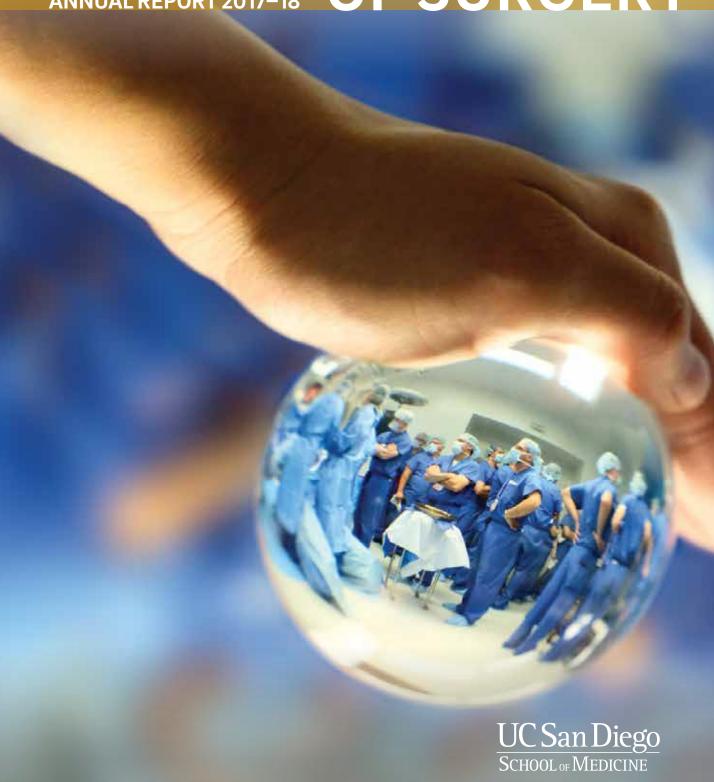
# DEPARTMENT OF SURGERY





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Cover photo by Dr. Jenny Lam General Surgery Resident, UC San Diego

Managing Editor: Lindsay Morgan Designed and Produced by Patera Design

# LETTER FROM THE CHAIR

Dear Colleagues and Friends,

We are excited to share with you the UC San Diego Department of Surgery 2017–18 Annual Report. Preparing this report each year is an important exercise for the Department as we reflect on the past year and prepare for the next.

The past year has been another extraordinary one for the Department. We have greatly enhanced our ability to serve the region with the recruitment of exceptional new faculty, the expansion of our facilities, new lines of research, and the graduation of exceptional surgical trainees. The opening of the Koman Family Outpatient Pavilion on the La Jolla medical campus in March 2018, ushered in eight new ambulatory surgery suites as well as expansive and patient-friendly ambulatory clinic space for many of our multidisciplinary programs. This facility is an important complement to the expansion last year of the Jacobs Medical Center inpatient facility, which is already nearing full utilization. Recognizing that we must extend beyond our campus to positively impact the region, the Department also partnered with El Centro Regional Medical Center to bring improvements in surgical care to the Imperial Valley, and with Tri-City Medical Center in Oceanside to further develop cardiac surgery services for North County patients.



We are also working hard to strengthen connections—both among our UC San Diego family and among friends and alumni of the Department. These efforts include the launch of our monthly e-newsletter and *Humans of Surgery*, a documentary-style collection of photographs that shares personal stories of the faculty, trainees, and staff who carry out our missions daily. The Department also hosted the 174th meeting of the Society of Clinical Surgery, during which more than 70 leaders of American surgery observed our talented faculty in the operating room and were introduced to their outstanding research activities. The Department established an annual Alumni Lecture, which, for the inauguration, featured noted alumnus and internationally recognized trauma surgeon, Dr. David Hoyt, who currently serves as Executive Director of the American College of Surgeons.

In this report, we share our vision for clinical care, research, and training, and the latest news from our 13 specialty divisions. Your interest and participation in the affairs of the Department are instrumental in helping us develop the absolute best clinical programs; in making our programs accessible to as many patients in the region as possible; and in making things better for tomorrow's patients. I look forward to your continued partnership.

Sincerely,

BRYAN M. CLARY, MD, MBA, FACS Chair, Department of Surgery

UC San Diego

# UC San Diego SCHOOL OF MEDICINE

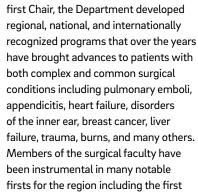
More than 50 years of serving patients and moving the field of surgery forward.

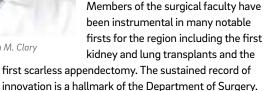
It has been 50 years since UC San Diego's School of Medicine enrolled its first medical students. Since then, the medical school has been a trailblazer: a research powerhouse, and a clinical leader in areas ranging from Alzheimer's disease and pulmonary hypertension to cardiovascular disease and minimally invasive surgery.

NNIVERSARY

Although relatively young, UC San Diego's medical school is a critical resource for the region, and ranked among the 20 best in the country in research and primary care. Its facilities have expanded—from Hillcrest Medical Center, to burgeoning facilities in La Jolla, including Moores Cancer Center, Jacobs Medical Center, and most recently, the Koman Family Outpatient Pavilion, which opened in 2018.

The Department of Surgery has been fundamental to this extraordinary success. Founded in 1966, when Dr. Marshall J. Orloff was recruited from UCLA to be the





The surgical program with the most storied history at UC San Diego involves the surgical treatment of chronic pulmonary emboli-clots in the arteries that deliver blood to the lungs—through a procedure called pulmonary thromboendarterectomy (PTE). The PTE program was established by Dr. Kenneth Moser, Pulmonologist, and Dr. Nina Starr Braunwald, the Acting Director of Cardiac Surgery at UC San Diego and the first woman to receive certification from the American Board of Thoracic

Surgery. The first PTE procedure was performed in 1970, and, with the subsequent recruitment of Dr. Stuart Jamieson to the faculty in 1988, the program grew exponentially. Today, under the leadership of Dr. Michael Madani, the Department's surgeons have performed more than 3,900 PTE procedures—more than any other institution in the world.

UC San Diego has long been a leader in the surgical treatment of disorders of the liver and pancreas. Our founding chair, Dr. Orloff, helped to better define the role of surgical shunt procedures in addressing the sequelae of cirrhosis of the liver. Our second Chair, Dr. A. R. (Babs) Moossa, was an internationally recognized authority on the surgical management of pancreatic cancer and benign conditions of the pancreas. Dr. Andrew Lowy is building on this legacy; his pancreatic cancer research collaborations with leading institutions throughout the world are helping to define and implement better treatments for this lethal disease.

Our Hillcrest-based Trauma and Burn programs have changed treatment paradigms across the country for the management of acute burns and blunt and penetrating trauma. UC San Diego faculty, notably Dr. Raul Coimbra, 2017 President of the American Association for the Surgery of Trauma, were instrumental in establishing the unique San Diego Trauma System, one of the first coordinated, multi-center trauma systems in the United States, which has helped to reduce the rate of preventable trauma deaths from 21% to less than 1%.

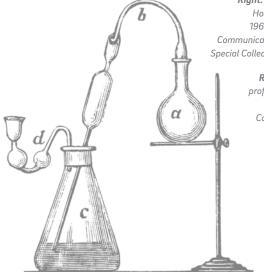
The monumental shift to minimally invasive surgical techniques over the past 20 years created a need for new educational programs, not just for young trainees, but for practicing surgeons. Dr. Mark Talamini, the Department's third Chair, and Dr. Santiago Horgan partnered with the UC San Diego School of Medicine to build the Center for the Future of Surgery (CFS), a one-of-a-kind educational and research facility. At the CFS, our faculty have pioneered approaches to natural orifice transluminal endoscopic surgery (scarless surgery) and trained more than 20,000 learners in these and other minimally invasive techniques since its opening in 2011.



Dr. Bryan M. Clary



Above: UC San Diego surgical residents circa 2001, Julio Vasquez, Alana Chock, Jacob DeLaRosa, David Poon and Sonia Ramamoorthy. Above right: Students in the School of Medicine hospital circa 1980. Photo credit: Health Sciences Communications. Public Relations Material, Special Collections & Archives, UC San Diego.



Right: Front entrance to the University
Hospital of San Diego County circa
1968. Photo credit: Health Sciences
Communications. Public Relations Material,
Special Collections & Archives, UC San Diego.

Right: UC San Diego surgeon and professor Nicholas Halasz lecturing. Photo credit: Health Sciences Communications. Public Relations Materials, Special Collections & Archives, UC San Diego.







The Department's Otolaryngology/Head and Neck Surgery (OHNS) Division holds one of the longest continuously funded T32 research training grants in the United States and has been a leader in the study of disorders of the inner ear and skull base. Research arising from the work of OHNS faculty members Dr. Jeffrey Harris (Chief of OHNS for 32 years) and Dr. Allen Ryan, has been translated to novel treatments for a devastating inner-ear disease that previously had no meaningful treatment options. Recent additions to the faculty have helped to establish UC San Diego as one of the premier institutions for the treatment and study of head and neck cancer (Joseph Califano) and skull base tumors (Dr. Rick Friedman and Dr. Marc Schwartz).

The Department has also been on the forefront of image and fluorescence-guided surgery. Working with Nobel Laureate Roger Tsien, OHNS faculty member Dr. Quyen Nguyen helped to develop injectable fluorescent molecules that light up tumors and hard-to-see peripheral nerves. Nguyen's team plans to begin testing these nerve-labeling fluorescent probes on human facial nerves in late 2018. Dr. Anne Wallace and her colleagues developed new reagents for the mapping of sentinel lymph nodes during cancer surgeries that are in clinical use; and Dr. Robert Hoffman and Dr. Michael Bouvet have created flourscent antibody conjugates that help localize gastrointestinal cancers and aim to minimize anastomotic complications associated with these complex procedures.

Over the next 50 years, UC San Diego's Department of Surgery looks forward to being a critical part of driving the field forward, and will continue to strive for excellence in research, training and practice—all with the goal of helping patients live longer, healthier lives.

# CLINICAL CARE

The Department of Surgery's team of internationally recognized surgeons are working hard to deliver the latest treatment advances to patients every day. Our surgeons perform some of the most advanced surgical procedures in the world, including Pulmonary Thromboendarterectomy surgery, minimally invasive and robotic surgery; heart, lung, and liver transplants; and complex cancer resections.

## **HEART TRANSPLANTATION**

The Department of Surgery/UC San Diego Health's heart transplant program began in 1989 under the direction of internationally renowned cardiothoracic surgeon Stuart W. Jamieson, MB, FRCS.

The program performed its first heart transplant in 1990, and has since performed over 300 heart transplants (about 30 per year), with results that exceed national standards for heart transplantation for people with irreversible, life-threatening heart disease. In 2011, our surgeons were the first on the West Coast to implant an FDA-approved total artificial heart.

Comprehensive Breast Health Center lobby, Koman Family Outpatient Pavilion. Photo credit: UC San Diego Health.

Our program continues to experience significant growth, and we are on track to perform the largest number of heart transplants at UC San Diego ever this year—more than 50.

## **COMPREHENSIVE BREAST HEALTH CENTER**

The capabilities of our Comprehensive Breast Health Center were greatly expanded this year with the opening of the Koman Family Outpatient Pavilion, a clinical facility on UC San Diego's La Jolla campus. About 60 percent of the 156,000-squarefoot pavilion is dedicated to breast services, including breast cancer detection, diagnosis, and personalized care.

"Previously our services were dispersed between Moores Cancer Center, Jacobs Medical Center, and Perlman," says Dr. Anne Wallace, Director of the Comprehensive Breast Health Center and Chief of the Division of Breast Surgery. "Now we have this beautiful space where all our services come together—imaging, infusion, pharmacy, clinic, and surgery. The patient comes in, sees their doctor, and then walks right through the door and they're in the infusion center. Or a new patient can get their mammogram and on the same day walk across the hall and see a doctor in the clinic."

The Comprehensive Breast Health Center includes specialized suites for medical and surgical care of patients with breast conditions ranging from advanced cancer to benign cysts. UC San Diego Health is ranked among the nation's best in cancer services by *U.S. News & World Report*, and is one of fewer than 50 National Cancer Institute (NCI)-designated Comprehensive Cancer Centers in the country—and the only one in San Diego County.



UC San Diego surgeons in the Division of Minimally Invasive Surgery perform bariatric surgery.

#### **BARIATRIC SURGERY**

Surgeons at the Bariatric and Metabolic Institute at UC San Diego Health are at the forefront of minimally invasive surgery and advanced robotic technology, and offer several weight loss options including gastric bypass, gastric sleeve, gastric balloon weight loss surgery, and gastric banding.

Our high-volume center delivers unparalleled quality care. Since 2006, we have performed more than 1,400 bariatric surgeries, with zero mortalities. Additionally, the average length of stay decreased from 2.1 days to 1 day between 2016 and 2018, following the introduction in July 2016 of an enhanced recovery protocol.

### **EXPANDED TREATMENT FOR ACOUSTIC NEUROMA**

The Department of Surgery, together with UC San Diego Health, has expanded its treatment of rare brain tumors by launching, in November 2017, a specialized program in the diagnosis and treatment of acoustic neuromas and complex skull base tumors.

Building on a strong interdisciplinary tradition in Neurotology and Skull Base Neurological Surgery, Dr. Rick Friedman and Dr. Marc Schwartz, together with teams from the Division of Otolaryngology and the Department of Neurological Surgery, are building a world-class Acoustic Neuroma Center to provide destination care in Jacobs Medical Center. They are also establishing Auditory Brainstem Implant and Neurofibromatosis Type 2 programs, which will feature use of a state-of-the-art imaging center, operating rooms, and surgical equipment.

121 FACULTY

31% WOMEN FACULTY

21,479 SURGICAL CASES FY17/18

62,706 OUTPATIENT VISITS

**TOP DECILE IN RISK-ADJUSTED MORTALITY** THREE YEARS IN A ROW (GENERAL & VASCULAR SURGERY)

11,361 INPATIENT SURGICAL PROCEDURES







Dr. Marc Schwartz

Dr. Friedman joined UC San Diego from the USC Keck School of Medicine where he served as Chief of Otology/ Neurotology, while Dr. Marc Schwartz joined from the House Ear Clinic, where he served as the senior Neurosurgical Associate.

# PRACTICE-CHANGING RESEARCH

#### PANCREATIC CANCER: WORK DONE, WORK BEGUN

UC San Diego is a leader in pancreatic cancer clinical care and research. In February 2018, UC San Diego hosted leaders in pancreatic cancer for the first disease-specific meeting of the UC Cancer Consortium. Attended by leaders in pancreatic cancer care and research from UC Davis, UCLA, UC San Diego, and UCSF, the meeting was an opportunity to strategize ways for the centers to leverage their immense collective expertise with the goal of defeating pancreatic cancer—the third leading cause of cancer death in the United States.

A high-risk prevention clinic has opened at Moores Cancer Center, which focuses on the multidisciplinary care of patients at high risk for pancreatic cancer based on family history, genetic susceptibility, high-risk lesions such as pancreatic cysts or diseases such as chronic pancreatitis.

In research, UC San Diego researchers and physicians, together with colleagues at MD Anderson Cancer Center, Johns Hopkins University and other institutions, have been awarded a \$7 million grant over four years by Stand Up to Cancer (SU2C) to create a "dream team" to develop new ways to identify and manage patients at high risk for development of pancreatic cancer. This is the second SU2C grant targeting pancreatic cancer to be awarded to UC San Diego researchers. The first "dream team" was announced in 2015 with a three-year, \$12 million grant to study Transcriptional Reprogramming to Control Pancreatic Cancer. Dr. Andrew Lowy, Chief of the Division of Surgical Oncology, is part of both dream teams.

of Surgical Oncology, is part of both dream teams.

Leaders in pancreatic cancer meet at UC San Diego for the first disease-specific meeting of the UC Cancer Consortium.

