Department Retreat: Planning Another Five-Year Journey

On Oct. 15, 2017, the Department of Surgery held its second five-year department retreat at McNair Campus. Nearly 100 faculty members, division administrators, senior staff, residents and postdoctoral scientists joined together to develop recommendations to delineate opportunities to advance the department’s core missions.

“It was a unique experience to have a voice in determining the path forward for our department,” said Chad Wilson, MD, MPH, associate professor of surgery. “I never had this opportunity at my previous institution as a junior faculty to participate in actively defining our vision, mission and goals.”

The evening began with a welcome from Chair Todd K. Rosengart, MD, who gave an overview of the department’s tremendous growth and progress over the past five years. Shortly after his arrival as department chair, Dr. Rosengart initiated an assessment of the state of the department, leading to the first faculty retreat in 2013, where participants developed an agenda for progress in the department. With reference to this benchmark event, Dr. Rosengart heralded the growth of the faculty, the spawning of new divisions, the expansion of trainees and support staff, the department’s financial health and the doubling of extramural research funding.

Looking to the future, department leaders proposed key areas to push the envelope.

William E. Fisher, MD, clinical vice chair, spoke about advancements in telesurgery facilitated by robotics, artificial intelligence (AI), ambulance drones and precision medicine.

Spelling out the goal—to be the premier surgical research department in the nation—Scott A. LeMaire, MD, vice chair for research, discussed the environment and achievements that will truly differentiate the department’s research program and boost its national presence.

Bradford G. Scott, MD, vice chair for education, underscored the need to expect highest standards from learners and create a culture of wellness where students and trainees can flourish.

Stuart Corr, PhD, MEng, director of technology development, spoke about leveraging the highly successful INSTINCTSM “Interdisciplinary Surgical Technology and Innovation Center” programs in order to build a vanguard innovation campus led by the department.

John A. Goss, MD, chair of our faculty appointment and promotions committee, discussed the importance of long-term investment in faculty by facilitating their promotion and career development at every stage.

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SURGICAL COLLABORATION DAY

The Department of Surgery’s second annual Surgical Collaboration Day was held Nov. 4, 2017. Originally set for Aug. 26 but rescheduled due to Hurricane Harvey, the event attracted more than 300 attendees, including surgeons, clinicians, researchers and technologists, from the Houston area (and from afar). Participants gathered in the Texas Medical Center Innovation Institute to forge new, innovative collaborations to solve the most advanced and pressing problems in healthcare and surgery.

Keynote Speaker
Internationally renowned cardiothoracic surgeon Joseph Lamelas, MD, professor and associate chief of cardiac surgery, delivered the event’s keynote address titled “Innovations in Minimally-Invasive Cardiac Surgery.”

Dr. Lamelas, who has completed more than 14,000 cardiac surgical operations in his career, has played a significant role in advancing the field of minimally invasive cardiac surgery and has extensive experience in innovating and creating new surgical instruments. He has developed techniques to facilitate minimally invasive approaches for repair of simple congenital defects, removal of cardiac tumors, aortic valve surgery, mitral valve surgery, double and triple valve surgery, as well as replacement of the ascending aorta without splitting the sternum.

The event comprised quick-fire presentations from surgeons and technologists, including a pitch from Innovation “Pressure Ulcer” Challenge winner InPro Medical (Onur Fidaner, PhD), as well as an insightful presentation on virtual and augmented reality, given by Caroline Cruz Neira, PhD, director of the Emerging Analytics Center at the University of Arkansas at Little Rock.

Session 1: “Innovation in the TMC” began with talks on new innovation ventures in the TMC and partnering institutions given by Stuart Corr, PhD, MEng, assistant professor and director of technology development, and Billy Cohn, MD, professor and director of the Center for Device Innovation at TMC/Johnson &
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Breakout Sessions
The group breakout sessions gave faculty a chance to discuss areas for improvement, and collaboratively devise a vision and three goals for a particular mission—clinical, research, education, innovation, or faculty development.

Assistant professor of surgery Michele Loor, MD, who participated in the education breakout group, said, “I was blown away by how smart and creative and engaged my new colleagues are. It was really great to see, and inspired me to commit to the goals and missions of the department.” She elaborated, “One of the themes that emerged was how best to evaluate trainees and provide constructive criticism. This was very thought-provoking for me, and will change the way I approach one-on-one time with the residents.”

A participant in the research breakout group, Dr. LeMaire remarked, “It was exciting to hear the enthusiasm regarding the development of a bona fide surgical health services research program. Making this a reality will create enormous opportunities for our faculty members and trainees, and will help the department expand its prominence in academic surgery.”

Associate professor of surgery James Suliburk, MD, who participated in the innovation breakout group said, “Our workgroup further developed the idea that innovation is key not only for device development but is synergistic with research, education and clinical programs in making next generation cures a reality as we treat patients today.”

“The retreat brought all of the best and brightest minds in our department together to develop a path forward to develop tomorrow’s cures. It’s not enough to just be good today. We must be better than that and keep leading the pace of innovation for the Texas Medical Center,” concluded Suliburk.

Johnson Innovation. Other presenters included Laura Richardson, CEO and president of Frazer Ltd – the Mobile Stroke Unit, Paul Hoopingarner of Sparx Engineering, and Ghanashyam Acharya, PhD, assistant professor of surgery, who discussed advances in translational nanosystems.

