

INSPIRATION

ANNUAL REPORT 2019



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE

Department of Surgery

FROM THE CHAIR



Passion is not self-contained. It requires a trigger, an impetus, a motivational realization. In a word, intensity of purpose needs to be inspired.

For many of us in healthcare, inspiring moments are often derived from experiences involving people, be they patients, mentors, colleagues, loved ones, or others that have shifted our point of view and awakened us to new needs or possibilities. These encounters become the genesis of the particular goals and intentions that drive us forward. The impressions they leave in our hearts and minds remind us again and again of why we do what we do, and help us withstand the intermittent difficulties and obstacles that work to deter us from our objectives.

One of my primary responsibilities as chair is to understand what motivates our faculty, trainees, and staff members so that I can cultivate a stimulating environment for influencing exceptional accomplishments. Expressed simply, it is my job to engineer avenues of discovery for people. The strategies to accomplish this can be as simple as introducing junior faculty to senior faculty with whom they share common interests, or reminding our departmental members of the wealth of resources at our fingertips, from intramural grants to our fine research support teams.

For me the payoff comes when inspiration takes hold. Then I simply get out of the way and watch the magic unfold.

John F. Sweeney, MD

Joseph Brown Whitehead Professor of Surgery and Chair
Department of Surgery
Emory University School of Medicine

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EMORY
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PATIENT CARE

MAPPING THE JOURNEY

“Mission: To provide high value, compassionate care to every patient through collaborative, team-based care while defining the future of surgery through discovery and education.”

– excerpt, *Building our Legacy, Department of Surgery Strategic Plan 2020-2024*

In September 2018, Department of Surgery Chair John Sweeney and a steering committee composed of physician and administrative leaders launched the department’s strategic planning process, the goal being to complete and present the finalized plan by early 2020 so that it could begin serving as a guide to excellence on behalf of our patients, communities, faculty, and staff.

Stakeholder input was solicited regarding strengths, areas of opportunity, and desired future directions of the department, and over 30 feedback sessions were conducted with approximately 100 participants from across the department and School of Medicine, Emory Healthcare, and affiliate organizations. The resulting data was contextualized further by conducting a comprehensive environmental assessment that explored the trends impacting surgical departments across the country.

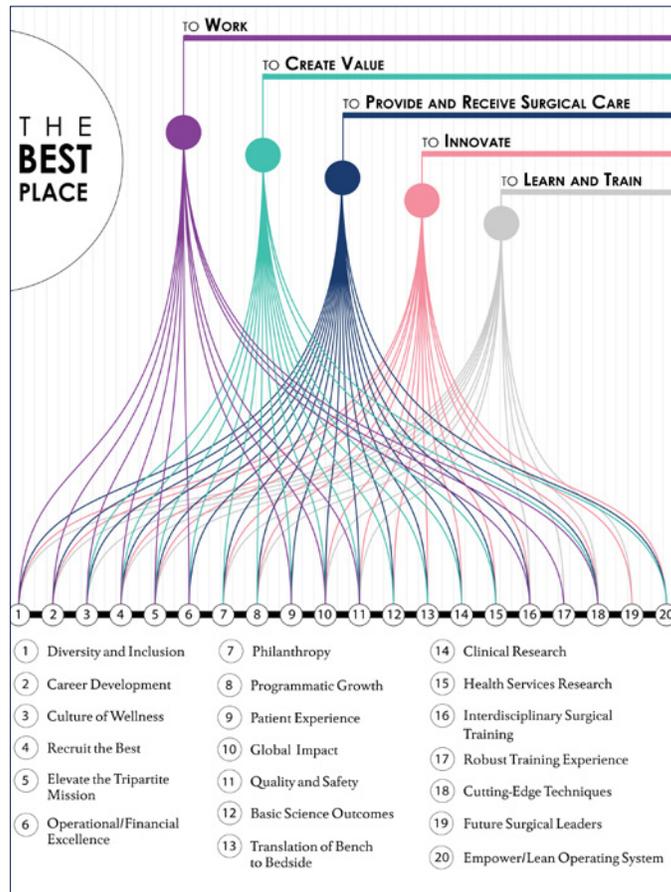
The Strategic Plan Steering Committee began determining the plan’s framework in December 2018. Based on the input gathered during the prior months, the committee defined Emory Surgery’s mission, vision, and values, building the core principles that would drive faculty and staff to make lasting contributions to Emory and to the futures of the department’s patients and trainees.