Dr. Rebekah White, Associate Professor of Surgery in the Division of Surgical Oncology, was recently awarded a grant to study "irreversible electroporation as an *in situ* vaccine for pancreatic cancer," and Dr. Michael Bouvet, Professor of Surgery, leads a study funded through a VA Merit Review Award that aims to use fluorescence image-guided surgery to improve the visualization, detection and resection of pancreatic and colon cancer.

#### STRENGTHENING DIVERSITY IN MEDICINE

Educational disparities among various ethnic and socioeconomic

groups in the United States are unacceptably high. The National Institutes of Healthfunded UC San Diego Initiative for Maximizing Student Development (IMSD) aims to address these gaps by training and mentoring students who are traditionally underrepresented in the sciences. Under the auspices of the Center for Investigations of Health and Educational Disparities (CIHED), which is directed



Antonio De Maio, Director, Center for Investigations of Health and Education Desparities.

by Antonio De Maio, PhD, Professor in the Department of Surgery, IMSD focuses on facilitating the transition from college to graduate school in biomedical sciences.

Established at UC San Diego in 2008, the program introduces freshmen students with no or limited prior research experience to essential research principles and skills (i.e., laboratory safety, data collection, and analysis) that will prepare them to participate in organized research projects. Students also participate in hands-on, bench research projects under the mentorship of established investigators, where they learn about experimental design, execution, data analysis and presentations, increasing their competitiveness as graduate school candidates.

UC San Diego-IMSD scholars have enrolled in top universities, including Harvard, MIT, Yale, Cornell, Columbia, Duke and several campuses of the Universities of Texas and California. Many are accepted to multiple programs. In 2018, 70 undergraduate students graduated as IMSD participants. Among them, 46 students have been accepted into PhD or MD/PhD programs nationwide.

#### **PULMONARY ARTERIAL HYPERTENSION**

Pulmonary arterial hypertension (PAH), a form of high blood pressure in the lung's arteries, affects more than 100,000 people in the United States, causing approximately 20,000 deaths per year.

UC San Diego researchers have discovered a key pathway that controls this proliferative process the NOTCH3 signaling pathway. Dr. Patricia A. Thistlethwaite, a Cardiothoracic Surgeon and

Currently, Thistlethwaite's research team is devising drugs that selectively block NOTCH3 signaling to treat PAH, with the goal of bringing their research from bench to beside. Together with a Cambridge, MA-based pharmaceutical company, the team has developed a humanized monoclonal antibody that selectively blocks NOTCH3 signaling. In rat and mouse experiments, when given intramuscularly, the monoclonal antibody reverses PAH and silences NOTCH3 signaling in the pulmonary vasculature. Experiments to test this treatment in a preclinical pig model of PAH are ongoing.









Dr. Patricia A. Thistlethwaite

Professor in the Division of Cardiovascular and Thoracic Surgery, has been studying the disease for more than a decade. "If we understand the genes that induce vascular smooth muscle cells proliferation, we will be able to unravel the cause of pulmonary arterial hypertension and devise drugs to treat this disease," she says.

With funding from the National Institutes of Health, Dr. Thistlethwaite and her co-investigators have demonstrated that mice that lack NOTCH3 are resistant to the development of PAH. More importantly, mice that are genetically engineered to overexpress HES-5 in lung vascular smooth muscle cells, spontaneously develop the disease.

20% FACULTY WITH EXTERNAL RESEARCH FUNDING

#21 NATIONALLY FOR SURGERY (NIH RANKING), 2017

\$10 MILLION
IN RESEARCH AWARDS (FY17/18)

# TRAINING THE NEXT ÉRÁTION

The UC San Diego Department of Surgery is committed to educating the next generation of surgeons to be leaders in a rapidly changing world. The Department offers fully accredited academic residency training programs and fellowships in a number of surgical specialties.



#### **FELLOWSHIP OPPORTUNITIES**

The Department of Surgery is proud to offer a variety of world-class fellowship opportunities. These include fellowships in: Breast Surgical Oncology; Burn; Cardiothoracic Surgery; Craniofacial and Pediatric Plastic Surgery; Endovascular Surgical Neuroradiology; Minimally Invasive Surgery; Neurotology and Skull Base Surgery; Pediatric

and Endovascular Surgery. Our fellowship programs

Dr. Abid Mogannam



Dr. Hitomi Sakano

Surgery; Pediatric Otolaryngology; Surgical Critical Care; and Vascular

aim to provide outstanding training across a variety of clinical systems. Dr. Abid Mogannam, who completed a Vascular and Endovascular Surgery fellowship in 2018, says, "I trained at Scripps Green, UC San Diego, the VA, and Kaiser. All of these groups have different biases in the way they treat patients. Being able to see different approaches is important. You're able to assimilate different techniques and ideas and choose for yourself what you think is the best way to treat your patients."

The Department also aims to nurture a culture of compassion, camaraderie, and support for colleagues. Dr. Hitomi Sakano, who graduated from the Neurotology Fellowship program in 2018 and has assumed a faculty position at the University of Rochester in New York, agrees: "The best thing

"The best thing about the program is the people."

about the program is the people. I also think one of the unique things about training at UC San Diego is your exposure to the close relationships between surgeons in different specialties on combined cases. When you have really good relationships, surgery goes well, and there's a good flow to the operation and to the care of the patient."

## ADVANCING SURGICAL **SCIENCE THROUGH SIMULATION**

The use of simulation technologies in surgical education has dramatically grown in recent decades. Simulation allows trainees to practice and make mistakes without risking patient safety, and gives practicing surgeons a way to hone and advance their skills.



Plastic surgery residents at the 1st Annual ACAPS West Coast Plastic Surgery Boot Camp.

UC San Diego is pleased to offer, through the Center for the Future of Surgery, a world-class simulation experience. Residents start their simulation experience as soon as they arrive on campus, through a series of surgical "bootcamps" in which they are introduced to the surgical basics, as well as advanced simulation in airway management and central line placement. On a weekly basis, residents are exposed to animate surgical modules directly tailored to their level, and instructed by UC San Diego faculty.

Dr. Bryan Sandler, Associate Professor of Surgery in the Division of Minimally Invasive Surgery and Director of Surgical Simulation, continually evolves the curricula. The Department now offers modules involving all of the major surgical sub-specialties, as well as exposure to advanced robotics and complex endoscopic therapeutics.

#### PLASTIC SURGERY BOOT CAMP

In August 2017, the Division of Plastic Surgery hosted the 1st Annual ACAPS West Coast Plastic Surgery Boot Camp, which introduced first-year plastic surgery residents from across the United States to core concepts in plastic surgery. Sponsored by the American Council of Academic Plastic Surgeons (ACAPS), the event brought together plastic surgery

faculty from across the country, who led sessions at the Center for the Future of Surgery on wound healing and nutrition; pediatric plastic surgery; craniofacial anatomy and radiology; and cosmetic procedures, among others.

Developed in response to ongoing changes in graduate medical education, the boot camp successfully provided standardized and timely exposure to critical clinical content in plastic surgery and energized and invigorated both junior trainees and faculty.

With overwhelmingly positive feedback from faculty and residents, and an enthusiastic commitment from last year's faculty to return, the division was pleased to host the 2nd Annual West Coast Plastic Surgery Boot Camp in August 2018.

## TRAINING THE NEXT GENERATION OF ACADEMIC OTOLARYNGOLOGY/HEAD AND NECK SURGEONS

One of the Department's proudest achievements in research training is our long-standing NIH Institutional National Research Service Award—the T32 grant—which was started by Dr. Jeffrey Harris, Chief of the Division of Otolaryngology/Head and Neck Surgery, and Dr. Allen Ryan, Director of Research for Otolaryngology/Head and Neck Surgery, almost 30



years ago. It has since been continuously funded with the added leadership of Dr. Quyen Nguyen, and is one of the longest-running T32 grants in the country.

Two of the division's current residents, Dr. David Bracken and Dr. Bharat Panuganti, are supported by this grant, and many past trainees have also benefitted, including: Dr. Albert Merati, President-Elect of the American Academy of Otolaryngology—Head and Neck Surgery; Dr. Cherie-Ann Nathan, President of the American Head and Neck Society; and Dr. Roberto Cueva, President of the American Otological Society.

The training grant has launched many academic careers and has helped to fund dozens of research projects

on topics ranging from pathogenetic mechanisms in otitis media, immunity in the middle and inner ears, and viral infection of the inner ear, to the genetics of deafness, tissue engineering of nasal septal cartilage, isolation of laryngeal myosin isoforms, and fluorescent guidance for facial nerve and head and neck cancer surgeries.

35% WOMEN TRAINEES

95 TOTAL TRAINEES

69% RESIDENTS FROM THE PAST 5 YEARS WHO HAVE GONE ON TO A FELLOWSHIP





# KOMAN FAMILY OUTPATIENT PAVILION

On March 5, 2018, UC San Diego Health proudly opened the Koman Family Outpatient Pavilion—a clinical facility on UC San Diego's La Jolla campus. The four-floor, 156,000-square-foot facility accommodates hospital-licensed services and programs to support Jacobs Medical Center and other UC San Diego Health facilities.

The outpatient pavilion houses the Disease Centers for Musculoskeletal Health, Breast Health, Urology, Pain Management, and Apheresis, with related services of imaging, rehabilitation, outpatient surgery and pharmacy. The Sanford Stem Cell Clinical Center, developed to transform the enormous potential of stem cell research into effective therapies for patients with degenerative diseases, will also be housed in the pavilion.

The pavilion significantly enhances the surgical capabilities of UC San Diego Health, with eight new surgery suites, basic and advanced imaging, physical therapy and pain management, as well as infusion and apheresis services. It will also provide space for hearing restoration, sinus procedures, and voice restoration, as well as minimally invasive surgeries.

Particularly notable, the new space is home to the Comprehensive Breast Health Center, which offers premier breast cancer detection, diagnosis, and personalized care, and is led by Professor of Surgery, Dr. Anne Wallace.

"The Koman Family Outpatient Pavilion is a further example of UC San Diego Health's commitment to the care of patients with surgical conditions," says Dr. Bryan M. Clary, Chair of the Department of Surgery. "The Ambulatory Surgery Center housed within the outpatient pavilion will greatly expand access of the region's patients to our internationally recognized surgeons and to the services they need—including imaging and rehabilitation. The patient-centered design elements throughout the building are extraordinary and reflect our intense desire to serve patients with compassion and respect."









Construction has begun at the Center for the Future of Surgery (CFS)—an advanced surgical training center located on the campus of UC San Diego-to build a microsurgery laboratory and hybrid operating room equipped with the latest technology. When complete, the hybrid OR will be the first of its kind in an academic medical center in the United States, with a fully functional Siemens Zeego rotational angiography imaging system with an integrated state-of-the-art surgical table system. The 15-station microsurgery suite will include the latest in microsurgical simulation, visualization and equipment for training purposes, and will help to foster advances in surgical training and simulation well into the 21st century.

"In surgery today, technology is evolving, techniques are changing, and new devices are coming out all the time," says Dr. Santiago Horgan, Director of the Center and Chief of the Division of Minimally Invasive Surgery. "There are still many operations that are done open because surgeons don't have the skills. There is a huge need for simulated training."

The CFS fills this gap by offering state-of-the-art educational opportunities to teach fundamental and advanced technical skills and procedures. In a simulated environment, students, residents, and practicing physicians can learn and hone their technical skills.

The new CFS suites will provide an expanded venue for skull based surgery, vascular surgery, neurosurgery, and plastic surgery.

"This expansion is an extraordinary opportunity for our microvascular surgeons and those who practice catheter-based endoluminal vascular procedures," says Dr. Bryan M. Clary, Chair of the Department of Surgery. "The CFS will be one of only a few surgical simulation training facilities in the world to have a hybrid OR for training, research, and device development in endoluminal surgery."

Since opening in 2011, the CFS has trained more than 20,000 individuals-from residents and medical students to surgeons, nurses, and industry partnersmaking it one of the largest and most comprehensive surgical training facilities in the world.



## HUMANS OF SURGERY

Before we are surgeons, before we are scientists, before we are nurses or residents or administrative professionals, the Department of Surgery is its people. What makes us us is our stories. On Humans of Surgery you can learn a little about who we are—where we come from, the things we have struggled with and overcome, and the things that motivate us and make us laugh. These are our stories-this is us.





























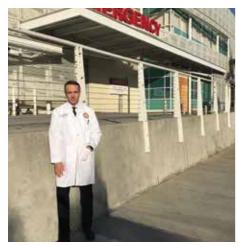














## DIVISION OF ANATOMY

Faculty in the Division of Anatomy are responsible for the anatomy education of all doctors-in-training at UC San Diego. The division's award-winning teaching approach centers on the dissection laboratory, where active learning of human structure by student doctors is guided by surgeons and an innovative curriculum that emphasizes clinical applications.

Researchers in the laboratory of Division Chief Dr. Mark Whitehead developed a medical device for the treatment of sleep apnea. Aura6000, the device, is a surgically implantable stimulator that provides mild electric pulses to the nerve that activates the tongue muscles. A successful alternative to the burdensome CPAP machine, the Aura6000 is activated by an external controller at bedtime and provides tone to key muscles to keep the tongue from blocking the airway during sleep. The device has obtained approval for sale in Europe and is currently undergoing FDA trials in the United States.

Development of the device led to the formation of a local biotechnical company, ImThera Medical. Founders of ImThera include Dr. Terrence Davidson (deceased), UC San Diego Department of Surgery, Division of Otolaryngology/Head and Neck Surgery; and Faisal Zaidi, PhD, formerly a postdoctoral fellow with Dr. Whitehead, who currently serves at Galvani Bioelectronics of GSK and Google. LivaNova, a global medical technology company, purchased ImThera Medical in January 2018.

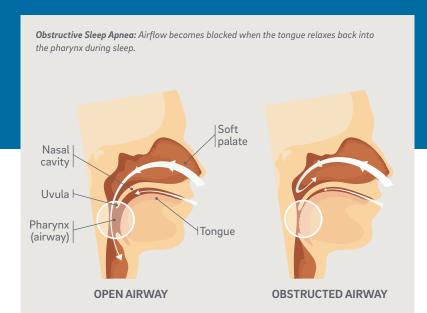
In the Spring of 2018, the Division of Anatomy collaborated with leadership in the School of Medicine to pilot a new Residency Transition Course for 4th year medical students, designed to prepare them for residency through simulated sessions, seminars, and hands-on skill sessions. The course will be required for all 130 4th year medical students beginning in the spring of 2019.

In October of 2017, Dr. Whitehead was appointed Interim Associate Dean for Undergraduate Medical Education at UC San Diego.

Dr. Nigel Woolf, Professor of Surgery Emeritus, continues work on an historical research project examining the relationship between Spanish artist and architect Antoni Gaudi and Spanish neuroscientist, pathologist and Nobel Laureate, Ramon y Cajal. Dr. Woolf explores the remarkable examples of anatomical structures that have been discovered in the architectural designs and constructions of Gaudi, which reveal his sophisticated knowledge of anatomy. An example is Gaudi's inclusion of the *tibia* leg bones as support columns in his early design for the *Passion Facade Portal* of the Sagrada Familia Basilica in Barcelona.



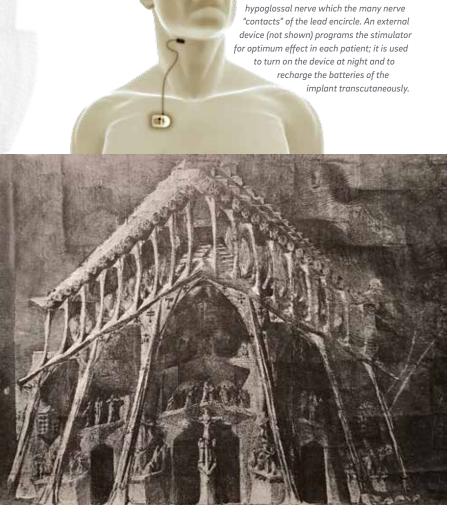
Antoni Gaudi is known for using human anatomy as a model for his architecture. He fused nature with structure to create intricate design in many of his works. The Passion Facade Portal of the world-renowned Sagrada Familia is supported by numerous tibia bones. They emulate the strength and beauty of the human skeleton. Photo credit: Nigel Woolf, In Preparation [Antonio Gaudi sketch for Sagrada Familia Passion Facade by permission: GR Collins & JB Nonell, The Designs and Drawings of Antonio Gaudi, Princeton University Press, Plate 63B, 1983.]