Scottish bagpiper Larry Fowler provided music for the event, and was instructed to ‘pipe up’ when speakers went over their allotted nine-minute speaking time.

In Session 2, individuals engaged in “Surgical Speed Dating” sessions with Baylor surgeons. Aspirants had two minutes to meet with each surgeon, who had previously identified problems in their respective areas, to pitch their ideas and technologies. Participating surgery faculty included Dr. Lamelas, endocrine and general surgeon James W. Suliburk, MD, as well as cardiothoracic surgeons Ourania Preventza, MD, Ravi Ghanta, MD, and Scott LeMaire, MD. Several Baylor medical students were also ‘drafted’ into this session including Dor Yoeli, a fourth-year medical student.

After lunch the event culminated with an open-floor exhibitions, where people from all over the world showcased their cutting-edge technologies. Interactive demonstrations gave attendees the opportunity to closely examine and try out these new technologies.

A full list of attendee-related institutes and companies/start-ups can be found below.

Institutions: Baylor College of Medicine, Rice University, The University of Texas Health Science Center, University of Arkansas-Little Rock, Ben Taub Hospital, CHI Baylor St. Luke’s Medical Center, Michael E. DeBakey VA Medical Center, Texas Heart Institute.

Companies & Start-Ups: M&S Biotics, LLC; Sparx Technologies, LLC; Lazarus 3D, LLC; Saranas, LLC; Simplicity Health Systems; iThermonitor; Diablo Sales and Marketing, Inc.; Tech-Labs, Inc.; Articulate Labs, Inc.; Frazer, Ltd.; Medifies, Inc.; AUGMENTx, Inc.; Seremedi, Inc.; InPro Medical; JBL Technologies, LP; iSono Health, Inc.
A Meeting of Minds
Baylor Surgeons and Rice Engineers Hold Collaboration Workshop

On Jan. 28, 2018 faculty members from the Department of Surgery at Baylor College of Medicine and Rice University School of Engineering met in the BioScience Research Collaborative for a first-of-its-kind collaboration workshop hosted by the Rice Health-Related Research and Educational Initiatives (HRREI). This groundbreaking event put collaborations between academic surgeons and engineers on display and cross-disciplinary thinking into practice.

The first half of the workshop provided an overview of the interface between surgical and engineering technologies and healthcare solutions, and showcased collaborative research projects led by Rice engineers and Baylor surgeons. After opening remarks from Advisor to the Provost and Rice Professor, Marcia O’Malley, PhD, workshop participants heard presentations from the event’s co-chairs, Reginald DesRoches, PhD, dean of Rice’s School of Engineering, and Todd Rosengart, MD, chair of Baylor’s Department of Surgery. Next, teams of two faculty members, one from Rice engineering and one from Baylor surgery, gave three-minute presentations on their collaborative research projects in corresponding thematic areas: innovation and design prototype facilities; hepatobiliary and pancreatic surgery/tissue engineering; vascular and cardiac-related technologies; minimally invasive surgery and robotics; and iCAMP/neuroengineering and signaling processing. In the second half, workshop participants attended two networking sessions, arranged by a thematic area of their choice and led by the Rice-Baylor presentation teams.
Drs. Najafi & Montero Co-Author Guidelines for DFU Infection

In response to the growing awareness of diabetic foot ulcers as global health problem, particularly in the Gulf region, the Gulf Diabetic Foot Working Group authored a set of guidelines for clinicians in the region entitled, Identification and Management of Infection in Diabetic Foot Ulcers: International Consensus, published by Wounds International 2017.

Bijan Najafi, PhD, MSc, professor and director of clinical research in the Division of Vascular Surgery and Endovascular Therapy, and director of the Interdisciplinary Consortium on Advanced Motion Performance (iCAMP), and Miguel Montero-Baker, MD, associate professor of surgery, were members of the international Expert Working Group that developed this first-of-its kind clinical and educational tool.

Of note, the Working Group’s International Consensus guidelines on classifying DFU infection featured the Society for Vascular Surgery Lower Extremity Threatened Limb Classification System authored by Joseph L. Mills, Sr., MD, professor and chief of the vascular division and John W. “Jack” Reid, MD, ’43 and Josephine L. Reid Endowed Professor in Surgery (see related story on page 17) at Baylor College of Medicine and medical director of the Diabetic Foot and Wound Care Center at Baylor St. Luke’s Medical Center, and colleagues. This risk stratification system is based on three main factors that affect clinical management of threatened limbs and amputation: wound, ischemia and foot infection.

Dr. Gabriel Loor Boosts Lung Transplantations at Baylor St. Luke’s

Gabriel Loor, MD, associate professor of surgery, has performed a record-breaking 62 adult lung transplantations since he joined the Baylor St. Luke’s Medical Center transplant team as surgical director in March 2017. This number exceeds the total of 59 lung transplants performed at Baylor St. Luke’s Lung Transplant Center over a two-and-a-half-year period (July 1, 2014 to Dec. 31, 2016). Since he arrived, Dr. Loor has also made significant contributions to Baylor St. Luke’s heart care by leading quality improvement initiatives and performing over 100 adult cardiac surgical procedures.

Behind the statistics, there’s an exceptionally experienced and well-coordinated lung transplant program at Baylor St. Luke’s, a recognized leader in successful lung transplants in the nation by the Scientific Registry in Transplant Recipients. The transplant center draws on numerous medical, surgical and support specialties, and lung transplant coordinators who play an essential role in connecting recipients with prospective donors.