After reviewing feedback obtained at the department’s February 2019 Faculty Retreat, the committee identified goals and strategies to assist in shaping the plan’s content. During the following summer, 15 work groups representing key components of the plan’s intent

and function were formed and charged with developing recommended actions and measures of success. Over 140 faculty and staff participated, distilling and reconciling a wide range of ideas and perspectives from across the department’s divisions and campuses. Using the work groups’ recommendations, steering committee members finalized the framework for the plan and identified priorities to be initially addressed.

Implementation of the plan will span 2020-2024. Building on the momentum and engagement of the planning process, newly created committees will be tasked with facilitating the plan’s initiatives, and a board of advisors will be established to oversee the department’s progress, performance, and to provide recommendations to the chair. This activity will align with the department’s transition to the Em-Power methodology, Emory’s version of the Lean

management organizational paradigm that deploys a process of continuous improvement by empowering frontline workers to solve problems.



Emory medical illustrator Satyen Tripathi’s graphic depicts the application of 20 primary strategies to achieving the strategic plan’s top five goals for advancing the mission of the Department of Surgery.



Yazan Duwayri and Alexis Neill, shown here during patient rounds at the Emory Clinic, are highly dedicated to facilitating local translation of national registry data into practice change.



Vigilance rewarded

In March 2019, the Society for Vascular Surgery's Vascular Quality Initiative (SVS-VQI) awarded a 3 Star Certificate to the Emory Clinic Vascular Surgery Service for its VQI participation, making Emory one of only 44 out of 383 eligible member centers to receive this top rating in advancing the VQI's mission to increase the quality, safety, and effectiveness of vascular health care while lowering costs.

The VQI's member centers, composed of multidisciplinary groups of physicians, data managers, and quality professionals, collect and submit clinical data on their vascular patients to VQI's clinical registries, which have grown to contain demographic, clinical, procedural, and outcomes data from more than 500,000 vascular procedures performed in the U.S. and Canada. This wealth of data allows centers and providers to compare their performance to regional and national benchmarks.

The one-to-three star ranking system qualifies actions by VQI centers that lead to better patient care, such as maintaining long-term follow-up after vascular interventions, physician participation in semi-annual meetings of a regional quality group, and initiation of quality improvement activities based on VQI data.

"VQI's registries are a powerful tool for monitoring outcomes, and VQI-generated reports have facilitated various targeted quality improvement initiatives at Emory that have reduced our patients' hospital stays, increased our compliance with appropriate cardiovascular medications, and enhanced our long-term vascular surveillance programs," says Yazan Duwayri, chief quality officer for the Division of Vascular Surgery and Endovascular Therapy and the leader of Emory's involvement in the VQI.

Duwayri is also the former medical director and current member of the Research Advisory Committee of the Southeastern Vascular Study Group (SEVSG), a partnership of Florida, Georgia, and Alabama-based clinicians, hospital administrators, and research personnel that is one of several regional quality groups associated with the VQI. SEVSG collects and exchanges information for benchmarking outcomes after vascular procedures to assure that patients in its region are receiving the highest quality of care possible.

Alexis Neill, Emory clinical research nurse and VQI data manager for Emory Vascular Surgery, was integral to the process that led to the service receiving the 3 Star award. "Ms. Neill effectively collaborated with other leading centers to identify the best processes of care, identified and contacted patients who were in need of surveillance after vascular interventions, and provided accurate reports to monitor our systems and outcomes within the Division of Vascular Surgery," says Duwayri.



Left to right: Vasilis Babaliaros, Kendra Grubb, and Adam Greenbaum. “We’ve crossed paths and collaborated throughout the years, so actually doing surgeries together feels very natural,” says Grubb.