The **ImThera** medical device consists of

a neurostimulator implanted below the skin of the chest (like a heart pacemaker)

and a lead run under the skin to the





MARK C. WHITEHEAD, PhD Chief, Division of Anatomy

## FACULTY PROFESSOR OF SURGERY

Mark C. Whitehead, PhD

## PROFESSORS OF SURGERY EMERITI (ACTIVE)

David H. Rapaport, PhD Nigel K. Woolf, ScD

#### **ACADEMIC AFFILIATE**

Paul Kingston, PhD

130 HOURS OF ANATOMY LEARNING TIME PER YEAR

## MORE THAN

MEDICAL AND PHARMACY STUDENTS TRAINED EACH YEAR

6 CLINICAL SURGEONS WHO TAUGHT ANATOMY LABS THIS YEAR TO FIRST-YEAR MEDICAL STUDENTS

## DIVISION OF BREAST SURGERY

The Division of Breast Surgery, established in 2018 with Dr. Anne Wallace as Chief, provides comprehensive surgical care for all aspects of breast surgery. The division provides care for benign breast disease and breast cancer, breast reconstruction, and breast augmentation. The division is part of the Comprehensive Breast Health Center at the new Koman Family Outpatient Pavilion.

In 2018, the division launched a Breast Surgery Fellowship, with Dr. Chris Tokin joining as the first fellow. Dr. Tokin trained in general surgery at UC San Diego followed by a plastic surgery fellowship at Vanderbilt University.

Dr. Anne Wallace, who is trained in breast and soft tissue surgical oncology, as well as plastic and reconstructive surgery, directs the Comprehensive Breast Health Center and is a committee member for the American Society of Plastic Surgeons and the International Sentinel Node Society. Dr. Wallace is involved in numerous research studies. She is

the Principal Investigator on the I-Spy2 trial, an innovative, adaptive clinical trial for high risk breast cancer; and is a co-investigator on a clinical trial to study the effects of long-acting post-operative cryoanalgesia following mastectomy or other breast surgery. She has also conducted animal, phase I and phase III studies on use of Tilmanocept for sentinel node detection; and last year completed the first in human phase I clinical trial of an agent—Radiometric Activatable Cell Penetrating Peptide—that was developed by the late Dr. Roger Tsien, who shared the 2008 Nobel Prize in Chemistry for his work developing green fluorescent protein (GFP) into ubiquitous imaging tools.

Dr. Sarah Blair continues to serve as a leader in both the American Society of Breast Surgeons and the Alliance Breast Committee. She is also actively engaged with the National Comprehensive Cancer Network establishing guidelines for the treatment of breast cancer. She has multiple research interests including work with nanoparticles for cancer localization and methods of improving surgical margins. Dr. Blair serves as Vice Chair for Academic Affairs and Faculty Development in the Department of Surgery, where she is instrumental in mentoring and preparing faculty for their academic positions. Dr. Blair also leads the Women in Surgery program, which works to connect, inspire and support the professional development of women surgeons.

Dr. Ava Hosseini, the division's newest faculty member, works closely with the Athena Breast Health Network, a collaborative network of breast care and research that includes five UC campuses—Davis, Irvine, Los Angeles, San Diego, and San Francisco. With an interest in medical student education, Dr. Hosseini is developing a program within the Department to guide 4th year internships for UC San Diego and external students.









**ANNE WALLACE, MD, FACS**Chief, Division of Breast Surgery

## **FACULTY**

## **PROFESSORS OF SURGERY**

Sarah Blair, MD Anne Wallace, MD, FACS

## ASSISTANT PROFESSOR OF SURGERY

Ava Hosseini, MD

**Top left:** The Comprehensive Breast Health Center team in the Koman Family Outpatient Pavilion. Photo credit: Kyle Dykes, UC San Diego Health.

Middle left: Dr. Anne Wallace and colleagues at 2017 Pedal The Cause at Petco Park.
Back row: (left to right) Lorraine Morgan
AA, Sherry Torng PA, Amanda Sawyer RN,
Michelle Benton AA, Chris Roesch. Front
row: (left to right) Dr. Kay Yeung, Dr. Anne
Wallace, Dr. Erin Roesch, Dr. Barbara Parker,
Cecilia Kasperick, RN.

Left: (left to right) Surgeons in the Division of Breast Surgery: Dr. Ava Hosseini, Dr. Anne Wallace, and Dr. Sarah Blair. Photo credit: Kyle Dykes, UC San Diego Health.

785 SURGICAL CASES FY17/18

13 FACULTY PUBLICATIONS

# DIVISION OF CARDIOVASCULAR AND THORACIC SURGERY

The mission of the Division of Cardiovascular and Thoracic Surgery is to deliver outstanding patient care to the community, lead groundbreaking research, and promote inspired teaching. Our group continues to be world leaders in the surgical treatment of chronic thromboembolic pulmonary hypertension and internationally recognized for the care of end-stage heart and lung disease.

In the past year, our division joined forces with the Division of Cardiovascular Medicine to form the new UC San Diego Cardiovascular Institute. The Institute builds upon the Sulpizio Cardiovascular Center model to bring together the clinical operations of specialties from multiple academic departments in order to better address the needs of patients with heart disease and related conditions. The division will continue to draw upon the expertise and capabilities of the Department of Surgery in the management of academic affairs, including faculty recruitment and research and educational program development. The Institute is an important step in the evolution of UC San Diego Health as it seeks to best serve patients by breaking down boundaries and enhancing collaborations. Its success will serve as an inspiration and model for future disease-specific institutes.

The division experienced significant clinical growth over the past year, with a 15 percent increase in surgical volume. Since the opening of the Sulpizio Cardiovascular Center in 2011, our division has nearly doubled its clinical

activity, and this past year performed more than 2,750 cardiac and thoracic procedures, across all campuses, while continuing to maintain some of the best outcomes and quality of care.

The division's heart transplant and thoracic surgery programs are among the most rapidly expanding programs in the Department and institution.

The division performed more heart transplants this past year than ever before, with patient outcomes that greatly exceed national standards and expectations. The division

also performed significantly more lung, esophageal, and chest cancer procedures than in any previous year through the implementation of highly specialized, multidisciplinary care teams for lung cancer patients, preventative screenings and the use of minimally invasive and robotic techniques.

Another major area of growth in our division has been the adult congenital heart disease program. This past year, with the successful and joint recruitment of a board certified and dedicated adult congenital cardiologist (one of seven in the country) to UC San Diego, we have been able to establish a busy clinical program within a short period of time. We are the only adult congenital heart program south of Los Angeles, and our program now attracts patients from all of San Diego County, as well as Orange County, Nevada, and Arizona. Similarly, we have seen significant growth in our thoracic transplantation program, and are on track to perform the largest number of lung transplants at UC San Diego this coming year.

Our 17 faculty and 10 advanced practitioners provide care across seven institutions in San Diego County. In addition, our faculty have performed surgeries in China, Hawaii, India, Japan and Mozambique. A team led by Dr. Michael Madani performed the first pulmonary endarterectomy surgery at Okayama University Hospital in Japan, and helped to establish a new comprehensive program there that treats chronic thromboembolic pulmonary hypertension. Dr. Madani also helped to establish a new pulmonary endarterectomy program at Michael DeBakey Heart and Vascular Center at Houston Methodist Hospital. Drs. Victor Pretorius and Mark Onaitis led a surgical team and performed complex cardiac and thoracic procedures as part of a UC San Diego medical mission in Mozambique. The division also continues to host visitors and trainees from around the world. This year we trained 31 scholars from 19 centers nationally and internationally.







**Above right:** Dr. Michael Madani in Japan performing PTE surgery.

Below right: (left to right) Thomas
Moore, Interim Chief Medical Officer and
CEO of UC San Diego Clinical Practice;
Steven Garfin, Interim Dean, School
of Medicine; UC San Diego Chancellor
Pradeep K. Khosla; Dr. Michael Madani;
David Brenner, Vice Chancellor, UC
San Diego Health Sciences; and Patty
Maysent, CEO, UC San Diego Health
at the UC San Diego Endowed Chair
Investiture Celebration.



200% GROWTH IN VENTRICULAR ASSIST DEVICE AND TRANSPLANT

VOLUME SINCE 2013

3,900 PTE PROCEDURES

2,750 SURGICAL CASES FY17/18

15% INCREASE IN SURGICAL VOLUME

Our ACGME-approved Cardiothoracic Surgery
Fellowship continues to be a highly competitive program,
which, this past year, drew more than 100 well-qualified
applicants for one position. Thanks to significant
growth across multiple campuses, we will soon be
able to offer separate cardiac and thoracic tracks.
We are also in the process of expanding our
training program to two positions per year.

Important honors were bestowed on the division's faculty. Dr. Patricia Thistlethwaite, Professor of Surgery, became the president of the Western Thoracic Surgical Association. She is the first woman president and the first faculty from any of the UC campuses to achieve such an honor. Dr. Madani was appointed as the holder of the John G. Pickard Chair in Cardiac Surgery.



MICHAEL M. MADANI, MD, FACS Chief, Division of Cardiovascular and Thoracic Surgery

## **FACULTY**

## **PROFESSORS OF SURGERY**

Alexander Geha, MD, MS Stuart W. Jamieson, MB, FRCS John Lamberti, MD Michael M. Madani, MD, FACS John Nigro, MD Anthony Perricone, MD Patricia A. Thistlethwaite, MD, PhD

## ASSOCIATE PROFESSORS OF SURGERY

Joelle Coletta, MD Theodore Folkerth, MD Eugene Golts, MD Dan Gramins, MD Steven Howe, MD Mark Onaitis, MD Victor (Gert) Pretorius, MBChB

## ASSISTANT PROFESSORS OF SURGERY

Raghav Murthy, MD Travis Pollema, DO Naohide Sakakibara, MD

**FELLOWS** Yuichi Ishida, MD Jakub Wilhelm, MD



# DIVISION OF COLON AND RECTAL SURGERY

The Division of Colon and Rectal Surgery provides innovative, high-quality care to patients with complex conditions, such as colon and rectal cancers, inflammatory bowel disease, and complicated benign disease, such as diverticulitis, anorectal disorders, and pelvic floor conditions. Recognized as a national leader in innovation and robotic surgery, our group continues to offer patients the most advanced colorectal care in the region.

The Division of Colon and Rectal Surgery has seen tremendous growth and expansion of our clinical programs over the past year. With the addition of new faculty and staff, we were able to expand our outreach into the southern and northernmost reaches of San Diego, with anticipated growth later this year into the Inland Empire. As a result, we hope to improve the quality of colorectal health care throughout the San Diego region.

Dr. Nicole Lopez, an alumnus of UC San Diego's general surgery residency program, who completed a fellowship in Complex General Surgical Oncology from the University of North Carolina, and, most recently, a fellowship in Colon and Rectal Surgery at Cedars-Sinai Medical Center, returned to join our faculty this year. She brings with her expertise in transanal approaches

to rectal cancer and Inflammatory Bowel Disease (IBD) surgery, as well as a research focus in systems engineering.

Recognized as a national leader in innovation and robotic surgery.

We have expanded our clinical portfolio to include several new exciting clinical and research initiatives. In the colorectal cancer domain, UC San Diego has developed the first rectal cancer tumor board in San Diego to fulfill the requirements for accreditation by the American College of Surgeons Commission on Cancer NAPRC. This multidisciplinary team provides focused attention on the management and treatment of rectal cancer. In collaboration with the Department of Radiology and Radiation Oncology, our teams are researching new approaches to pelvic MRI to better assess response to treatment. We are able to offer patients the full range of surgical approaches to pelvic surgery including traditional, open, and minimally invasive (robotic) techniques as well as transanal (TaTME) surgery. The division is also compliant with leapfrog measures for minimum surgical volume per surgeon of rectal surgery, and continues to meet and exceed national benchmarks for volume and quality.

In the realm of Inflammatory Bowel Disease, in conjunction with our gastrointestinal (GI)-IBD colleagues, our team manages a variety of complex surgical IBD problems, specifically: complicated crohns enterocutaneous fistulas, non-healing perianal disease and complications related to J pouch surgery. Nationally, we are active members of the Crohns' and Colitis Foundation Surgical Research Network, the American Society of Colon and Rectal Surgeons (ASCRS) IBD Committee, and the national NSQIP IBD collaborative, which is run by Dr. Samuel Eisenstein through our division at UC San Diego.

This was a banner year for our research residents, Drs. Michelle Ganyo, Sarah Stringfield, Shawn Liu and Mark Zhao, each of whom presented research from our division at national meetings including SAGES, ACS,





**Top:** Faculty and residents from the Division of Colon and Rectal Surgery.

**Above:** (left to right) Dr. Lisa Parry, Dr. Bard Cosman, and Dr. Samuel Eisenstein.

**Right:** Dr. Lisa Parry and colleague with Da Vinci surgical system robots.

**Bottom right:**Dr. Nicole Lopez at
Jacobs Medical Center.

and ASCRS. The division continues to engage in surgical clinical trials involving colorectal cancer, crohns fistulas, robotics, 30-day outcomes for UC pouch patients, and 3-D imaging for stricturing disease. Dr. Lisa Parry recently received an American Society of Colon and Rectal Surgery grant to support her study of robotic training in residency throughout the UC system.

The management of disorders of the pelvic floor remains an area of keen interest for our group. We are one of the only centers in the region with expertise in the placement of sacral nerve stimulators for the management of fecal incontinence. In collaboration with urogynecology and GI motility, we offer patients a comprehensive medical and surgical approach to pelvic floor and GI motility disorders.



SONIA RAMAMOORTHY, MD, MS, FACS, FASCRS

Chief, Division of Colon & Rectal Surgery

## **FACULTY**

#### PROFESSORS OF SURGERY

Bard Cosman, MD, FACS, FASCRS Sonia Ramamoorthy, MD, MS, FACS, FASCRS

## ASSISTANT PROFESSORS OF SURGERY

Samuel Eisenstein, MD, FASCRS Nicole Lopez, MD Lisa Parry, MD, FASCRS

#### RESIDENT

Sarah Stringfield, MD





**S** COLORECTAL-TRAINED SURGEONS

71% GROWTH IN CLINICAL VOLUME AT HILLCREST MEDICAL CENTER FROM THE PREVIOUS YEAR

10 FACULTY PUBLICATIONS

# DIVISION OF HEPATOBILIARY AND TRANSPLANT SURGERY

The Division of Hepatobiliary and Transplant Surgery performs liver, kidney, and pancreas transplantation, as well as complex hepatobiliary surgery for cancer and benign conditions, and is a regional referral center for the surgical treatment of liver disease and cancers.

The only academic transplant program in San Diego, in 2017, the division completed the most kidney transplants in the County. The living donor program has been named a donor center of excellence by the national kidney registry, and remains the only program in Southern California to offer robotic kidney donation.

Dr. Kristin Mekeel was named Interim Chief of the division and continues as Surgical Director of Kidney and Pancreas Transplantation and Director of Transplant Quality. Dr. Mekeel serves nationally on the American Society of Transplant Surgeons PROACTOR Task Force, the United Network of Organ Sharing (UNOS) Donor Labs Committee and the UNOS Pediatric Committee. Dr. Mekeel's interests include both transplant and surgical quality, and she speaks nationally on physician engagement in transplant quality. Dr. Mekeel is also co-investigator of an industry study of islet cell transplants.

Dr. Gabriel Schnickel joined the division this year and was named Surgical Director of Liver Transplantation.

Felicia Ferguson, Hilary Beltran, and Kimberly Gross, RN, at Jacobs Medical Center.