“I thank the incredibly motivated surgical staff, anesthesiologists and critical care staff, coordinators and pulmonologists at Baylor St. Luke’s Medical Center. Dr. Amit Parulekar has been an incredible medical director and integral partner in the growth of the transplant program. Without such a strong team of surgeons and personnel none of this would be possible or sustainable. Baylor St. Luke’s is definitely well situated to be a leader and a pillar of hope for patients with advanced lung and heart disease,” says Dr. Loor.

Since he joined Baylor in March 2017, Dr. Loor has been credited with numerous accomplishments in lung transplant and cardiothoracic surgery. Dr. Loor is the lead principal investigator of the first international registry to review extracorporeal life support strategies for lung transplants involving 12 participating high volume transplant centers, with Baylor as the primary site. He co-authored the recently published landmark International Society for Heart and Lung Transplantation (ISHLT) 2016 Consensus Group Statement on prevention and treatment of primary graft dysfunction, a timely update to a previous 2005 publication by the ISHLT, published in the Journal of Heart and Lung Transplantation (2017 Oct.). Last year, Dr. Loor and the transplant team performed first redo-donation after cardiac death (DCD) transplant reported in the literature (in Annals of Thoracic Surgery 2017 Nov.). Recently, Dr. Loor was selected to represent portable ex vivo lung perfusion (EVLP) technology to the US Food and Drug Administration (FDA) and present the findings of the landmark EXPAND I lung EVLP transplant trial at the 2018 ISHLT annual meeting.
EDUCATION NOTES

Department Hosts Education & Wellness Retreat

On Sept. 27, 2017, the Department of Surgery Education Office hosted a Surgical Education and Wellness Retreat for residents where Bradford G. Scott, MD, vice chair for education, and Holly Shilstone, manager for education and alumni affairs, unveiled the department’s new Resident Wellness Initiatives, developed in collaboration with BCM BeWell Program and in compliance with new Accreditation Council for Graduate Medical Education (ACGME) guidelines. The initiatives support and encourage improved resident self-care in four key areas: physical well-being, psychological well-being, nutritional well-being and mentorship. The event’s keynote speaker was Claudia Mueller, MD, assistant professor of surgery and co-director of the Balance in Life Program for general surgery residents at Stanford University Medical Center. Dr. Mueller gave a talk entitled, “Achievable Goal or Pipedream? Balance in Life.”

New Wellness Initiatives

For physical well-being, the department supports workout sessions twice a week with a professional trainer as well as support gym memberships for those participating in the twice a week workout sessions. Feedback from participants has been increased energy, improved stamina, improved core and muscle strength in standing for surgeries, and healthier well balanced lifestyle. Baylor physical therapist Melanie McNeal, will join Wednesday morning curriculum sessions with residents to provide coaching on techniques and tools for surgeons such as posture, footwear, core and neck exercises after long cases. For nutritional well-being, the department will be exploring nutritional options at our hospitals in collaboration with Roberta Anding, MS, RD/LD, CSSD, CDE, registered dietitian and assistant professor at Baylor, and working with our residents and faculty at each site for options, from on-call meals to easy quick snacks, and availability to stock healthy options for the residents on site.

For mentorship, M. Andrew Davis, MD, assistant professor of surgery, has been meeting with residents to review our mentorship program, and working with faculty to pair up mentors and mentees. Dr. Davis will be developing a support group for those interested in surgical specialties (e.g., vascular surgery, thoracic surgery, pediatric surgery, surgical oncology, surgical critical care) to help mentor residents in their career path.

For psychological well-being, clinical psychologist Karen Lawson, MD, assistant professor in the Menninger Department of Psychiatry and Behavioral Sciences, will be added to the Wednesday morning curriculum to host sessions by PGY level to assist in the psychological support during residency and help work on tools for work-life balance.

Residents had a chance to discuss these key areas of well-being during breakout sessions led by faculty facilitators and experts. The department’s educational leadership will be working with the College and departmental faculty to expand wellness in these areas, follow up with action items, and study the process and implementation of these initiatives in our educational programs.

Baylor Ranked 4th in ASC Abstracts by Institution

The Department of Surgery was well-represented at the 13th Annual Academic Surgical Congress (ASC), organized by the Association for Academic Surgery (AAS) and the Society for University Surgeons (SUS), held in Jacksonville, Fla., Jan. 30 to Feb. 1, 2018. Thirty-five abstracts by department faculty members and trainees were accepted to this year’s meeting—-ranking Baylor 4th in the ASC’s top 10 abstract count by institution.

Scott LeMaire, MD, vice chair for research, Sundee Keswani, MD, associate professor of surgery, and Barbara W. Trautner, MD, PhD, director of clinical research for the Department of Surgery and associate professor of surgery and medicine, were featured speakers.

Timothy C. Lee, MD, associate professor of surgery, James Suliburk, MD, associate professor of surgery, and Sanjeev Vasudevan, MD, assistant professor of surgery, served as session moderators. Drs. LeMaire and Keswani were also moderators.

There was a significant showing from our trainees, as the following made podium presentations:

Medical students: Kausar Ali; Jonathan Hyak; Ryan Jacobs; Eric Lo; David Lee; Sarah McGriff; Priyanka Moolchandani; Colin Rog; Amos Zimmerman.