New alliance will advance treatment options

“We are proud to welcome the Emory Structural Heart and Valve (SH&V) Center as the first member of the Structural Heart Intervention Network of the National Heart Lung and Blood Institute. Emory has been a partner in developing novel therapies, and their vision and leadership are invaluable for the cooperative development of new treatments,” says Robert Lederman, senior investigator and coordinator of the new network.

Led by interventional cardiologist Vasilis Babaliaros, the Emory SH&V Center is a prominent and highly specialized program for treating abnormalities of the heart valves and chambers that has achieved such milestones as being the first program in Georgia to perform transcatheter aortic valve replacement (TAVR). Babaliaros was joined in 2018 by Kendra Grubb, former surgical director of the heart valve program at the University of Louisville and Jewish Hospital, and Adam Greenbaum, who served as co-director of the Center for Structural Heart Disease at Henry Ford Heart and Vascular Institute.

As the new research collaboration commences, these physician-scientists will build upon prior advancements. Lederman has led many NIH multicenter trials with Babaliaros and Greenbaum as collaborators, including the development of alternative access for TAVR by a transcaval approach; refinement of BASILICA, a valve leaflet laceration method used in TAVR to prevent the devastating complication of coronary obstruction; and fine-tuning LAMPOON, a technique that prevents the

blockage of blood flow during transcatheter mitral valve replacement. Grubb has also been involved in studies of transcatheter heart valve therapies and early phase cardiac technologies such as AccuCinch, a unique ventricular repair system for patients with advanced heart failure.

In June 2019, Grubb, Babaliaros, Greenbaum, and Lederman represented the Emory SH&V Center as one of only six stateside centers to perform live cases streamed to the 12th Annual Structural Heart Summit in Chicago. The multidisciplinary team demonstrated three complex surgeries, highlighting several of the aforementioned techniques and personifying the translation of progress to practice.

“What started as a TAVR program for aortic stenosis patients considered too old and/or sick for surgery has blossomed into a locus of excellence for treating structural heart and valve disease. Through collaboration across disciplines, the SH&V Center provides novel therapies to patients, many of whom have been told they have no options,” says Grubb. “We are excited to offer such first-in-U.S. therapies as cerclage, a new approach for mitral regurgitation, while we simultaneously develop ElastaClip, which removes failed Mitraclips; ANTEPASTA, a right ventricular remodeling technique; and other pioneering treatments.”

The Burn Center thrives

The American Burn Association recently reverified the adult and pediatric burn treatment status of the Burn Center of Grady

Memorial Hospital, the highest recommendation a burn center can receive. This is the third ABA verification the center has achieved under the watch of Walter Ingram, the center's medical director since 1992.

When Juvonda Hodge joined the Burn Center in 2014 as assistant medical director, the first verification had been in place for two years. By then, Ingram and his team were annually treating over 500 inpatients and were the primary providers of pediatric burn care in Georgia (an estimated 20% of the center's patients are two years old or younger). With Hodge's arrival, activity at the center ramped up even further.

"At first, we did surgeries two to three days a week. Gradually, it became five," she says. "Referrals were climbing, particularly because Dr. Ingram's standardization of wound care protocols, expansion of hydrotherapy, refinement of pain control, and expansion of treatment to include patients with complex wound problems secondary to burns had made Grady the most advanced and well-equipped burn program in the area."

By 2017, the center's patient volume rose to 3,400 patient admissions, 739 of whom were inpatient. Out of 3,785 total admissions in 2018, 717 were inpatients. As of August 2019, there were 3,000 patients overall and more than 520 inpatients, with the year-end tallies expected to be higher than ever.

These stats are joined by a nationwide increase in burn injury survival. "Revisions to managing inhalation injury, improvements in nutrition to fight infection and aid healing, and patients receiving early burn excision and skin grafts immediately following injury are boosting survivability," says Hodge. "But with that comes an intensified need for reconstruction services."