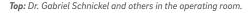
Dr. Schnickel trained at the University of California, Los Angeles as a liver transplant and hepatobiliary surgeon and worked most recently at the Cleveland Clinic. Dr. Schnickel brings with him expertise in the treatment of hepatocellular carcinoma (HCC) and previously ran clinical trials on Sorafenib treatment in liver transplant recipients with HCC. Dr. Schnickel serves nationally on the American Society of Transplant Surgeons Business Practice Committee and the UNOS Regional Review Board.

Dr. Jennifer Berumen is the Director of the Living Donor Kidney Transplant program and the Surgical Director of Kidney Transplantation at Rady Children's Hospital. Dr. Berumen directs the medical student clerkship and recently ended a two-year appointment as the Director of the Lifesharing Medical Advisory Committee. Dr. Berumen was recently recognized by her undergraduate alma mater and received the Tulane School of Science and Engineering Young Alumni Award. Dr. Berumen is active in the community with Women Encouraging Living Donation (WELD), a group that educates patients and families about the benefits of living donation.

Dr. Tatiana Kisseleva continues her substantial work in the research arena. Her interests include a) reversibility of liver fibrosis and inactivation of hepatic myofibroblasts; b) the role of portal fibroblasts in pathogenesis of cholestatic liver fibrosis; and c) the role of IL-17 signaling as a therapeutic target of alcohol-induced liver fibrosis and alcohol dependence in experimental models. Dr. Kisseleva opened a Human Liver Cell Isolation Laboratory, which receives donor livers that are rejected for transplantation for various reasons (as a part of a longstanding collaboration with Lifesharing). Isolated hepatocytes, Kupffer cells, Hepatic Stellate cells, and endothelial cells are used for translational research. Dr. Kisseleva served as an organizer of a Keystone Symposium on Injury, Inflammation, and Fibrosis (2017).







**Above:** (left to right) Dr. Ava Hosseini, Dr. Kristin Mekeel, Dr. Jennifer Berumen, and Dr. Nicole Lopez.

**Right:** Dr. Thach Pham, Fellow, Minimally Invasive Surgery, and Dr. Kristin Mekeel, Interim Chief, Division of Hepatobiliary and Transplant Surgery.

Dr. Bryan Clary, Chair of the Department of Surgery, is a nationally recognized expert in performing surgeries of the liver, pancreas, gallbladder, and bile ducts obstructed by cancer.

In addition to providing outreach services to the Coachella Valley for transplant patients, the division plans to expand into Imperial, Orange, and Riverside counties. Our liver transplant program has also maintained and grown the strategic partnership with the Sharp Healthcare system, with the goal of providing excellent care for patients with liver disease in San Diego.



KRISTIN MEKEEL, MD, FACS
Interim Chief, Division of Hepatobiliary
and Transplant Surgery

## **FACULTY**

#### **PROFESSORS OF SURGERY**

Bryan Clary, MD, MBA, FACS Kristin Mekeel, MD, FACS

## ASSOCIATE PROFESSORS OF SURGERY

Tatiana Kisseleva, MD, PhD (Adjunct) Gabriel Schnickel, MD, MPH, FACS

## ASSISTANT PROFESSOR OF SURGERY

Jennifer Berumen, MD, FACS



MORE 100 ABDOMINAL ORGAN THAN THAN THAN THAN THE TRANSPLANTS PERFORMED

100% INCREASE IN THE NUMBER OF LIVING DONOR KIDNEY TRANSPLANTS

**22** FACULTY PUBLICATIONS, AND THREE BOOK CHAPTERS

MORE THAN \$1.5 MILLION IN RESEARCH FUNDING

258 SURGICAL CASES FY17/18

# DIVISION OF MINIMALLY INVASIVE SURGERY

Surgeons in the Division of Minimally Invasive Surgery offer the most cutting-edge technology available in the realm of minimally invasive and robotic surgery while maintaining the highest quality of care.

We work hard to provide the latest in endoscopic, laparoscopic, and robotic techniques in bariatric and foregut surgery.

The surgeons in the Division of Minimally Invasive Surgery offer natural orifice transluminal surgery (NOTES), single incision laparoscopic surgery (SILS), and robotic hernia repairs and esophagectomies, among others. Our division works closely with the UC San Diego Jacobs School of Engineering to create and test new biomedical devices at the Center for the Future of Surgery (CFS), with benefits to the entire Department of Surgery.

Our Bariatric and Metabolic Institute has maintained Level 1 reaccreditation from the American College of Surgeons' Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program. This accreditation signifies us as a Bariatric Center of Excellence, performing a high volume of bariatric procedures while maintaining quality.

Additionally, our Minimally Invasive Surgery Fellowship has maintained accreditation by the Fellowship Council.



Dr. Thach Pham, Fellow, Minimally Invasive Surgery.

We continue to train outstanding laparoscopic and robotic surgeons who represent us in the community and at prestigious academic centers across the country.

Division Chair, Dr. Santiago Horgan, was featured in *The Wall Street Journal* in the article, "The Operating

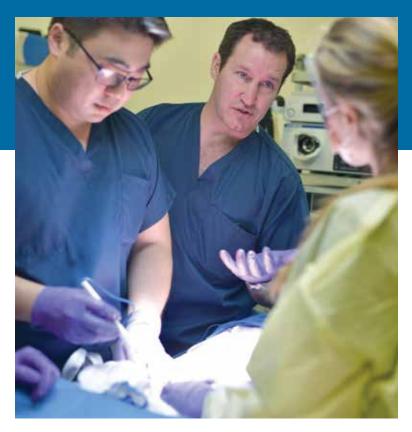
Room of the Future," as well as in UC San Diego's Discoveries magazine, where he was profiled for being the first surgeon in the United States to remove an appendix through the mouth. Today, more than 200 patients have undergone Natural Orifice Translumenal Endoscopic Surgery (NOTES) at UC San Diego Health.

The division made significant contributions at the annual meeting of SAGES-The Society of American Gastrointestinal and Endoscopic Surgeons-which was held in Seattle, April 11–14. Our faculty and trainees gave 19 presentations and participated in teaching courses. Dr. Garth Jacobsen was selected as one of eight participants-including five past society presidents-to showcase their minimally invasive techniques in a surgery Masters session. Dr. Jacobsen presented both robotic and laparoscopic inguinal hernia repairs, as well as a robotic transversus abdominus release. Dr. Horgan presented Robotic Myotomy and Esophagectomy. Dr. Jacobsen continues to serve as co-chair and corporate affairs liaison of the development committee for SAGES, working on its resident and fellows task force and endoscopic and bariatric task force.

Dr. Bryan Sandler continues as a leader in surgical simulation. The Center for the Future of Surgery hosts animate labs on a weekly basis, ranging from an intern boot camp, to complex robotic surgery. Dr. Sandler continues to represent our program in the UC robotics collaborative, and has successfully lobbied SAGES to host their annual fellows endoscopic surgery hands-on symposium at the CFS.

Dr. Garth Jacobsen completed the Health Sciences Leadership Academy and was chosen for an accelerated promotion to Professor in the clinical X series. He has maintained continuous accreditation of the general surgery residency program and has been active in education-related research.

Dr. Joslin Cheverie, an alumnus of UC San Diego's Minimally Invasive Surgery Fellowship program, joined our group from the cold Canadian North. Recruited from Kawartha Collaborative Surgical Care in Peterborough, Canada, Dr. Cheverie has interests in foregut, bariatrics and hernia surgery, as well as a keen interest in surgical education and mentorship.





**Top:** Dr. Bryan Sandler and trainees in the simulation lab. Photo credit: Dr. Jenny Lam General Surgery Resident. **Above:** A surgical robot in the Center for the Future of Surgery. **Below:** Dr. Garth Jacobsen presenting at SAGES annual meeting in Seattle.





## **SANTIAGO HORGAN, MD, FACS**

Chief, Division of Minimally Invasive Surgery

## **FACULTY**

## **PROFESSORS OF SURGERY**

Santiago Horgan, MD, FACS Garth Jacobsen, MD, FACS

## ASSOCIATE PROFESSOR OF SURGERY

Bryan Sandler, MD, FACS

## ASSISTANT PROFESSOR OF SURGERY

Joslin N. Cheverie, MD

## **FELLOWS**

David Bernstein, MD Jonathan Delong, MD Jenny Lam, MD Carlos Maeda, MD Thach Pham, MD Toshiaki Suzuki, MD

933 SURGICAL CASES FY17/18

12 PUBLICATIONS

5 VISITING INTERNATIONAL SCHOLARS 2017–18

130 COMPLEX ABDOMINAL WALL HERNIA PROCEDURES THIS YEAR

OVER 1,400 BARIATRIC SURGERIES PERFORMED CONSECUTIVELY WITH A ZERO MORTALITY RATE

# DIVISION OF NEUROSURGERY

The Division of Neurosurgery provides the full range of contemporary neurosurgical practice. Using a multidisciplinary approach, we provide care to diagnose, treat and rehabilitate patients with neurological disorders. The division also offers residency and fellowship opportunities and conducts path-defining research that is advancing the field.

renewal as the third Comprehensive Stroke Center in the country, UC San Diego Health is one of few health

The 2017–2018 academic year was a pivotal period of expansion for UC San Diego Neurological Surgery. After an extensive national search, Dr. Alexander Khalessi was named Chairman of the Department of Neurosurgery at UC San Diego Health and Chief of the Division of Neurosurgery in the Department of Surgery at UC San Diego's School of Medicine.

Neurosurgery and Neurosciences maintained its top 50 ranking in *U.S. News & World Report.* Jacobs Medical Center opened a Quad-Pod of neurosurgical operating rooms with integrated cranial and spinal navigation, intra-operative MRI and CT capabilities, and sophisticated microscopy and imaging tools. Aside from the tremendous opportunities for neuro-oncology and restorative procedures, these suites are home to the stereo-EEG and laser ablation procedures that anchor our Level 4 Epilepsy Center.

In September 2017, the Joint Commission recognized the Jacobs Medical Center as a Comprehensive Stroke Center. Coupled with the Hillcrest location certification The division further initiated a 5-year national pilot program with the U.S. Navy to maintain combat readiness for naval neurosurgeons. These service members will participate with UC San Diego faculty and residents to provide cranial trauma care at our Hillcrest Level 1 Trauma Center. This model reinforces our commitment to providing state-of-the-

systems with two destination neurovascular centers.

art patient care and serve the community, and provides new opportunities for trauma research collaboration.

The faculty and residency program continued a strong history of academic productivity and national engagement. Faculty were responsible for 81 peer reviewed publications and 4,416 citations in the 2017–2018 academic year. Neurosurgery continued its strong support of UC San Diego medical students matching successfully

to top programs around the country and recruiting leading candidates for our own residency program.

Neurosurgery faculty member Dr. Hal Meltzer won the Faculty Teaching Award and two neurosurgical residents, Drs. Jeffrey Steinberg and David Santiago-Dieppa, won the resident teaching awards as voted by the medical students. These awards exemplify our strong tradition of teaching excellence at UC San Diego Neurosurgery, which will be enhanced by the new microsurgical lab slated to open at the Center for Future Surgery.

Faculty and trainees in the Division of Neurosurgery.







Top: Sharona Ben-Haim, Assistant Professor of Surgery in the Division of Neurosurgery, and neurosurgery residents in the operating room, implanting a responsive neurostimulation system using the "NeuroPace" system. This technology had previously never been performed in San Diego.

Above: Stroke and Carotid Neurovascular intervention at the JMC-CVC
Comprehensive Stroke Center.



**ALEXANDER KHALESSI, MD, MS, FAANS**Chief, Division of Neurosurgery

## **FACULTY**

#### PROFESSORS OF SURGERY

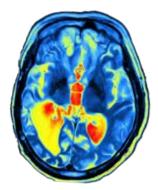
John Alksne, MD
David Barba, MD
Joseph Ciacci, MD
Alexander Khalessi, MD, MS, FAANS
Michael Levy, MD, PhD
Lawrence Marshall, MD
Hal Meltzer, MD
Ahmet Oygar, MD
Hoi Sang, MD
Marc Schwartz, MD
William Taylor, MD
Howard Tung, MD

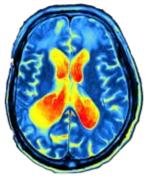
#### **ASSOCIATE PROFESSORS OF SURGERY**

Sunil Jeswani, MD Andrew Nguyen, MD, PhD Scott Olson, MD

### **ASSISTANT PROFESSORS OF SURGERY**

Sharona Ben-Haim, MD David Gonda, MD J. Scott Pannell, MD





We continue to expand our ranks, including through the world-class Skull Base Surgery program initiated by Dr. Rick Friedman from Otolaryngology and Dr. Marc Schwartz in Neurosurgery. These faculty bring destination integrated care to UC San Diego for the most complex cranial tumors and establish the highest volume service in the country.

670 MAJOR PEDIATRIC CASES

2,773 SURGICAL CASES FY17/18

\$650,000 IN COMBINED NIH AND INDUSTRY GRANTS FOR 2017/18.

**PACULTY** PUBLICATIONS

TOP 50 RANKING (46) IN USNWR

# DIVISION OF OTOLARYNGOLOGY/ HEAD AND NECK SURGERY

The Division of Otolaryngology/Head and Neck Surgery provides advanced medical and surgical care and specialized training in otology and neurotology, head and neck surgery, facial and reconstructive surgery, surgical oncology, laryngology, and thyroid and parathyroid surgery. Our surgeon-scientists are discovering and making available the latest advances in their field.

This year has been a milestone for our program. We were fortunate, together with the Division of Neurosurgery, to recruit Dr. Rick Friedman and Dr. Marc Schwartz, two of the most experienced Acoustic Neuroma surgeons in the United States who previously practiced at the House Ear Clinic, where they operated together for more than 15 years. Since this team was rejoined at UC San Diego in November 2017, surgical volume has significantly increased with referrals from across the country. Drs. Friedman and Schwartz have also launched an auditory brainstem program for patients with no useable cochlear nerves. In the procedure, electrode arrays are implanted directly against the auditory nuclei in the brainstem to restore hearing in deafened patients.

We also recruited Dr. Ryan Orosco, our former Chief Resident, who, following a microvascular reconstructive fellowship at Stanford University, joined the head and neck group based at Moores Cancer Center. Clinical activity in the division has increased by 25 percent and we are now the busiest surgical division in the Department of Surgery. Head and Neck surgery volumes have also grown with the addition of transoral robotic surgery for oropharyngeal lesions.

The Voice and Swallowing Center, under the direction of Dr. Philip Weissbrod, continues to expand with the recruitment of Dr. Andrew Vahabzadeh-Hagh, who completed his residency and fellowship under the direction of Dr. Gerald Berke at UCLA. This team is rounded out by three speech language pathologists who specialize in the professional voice, swallowing and voice rehabilitation for benign and oncological conditions.

Dr. Quyen Nguyen, who is internationally recognized as a pioneer in the development of fluorescently labeled probes for molecular navigation during surgery, was recently appointed Associate Director of Education and Training at Moores Cancer Center. She is also a member of the Clinical Molecular Imaging and Probe Development NIH Study Section.

Otolaryngology/Head and Neck Surgery Division, 2018.







**Top:** Dr. Quyen Nguyen speaking at the 10th Annual Dean's Symposium at UC San Diego.

**Above:** Dr. Joseph Califano, Director, Head and Neck Cancer Center. 6,068 SURGICAL CASES FY17/18

MORE \$2.8 MILLION IN RESEARCH FUNDING (FY17/18)

Graduates of our training programs are making an indelible mark in the field. Dr. Cherie-Ann Nathan, who is the Chair of Otolaryngology at Louisiana State University, Shreveport, is the President of the American Society of Head and Neck Surgery; Dr. Albert Merati, a Professor of Laryngology at the University of Washington, is the incoming President of the American Academy of Otolaryngology; and Dr. Roberto Cueva, a member of our Neurotology fellowship program at Kaiser, is the President of the American Otological Society.