Residents: Elizabeth Alore, MD; Ramon Diez-Barroso, MD; Patricio Lau, MD; Eric Rosenfeld, MD; Emily Steen, MD; Mariatu Verla, MD; Nicole Villafane-Ferriol, MD; Elaine Vo, MD; Yangyang Yu, MD.

Fellows: Megan Cunningham, MD; Candace Style, MD.

The next Academic Surgical Congress will be held in Houston, Feb. 5-8, 2019. “Congratulations to everyone who represented our department so well at the ASC,” said Dr. LeMaire. “We are aiming for an even better year at the next meeting.”
Device that Induces a Mild Localized ‘Fever’ Could Treat Vascular Involvement in Cancer

The prognosis of a cancer patient relies significantly on the ability of the surgeon to remove all the tumor, including a cancer-free boundary, leaving what surgeons call a tissue margin negative for cancer cells. But this is not always possible. Leaving tumor tissue behind reduces the patient’s chance for recovery because the unremoved tumor may metastasize or spread to other organs and continue to grow.

One instance in which surgeons usually are not be able to completely remove the tumor happens when it grows around vital veins or arteries.

“We were looking at technologies that could help surgeons treat that cancer-positive margin,” said Matthew Ware, PhD, instructor of surgery at Baylor College of Medicine and first author of this work. “Our group has a history of using noninvasive radiofrequency devices to study the effects of mild hyperthermia on cancer cells, and we found promising effects on tumors, which are not so much seen in healthy tissue.”

Bringing the heat to cancer therapy
In laboratory cell cultures and animal models, the researchers discovered that mild hyperthermia in the range of 39 to 45 degrees Celsius (102 to 113 degrees Fahrenheit) is toxic to cancer cells; it lowers their proliferation rate, can increase their susceptibility to cancer drugs and promotes changes in the tumor microenvironment that favor tumor destruction. At the same time, this localized ‘fever’ seems to have limited negative effects on healthy tissue, such as reduced inflammation and necrosis that are seen in other surgical techniques.

“These results prompted the design of a tool that we named the CorleyWare Device,” said co-corresponding author Stuart Corr, PhD, MEng, director of technology development and assistant professor of surgery. “The device would allow a surgeon to heat the tumor layer outside a blood vessel to promote cancer cell death, while allowing the blood inside the vessel to act like a heat sink that would keep the healthy tissue inside relatively cool.”

The researchers worked with an animal model of human pancreatic ductal adenocarcinoma, a type of cancer in which the tumor tends to grow around the superior mesenteric artery, a major artery that supplies blood to the abdomen, limiting the ability of the surgeon to remove all the tumor.

“The CorleyWare device can potentially offer surgeons an opportunity to do something more for patients who currently might not be eligible for surgery because part of the tumor is growing around a major blood vessel,” Corr said.

“Nowadays, a surgeon removing a tumor around the superior mesenteric usually leaves a 1 to 3 millimeter positive margin. The CorleyWare device offers the possibility in the future to treat this unresectable margin by wrapping this device around the remaining tumor, applying localized heat for 10 minutes, taking the device off, completing the surgical procedure, and further treating the patient with chemotherapy, for example.”

This study shows the results with pancreatic ductal adenocarcinoma, but, according to the researchers, there are other types of cancer that also involve other major blood vessels, such as the carotid artery in the neck, in which this tool also could be applied to treat cancer.

“Our next step is to proceed with evaluation of this technology, make changes if necessary and ideally conduct a clinical trial in the future,” Ware said.

“Our Surgical Innovations lab at the Baylor College of Medicine is focused on addressing real clinical problems encountered by surgeons,” said co-corresponding author Steven Curley, MD, professor and Olga Keith Wiess Chair of Surgery at Baylor College of Medicine and associate director for clinical affairs at the Dan L Duncan Comprehensive Cancer Center.

The CorleyWare tool is one of the medical devices developed in the Department of Surgery INSTINCT™ program, which offers its unique resources for prototype development and networking.
Grant to Fund Study on Sex Differences in Aortic Disease

While aortic disease is frequent in men, it tends to be more severe in women, and researchers do not have a clear understanding of why this is the case. Baylor College of Medicine and the University of Kentucky recently were selected to join the newly formed Strategically Focused Vascular Disease Research Network of the American Heart Association to focus on understanding the pathobiology underlying the differences in aortic disease between men and women.

Since 2014, the American Heart Association has created nine networks that focus on specific areas related to their overall mission and goals for 2020. Baylor and the University of Kentucky were part of a collaborative proposal, University of Kentucky-Baylor College of Medicine Aortopathy Research Center, to join the newest network, which focuses on vascular disease.

“Currently, there is no medication available to reliably prevent aortic disease, but because the disease is so different in men and women, it is likely that they need different treatment approaches,” said Scott A. LeMaire, MD, director of research in the Division of Cardiothoracic Surgery, vice-chair for research in the Department of Surgery, and professor of surgery and of molecular physiology and biophysics at Baylor. He added, “We are thrilled to join the University of Kentucky team in studying this important issue, and we look forward to collaborating with other centers across this new network.”

LeMaire, along with Ying H. Shen, MD, PhD, director of the Aortic Disease Research Laboratory and associate professor in the Department of Surgery at Baylor, will lead the project at Baylor that will focus on determining which differences in X-chromosome gene expression are associated with sex-based differences in ascending aortic aneurysm formation and progression in patients. The award for the project is approximately $250,000 per year for four years, plus funding to support the training of a postdoctoral fellow.