Enter Emory alumnus Rohit Mittal, fresh from completing his burn/critical care and burn/reconstructive surgery fellowships at the University of Texas Medical Branch in Galveston. Mittal is the new director of the center's burn reconstruction and burn outcomes research programs.

"When I rotated on the burn service as a resident, I was humbled by Drs. Ingram and Hodge's commitment to their patients, and decided to dedicate myself to alleviating the physiological and psychological toll of burn scarring," he says. "Since returning, I've been working to expand our laser therapy program for burn scars, and am collaborating with Grady's rehabilitation team to create a comprehensive pathway for the surgical reconstructive needs of our patients."

Mittal also did a two-year research fellowship at Emory with sepsis and shock investigator Craig Coopersmith and transplant immunologist Mandy Ford. As he studied cancer's interaction with sepsis, he learned the mechanics of developing and executing research projects, which he will now apply to evaluating and improving quality and clinical outcomes in burn patients.

"The new frontier in burn outcomes research is addressing issues that both aid and impede the patient's reintegration into society," he says. "Dr. Hodge and I plan to track our patients' functional, psychological, and quality of life changes as we streamline their access to reliable burn and reconstructive surgery services."

Tom Granchi will join the team as chief of burn surgery in March 2020. The former medical director of the University of Iowa's burn program and retired U.S. Army Medical Corps reservist, with multiple deployments to Iraq, Afghanistan, and Kosovo, will provide additional surgical expertise in the burn ICU, operating room, and clinic while assuming various administrative tasks.

"With Dr. Mittal and Dr. Granchi's arrival, Dr. Ingram and I will have the extra bandwidth we need to expand research, provide additional outreach to regional emergency departments, and partner with firefighters on community education," says Hodge.

Commenting on her working relationship with Walter Ingram, Juvonda Hodge says, "We are both very passionate about doing what's best for the patient and are not afraid of working hard, which makes our combination that much better. We have mutual respect."



LEGACY HONORED, OPPORTUNITY PROVIDED

In the summer of 2019, Emory Surgery hosted the first two recipients of the Asa G. Yancey Visiting Student Diversity Scholarship. By welcoming minority fourth-year medical students to Emory's surgical environment for one-month rotations, the scholarship aims to set an example for residency programs nationwide as well as increase the number of underrepresented minority trainees in Emory's general surgery residency program. Yancey scholars will be strongly considered for residency interviews following successful completion of their scholarship.



“The scholarship solidified my desire to pursue a surgical residency,” says India Jones, shown with Allan Pickens, faculty advisor for the department’s diversity committee. “Watching the faculty and residents confidently handling complex cases showed me I could reach the same skill level if I worked hard enough.”

The inaugural recipients were Katherine McElroy from McGovern Medical School at the University of Texas and India Jones from Howard University College of Medicine. McElroy was assigned to the surgical oncology service at Emory University Hospital Midtown, and Jones worked on the breast, melanoma, and endocrine service at Emory University Hospital.

Both scholars were selected from a competitive pool of applicants by members of the Yancey Scholarship Selection Committee: Adekemi Egunsola, a recent residency graduate who is now a colorectal surgery fellow at Long Island Jewish Medical Center; current resident Nnaemeka Ndubisi; Keith Delman, program director of the general surgery residency program; Barbara Pettitt, director of medical student education; and Johanna Hinman, director of education and global surgery.

“For any rotating student, I think there is always anxiety about finding where you fit in,” says McElroy. “The residents and faculty I worked with were incredibly welcoming and made me feel comfortable as a member of the care team. Everyone encouraged my growth and learning.”

Applicants submit official transcripts, letters of good standing, recommendations from their surgery clerkship directors, and are expected to have achieved honors or high pass rates in their third year surgery clerkship as well as high Step One scores on the three-part U.S. Medical Licensing Examination.

The scholarship is named for Asa G. Yancey, the first African American physician to serve at Grady Memorial Hospital. Yancey was appointed chief of surgery at Grady’s Hughes Spalding Pavilion in 1958, and established the first accredited surgical residency program for African Americans in the state of Georgia shortly thereafter. In 1964, he became the first African American faculty

member at the Emory School of Medicine, and was named medical director of Grady as well as associate dean at the School of Medicine in 1972.