JEFFREY P. HARRIS, MD, PHD, FACS Chief, Division of Otolaryngolory/Head and Neck Surgery

## **FACULTY**

#### **PROFESSORS OF SURGERY**

Joseph A. Califano, III, MD, FACS Daniela Carvalho, MD Rick Friedman, MD, PhD Jeffrey P. Harris, MD, PhD, FACS Anthony Magit, MD, FAAP Quyen T. Nguyen, MD, PhD Deborah Watson, MD, FACS

## PROFESSORS OF SURGERY, EMERITUS

Allen Ryan, PhD Robert A. Weisman, MD, FACS

## ASSOCIATE PROFESSORS OF SURGERY

Matthew Brigger, MD, MPH Kevin T. Brumund, MD, FACS Charles Coffey, MD Adam S. DeConde, MD Wen Jiang, MD Shelby Leuin, MD Javan Nation, MD Philip Weissbrod, MD

## ASSISTANT PROFESSORS OF SURGERY

Sapideh Gilani, MD, FACS Elina Kari, MD Ryan K. Orosco, MD

## **ADJUNCT PROFESSORS**

Arthur Boothroyd, PhD Min Guan, PhD

#### **ASSISTANT RESEARCH SCIENTIST**

Arwa Kurabi, PhD

## AUDIOLOGY FACULTY

## **CLINICAL PROFESSOR**

Erika Zettner, PhD, CCC-A

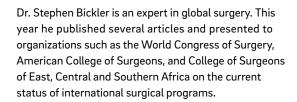
#### **ASSISTANT CLINICAL PROFESSOR**

Meghan Spriggs, AuD, CCC-A

# DIVISION OF PEDIATRIC SURGERY

Committed to improving the health and welfare of children and adolescents living in San Diego County, the Division of Pediatric Surgery provides comprehensive surgical care in subspecialties such as general abdominal, trauma, oncology, neonatal and colorectal surgery.

The Division of Pediatric Surgery supports a robust clinical service. Educationally, we provide pediatric surgical exposure to medical students and residents interested in pediatric surgery. The division is involved nationally in advocacy for pediatric trauma and supports several international health initiatives. The team has also supported multiple clinical and basic science research projects, which have been presented both regionally and nationally. The team has also developed several quality based initiatives to improve care.



Division Chief Dr. Timothy Fairbanks has led the Pediatric Surgery Fellowship Program to full ACGME accreditation. He also published a paper with UC San Diego graduating Chief Resident Dr. Simone Langness on the utility of D-dimer in a diagnosis of head trauma.

Dr. Karen Kling has provided excellent leadership and mentorship as the associate program director for the fellowship program. She continues her leadership in refining educational content for students, residents and fellows. She presented her research at the Pacific Association of Pediatric Surgeons (PAPS) and the International Pediatric Endosurgery Group (IPEG).

Our newest faculty member, Dr. David Lazar, is building a diverse clinical practice. A UC San Diego general surgery residency alumnus, he is also proud to serve as the liaison to UC San Diego general surgery residents.

Dr. Nicholas Saenz remains a clinical workhorse. He provides excellent care for general surgery patients and specialized multidisciplinary surgical care to pediatric surgical oncology patients.

Dr. Hari Thangarajah continues his work on several pediatric surgical outcomes research projects. He was honored to be an invited lecturer at a meeting of pediatric surgeons and neonatologists in Baja California, Mexico.





Dr. Mary Hilfiker retired this year after a long and distinguished career serving the children and families of San Diego County. She was instrumental in improving the care of trauma patients in San Diego County's only Level 1 pediatric trauma center, and mentored many students and residents interested in pediatric surgery. She will be missed by all those who worked with her and we wish her well in the next phase of her life.

Finally, Dr. Bhargava Mullapudi completed his ACGME Accredited Pediatric Surgery Fellowship. He is currently at Cincinnati Children's Hospital working as a Transplant Fellow. Dr. Benjamin Keller joined our fellowship program this year.



**TIMOTHY FAIRBANKS, MD**Chief, Division of Pediatric Surgery

# **FACULTY**

# **PROFESSORS OF SURGERY**

Stephen Bickler, MD, FACS Timothy Fairbanks, MD Mary Hilfiker, MD, PhD, MMM Karen Kling, MD Nicholas C. Saenz, MD

# ASSISTANT PROFESSORS OF SURGERY

David Lazar, MD Hari Thangarajah, MD, MPH

### **FELLOW**

Bhargava Mullapudi, MD



# DIVISION OF PLASTIC SURGERY

The Division of Plastic Surgery is internationally recognized for its surgical innovation, and excellence in teaching and research. Our faculty have clinical expertise in microsurgery, breast surgery, craniofacial and pediatric plastic surgery, burn reconstruction, complex wound management, hand and peripheral nerve surgery, and aesthetic surgery.



Our division collaborates with many other specialties to provide comprehensive multidisciplinary team care to our patients. With a flourishing research enterprise and training program, the Division of Plastic Surgery is now in its 42nd year.

We are in the second year of our six-year Integrated Residency Program. We currently have four residents in our integrated track and three in our three-year Independent Residency Program, which accepts applicants after completion of general surgery training. Dr. Amanda Gosman is the residency Program Director and Dr. Samuel Lance is the Associate Program Director. The division also accepts one fellow per year into its Craniofacial and Pediatric Plastic Surgery Fellowship.

San Diego hosted the 68th Annual Meeting of the California Society of Plastic Surgeons (CSPS) this year and Dr. Ahmed Suliman did a wonderful job as the Scientific Program Committee Chair. Dr. Jack Fisher, UC San Diego Professor Emeritus and founder of our Plastic Surgery division, was honored with the Gary

Brody MD Family Lectureship. Dr. Fisher gave an inspiring lecture on "Town Versus Gown" describing UC San Diego Plastic Surgery's long-standing collaborative relationship with the local private practice plastic surgery community. Dr. Gosman was honored with the CSPS Distinguished Academician Award.

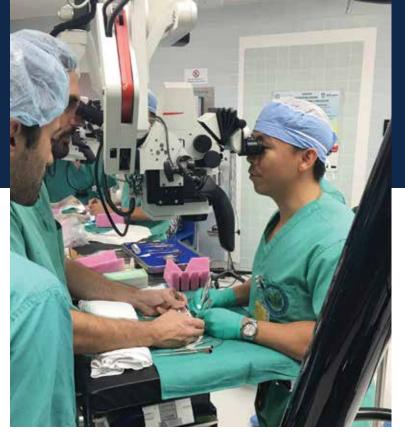
In the research arena, Dr. Ahmed Suliman collaborates with UC San Diego's Division of Endocrinology and ViaCyte, Inc., a biotechnology firm specializing in regenerative medicine. This study launches the first-ever human Phase I/II clinical trial of a stem cell-derived therapy for patients with Type 1 diabetes.

Dr. Amanda Gosman, Interim Chief of the Division of Plastic Surgery, and colleagues from San Diego State University continue their in-depth investigation into the health-related quality of life (HRQoL) of pediatric patients with craniofacial conditions. The project has resulted in a patient reported outcome measure in English and Spanish for patients with facial differences and their parents. This project has been supported by the Rady Children's Hospital-San Diego Surgical Research Fund Grant and by the Altman Clinical and Translational Research Institute Academic-Community Partnership Pilot Project Grant provided by the National Institutes of Health. Additional funding was awarded in 2016-17 by the Rady Children's Hospital-San Diego Board of Trustees Academic Enrichment Program Grant to complete the cognitive phase of measure development, which was completed this year. This project is preparing to enter the national multicenter validation and fieldtesting phase.

Dr. Gosman was elected to the American Society of Plastic Surgeons (ASPS) Judicial Council, and is a member of the Board of Directors of ASPS, the American Council of Academic Plastic Surgeons (ACAPS), and



Faculty and trainees in the Division of Plastic Surgery.





**Top:** Plastic surgery residents practicing microsurgery.

Above: Dr. Asra Hashmi, Dr. Amanda Gosman, medical student Michael Brandel, and Dr. Samuel Lance attend the American Cleft Palate-Craniofacial Association annual meeting.

**Right:** Dr. Ahmed Suliman and trainee at the 1st Annual ACAPS West Coast Plastic Surgery Boot Camp.

**Below rght:** Dr. Amanda Gosman, Interim Division Chief, and Dr. Bryan Clary, Department Chair.



the California Society of Plastic Surgeons. She has demonstrated a commitment to international humanitarian work and has been recognized by the San Diego community for her outreach work with ConnectMed International, a non-profit organization she founded in 2010. In the past year, Dr. Gosman was also named as one of *The Daily Transcript's* Influential Women of San Diego.

1,340 SURGICAL CASES FY17/18

18
FACULTY
PUBLICATIONS

36 TRAINEES AT 2017 PLASTIC SURGERY BOOTCAMP



**AMANDA GOSMAN, MD**Interim Chief, Division of Plastic Surgery

# **FACULTY**

# **PROFESSORS OF SURGERY**

Marek Dobke, MD, PhD Amanda Gosman, MD Mayer Tenenhaus, MD, FACS

# ASSOCIATE PROFESSORS OF SURGERY

Mark Rechnic, MD Ahmed Suliman, MD

# ASSISTANT PROFESSOR OF SURGERY

Samuel Lance, MD

### **INTEGRATED RESIDENTS**

Michelle Zaldana, MD/PGY3 Anthony Kordahi, MD/PGY2 Sean Li, MD/PGY2 Kevin Engler, MD/PGY1

# **INDEPENDENT RESIDENTS**

Chris Reid, MD/PGY8 Chinwe Kpaduwa, MD/PGY7 Adam Hauch, MD/PGY6

# **CRANIOFACIAL FELLOW**

Asra Hashmi, MD



# DIVISION OF SURGICAL ONCOLOGY

The Division of Surgical Oncology maintains a robust clinical and research enterprise and has the distinction of offering clinical programs that draw patient referrals nationally and internationally. Our faculty are at the forefront of treatment for patients with GI stromal tumor, hepatobiliary-pancreatic, and peritoneal malignancies, and in the use of fluorescence-guided surgery.



All division members are active in basic and/or clinical research, funded by the National Institutes of Health/ National Cancer Institute, the Veterans Administration, and Stand Up to Cancer, among others. Residents interested in surgical oncology are strongly encouraged to join one of these laboratories during their research years. In the past year, new clinical trials for patients with hepatocellular carcinoma and peritoneal malignancies, as well as a viral-based vaccine study for patients with solid tumors were developed and/or led by division faculty.

Dr. Jason Sicklick's clinical practice and research focus on treating and studying patients with gastrointestinal stromal tumors (GIST) and other abdominal/retroperitoneal sarcomas, as well as hepatobiliary malignancies.

Dr. Jason Sicklick received the prestigious James IV Traveling Fellowship. Awarded by the James IV Association of Surgeons, the fellowships pays a stipend allowing young, academic surgeons a four-week period of foreign travel, with the goal of promoting communication and collaboration in the surgical community.

Dr. Joel Baumgartner's work, "Preoperative Circulating Tumor DNA in Patients with Peritoneal Carcinomatosis Is an Independent Predictor of Progression-Free Survival" was selected for a plenary talk at the Society of Surgical Oncology meeting in Chicago.

Our peritoneal surface malignancy program attracts approximately 75 percent of its patients from outside San Diego County and patients from as far as four continents have been treated at Jacobs Medical Center this past year.

Dr. Divya Sood's work, "RON Kinase Inhibition Modulates the Pancreatic Cancer Microenvironment to Promote an Antitumor State" was selected for a plenary session talk at the Academic Surgical Congress meeting in Jacksonville, Florida.

Division members performed their 500th cytoreductive surgery with HIPEC (heated intraperitoneal chemoperfusion) and launched an interdisciplinary program with the Division of Gynecologic Oncology to offer this treatment to ovarian cancer patients. UC San Diego surgical oncologists have performed HIPEC on select cancer patients since 2007, and today, UC San Diego is one of only 10 high-volume HIPEC centers in the United States and the only one in the Western United States.



**Top:** Dr. Kaitlyn Kelly doing a laparascopic gastrectomy with observers from the Society for Clinical Surgery.

**Right:** Faculty and trainees at the Academic Surgical Congress in Jacksonville, Florida.

**Below:** Dr. Michael Bouvet and Dr. Robert Hoffman at a meeting of the Japan Society of Clinical Oncology.







**ANDREW M. LOWY, MD, FACS** Chief, Division of Surgical Oncology

# **FACULTY**

# **PROFESSORS OF SURGERY**

Michael Bouvet, MD, FACS Bryan M. Clary, MD, MBA, FACS Andrew M. Lowy, MD, FACS

# ASSOCIATE PROFESSORS OF SURGERY

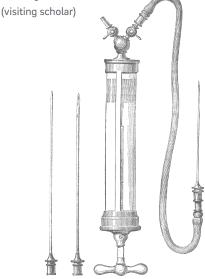
Joel Baumgartner, MD Jason Sicklick, MD, FACS Jula Veerapong, MD Rebekah White, MD, FACS

# ASSISTANT PROFESSOR OF SURGERY

Kaitlyn Kelly, MD

# **RESEARCH FELLOWS**

Sudeep Banerjee, MD/PGY3
Jonathan DeLong, MD/PGY5
Ho Kyoung Hwang, MD
(visiting scholar)
Thinzar Lwin, MD/PGY5
Jayanth Suryana Narayanan, PhD
Vi Nguyen, MS2
Sangkyu Noh, BS
Divya Sood, MD/PGY5
Sam Nang Yoon, MD









Above: Dr. Jula Veerapong and Dr. Joel Baumgarnter.

Left: Dr. Jason Sicklick in the operating room.



949 SURGICAL CASES FY17/18

24 RESEARCH FELLOWS TRAINED BY DIVISION MEMBERS IN FY2017

500th

CYTOREDUCTIVE SURGERY/HIPEC OPERATION

# TRAUMA, SURGICAL CRITICAL CARE, BURNS, AND ACUTE CARE SURGERY

The Division of Trauma, Surgical Critical Care, Burns, and Acute Care Surgery serves more than 7,000 patients every year in San Diego and Imperial Counties. Since 1973, we have provided state-of-the-art care at the UC San Diego Regional Burn Center, and, since 1976, have led the nation in effective trauma care, operating the region's first Level 1 Trauma Center.

Our nine clinical and three research faculty are engaged in a robust research program in clinical outcomes and basic science/translational research. We also host a prestigious fellowship program in surgical critical care and acute care surgery.

This year, the UC San Diego Trauma Center received full, three-year re-verification as a Level I Trauma Center by the American College of Surgeons. This achievement recognizes the Trauma Center's dedication to providing optimal care for injured patients.



Trauma faculty are leading efforts to expand Stop the Bleed, a campaign launched in October of 2015 by the American College of Surgeons that aims to train, equip, and empower bystanders to help in a bleeding emergency before professional help arrives. UC San Diego's trauma team has led Stop the Bleed training courses at the San Diego International Airport, San Diego Convention Center, Petco Park, for the UC San Diego Police, and the city of Chula Vista, among others. This training class teaches individuals how to recognize potentially life-threatening bleeding and how to intervene to control bleeding by using techniques including direct pressure, wound packing, and tourniquet use. The Trauma team has also partnered with UC San Diego Emergency Management to provide training courses for UC San Diego Health employees and to place bleeding control stations across the UC San Diego Health campus.

Trauma faculty hosted the San Diego Trauma, Surgery and Critical Care Workshop, providing education on innovation, advancements and procedures in Surgical Critical Care. More than 120 physicians, nurses and allied health professionals attended.

Dr. Jay Doucet was named Interim Chief of the Division of Trauma, Surgical Critical Care, Burns and Acute Care Surgery; and Chair of the Disaster Committee for the American Association for the Surgery of Trauma. Dr. Doucet also became a Governor of the American College of Surgeons.

Dr. Todd Costantini was named Trauma Medical Director and Chair of the Multi-institutional Trials Committee for the American Association for the Surgery of Trauma.

Dr. Laura Godat was named State Vice-Chair for San Diego/Imperial County in the American College of Surgeons Committee on Trauma.





