</td>
<td>Gordon and Betty Moore Foundation, 10/1/2014–12/31/2015 Libretto Consortium Task Forces: UCSF $37,500</td>
</tr>
<tr>
<td>Zhonghui Guan</td>
<td>Principal Investigator NIH/NINDS, 9/30/2012–8/31/2017</td>
</tr>
<tr>
<td>Tomoki Hashimoto</td>
<td>Principal Investigator NIH/NINDS, 3/15/2011–2/29/2016 Intracranial aneurysm pathogenesis-roles of vascular remodeling and inflammation $1,674,637</td>
</tr>
<tr>
<td>Helen Kim</td>
<td>Principal Investigator NIH/NINDS, 9/1/2013–5/31/2018 The Role of Mast Cells in the Pathophysiology of Intracranial Aneurysm $1,726,306</td>
</tr>
<tr>
<td>Jacqueline Leung</td>
<td>Principal Investigator NIH/NCI, 8/1/2010–7/31/2017</td>
</tr>
<tr>
<td>Philip Kurien</td>
<td>Principal Investigator UCSF Catalyst Program, 7/1/2015–7/1/2016 SuperAlarm $40,000</td>
</tr>
<tr>
<td>Philip Kurien</td>
<td>Principal Investigator NIH/NINDS, 9/30/2012–7/31/2016 Brain Vascular Malformation Consortium: Predictors of Clinical Course $6,179,248</td>
</tr>
<tr>
<td>Jae-Woo Lee</td>
<td>Principal Investigator NIH/NHLBI, 5/1/2012–4/30/2017</td>
</tr>
<tr>
<td>Jan Hirsch</td>
<td>Principal Investigator VA Office of Academic Affairs, 7/1/2013–Ongoing VA Advanced Fellowship Program in Simulation $300,000</td>
</tr>
<tr>
<td>Susan M. Lee</td>
<td>Principal Investigator NIH/NHLBI, 7/1/2015–6/30/2016 Anesthesia Department Research Award $80,000</td>
</tr>
<tr>
<td>Michael Lawton</td>
<td>Principal Investigator NIH/NINDS, 9/30/2014–7/31/2019</td>
</tr>
<tr>
<td>Bin Liu</td>
<td>Principal Investigator Multiple Myeloma Research Foundation, 8/1/2015–7/31/2017</td>
</tr>
<tr>
<td>Martin London</td>
<td>Principal Investigator NIH/NHLBI, 3/1/2010–12/31/2015</td>
</tr>
</tbody>
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Mervyn Maze  
Principal Investigator  
NIH/NIGMS, 9/1/2013–8/31/2017  
Inflammation resolving mechanism dysregulation in postoperative cognitive decline  
$1,212,399

Claus Niemann  
Principal Investigator  
HRSA, 9/1/2011–11/30/2015  
The effect of therapeutic hypothermia on deceased donor  
$2,001,108

Jonathan Pan  
Principal Investigator  
FAER, 7/1/2014–6/30/2016  
Dexametomidine Rinders Neuroprotection via Modulation of Systemic and Local Immune Responses Following Rodent Spinal Cord Injury  
$175,000

Ludmila Pawlikowska  
Co-Leader  
NIH/NINDS, 9/30/2014–7/31/2019  
Genetic and Statistical Analysis Core (GSAC)  
$417,458

Romain Pirracchio  
Principal Investigator  
Semi-parametric Causal Inference Methods for Adaptive Statistical Learning in Trauma Patient-Centered Outcomes Research  
$92,635

Arun Prakash Budde  
Principal Investigator  
Anesthesia Dept, 7/1/2015–6/30/2016  
Anesthesia Department Research Award  
$25,000

James Ramsay  
Principal Investigator  
Tenax Therapeutics, Inc., 5/15/2015–4/30/2020  
A Double-Blind, Randomized, Placebo-Controlled Study of Levosimendan in Patients with Left Ventricular Systolic Dysfunction Undergoing Cardiac Surgery Requiring Cardiopulmonary Bypass  
$206,097.08

Jeffrey Sall  
Principal Investigator  
NIH/NIGMS, 3/1/2015–2/29/2020  
Testosterone's role in sex-specific outcomes after early anesthesia  
$1,524,496

Mark Schumacher  
Principal Investigator  
Anesthesia Dept, 7/1/2015–6/30/2016  
Anesthesia Department Research Award  
$80,000

Paul Swinkels  
Principal Investigator  
NIH/NIDA, 7/15/2015–7/14/2016  
NIH Pain Consortium Centers of Excellence in Pain Education (CoEPE)  
$77,867

David Shimabukuro  
Co-Investigator  
Vanderbilt University, 8/15/2012–3/30/2017  
The MENDS II Study  
$200,304.45

James Sonner  
Principal Investigator  
Anesthesia Dept, 7/1/2015–6/30/2016  
Anesthesia Department Research Award  
$80,000