“This award truly epitomizes Dr. Yancey’s legacy,” says Ndubisi. “His family was elated and was proud to give their blessing to the scholarship.”

Upon his retirement in 1989, Yancey was named professor emeritus. Two years later, Grady Health System established the Asa Yancey Health Center, a neighborhood primary care facility.

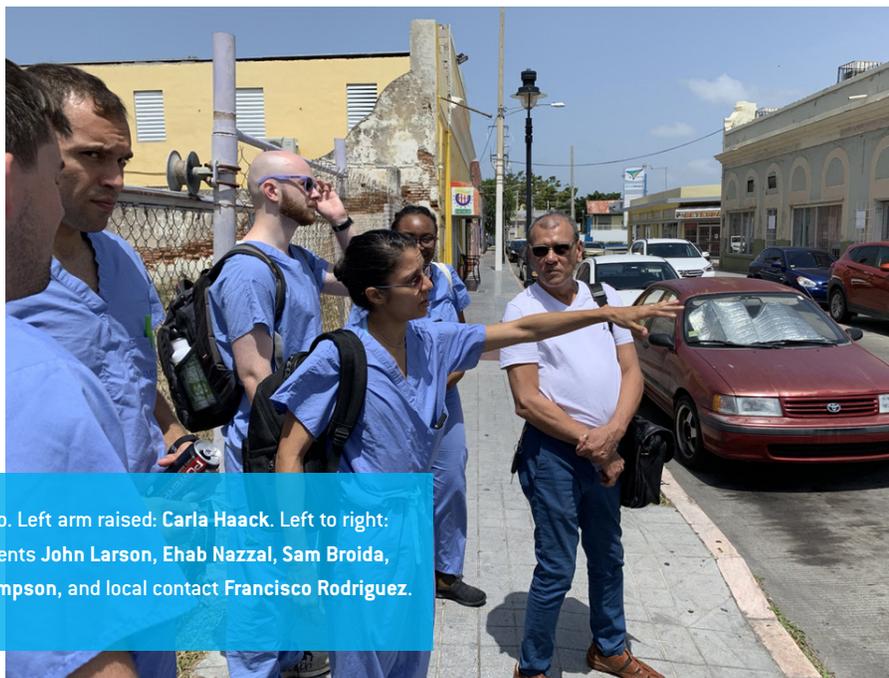
Potency of presence

The Emory medical student team, led by general surgeon Carla Haack, had just completed a day of house-to-house visits in Yabucoa, Puerto Rico, checking in on homebound, often elderly patients. As the team reflected on how their encouragement had appeared to lift the morale of the family members, neighbors, and social workers serving as caregivers, Haack said: “Never underestimate the power of just showing up. It makes these people feel that their work is not forgotten.”

Ever since Hurricane Maria struck Puerto Rico in September 2017, Haack has been making medical relief trips to its most hard-hit regions. She was raised on the island, received her MD at the University of Puerto Rico, and her parents still live there.

“Practically everywhere I went the first time was like scorched earth,” she says. “Two years later, communities are still recovering.”

When the medical students, surgery and anesthesiology residents, faculty physicians, and mid-level practitioners known as the Emory Haiti Alliance were unable to make their annual trip to



In Puerto Rico. Left arm raised: Carla Haack. Left to right: Medical students John Larson, Ehab Nazzal, Sam Broida, Nishone Thompson, and local contact Francisco Rodriguez.

Haiti because of unrest in the country, Haack, an alliance member since 2014, suggested that some of them accompany her to Puerto Rico. The trip was approved, and she and 12 medical students, anesthesiologists Mark Caridi-Scheible and Grant Lynde, and former chief resident Priya Rajdev flew into San Juan on June 8.

Limited to stocks of antibiotics, insulin, drugs for such conditions as hypertension, and other basic medical supplies, the team had to adapt to surgery not being a treatment option. Instead, they worked within the boundaries of triage and primary care, doing physical exams, wound care, blood glucose monitoring, medication refills, and other tasks. They also did a lot of listening.