Researchers at Baylor will determine whether cells in the aorta of men and women behave differently, whether the cells in the aorta in men are less resistant to stress than those from women and whether there are differences in aortic disease in men and women related to differences in their X-chromosome genes.

“We will use single-cell transcriptome technology that not only enables us to identify genes that are associated with sex-based differences in disease formation and progression, but also illustrates how these genes are regulated in different cells during disease development. The information will be very useful for developing specific therapeutic targets,” Shen said.

LeMaire and Shen will collaborate with Rui Chen, PhD, associate professor of molecular and human genetics, and Cristian Coarfa, PhD, assistant professor of molecular and cellular biology, both at Baylor.

Alan Daugherty, PhD, chair of the department of physiology and director of the Saha Cardiovascular Research Center at the University of Kentucky, will serve as the program director and Dr. Nancy Webb, professor of pharmacology and nutritional sciences at the University of Kentucky, will serve as the training director. Daugherty, along with Lisa Cassis, PhD, professor of pharmacology and nutritional sciences, and vice president of research at the University of Kentucky, will lead the other two research projects awarded to the Center.

Along with Baylor and the University of Kentucky, the other centers selected to join the research network include Brigham and Women’s Hospital, Dartmouth-Hitchcock Medical Center, Northwestern University and Vanderbilt University.
NEW GRANTS

Joseph S. Coselli, MD, received funding from the European Union/European Commission to lead the Baylor site of the international trial PAPA-ARTIS (Paraplegia Prevention in Aortic Aneurysm Repair by Thoracoabdominal Staging with ‘Minimally Invasive Segemental Artery Coil-Embolization’: A Randomized Multicentre Trial).

Scott A. LeMaire, MD, received a grant from the Strategically Focused Vascular Disease Research Network of the American Heart Association (AHA). Ying H. Shen, MD, PhD, is coinvestigator on this study.

Gabriel Loor, MD, received a grant from the Roderick D. MacDonald Research Fund of Baylor St. Luke’s for his study “Gender-specific Molecular Phenotypes Predict Long-term Survival Post-Lung Transplant.” He also received a grant from the JLH Foundation to support his ex vivo lung perfusion program at Baylor St. Luke’s Medical Center.

Bijan Najafi, PhD, MSc, with Biosensics LLC awarded a $225,000 NIH-STTR Phase 1 grant to design an innovative therapeutic game-based exercise to improve balance and mobility in patients undergoing hemodialysis. Joseph L. Mills, Sr., MD, is a coinvestigator on this study. Dr. Najafi was also awarded a $25,000 grant from the NSF Industry/University Cooperative Research Centers (IUCRC) program for his proposal “Planning IUCRC Baylor College of Medicine: Center to Stream Healthcare in Place (C2SHIP).”

Ying H. Shen, MD, PhD, and Scott A. LeMaire, MD, were awarded funding from the Roderick D. MacDonald Research Fund of Baylor St. Luke’s for their research protocol, “Potential Effects of Ciprofloxacin Use on the Susceptibility to Aortic Aneurysm and Dissection Development in Marfan Syndrome.”

Norman L. Sussman, MD, was awarded a $50,000 grant from the Phillip A. Salem Chair in Cancer Research Fund of the St. Luke’s Foundation to develop artificial livers for patients with liver failure or liver cancer.

Hop S. Tran Cao, MD, was awarded a $164,500 grant from the Phillip A. Salem Chair in Cancer Research Fund of the St. Luke’s Foundation for his project entitled, “Her2/neu Antibody-Fluorophore Conjugate for Intraoperative Detection of Her2-Positive Breast Cancer.”

George Van Buren II, MD, and Silke Paust, PhD, received a $50,000 grant from the Barry Stephen Memorial Pancreatic Cancer Research Award Fund for their project, “Curing Pancreatic Cancer with NK Cell Immunotherapy.”

Qizhi Cathy Yao, MD, PhD, was awarded funding from the Roderick D. MacDonald Research Fund of Baylor St. Luke’s for her proposal, “Pancreatic Cancer Immunotherapy Co-clinical Trial using Pre-clinical Mouse Model.” George Van Buren II, MD, is a coinvestigator on the study.

Matthew J. Ware, PhD, received a $97,000 grant from Philip A. Salem Chair in Cancer Research Fund of the St. Luke’s Foundation to develop novel surgical and therapeutic strategies for local tumor control in borderline resectable pancreatic cancer patients.

HIGH IMPACT PUBLICATIONS


NEW APPOINTMENTS

Neal R. Barshes, MD, MPH, associate professor of surgery, has been appointed associate director of the General Surgery and Vascular Surgery Residency Programs. In addition, he has been named GME curriculum director for the Department of Surgery.

Stacey Ann Carter, MD, assistant professor of surgery, has been appointed assistant director of UME Simulation Programs for the Department of Surgery.

M. Andrew Davis, MD, assistant professor of surgery, has been appointed director of the General Surgery Residency Mentorship Program. In addition, he has been named assistant director of GME Simulation Programs for the Department of Surgery.

Lisa Haubert, MD, MS, assistant professor of surgery, has been appointed UME Elective director for the Department of Surgery.

Larry H. Hollier, MD, professor of surgery and chief of the Division of Plastic Surgery at Baylor and chief of Plastic Surgery at Texas Children’s Hospital, has been appointed director of the Global Surgery Track for Baylor’s General Surgery Residency Program.