\$1 MILLION IN RESEARCH FUNDING

26 FACULTY PUBLICATIONS

1,435
SURGICAL CASES FY17/18

BLEIDCONTAL

**Top:** Members of the trauma team in the operating room.

**Above left:** Dr. Laura Godat training department chair Dr. Bryan Clary in how to use a tourniquet to stop bleeding.

**Above:** Dr. Todd Costantini with Monique Imroth, Director of Emergency Management.

# JAY DOUCET, MD, MSc, FRCSC, FACS

Interim Chief, Division of Trauma, Surgical Critical Care, Burns, and Acute Care Surgery

# **FACULTY**

### **PROFESSORS OF SURGERY**

Andrew Baird, PhD Antonio De Maio, PhD Jay Doucet, MD, MSc, FRCSC, FACS Brian Eliceiri, PhD

# ASSOCIATE PROFESSORS OF SURGERY

Todd Costantini, MD, FACS Leslie Kobayashi, MD, FACS Jeanne Lee, MD, FACS

# ASSISTANT PROFESSORS OF SURGERY

Allison Berndtson, MD, FACS Emily Cantrell, MD Sara Edwards, MD Laura Godat, MD, FACS Amelia Simpson, MD

# **ASSOCIATE PROJECT SCIENTIST**

David Cauvi, PhD

# **CLINICAL INSTRUCTOR**

Paul Albini, MD

# **FELLOWS**

Meghan Cochran-Yu, MD, PGY 6 Nikolas Kappy, MD, PGY 6 Hector D. Ludi, MD, PGY 6

# RESEARCH RESIDENT

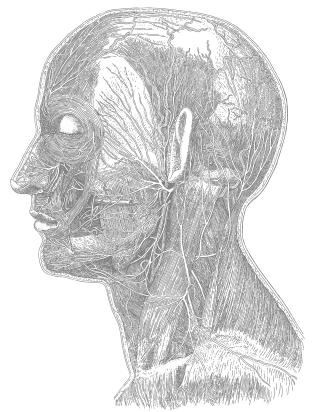
Elliot Williams, MD



# DIVISION OF VASCULAR AND ENDOVASCULAR SURGERY

The Division of Vascular and Endovascular Surgery continues to be an incredible resource for patients in the greater San Diego region who are afflicted with disorders of the central and peripheral arterial and venous systems. The division provides not only state of the art care, but is on the leading edge of new technology development and testing.

The division expanded its clinical trial portfolio to make new and exciting treatments available to patients, including the Humactye trial, which will utilize a bioengineered conduit (tube) as an alternative to a patient's own vein for the construction of hemodialysis access. The ROX trial is designed to treat medically resistant hypertension (high blood-pressure) by creating a small connection (coupler) between the arteries and veins in the abdomen. The CONFIDENCE trial improves on existing techniques for carotid stenting by using a novel and safer protection system with a newly designed low-porosity stent. The division continues enrolling in the NIH-sponsored BEST trial, which randomizes patients with critical limb ischemia



to either open bypass or endovascular treatments. Other clinical device trials are also in submission, with new and exciting trials to begin this year.

This year has been a busy and productive year for the division under the interim leadership of Dr. John Lane. Dr. Lane served as the President of the Southern California Vascular Surgical Society in 2018, hosting the annual meeting in Laguna Beach, California at which the division presented on polymer-based aortic aneurysm repair (Dr. Michael Levine), perigraft arterial sac embolization (Dr. Abid Mogannam) and branched and fenestrated aortic endograft experience (Dr. Antonio Covarrubias). Dr. Covarrubias received second place for the Bob Hye Research Award at the meeting. We are proud to have recruited two outstanding UC San Diego residents to become our upcoming Vascular Fellows: Dr. Michael Levine (2018–2020) and Dr. Rebecca Marmor (2019–2021).

Dr. Erik Owens announced plans to step down as Chief of Surgical Services for San Diego Veterans Affairs in January 2019 after 17 years of service in the role. Dr. Dennis Bandyk continues to serve as the Editor of Seminars in Vascular Surgery while Dr. Andrew Barleben served as the Chief of Vascular Surgery at the San Diego VA. As part of the division's collaboration with the UC San Diego Department of Engineering, Dr. Steve Sparks has a funded project involving modeling of normal pressure hydrocephalus, and Dr. Barleben is studying CT and MRI flow modeling in aortic aneurysms and occlusive disease.

The Department recently concluded a national search for the permanent role of Chief of the Division of Vascular and Endovascular Surgery and was able to secure the recruitment of Dr. Mahmoud Malas. Dr. Malas joins the division from Johns Hopkins University, where he served as Professor of Surgery at the Johns Hopkins Medical



**Above:** Dr. Andrew Barleben in the operating room. **Below right:** Dr. John Lane and Dr. Abid Mogannam making a modified graft.



# 8 FACULTY PUBLICATIONS





JOHN LANE III, MD, FACS Interim Chief, Division of Vascular and Endovasular Surgery

# **FACULTY**

# **PROFESSORS OF SURGERY**

Dennis F. Bandyk, MD, FACS John Lane III, MD, FACS Erik L. Owens, MD, FACS

# ASSOCIATE PROFESSOR OF SURGERY

Steven A. Sparks, MD

# ASSISTANT PROFESSOR OF SURGERY

Andrew R. Barleben, MD

### **FELLOWS**

Antonio Covarrubias, MD Abid Mogannam, MD

School and Professor of Epidemiology at the Bloomberg School of Public Health. He also directed the Center for Research Excellence and Surgical Trials at the Johns Hopkins Hospital and Johns Hopkins Medical Institutes; and was Chief of Endovascular Surgery and Director of the Vascular and Endovascular Surgery Clinical Research Center at Johns Hopkins Bayview Medical Center.

Dr. Malas is one of the most active clinical trialists in the country in the field of vascular surgery, a field where the development and implementation of new technology is rapidly occurring. He serves as the national or site-principal investigator for over 30 clinical trials at the Johns Hopkins Medical Institutes and has been the recipient of the Johns Hopkins Clinical Scientist Award for two years in a row. Dr. Malas completed his Vascular and Endovascular training at the Albert Einstein College of Medicine under the mentorship of endovascular surgery pioneer, Dr. Frank Veith, after serving as a resident in general surgery at the University of Southern California.



# GLOBAL SURGERY

The Department of Surgery at UC San Diego is committed, not only to improving access to, and the quality of, surgical care at home, but also around the world–especially for the underserved. We aim to support efforts in research and education that equip trainees for global service, contribute to the global policy dialogue, and directly serve communities in low- and middle-income countries.







# **STEWARDSHIP**

With your help, the Department of Surgery at UC San Diego School of Medicine is changing lives. Gifts to the Department of Surgery support advances in patient care, cutting-edge research, endowed professorships, and resident and fellow education.

### **FUNDING A CURE FOR CANCER**

Dr. Antonio Grillo-López, a hematologist and oncologist, is a pioneer in clinical cancer research. Instrumental in the development of Rituxan, which treats non-Hodgkins Lymphoma, and more than 25 other anticancer agents, he and his wife, María Marxuach-Grillo, have made it their life's work to support people living with cancer, as well as research to find new cures.

Dr. Antonio Grillo-López and María Marxuach-Grillo.

Now retired, the Grillo-Marxauch family are continuing in their mission through philanthropy. This year, they made a gift to the Department of Surgery's *Research* for a *Cure for Pancreatic Cancer*, an effort led by Dr. Andrew Lowy, the Chief of the Division of Surgical Oncology.

"When I was working in academia and private practice, I saw a lot of suffering," says Dr. Grillo-López. "To be able to extend life for some people is a gift."

Support from the Grillo-Marxauch family will enable the pancreatic cancer research program to use innovative basic research to identify and validate new strategies for the treatment and ultimately the cure of pancreatic cancer. Areas of focus include pancreatic cancer immunotherapy and targeting pancreatic cancer stem cells.

Says Dr. Grillo-López: "Our cure rate has improved in many areas, but there's still a lot of room to develop new treatments for many of the solid tumors and

"The question isn't why to give, it's why not?"

-Dr. Antonio Grillo-López

pancreatic cancer is one of them. We've been impressed with Dr. Lowy and his work, and we have visited his labs. We believe this is one area of research where we can put our money to work."

María agrees: "We share what we have with our family and with others. We have always been involved in cancer research and cancer cures. I have had a brain tumor, Antonio has had cancer, and many friends and family have had cancer. We want to find more cures."

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Karri M. Meehan

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Kathryn A. Trulock

Kathy Ekker

Kathy Welcher

Katie Boyle

Katzke Family

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Keith C. Johnson

Keith Larson

Kelley and Todd Sucher

Kelly J. and Philip A. Wasserman

Kerry and Jeffrey Peter

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Kevin Mylod

Kimberly L. and Michael B. York

Kristin Bonaguidi

Kristina Thomas

Kuang-Chung and Shu Chien

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and Ralph A. Lewin, PhD\*

Larry D. Cogdill

Laura G. and Lyall Kitson

Laura Hennes

Laura Iwan

Laura Schadler

Laura Tannenwald

and Eric N. Tannenwald '90

Laura Zirinsky

Lauren Caplan

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Melody and Jeffrey P. Spurlock

Merrilyn T. Dow and Warren W. Taylor

Michael D. Welcher Michael Drescher

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Rachel and Ryan Goldenhar

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Rebecca Turner **Robb Lippitt** Robert Lauzier Robert Lewis Robin and Kenneth Kahrs Robin and Robert McAfee Robin Zatzkin Rochelle and Richard H. Manson Ron P. Brady Rona R. and Robert A. Mellman Ronald Goble Ronald Neitzel Ronna and Harvey Heller Roseann and Michael Pittakas Roslyn A. Steinberg Roxanne and David Cohen Rozane and Paul Williamson **Ruth Fritkin Ruthmarie and Don Schroeder** Sally Blitz-Weisz Sally Krugel and Richard Krugel, MD Sally L. and William E. Fleck Sally Songy Samira Zeydi Sandee and Jeffrey A. Birdwell Sandra and Mike Florence Sandra and Paul Renner Sandra L. and Sylvester Stewart Sr. Sandra Rosen Sandy McKinnon Sarah and Alexander A. Khalessi Sarah and Arnold Bloch Saundra C. and Glenn A. Buller Scott Goetz Sean Van Gemert Seema S. and Sujit J. Shah Selana F. and Fred E. Shaheen Shammy B. and Daniel Patoyian Shari F. and Frederick N. Schenk Shari Kritsch Sharon A. Josepho '84 Sharon A. Phelps Sharon M. Sterley Sharon Miret Shawn A. Pugel Shawn N. and Lance Steaman Sheila and Sean Wood Sheila Foley Sheila R. Lesher Shelly Renner-Allen Sherri L. and Joel A. Bakos **Sherrie Connor** 

Shirlee F. Berger

Shirley Shagrin

Shirley P. and Henry K. Lee

Sona Simsarian Sonia Bubar Sonya G. Wang and Clark C. Chen Stanton S. Perry Stephanie and Dapper Spar Stephanie Mackey Stephanie McGuire Stephanie Nelson Stephen Roehrs Steve Oakey Steven Jackman Sue A. and Kenneth P. Durham Sue and Eugene H. Bosart Susan and Richard Roth Susan Greiner Susan J. Greenstein Susan M. and Martin Lowy Susan P. Snyders Susanne Lee Suzanne S. and John G. Williams T. Johnston Tammie Blum Tammy and Louis Vener Tara Stephenson Theresa Cook Therese Farrell Thomas Dorsch Tianna Howell Timothy C. Hayden Tina and Kurt E. Moser Tina Patterson Tom Beddingfield Tracie Horstman Tracy and Conor McKeown Tracy Krug Treva Bever Trudi Wineman **Trudy Gillions** Valerie A. and Charles M.\* Ewell Valerie Field Vikki Goodman Vincent Capone

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Wendy A. Lloyd

William Savin

Wendy A. Williams

William B. Williams

Wiveka E. O'Malley

Yvonne G. Denser

Yvonne and Abraham Ben Hur

Yvonne D. and Harold J. Burns

Virginia and Chungpah Lee

Shiv Verma

ORGANIZATIONS American Rhinologic Society **American Society of Colon** and Rectal Surgeons **Associated Student Body of** Pacific Trails Middle School **CRC Cares Foundation** Drum Channel, LLC Indeed, Inc. Lighting the Path Forward Point Loma Rotary Club Roxanne and David Cohen Surgical Infection Society University of Pittsburgh Medical Center USS Tiru SS 416 **Submarine Association** 

\* Deceased

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# **GRADUATING TRAINEES**

# CARDIOVASCULAR FELLOWSHIP Jakub Wilhelm

Lawrence Memorial Hospital, Kansas

### CRANIOFACIAL FELLOWSHIP

### Asra Hashmi

Loma Linda University, Department of Plastic and Reconstructive Surgery

# **GENERAL SURGERY RESIDENCY**

### Ryan Broderick

UC San Diego, Clinical Fellowship in Minimally Invasive Surgery

### Simone Langness

UC San Francisco, Critical Care and Trauma Fellowship

### Michael Levine

UC San Diego, Fellowship in Vascular Surgery

# Patrick McCarty

University of Southern California, Fellowship in Advanced GI and Minimally Invasive Surgery

# Vijay Menon

Massachusetts General Hospital, Boston, Abdominal Transplant Fellowship

# OTOLARYNGOLOGY RESIDENCY

# Avram Hecht

Private practice in Washington state

### William Moss

Saipan Regional Medical Center

# MINIMALLY INVASIVE SURGERY FELLOWSHIP

### Dave Bernstein

Dignity Health-St. Bernardine Medical Center; San Bernardino, California

### Thach Pham

American Hospital in Landstuhl, Germany

### **NEUROSURGERY RESIDENCY**

### **Gunjan Goel**

Fellowship, The Royal College of Surgeons of Edinburgh

### **Dustin Hatefi**

Skull Base Surgery Fellowship, UC Irvine

# **NEUROTOLOGY FELLOWSHIP**

### Hitomi Sakano

University of Rochester in New York, assistant professor in the Department of Otolaryngology

# PEDIATRIC SURGERY FELLOWSHIP

# Bhargava Mullapudi

Cincinnati Children's Hospital

# PEDIATRIC OTOLARYNGOLOGY FELLOWSHIP

### **Ronak Rahmanian**

Assistant Professor of Surgery, Pediatric Otolaryngology, UC San Diego

# PEDIATRIC NEUROSURGERY FELLOWSHIP

### Dr. Carlos Sanchez

Children's National Medical Center, Washington D.C.