“Our success here cannot be measured by the number of patients we see or operations we perform, and that’s okay,” wrote medical student Kareem Al-Mulki on the alliance’s trip blog. “We have been gifted the opportunity to meet these people, hear their stories, build relationships, and provide what services we can.”

The group’s stay was divided between addressing the primary care needs of homeless people in San Juan and making day trips to the municipalities of Yabucoa, Ponce, Humacao, and Punta Santiago. Much of this work was conducted with representatives of Puerto Rican relief organizations, including Coalición de Coaliciones (a homeless aid program), PECES (Programa de Educación Comunal de Entrega y Servicio, a socioeconomic development service), and Intercambios Puerto Rico (a needle exchange/social services program).

“We hope that these partnerships will help build a stronger surgical capacity network in those communities,” says medical student Bonnie Stedje. “But ultimately, our experiences reinforced that sitting, listening, and connecting with people is a valuable therapeutic intervention that can always be done, even in the most difficult of circumstances.”

Dissecting discussion

Long referred to as “the Golden Hour of surgical education,” the ACGME-mandated surgical morbidity and mortality (M&M) conference allows surgical trainees to work with faculty as they evaluate the management details of cases involving adverse outcomes. The intention is to identify any contributing

circumstances in order to improve the quality of response in future encounters with similar conditions.

However, standard M&M conferences are often limited to one hour per week and can rarely review all of the tangents of every topic. In an effort to create an auxiliary source for these unaddressed threads, Emory Surgery and the Woodruff Health Sciences Center (WHSC) Library initiated the Surgical Focus blog.

“Studies have shown that only 40%-70% of clinical questions posed during M&M and other clinical conferences are actually pursued. Surgical Focus helps eliminate this educational leak for the benefit of our residents,”

says Hannah Rutledge, head of Clinical Informationist Services at the WHSC Library and the blog’s founding curator in collaboration with surgery resident Brendan Lovasik.

After planning and development by Rutledge, Lovasik, general surgery program director Keith Delman, and M&M faculty moderator Shishir Maithel, Surgical Focus launched in October 2018. The blog features each week’s cardinal topics of discussion and debate, paired with on-site summaries of those studies as well as links to related studies and additional readings. Rutledge and Lovasik select the topics and associated studies and readings, and Rutledge posts and maintains the content and writes the summaries (in December 2019,

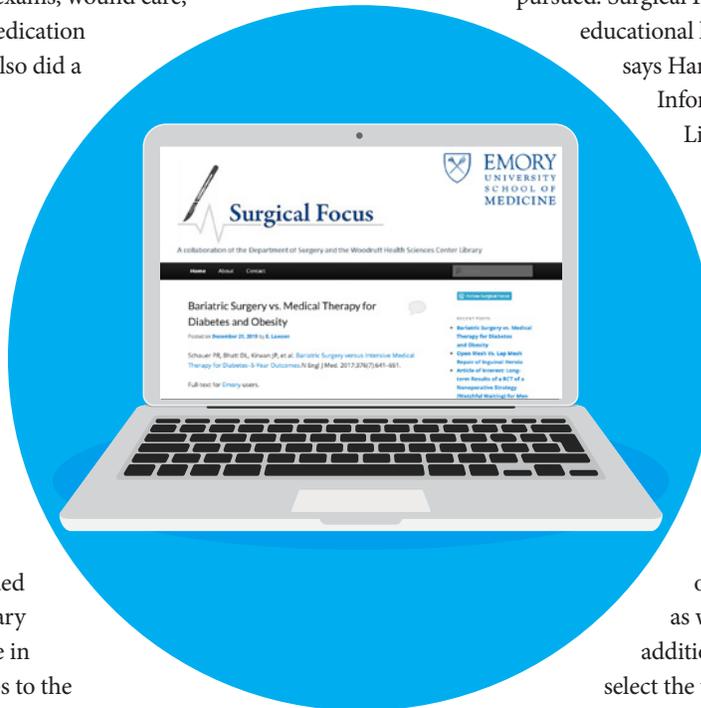
Emily Lawson, coordinator of user outreach at the WHSC Library, took over Rutledge’s tasks).