Una Srejic  
Principal Investigator  
Anesthesia Dept, 7/1/2015–6/30/2016  
Anesthesia Department Research Award  
$20,000

Arthur Wallace  
Principal Investigator  
NCIRE, 3/1/2012–3/1/2016  
Perioperative Outcomes Epidemiologic Consortium  
$150,000

Jennifer Lucero  
Principal Investigator  
Anesthesia Dept, 7/1/2014–6/30/2016  
Anesthesia Department Research Award  
$20,520

Principals Investigator  
UCSF Academic Senate, 8/1/2015–1/31/2017  
Intervascular Nitroglycerin for Prevention of Hysterectomy Extension During Cesarean Delivery in the Second Stage of Labor  
$29,321

James Marks  
Principal Investigator  
CA Dept of Public Health, 10/15/2012–10/14/2016  
Identification of monoclonal antibody combinations that neutralize variant botulinum neurotoxins  
$0

Principals Investigator  
DNA 2.0 Inc, 2/5/2013–2/5/2018  
Improve the CHO Expression of a scFv Fragment that is moving towards the clinic optimizing the DNA sequence of the scFv and/or leader sequence  
$0

Principals Investigator  
 Bispecific Antibodies Targeting Basal Breast Cancers  
$0

Principals Investigator  
NIH/NCI, 9/24/2014–8/31/2019  
Antibody Technology Research Center  
$5,779,613

Principals Investigator  
NIH/NIAID, 2/1/2013–1/31/2018  
Generation of therapeutic antibodies for serotype F botulism  
$5,448,316

Principals Investigator  
NIH/NIAID, 6/20/2014–5/31/2017  
Trispecific Monoclonal Antibody for Botulinum Neurotoxin Intoxication Therapy  
$1,336,571

James Mats  
Principal Investigator  
Tenax Therapeutics, Inc., 5/15/2015–4/30/2020  
A Double-Blind, Randomized, Placebo-Controlled Study of Levosimendan in Patients with Left Ventricular Systolic Dysfunction Undergoing Cardiac Surgery Requiring Cardiopulmonary Bypass  
$206,097.08

Hua Su  
Principal Investigator  
NIH/NHLBI, 1/16/2015–12/31/2018  
Cell Type-Specific Influences on HHT Pathogenesis  
$1,582,037

Jeffrey Sall  
Principal Investigator  
NIH/NINDS, 1/14/2012–12/31/2018  
Hemodynamics of Cerebral Arteriovenous Malformations  
$1,633,785.65

Principals Investigator  
Soluble VEGF Receptor Therapy for Brain Arteriovenous Malformation  
$790,313

Principals Investigator  
UCSF Research Evaluation and Allocation Committee (REAC), 1/14/2012–12/31/2015  
Mouse AVM Models for Mechanistic Study and Therapeutic Test  
$30,000

Principals Investigator  
The Community Foundation of Orange & Sullivan, 1/1/2013–Ongoing  
Michael Ryan Zodda Foundation  
$10,000

Xiaobing Yu  
Principal Investigator  
Anesthesia Dept, 7/1/2013–6/30/2016  
Anesthesia Department Research Award  
$50,000

Paul Swinkels  
Principal Investigator  
FAER, 7/1/2013–6/30/2016  
Treating neuropathic pain with spinal cord transplants of genetically modified human pluripotent stem cell-derived GABAergic inhibitory neurons  
$175,000

Wan Zhu  
Principal Investigator  
An Innovative Gene Therapy by Selective and Regulative Neutralizing VEGF in HHT Associated Brain Arteriovenous Malformation  
$30,000
Upcoming Events

**WARC 2016**
The 54th Annual Western Anesthesia Residents’ Conference (WARC) will be hosted by UCSF, **April 29 to May 1, 2016**, at the Westin St. Francis Hotel in San Francisco.

**AUA 2016**
The 63rd Annual Association of University Anesthesiologists Meeting Social Event will be hosted by UCSF on **May 19, 2016**, at the California Academy of Sciences in San Francisco. Details about the annual meeting can be found here: [http://auahq.org/aua-annual-meeting/](http://auahq.org/aua-annual-meeting/)

**San Diego Reception**
**UCSF Department of Anesthesia and Perioperative Care Alumni Reception at the American Society of Anesthesiologists Annual Meeting**
**Sunday, October 25, 2015, 6:00–9:00pm**
Harbor House Restaurant, 831 W. Harbor Drive, San Diego

**Saturday Anesthesia Grand Rounds**
8:00 – 10:00 a.m., HSW-301 / Video Link: TBA
**November 7, 2015:** Updates in Obstetrical Anesthesia
**February 6, 2016:** Updates in Trauma Anesthesia
**May 7, 2016:** Updates in Pediatric Anesthesia