Michele Loor, MD, assistant professor of surgery, has been appointed the director of the UME/GME Women in Surgery Program for the Department of Surgery.

Nader Massarweh, MD, MPH, assistant professor of surgery, has been appointed director of the General Surgery Resident Research Track for the Department of Surgery.

Mark V. Mazziotti, MD, associate professor of surgery and pediatrics, has been appointed the site director of UME at Texas Children’s Hospital for the Department of Surgery.

James W. Suliburk, MD, associate professor of surgery, and chief of endocrine surgery, has been appointed director of Continuous Quality Improvement (CQI) Research for the Department of Surgery.

Hop S. Tran Cao, MD, assistant professor of surgery, has been appointed director of Surgical Education Research for the Department of Surgery.

R. Mario Vera, MD, assistant professor of surgery, has been appointed director of UME/GME Simulation Programs for the Department of Surgery.

O. Howard Frazier, MD, professor of surgery in the Division of Cardiothoracic Transplantation & Circulatory Support at Baylor College of Medicine, has been named the 2018 ISHLT Lifetime Achievement Award recipient by the Board of Directors and the Program Committee of the International Society of Heart and Lung Transplant, for his outstanding achievements and tireless dedication in the field of advanced heart failure, heart transplantation and mechanical circulatory support. He will be presented the award at the 38th ISHLT Annual Meeting and Scientific Sessions to be held April 11–14, 2018 in Nice, France.

For more than 40 years, Dr. Frazier has been a pioneer in the treatment of severe heart failure and in the fields of heart transplantation and artificial devices that may be used either to substitute for or assist the pumping action of the human heart. As a result of his work, the Texas Heart Institute at Baylor St. Luke’s Medical Center has become one of the top transplantation and mechanical circulatory support programs in the world. Dr. Frazier has performed over 1,300 heart transplants and implanted more than 1,000 left ventricular assist devices, more than any other surgeon in the world.

Dr. Frazier’s interest in mechanical circulatory support began in 1964, when, as a medical student at Baylor, he did research with Dr. DeBakey and Domingo Liotta on the development of the experimental total artificial heart, which was first implanted in 1969 by Dr. Denton Cooley. Throughout the 1970s and 1980s, Dr. Frazier continued experimental work toward developing an implantable left ventricular assist device (LVAD) to aid the failing heart.

He implanted the first implantable long-term LVAD in 1986, the pulsatile HeartMate I. His most important contribution was the development of the nonpulsatile implantable LVADS that have now been successfully implanted for more than 12 years. These pumps, the Jarvik, HeartMate II and HeartWare, have now been implanted in more than 45,000 patients worldwide. In 2011, Dr. Frazier implanted the first successful continuous-flow total artificial heart using two second-generation HeartMate II LVADs to replace a patient’s failing heart.

FAST FACT: The Department had a record 27 abstracts accepted for presentation at the 2018 ISHLT meeting.
Dr. Joseph Mills is Inaugural Reid Endowed Professor

The Executive Committee of the Baylor College of Medicine Board of Trustees has approved the appointment of Joseph L. Mills, Sr., MD, to the John W. “Jack” Reid, MD, ’43 and Josephine L. Reid Endowed Professorship in Surgery.

Dr. Mills is an internationally recognized expert on peripheral vascular disease and limb salvage in diabetic patients. Dr. Mills was the lead author of the Society for Vascular Surgery (SVS) Lower Extremity Threatened Limb Classification System, a risk stratification system based on wound, ischemia, and foot infection (WIfi), adopted in 2014. Among his great many honors, Dr. mills has served as president of the Peripheral Vascular Surgery Society, president of the Western Vascular Surgery Society, president of the Association of Program Directors in Vascular, director of the American Board of Surgery, immediate past chair of the Vascular Surgery Board of the ABS, and is currently a member of the Surgery Residency Review Committee of the ACGME.

Dr. Mills has authored over 300 peer-reviewed journal articles and book chapters, focused on his clinical and research interests in noninvasive diagnosis, vein graft stenosis, intimal hyperplasia and limb-salvage in patients with diabetes mellitus. He has been the principal investigator for over 40 clinical trials, including a number of current investigations.

Dr. Raymon Grogan Named Section Chief of Endocrine Surgery

Raymon H. Grogan, MD, MS, an expert in diseases of the thyroid, parathyroid and adrenal gland, has joined Baylor College of Medicine as section chief of endocrine surgery in the Department of Surgery. Grogan is a pioneer of several novel techniques for operating on the thyroid and parathyroid. He is one of only a few experts in the United States on Transoral Endocrine Surgery, a novel approach to surgery for both thyroid and parathyroid disease that leaves no visible scar. He was one of the first surgeons to perform this operation in the United States, and the first surgeon to perform this operation in Chicago and the Midwest. He is also an expert in other forms of minimally invasive thyroid, parathyroid and adrenal surgery.

Dr. Grogan is the Principal Investigator and founder of the North American Thyroid Cancer Survivorship Study, which is a longitudinal cohort study that currently has nearly 3,000 participants enrolled and continues to expand. Through this work Grogan has published several novel findings related to thyroid cancer survivorship and has helped start a national discussion on ways to improve quality of life in these patients. Most recently Grogan has begun research on the relationship between the human microbiome and thyroid disease. In 2017 he was awarded the prestigious Paul LoGerfo Research Grant from the American Association of Endocrine Surgeons to study this relationship.