The blog’s categories range from general surgery clinical specialty areas to clinical trials, “great debates,” perioperative care, oncology, pathology, and more.

“The role of the blog is not to provide absolute guidelines for a particular technique, course of treatment, or critical situation,” says Lovasik. “Instead, we are presenting the primary areas of discourse and accompanying evidence to help residents and faculty provide the best evidence-based practices in their patient care.”

Realistic simulation breeds autonomy

The ACGME does not mandate cadaver dissection for general surgery training, but Emory does. Jahnavi Srinivasan, associate residency program director and director of surgical simulation and elective programs, believes cadaver skills training enhances residents’ confidence and self-reliance and is an important



adjunct to clinical operative experience. She initiated the effort to standardize the cadaver dissection curriculum for all general surgery PGY levels at Emory in 2014.

“Stricter supervisory guidelines, restrictions in work hours, and the development of advanced minimally invasive techniques such as robotics have limited the breadth of operative exposure and lessened resident independence,” she says. “If residents have to learn fundamental exposures based solely on luck-of-the-draw clinical experience, they run the risk of having knowledge gaps and losing faith in their operative skill.”

While Srinivasan is an advocate of multimedia simulation and procedural surgical task trainers, she has found that performing surgical techniques on human tissue is the only way to truly understand what is required to be a proficient surgeon. “Independent dissection helps trainees appreciate the planes, layers, and locations of

crucial body structures and anatomical orientations. Current simulators cannot reproduce the types of tactile, visual, and auditory details that trainees should encounter to become more familiar with fundamental techniques during an actual procedure on a real person.”

The cadaver-based curriculum was originally designed by a Srinivasan-led committee of faculty and chief residents, and involves teaching core surgical exposures and maneuvers common to the majority of operative procedures. The governing principle is that learning these central methods is more likely to contribute to a versatile and broadly applicable skill set than just performing simulations of specific surgeries.