# PLASTIC SURGERY RESIDENCY

### **Christopher Reid**

Microsurgery Fellowship, Division of Plastic and Reconstructive Surgery, UCLA

# TRAUMA, SURGICAL CRITICAL CARE, BURNS AND ACUTE CARE SURGERY FELLOWSHIP

# Kuong Ngann

### John Woods

Riverside University Health System

# **Brandon Woodward**

Private practice in San Bernadino, California

# VASCULAR AND ENDOVASCULAR SURGERY FELLOWSHIP

### Abid Mogannam

Private practice, San Jose, California

# **RESIDENTS AND FELLOWS 2018/19**

# BREAST SURGICAL ONCOLOGY FELLOWSHIP

**Chris Tokin** 

# CARDIOTHORACIC SURGERY FELLOWSHIP

Yuichi Ishida Scott Chicotka

# CRANIOFACIAL AND PEDIATRIC PLASTIC SURGERY FELLOWSHIP

Sun Tso Hsieh

# GENERAL SURGERY RESIDENCY PGY 5 - Chiefs

Timothy Law Shanglei "Shawn" Liu Rebecca Marmor Andrea Munden

Sarah Stringfield

Rachel Voss

Kathryn Parker

### PGY 4

Maha Alkhuziem Alexandra Brito Theresa Chan

Thinzar "Helmi" Lwin

Edna Shenvi

Divya Sood

Erin Ward

# PGY 3

Danielle Carroll Jonathan DeLong Claire Janssen Charissa Lake Stephen Niemiec Elizabeth Roderick

# PGY 2 - Categorical

Rachel Blitzer

Harrison Chau

Sasha Halasz

Jonathan Li Eleftherious Makris

Jared Matson

James Reeves

# PGY 2 - Preliminary

Ramon Diez-Barroso, Jr. Jocelyn Green

Steven Hawkins

# PGY1 - Categorical Interns

Victoria Bendersky Rachel Jensen Jay Meisner Zongyang "Tom" Mou Rohini Patel Ashwyn Sharma Michael Turner

# PGY1 - Preliminary Intern

Raeda Taj

Sean Flynn

# Research Fellows Rebecca Dominguez

Karl-Hermann Fuchs Hannah Hollandsworth Jenny Lam Arielle Lee Tokio Matsuzaki Kai Neki Elliot Williams

Beigun "Mark" Zhao

# MINIMALLY INVASIVE SURGERY FELLOWSHIP

Ryan Broderick Frank Robert Cubas

# NEUROSURGERY RESIDENCY PGY7

Vincent Cheung Reid Hoshide

# PGY 6

David Santiago-Dieppa Jeffrey Steinberg

### PGY 5

Joel Martin Robert Rennert

# PGY 4

Daniel Cleary Mihir Gupta

### PGY 3

Usman Khan Brian Hirshman

# PGY 2

Jillian Plonsker Harjus Birk

# PGY1

Luis Daniel Diaz-Aguilar Arvin Wali

# NEUROTOLOGY AND SKULL BASE SURGERY FELLOWSHIP

Joe Saliba Kareem Tawfik

# OTOLARYNGOLOGY RESIDENCY PGY 6

Aria Jafari Daniel Schaerer

### PGY 5

Sunny Haft John Pang

### PGY 4

David Bracken Bharat Panuganti

# PGY 3

Andrey Finegersh Jesse Qualliotine Joshua Stramiello

# PGY 2

Emily Funk Robert Saddawi-Konefka

### PGY'

Kayva Crawford Farhoud Faraji Omid Moshtaghi

# PEDIATRIC SURGERY FELLOWSHIP

Benjamin Keller

PEDIATRIC OTOLARYNGOLOGY FELLOWSHIP

Tzyy-Nong Liou

# PLASTIC SURGERY RESIDENCY

Independent Program PGY 8

Chinwe Kpaduwa

# PGY 7

Adam Hauch

### PGY 6

Sarah Crowley

# Integrated Program

PGY 4

Michelle Zaldana

# PGY3

Sean Li

### PGY 3

Anthony Kordahi

### PGY 2

Kevin Englar

# PGY1

**Riley Dean** 

### PGY1

Paige McLean

# TRAUMA, SURGICAL CRITICAL CARE, BURNS AND ACUTE CARE SURGERY FELLOWSHIP

Meghan Cochran-Yu Nikolas Kappy Hector Daniel Ludi

# VASCULAR AND ENDOVASCULAR SURGERY FELLOWSHIP

Antonio Covarubias Michael Levine



# HONORS AND AWARDS

### **ANATOMY**

In October of 2017, Dr. Mark Whitehead, Chief of the Division of Anatomy, was appointed Interim Associate Dean for Undergraduate Medical Education at UC San Diego.

### **BREAST SURGERY**

Dr. Sarah Blair and Dr. Anne Wallace were elected to *San Diego Magazine's* Top Doctors in 2017, continuing years of inclusion in this list of surgeons within the division.

Dr. Ava Hosseini was accepted to the American Society of Breast Surgeons Young Surgeons Committee.

# CARDIOVASCULAR AND THORACIC SURGERY

Dr. Patricia Thistlethwaite, professor of surgery, became President of the Western Thoracic Surgical Association. She is the first woman president and the first faculty from any of the UC campuses to achieve such honor.

Dr. Michael Madani, Chief of the Division, was appointed as the holder of the John G. Pickard Chair in Cardiac Surgery.

Dr. Mark Onaitis received the VA merit review award for *Proximal Differentiation* Therapy for K-Ras-Induced Lung Adenocarcinoma

# **COLON AND RECTAL SURGERY**

Dr. Bard Cosman received a 2018 "Star Certificate" from *Diseases of the Colon & Rectum*. Dr. Bard serves on the editorial board of DCR.

Dr. Samuel Eisenstein received the 2017 Excellence in research award for his presentation, Successful Adoption of Robotic Transanal Minimally Invasive Surgery: A Multi-Institutional North American Experience, at the American College of Surgeons Annual Meeting. He was also interviewed on KUSI News about the new ACS guidelines for colon cancer screening.

Dr. Sonia Ramamoorthy was featured in *The Atlantic Monthly* March 2018 edition: "The Man Who Saw Inside Himself." She was also interviewed on Aspen Public Radio in Spotlight Health 2018: The

Cutting Edge of Science and Medicine; and presented at Exponential Medicine November 2017: Convergence: Patient, Surgeon and Roboticist.

# HEPATOBILIARY AND TRANSPLANT SURGERY

Dr. Jennifer Berumen received the Tulane School of Science and Engineering Young Alumni Award

Dr. Kristin Mekeel received the Mentorship award from UC San Diego's Women In Surgery Committee.

### MINIMALLY INVASIVE SURGERY

Dr. Santiago Horgan and authors received the 2017 Owen H. Wangensteen Scientific Forum—Excellence in Research Award for "Successful Adoption of Transanal Minimally Invasive Surgery (TAMIS) in Robotic Surgery: A Multi-Institutional North American Experience."

### **NEUROSURGERY**

Dr. Hal Meltzer won the Faculty Teaching Award.

Neurosurgical residents, Drs. Jeffrey Steinberg and David Santiago-Dieppa, won the Resident Teaching Awards as voted by the medical students.

Dr. Alexander Khalessi is Scientific Program Chairman for 2018 Congress of Neurological Surgeons Annual Meeting.

# OTOLARYNGOLOGY/HEAD AND NECK SURGERY

Dr. Matthew Brigger developed two new clinical programs: the Pediatric Surgical Airway Program and the Pediatric Aerodigestive Clinic. In the first year since inception, over 100 children have been evaluated with a significant decrease in time to diagnosis and improved accuracy of diagnosis resulting in improved patient satisfaction. In addition to a variety of presentations at national otolaryngology meetings, Dr. Brigger was invited to moderate and present a session on airway disorders in children with congenital heart disease to the Western Society of Pediatric Cardiology and received an invitation to deliver a plenary session and panel on pediatric speech disorders in Beirut, Lebanon.

Dr. Joseph Califano is the Quality and Value Chair for Moores Cancer Center and was appointed a board member of the UC San Diego Medical Center Accountable Care Organization. He was appointed a member of the NIH Head and Neck Cancer Steering Committee, and Co-Chair of the Mucosal Tumor section of the American Head and Neck Society. He was a keynote speaker at the 2017 International Federation of ORL Societies (IFOS) meeting in Paris.

Dr. Daniela Carvalho was elected Secretary of the prestigious Society for Ear, Nose and Throat Advances in Children (SENTAC).

Dr. Charles Coffey is active in the American Head & Neck Society where he currently serves on three service committees, the salivary surgery section, and most recently the Scientific Review Committee for the 10th International Conference of Head & Neck Cancer. He serves as the Co-Director of the Surgery Core Clerkship for UC San Diego's School of Medicine and is a 2018-19 Fellow in the Surgical Education Research Fellowship program, which is sponsored by the Association for Surgical Education.

Dr. Andrey Finegersh won the American Head & Neck Society Alando J. Ballantyne Resident Research Pilot Grant Award for his manuscript "Epigenetic Reprogramming of HPV Related Head and Neck Squamous Cell Carcinoma."

Dr. Jeffrey Harris received the American Otological Society Presidential Citation. In addition, at the IFOS Paris 2017—World ENT Congress he was the Moderator for the Meniere's disease management roundtable and gave a keynote lecture entitled "The Future of Inner Ear Drug Delivery."

Dr. Jesse Qualliotine won the 2018 American Academy of Otolaryngology-Head and Neck Surgery Foundation Resident Research Award.

Dr. Quyen Nguyen was invited to speak at the Dean's 2018 Spring Symposium celebrating the 50th anniversary of UC San Diego's School of Medicine. She was the Session Chair for the World Molecular Imaging Congress Special Interest Group for Optical/Surgical Navigation in 2017 and will be again in September 2018. She was also a keynote speaker at the International Congress on Computational Photography in May 2018 at Carnegie Mellon University, Pittsburgh, PA.

Dr. Deborah Watson is a Senior Oral Examiner for the Board of Otolaryngology; a Research Study Section Reviewer for the research foundation in our academy; a panel chairperson for the Combined Otolaryngologic Spring Meetings; and continues to be a course director for the Annual UC San Diego Superficial Anatomy and Cutaneous Surgery program, now in its 35th year.

Dr. Philip Weissbrod received the Excellence in Teaching award; and was named a Top Doc in San Diego Magazine, and a Regional Top Doctor by Castle Connolly. His research team received an award for research excellence at the Department of Surgery's Annual Symposium in Surgical Science.

### **PLASTIC SURGERY**

Dr. Christopher Reid received the House staff Kaiser Excellence in Teaching Award from UC San Diego School of Medicine in 2017.

Dr. Michelle Zaldana was recognized by UC San Diego medical students and became the recipient of prestigious Arnold P. Gold Foundation's Humanism in Medicine Resident Award in Surgery in 2017.

For the past four years, the Division of Plastic Surgery Research Group has won awards for Excellence in Research at the UC San Diego Department of Surgery Surgical Sciences Symposium.

Dr. Mark Rechnic was awarded the UC San Diego Division of Plastic Surgery Teacher of the Year Award in 2017.

Dr. Sean Li was awarded the UC San Diego Division of Plastic Surgery Academic Achievement Award in 2017.

Dr. Amanda Gosman received *The Daily Transcript's* "Influential Women of San Diego" Award and the California Society of Plastic Surgeons (CSPS) "Distinguished Academician Award" at the 2018 CSPS Annual Meeting.

### **SURGICAL ONCOLOGY**

Dr. Jason Sicklick received the prestigious James IV Traveling Fellowship. Awarded by the James IV Association of Surgeons, the fellowships pays a stipend allowing young, academic surgeons a four-week period of foreign travel, with the goal of promoting communication and collaboration in the surgical community. . Dr. Sicklick was also a nominee (2017) for the RARE Champion Of Hope in Medical Care & Treatment Award.

Drs. Jason Sicklick, Joel Baumgartner, Andrew M. Lowy, Michael Bouvet, and Bryan Clary (2016) were named "Top Doctors" by San Diego Magazine.

Dr. Andrew M. Lowy served as Lecturer/ Visiting Professor at Johns Hopkins University, Brigham & Women's Hospital, UT Southwestern, and the University of Cincinnati.

Dr. Bryan Clary was a visiting professor at the University of Alabama at Birmingham and City of Hope, and is President-Elect of the Society of Clinical Surgery.

# TRAUMA, SURGICAL CRITICAL CARE, BURNS, AND ACUTE CARE SURGERY

Dr. Jay Doucet was selected as a 2018 Health Care Hero in Emergency Medical Care by the *San Diego Business Journal*.

Dr. Laura Godat was awarded the UC San Diego Academy of Clinician Scholars (AoCS) Whitehill Award for Excellence for the Department of Surgery. AoCS is the body of distinguished faculty recognized by their peers for exceptional clinical skills, their commitment to patient care, medical education, and the advancement of new knowledge.

Dr. Todd Costantini was awarded the Excellence in Clinical Education Award by the UC San Diego General Surgery Residency. Trauma Research Fellow, Dr. Theresa Chan, was awarded the Shock Society Research Investigator Fellowship Award to support her basic science research. Dr. Chan also received second place in the American College of Surgeons Committee on Trauma National Basic Science Paper Competition for her project studying the role of the uniquely human gene CHRFAM7A in contributing to human variability in the injury response.

General Surgery Resident Dr. Elliot Williams was awarded the Surgical Infection Society Resident Basic Science Research Fellowship to support his project studying the role of exosomes in mediating the inflammatory response to injury.

# VASCULAR AND ENDOVASCULAR SURGERY

Dr. John Lane served as the President of the Southern California Vascular Surgical Society (SCVSS) in 2018, hosting the annual meeting in Laguna Beach, California.

Dr. Andrew Barleben will serve as Program Director of SCVSS in 2019; and as Recorder of SCVSS, 2018–2021.

Dr. Dennis Bandyk served as Editor of *Seminars in Vascular Surgery*.

First-year fellow, Dr. Antonio Covarrubias, received second place for the Bob Hye Research Award at this year's SCVSS meeting.

# **SELECT PUBLICATIONS**

# **ANATOMY**

- Meadows PM1, Whitehead MC2, Zaidi FN3.

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- Zaidi FN1, Meadows P, Jacobowitz O, Davidson TM. Tongue anatomy and physiology,the scientific basis for a novel targeted neurostimulation system designed for the treatment of obstructive sleep apnea. *Neuromodulation*. 2013 Jul -Aug; 16(4):376–86; discussion 386. doi: 10.1111/j.1525-1403.2012.00514.x. Epub 2012 Aug 31.

### **BREAST SURGERY**

- Eghtedari M1, Tsai C2, Robles J2, Blair SL3, Ojeda-Fournier H4. Tomosynthesis in breast cancer imaging: How does it fit into preoperative Evaluation and surveillance? Surg Oncol Clin NAm. 2018 Jan;27(1):33–49. doi: 10.1016/j. soc.2017.07.004. PMID: 29132564.
- Hosseini A, Khoury AL, Esserman LJ. Precision surgery and avoiding over-treatment.

  European Journal of Surgical Oncology. 2017; 43(5): 938–943.
- Manahan MA, Wooden WA, Becker SM,
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- Unkart JK, Hossini A, Wallace A. Tc-99m
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- Unkart JT, Proudfoot J, Wallace AM. Outcomes of one-day versus two-day injection protocols using Tc-99m tilmanocept for sentinel lymph Nnode biopsy in breast cancer. *Breast J.* July 2017. Internal Article ID: 15051632.
- Unkart JT, Wallace AM. Use of Tc-99m tilmanocept as a single agent for sentinel lymph node identification in breast cancer: A retrospective pilot study. *J. Anesth.* July 2017 [Epub ahead of print] PMID 28705929.
- Ward EP, Unkart JT, Bryant A, Murphy J,
  Blair SL. Influence of distance to hospital and
  insurance status on the rates of contralateral
  prophylactic mastectomy, a national
  cancer data base study. *Annals of Surgical Oncology*. 1–10 PMID: 28766225.
- Ward EP1, Yang J2, Delong JC1, Sung TW3, Wang J3, Barback C4, Mendez N5, Horgan S1, Trogler W2, Kummel AC2, Blair SL6. Identifying lost surgical needles with visible and near infrared fluorescent light emitting microscale coating. Surgery. 2018 Jan 12. pii: S0039-6060. PMID: 29338879.