Grogan joins Baylor from the University of Chicago, where he was director of the Endocrine Surgery Research Program, director of the Endocrine Surgery Fellowship Program, associate program director of the General Surgery Residency Program, and chair of the Resident Research Advisory Committee. During his tenure in Chicago, Grogan traveled abroad to Bangkok, Thailand to learn the Transoral Thyroidectomy technique from the world-renowned expert, Angkoon Anuwong, MD, and then returned to Chicago and started the transoral neck surgery program.

Dr. Grogan sees patients at Baylor St. Luke’s Medical Center.
IN THE OR LIGHT

FACULTY
RAVI K. GHANTA, MD
Associate Professor of Surgery
Division of Cardiothoracic Surgery
Chief, Cardiac Surgery
Ben Taub Hospital

I am proud to have recently joined the Baylor College of Medicine family. I was born in India, but moved to Oakdale, Louisiana when I was very young. My father was a primary care physician who had one of the largest and most diverse practices in central Louisiana. His practice was a true family affair with my mom managing the front desk and my brother and me assisting on the weekends. The impact my father on our community and his dedication to helping people of all backgrounds certainly influenced my decision to pursue a career in medicine. During my schooling in Louisiana, I also developed additional interests in physics and history, which remain passions of mine today.

I attended Cornell University and received a BS in Applied and Engineering Physics. My senior thesis, supervised by Dr. George Hess, was a study of cell signaling. I then attended Harvard University for medical school. I had the opportunity to be part of the Harvard-MIT Division for Health Sciences and Technology which allowed me to merge my interests in engineering and technology with medicine. With funding from the Howard Hughes Medical Institute, I worked in the laboratory of Dr. James Fujimoto to help develop a new optical technique for imaging, called ultra-high resolution optical coherence tomography. This allowed for very precise imaging of the eye and of other structures such as the coronary artery. We were able to publish this new technique in *Nature Medicine*. I graduated with honors from Harvard Medical School for my senior thesis on biomedical optics and imaging.

As a medical student I rotated frequently at the Brigham and Women’s Hospital. Through my clerkships I was drawn to a career in surgery and pursued surgical training at the Brigham. During my second year of residency, I rotated on the cardiac surgery service for three months—and I was hooked. Dr. Lawrence Cohn was a big influence on my career and encouraged me to pursue an academic career as a cardiac surgeon. I worked with Dr. Cohn and Dr. Fred Chen for three fulfilling years in the Brigham Cardiac Surgery Laboratory with funding from an NIH F32. We studied ventricular remodeling and heart failure. This effort was rewarded with an NIH RO1 and a high impact publication in *Circulation*. After completion of my residency in surgery, I stayed at the Brigham for thoracic surgery residency.

After graduating from residency and a 15-year stint in Boston (Go Sox!), I joined the faculty at the University of Virginia (UVA). I was able to develop a diverse clinical practice and a translational research laboratory. At UVA, I was an active in heart transplantation, mechanical circulatory support, complex aortic surgery, and trans-catheter valves. My lab focused on studying post-infarct ventricular remodeling and developing therapies to prevent adverse remodeling. In addition, I was active in health services research as part of the Virginia Cardiac Surgery Quality Initiative and the NIH Cardiac Surgery Trials Network.

In 2016, I joined Baylor as chief of cardiac surgery at Ben Taub Hospital. Working with Dr. Matt Wall at Ben Taub has been an incredible experience with exciting opportunities for future growth. We have developed a mechanical circulatory support program and will continue to expand the clinical capabilities at the Ben Taub. I have also continued my work in ventricular remodeling with the Laboratory for Cardiac Regeneration led by Dr. Todd Rosengart. The opportunities for growth at Baylor are enormous, and I am very excited to join the BCM team at this time.

Not to mention, my family shares my excitement to be in Houston. My wonderful and superstar wife Sharmila along with my twin sons Avighna and Ashvin look forward to our future at Baylor!
I am currently in my sixth year as a general surgery resident, enjoying my fourth clinical year after completing a two-year research fellowship in clinical and health services research. I am originally from Birmingham, Alabama and spent my first 10 years in the South. My family and I then moved to Albuquerque, New Mexico, which I now consider home. In high school, I always wanted to pursue a career in medicine, and was encouraged by my mentors to strive to be a female leader in a STEM field. I attended Vanderbilt University as an undergraduate, and graduated with degrees in Chemistry and Spanish. I then went on to the University of New Mexico (UNM) for medical school, unsure of the path I would take. At the end of my first year of medical school I met my first surgical mentor, the chief of surgical oncology at UNM, and I fell in love with surgery. I became involved in surgical oncology disparities research, and was deeply inspired by how he and his fellow surgical oncologists treated each of their patients in a team with full multidisciplinary care.

I first came to Baylor College of Medicine as a visiting fourth-year medical student, attracted by the Texas Medical Center and the strong surgical oncology training program at Baylor. I spent a month on the pancreas service as Baylor St. Luke’s Medical Center, and my time in the operating room and getting to know the Baylor surgery residents and faculty confirmed in my mind that Baylor was the place for me. I was honored and overjoyed to open my Match letter and see my first choice program listed. The (sometimes grueling, but always rewarding) training, support and mentorship I have received at Baylor have been more than I ever could have asked for, and I will be forever grateful to the program for taking a chance on me.