# CARDIOVASCULAR AND THORACIC SURGERY

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### **COLON AND RECTAL SURGERY**

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- Eisenstein, S. Commentary on Kang et al.
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# **FUNDED RESEARCH**

| PRINCIPAL INVESTIGATOR           | RESEARCH TITLE                                                                                                                                    | FUNDING SOURCE                                                    |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| BREAST SURGERY                   |                                                                                                                                                   |                                                                   |
| Sarah Blair, MD                  | An improved BREAST MRI contrast using folate targeting and gadolinium oxide nanoparticles                                                         | Moores Cancer Center pilot grant                                  |
| Sarah Blair, MD                  | Non-circulating microparticles for improved localization and resection of cancer.                                                                 | NIH-NCI                                                           |
| Anne Wallace, MD, FACS           | Investigation of serial studies to predict your therapeutic response with imaging and molecular analysis 2 (ISPY-2 Trial) (2016)                  | Quantum Leap                                                      |
| Anne Wallace, MD, FACS           | A Phase II study of intraoperative tumor detection using ratiometric activatable fluorescent peptide in early stage breast cancer patients (2017) | Avelas                                                            |
| CARDIOVASCULAR AND T             | HORACIC SURGERY                                                                                                                                   |                                                                   |
| Michael Madani, MD, FACS         | Grant to establish a national registry for patients who suffer from chronic thromboembolic pulmonary hypertension                                 | Bayer                                                             |
| Mark Onaitis, MD                 | Proximalization therapy for KRAS mutant adenocarcinoma                                                                                            | VA                                                                |
| Mark Onaitis, MD                 | CTGF as therapeutic target in lung cancer                                                                                                         | NCI                                                               |
| Mark Onaitis, MD                 | Comprehensive evaluation of mesothelioma                                                                                                          | DOD                                                               |
| Patricia Thistlethwaite, MD, PhD | Notch signaling in pulmonary hypertension                                                                                                         | NIH-NHLBI                                                         |
| Patricia Thistlethwaite, MD, PhD | Small molecule inhibitors to treat pulmonary arterial hypertension                                                                                | NIH-NHLBI                                                         |
| COLON AND RECTAL SURG            | ERY                                                                                                                                               |                                                                   |
| Nicole Lopez, MD                 | Bioinformatics fellowship                                                                                                                         | NIH-NLM                                                           |
| Lisa Parry, MD, FASCRS           | Educating the next generation of robotic surgeons                                                                                                 | American Society of Colon<br>and Rectal Surgeons<br>Robotic Grant |
| HEPATOBILIARY AND TRA            | NSPLANT SURGERY                                                                                                                                   |                                                                   |
| Tatiana Kisseleva, MD, PhD       | The role of portal fibroblasts in cholestatic liver fibrosis                                                                                      | NIH                                                               |
| Tatiana Kisseleva, MD, PhD       | The role of IL-17 in alcoholic liver disease and cancer                                                                                           | NIH                                                               |
| Tatiana Kisseleva, MD, PhD       | Inactivation of hepatic stellate cells during reversal of liver fibrosis                                                                          | NIH                                                               |
| Tatiana Kisseleva, MD, PhD       | Fibrocytes regulate liver fibrosis                                                                                                                | NIH                                                               |
| Tatiana Kisseleva, MD, PhD       | Epigenetic regulation of alcoholic liver disease                                                                                                  | NIH                                                               |
| Tatiana Kisseleva, MD, PhD       | The role of human serum amyloid protein (SAP) in treatment of liver fibrosis                                                                      | Corporate Award Promedior                                         |

| PRINCIPAL INVESTIGATOR                                | RESEARCH TITLE                                                                                                                                                                                                                | FUNDING                                                                      |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| HEPATOBILIARY AND TRA                                 | ANSPLANT SURGERY                                                                                                                                                                                                              |                                                                              |
| Tatiana Kisseleva, MD, PhD                            | Therapeutic role of allogeneic murine mesenchymal precursor cells (MPCs) in inhibition of liver fibrosis in mice                                                                                                              | Mesoblast Inc.                                                               |
| Tatiana Kisseleva, MD, PhD                            | Evaluation of the response of primary human hepatic stellate cells to anti-fibrotic drugs                                                                                                                                     | Celgene Corporation                                                          |
| Tatiana Kisseleva, MD, PhD                            | Evaluation of a second genome test compound on activation of primary human hepatic stellate cells                                                                                                                             | Second Genome                                                                |
| Tatiana Kisseleva, MD, PhD                            | Isolation of primary liver cells for 3-D printing of the human liver                                                                                                                                                          | Samsara Sciences, Inc.                                                       |
| MINIMALLY INVASIVE SU                                 | RGERY                                                                                                                                                                                                                         |                                                                              |
| Santiago Horgan, MD, FACS<br>Garth Jacobsen, MD, FACS | The evaluation of Magnetic Resonance (MR)-determined Proton Density Fat Fraction (PDFF) as a biomarker in obesity- associated Non Alcoholic Fatty Liver Disease (NAFLD)                                                       | NIH                                                                          |
| Santiago Horgan, MD, FACS<br>Garth Jacobsen, MD, FACS | Endoscopic treatment for weight reduction in patients with obesity using the TransPyloric Shuttle® system: a multicenter, prospective, randomized, double-blind, shamcontrolled, parallel-design study (ENDObesity® II study) | BAROnova                                                                     |
| Santiago Horgan, MD, FACS<br>Garth Jacobsen, MD, FACS | A worldwide post-market surveillance registry to assess the Medigus Ultrasonic Surgical Endostapler (MUSE $^{\text{TM}}$ ) system for the treatment of GERD                                                                   | MEDIGUS                                                                      |
| NEUROSURGERY                                          |                                                                                                                                                                                                                               |                                                                              |
| Joseph Ciacci, MD                                     | Research support for Dr. Ciacci                                                                                                                                                                                               | Orthofix                                                                     |
| Alexander Khalessi, MD, MS,<br>FAANS                  | exRNA biomarkers for human glioma                                                                                                                                                                                             | National Center for Advancing<br>Translational Sciences                      |
| Alexander Khalessi, MD, MS,<br>FAANS                  | Research support for Dr. Khalessi                                                                                                                                                                                             | The Penny and Robert Sarver Foundation                                       |
| OTOLARYNGOLOGY/HEA                                    | D AND NECK SURGERY                                                                                                                                                                                                            |                                                                              |
| Joseph Califano, III, MD, FACS                        | Epigenetic biomarker discovery in HPV related HNSCC                                                                                                                                                                           | Dental and Cranial Research,<br>National Cancer Institute                    |
| Joseph Califano, III, MD, FACS                        | A novel point of care test for oral and oropharyngeal cancer risk                                                                                                                                                             | National Cancer Institute                                                    |
| Joseph Califano, III, MD, FACS                        | Optimizing an assay for high risk HPV DNA in body fluids                                                                                                                                                                      | National Cancer Institute                                                    |
| Arwa Kurabi, PhD                                      | Establishment of an animal model of human-specific responses to middle ear infection                                                                                                                                          | National Institute on Deafness<br>and Other Communications<br>Disorders, NIH |
| Quyen Nguyen, MD, PhD                                 | Genetic and injectable reporters to image tumors and guide resection                                                                                                                                                          | National Cancer Institute                                                    |
| Quyen Nguyen, MD, PhD                                 | Testing fluorescently labeled probes for nerve imaging during surgery                                                                                                                                                         | National Institute of Biomedical<br>Imaging and Bioengineering               |
| Quyen Nguyen, MD, PhD                                 | Specialized cancer center core support grant                                                                                                                                                                                  | National Cancer Institute                                                    |
| Quyen Nguyen, MD, PhD                                 | A 6-month, multicenter, Phase 3, open-label extension safety study of OTO-104 given at 3-month intervals by intratympanic injection in subjects with unilateral Meniere's disease                                             | Syneos Health Inc.<br>Otonomy, Inc.                                          |

| PRINCIPAL INVESTIGATOR              | RESEARCH TITLE                                                                                                                                                                                  | FUNDING                                                                            |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| OTOLARYNGOLOGY/HEA                  | D AND NECK SURGERY                                                                                                                                                                              |                                                                                    |
| Quyen Nguyen, MD, PhD               | Rapid 3-D-printing of multi-functional adaptive nerve conduits                                                                                                                                  | Child Health & Human Development, Department of Health & Human Services (DHHS)(FH) |
| Quyen Nguyen, MD, PhD               | Dose-ranging study of the efficacy and safety of miconazole oil used for 7 or 14 days compared with vehicle in the treatment of otomycosis                                                      | QST Consultations                                                                  |
| Allen Ryan, PhD                     | Mechanisms of persistence and recovery in otitis media                                                                                                                                          | National Institute on Deafness<br>and Other Communications<br>Disorders, NIH       |
| Allen Ryan, PhD<br>Arwa Kurabi, PhD | Middle ear response in otitis media                                                                                                                                                             | National Institute on Deafness<br>and Other Communications<br>Disorders, NIH       |
| Allen Ryan, PhD                     | Otolaryngology training in immunology, virology and molecular biology                                                                                                                           | National Institute on Deafness<br>and Other Communications<br>Disorders, NIH       |
| Allen Ryan, PhD                     | Innovative therapy for diseases of the middle ear                                                                                                                                               | National Institute on Deafness<br>and Other Communications<br>Disorders, NIH       |
| Allen Ryan, PhD                     | A biological interface for auditory rehabilitation with a cochiea implant                                                                                                                       | U.S. Department of<br>Veterans Affairs                                             |
| SURGICAL ONCOLOGY                   |                                                                                                                                                                                                 |                                                                                    |
| Joel Baumgartner, MD                | The ILEUS study: a Phase 2 randomized controlled trial investigating Alvimopan for enhanced gastrointestinal recovery after cytoreductive surgery and hyperthermic intraperitoneal chemotherapy | Merck                                                                              |
| Michael Bouvet, MD, FACS            | Development of near infrared fluorescence-guided surgical navigation and tumor-specific photoimmunotherapy for improved outcomes for GI cancers                                                 | VA Merit Review Award                                                              |
| Michael Bouvet, MD, FACS            | TAV-255 viral development                                                                                                                                                                       | Peninsula Biomedical                                                               |
| Kaitlyn Kelly, MD                   | Safety and effect of GL-ONC1 administered IV prior to surgery to patients with solid organ cancers undergoing surgery                                                                           | Merck                                                                              |
| Andrew M. Lowy, MD, FACS            | RO1-RON receptor in pancreatic cancer biology and therapy                                                                                                                                       | NIH                                                                                |
| Andrew M. Lowy, MD, FACS            | Transcriptional reprogramming to control pancreatic cancer                                                                                                                                      | SU2C / AACR /<br>Lustgarten Foundation                                             |
| Andrew M. Lowy, MD, FACS            | RO1-Musahi mediated control of pancreatic cancer growth and progression                                                                                                                         | NIH/NCI                                                                            |
| Andrew M. Lowy, MD, FACS            | UO1-imaging and molecular correlates of progression in cystic neoplasms of the pancreas                                                                                                         | NIH/NCI                                                                            |
| Andrew M. Lowy, MD, FACS            | ROR1 CAR-T cells for anticancer therapy                                                                                                                                                         | CA Institute of Regenerative<br>Medicine (CIRM)                                    |

| PRINCIPAL INVESTIGATOR                                          | RESEARCH TITLE                                                                                                                   | FUNDING                                                                                                  |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| SURGICAL ONCOLOGY                                               |                                                                                                                                  |                                                                                                          |
| Andrew M. Lowy, MD, FACS                                        | Molecular strategies for early detection and targeting of cancer                                                                 | NIH/NCI                                                                                                  |
| Andrew M. Lowy, MD, FACS                                        | Clinical development of a tumor-penetrating peptide for enhanced pancreatic cancer treatment                                     | Pancreatic Cancer Action<br>Network                                                                      |
| Jason Sicklick, MD, FACS                                        | Targeting Imatinib-resistant, KIT-negative cells in human GISTs                                                                  | Kristin Ann Carr Foundation                                                                              |
| Jason Sicklick, MD, FACS                                        | KO8-novel allosteric kinase inhibitors target ImatiniB-<br>resistant GIST                                                        | NIH                                                                                                      |
| Jason Sicklick, MD, FACS                                        | R21-defining the germline genomic landscape of a novel GIST multi-tumor syndrome                                                 | Pedal the Cause<br>Grant Active                                                                          |
| Rebekah White, MD, FACS                                         | Irreversible electroporation as an <i>in situ</i> vaccine for pancreatic cancer                                                  | NIH                                                                                                      |
| Rebekah White, MD, FACS                                         | R21-Aptamers as proteomic tools for pancreatic cancer biomarker identification                                                   | National Cancer Institute                                                                                |
| TRAUMA, SURGICAL CRIT                                           | ICAL CARE, BURNS, AND ACUTE CARE SURGERY                                                                                         |                                                                                                          |
| Todd Costantini, MD, FACS                                       | The pathogenesis of post-traumatic pulmonary embolism: a prospective multi-center investigation by the CLOTT Study Group (CLOTT) | Department of Defense/<br>Medical Research and<br>Development Program                                    |
| Todd Costantini, MD, FACS                                       | Role of exosomes in mediating the inflammatory response following trauma/hemorrhagic shock                                       | Health Sciences<br>Academic Senate                                                                       |
| Todd Costantini, MD, FACS                                       | The human-specific gene CHRFAM7A in leukocytes                                                                                   | NIH/National Institute of<br>General Medical Sciences                                                    |
| Antonio De Maio, PhD                                            | Contribution of cholesterol homeostasis for injury resolution                                                                    | NIH/National Institute of<br>General Medical Sciences                                                    |
| Antonio De Maio, PhD                                            | Mentoring young minds to increase diversity in biomedical research                                                               | NIH/National Institute of<br>General Medical Sciences                                                    |
| Jay Doucet, MD, MSc, FRCSC,<br>FACS                             | Charlotte E. Hammond Fund                                                                                                        | UC San Diego Foundation<br>(Reoccurring Donation)                                                        |
| Brian Eliceiri, PhD                                             | Vagus nerve-mediated regulation of tumor-associated leukocytes                                                                   | Health Sciences<br>Academic Senate                                                                       |
| Brian Eliceir, PhD<br>Robert Dorschner, MD, MSc,<br>FRCSC, FACS | The role of the host-defense peptide ECRG4 in mediating inflammation in wound repair                                             | Society for Investigative<br>Dermatology (SID) Sun<br>Pharma-SID Innovation<br>Research Fellowship Grant |
| Jeanne Lee, MD, FACS                                            | Physiologic signals and signatures with the Accuryn System in intensive care patients                                            | Potrero Medical, Inc.                                                                                    |
| Elliot Williams, MD                                             | The role of exosomes in mediating the inflammatory response to injury                                                            | Surgical Infection Society (SIS)<br>Basic or Translational Research<br>Training Fellowship Grant         |

| PRINCIPAL INVESTIGATOR  | RESEARCH TITLE                                                                                                                                                                                                                                                                                  | FUNDING                                                                                              |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| VASCULAR AND ENDOVAS    | CULAR SURGERY                                                                                                                                                                                                                                                                                   |                                                                                                      |
| Andrew Barleben, MD     | H160159, "Expanding patient applicability with polymer sealing ovation alto stent graft IDE study"                                                                                                                                                                                              | Endologix, Inc                                                                                       |
| Andrew Barleben, MD     | Combined computational-experimental approach to evaluation of abdominal aortic aneurysms following stent graft placement to mitigate endoleak and late graft failure                                                                                                                            | NIH, National Center for<br>Advancing Translational<br>Sciences (NCATS) and the<br>UC San Diego HRPP |
| Andrew Barleben, MD     | SAFE MANTA pivotal IDE study                                                                                                                                                                                                                                                                    | Essential Medical                                                                                    |
| John Lane III, MD, FACS | Best endovascular versus best surgical therapy in patients with critical limb ischemia (BEST-CLI). NIH sponsored prospective, randomized clinical trial NCT02060630                                                                                                                             | National Institutes<br>of Health                                                                     |
| John Lane III, MD, FACS | Pivotal study of the MicroVention, Inc. carotid artery stent system used in conjunction with the Nanoparasol® embolic protection system for the treatment of carotid artery stenosis in patients at elevated risk for adverse events from carotid endarterectomy (CONFIDENCE Trial) NCT02908880 | MicroVention-Terumo, Inc.                                                                            |
| John Lane III, MD, FACS | Prospective, multicenter, single arm safety and effectiveness study of endovascular abdominal aortic aneurysm repair using the Nellix® system: a pivotal and continued access study NCT02908880                                                                                                 | Endologix, Inc.                                                                                      |
| John Lane III, MD, FACS | A prospective, randomized, adaptive, double-blind, sham-<br>controlled, multicenter study to evaluate the ROX coupler<br>in subjects with hypertension NCT02895386                                                                                                                              | ROX Medical, Inc                                                                                     |
| John Lane III, MD, FACS | A Phase 3 study to compare the efficacy and safety of Humacyte's human acellular vessel with that of an autologous arteriovenous fistula in subjects with end stage renal disease NCTO3183245                                                                                                   | Humacytel, Inc                                                                                       |
| John Lane III, MD, FACS | Prospective, multicenter, single arm safety and effectiveness confirmatory study of endovascular abdominal aortic aneurysm repair using the Nellix system IDE study (EVAS 2 confirmatory IDE study)                                                                                             | Endologix, Inc                                                                                       |



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