I spent my two-year research fellowship doing clinical and health services research at the Houston VA Center for Innovations in Quality, Effectiveness and Safety (IQuEST) under the mentorship of Dr. Daniel Anaya and Dr. Nader Massarweh. At first I thought research would be a means to an end, but I was quickly and pleasantly surprised at how much I enjoyed learning research methodology and conducting clinical studies. For me, my research put my clinical work and aspirations into focus and gave me a long-term perspective on what I hope to accomplish in the field of surgical oncology. Both of my maternal grandparents died of non-Hodgkin lymphoma. As a little kid, I watched as grandmother and, a years later, my grandfather each received the devastating news. I watched as my grandparents—who had little education on their side and probably never imagined their first granddaughter would become a cancer surgeon—entered the confusing and frightening reality of scans, biopsies, chemotherapy, more scans, and wagers on prognosis. As surgeons, we can be powerful voices and active stakeholders in oncologic care quality improvement and better access to cancer care. I want to be one of those voices.

With the outstanding guidance and support of my Baylor mentors, my saint of a husband, and my family in Albuquerque, I have applied for a surgical oncology fellowship to follow graduation in 2019. I plan to pursue a career in academic surgery and continue health services research with a specific focus on barriers and access to oncologic care in underserved populations.
Hailing from the lovely bluegrass state of Kentucky, my passion for biology and learning the intricacies of the human body began in my high school anatomy class. I attended Kentucky State University where I majored in Biology with a Chemistry minor. Throughout my college career I participated in two consecutive summer biomedical research programs at the University of Arizona focusing on health disparities in minority communities. Upon completion of my degree I began my career as a research assistant at the University of Kentucky (GO WILDCATS!). It was there that I honed my research skills as I supported surgeons performing various procedures daily. In 2014 I moved to Houston. Finding my affinity for research waning, I decided to change my career path and apply for a position in the Simulation Center at Baylor. The Simulation Center provides an innovative, immersive learning environment that bridges classroom learning and real-life clinical experiences. Working in this center has afforded me the opportunity to not only be a contributor in the training of medical students, residents, physicians, and other healthcare professionals, but I am also able to acquire jewels of knowledge from our distinguished faculty collaborators. There is never a dull moment here at the Simulation Center. We are consistently growing and evolving, and I am very proud to be a member of this dynamic team.
Welcome Matt Bush

Matt Bush, MHA, joined the Department of Surgery on January 2nd as administrative associate for the Divisions of Plastic Surgery and Vascular Surgery & Endovascular Therapy. With over seven years of revenue cycle experience at HCA Healthcare, Houston Methodist, and Baylor College of Medicine, Matt is intimately familiar with the operations of hospitals and physician group practices. Matt earned his MHA degree from Texas State University, and his BS from Texas A&M University. Please join us in welcoming Matt to the department!

HONORS & AWARDS

FACULTY HONORS AND AWARDS

Stuart Corr, PhD, MEng, received the Sue Nguyen Surgical Incubator Award from Baylor St. Luke’s Medical Center.

Joseph S. Coselli, MD, delivered the Dr. Lawrence H. and Mrs. Robert Cohn Visiting Professor Lecture in the Department of Cardiothoracic Surgery, Stanford University.

Nader Massarweh, MD, was elected At-Large Member of the Surgical Outcomes Club Board of Directors.

Jeffrey A. Morgan, MD, was elected to the American Association for Thoracic Surgery (AATS) Education Committee.

Ourania Preventza, MD, was appointed Associate Editor of Annals of Thoracic Surgery.

Todd K. Rosengart, MD, received a 2017 Distinguished Scientist Award from Baylor St. Luke’s Medical Center.

Jeffrey A. Ross, DPM, MD, is President-Elect of the Texas Podiatric Medical Association.

James W. Suliburk, MD, was elected Association of Academic Surgery (AAS) Representative to American College of Surgeons (ACS) Board.

RESIDENT AND STUDENT AWARDS

Katherine Baugh, MD, was awarded a NIH T32 Postdoctoral Fellowship from the Center for Cell and Gene Therapy at Baylor College of Medicine.
Mentor: Dr. William Fisher

Erin Corsini, MD, MS, received a 2018 Society for Thoracic Surgeons (STS) Looking to the Future Resident Scholarship.
Mentor: Dr. Scott LeMaire

Rachel W. Davis, MD, received a $5000 grant from the Craig and Galen Brown Foundation to help support her second year of global surgery training at Baylor.
Mentor: Dr. Larry H. Hollier.

Jessica Mayor, MD, was selected as a Center of Excellence Clinical Fellow Scholar by Baylor College of Medicine’s Center of Excellence in Health Equity, Training and Research.
Mentor: Drs. Joseph Mills and Nader Massarweh

Kirea Mazzolini, BS, won 2nd place in the clinical research division of the 2017 Medical Student Program Poster Session at the American College of Surgeons (ACS) Clinical Congress.
Mentor: Dr. Sohail Shah

Jackie Olive, BS, received a 2018 STS Looking to the Future Resident Scholarship.
Mentors: Drs. Ourania Preventza, Joseph Coselli and Todd Rosengart

Catherine Seger, MD, was awarded the Raleigh R. Ross Texas Surgical Society Scholarship.
Mentor: Dr. R. Mario Vera

Rohan M. Shah, BS, was a 2017 finalist for the Southern Thoracic Society Association James W. Brooks Medical Student Scholarship. Rohan was also a scholarship candidate in 2016.
Mentors: Drs. Todd Rosengart, Bryan Burt, Ravi Ghanta and David Sugarbaker