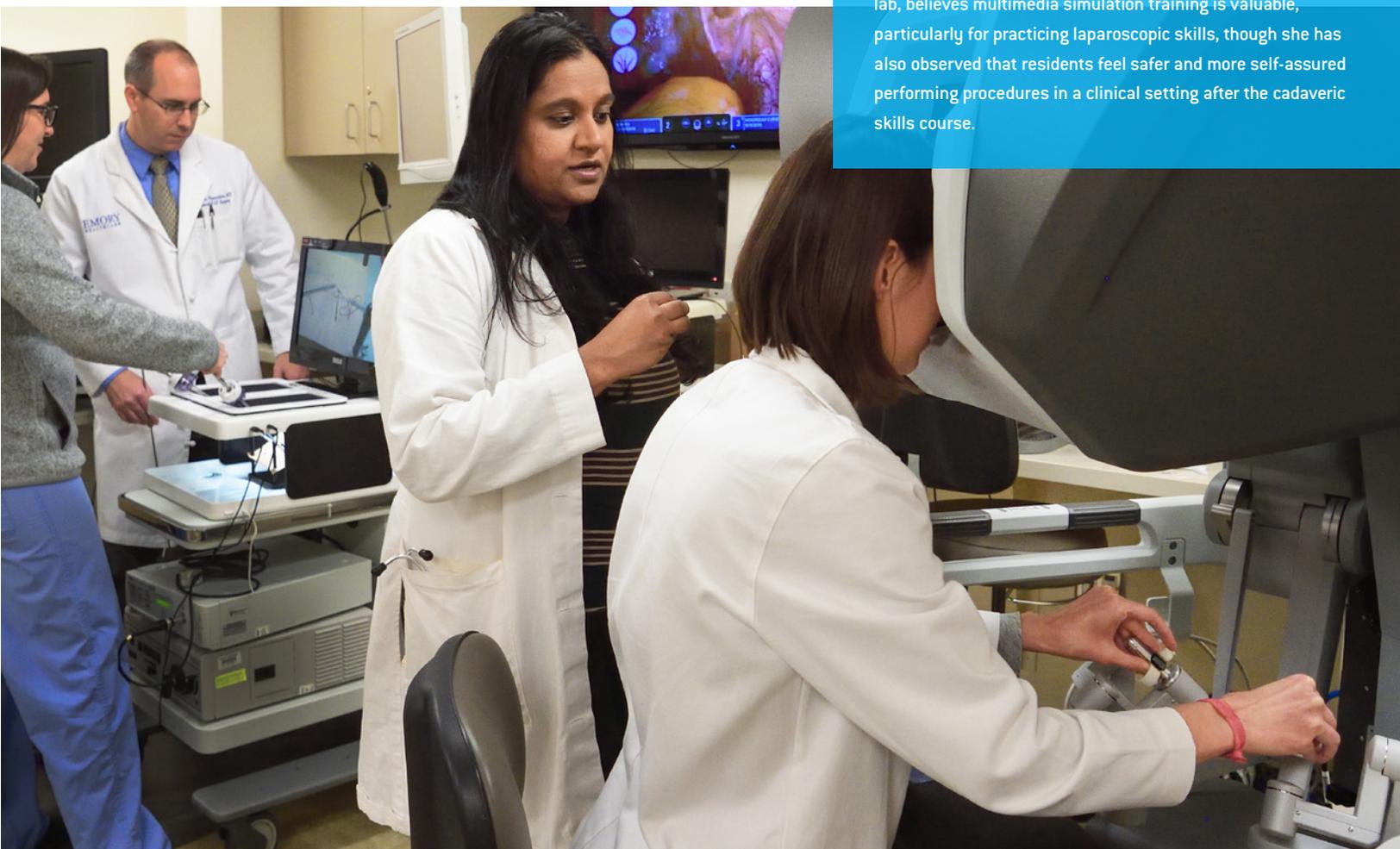
At the beginning of the year, residents are assigned to small groups overseen by chief residents that perform techniques appropriate to their PGY level. They do a series of cadaver dissections at several workshops supervised by faculty, culminating

in a final video-taped testing session that is de-identified and faculty-reviewed. The residents receive a list of possible skills that will be tested several days before the exam, but are not informed of the skill they will be assigned until just before the session begins.

“Survey data thus far shows that the majority of residents feel that the course improved their confidence, and that attendings have an increased willingness to give these residents a higher level of autonomy in the operating room,” says Srinivasan.

Various Emory Surgery faculty members supervise the learning acquisition sessions, arrange the testing sessions, and grade the final exam videos. Direct course oversight has been handled by Srinivasan with Jamil Stetler, Ankit Patel, Matthew Santore, and Dominic Papandria.

Jahnavi Srinivasan, shown with **Dominic Papandria** working with residents in the Surgical Education Office's simulation lab, believes multimedia simulation training is valuable, particularly for practicing laparoscopic skills, though she has also observed that residents feel safer and more self-assured performing procedures in a clinical setting after the cadaveric skills course.





Brett Tracy checking a patient's vital signs with Morehouse School of Medicine surgery resident Alex Wang at Grady Memorial Hospital's Marcus Trauma Center.

Stellar surgeon-scientist in the making

Surgical critical care (SCC) fellow Brett Tracy can often be found moving between resuscitation bays in the Marcus Trauma Center and operating rooms on the 6th floor at Grady Memorial Hospital, treating patients with gunshot wounds, motor vehicle injuries, organ failure, and other acute conditions. Resolving these emergencies would be the end-goal for some, but for Tracy, they inspire future investigations.

“Much of my research over the past two years relates to patients I’ve treated or procedures I’ve done,” he says. “Working at one of the largest public hospitals in the country offers many opportunities to consider new approaches.”

Before joining Emory as an acute care surgery (ACS) fellow in 2018 (the ACS and SCC one-year tracks are typically done in succession), Tracy received three consecutive research awards during his residency at Mercer University’s Savannah campus. Staying this course, he is now an ad-hoc reviewer for several trauma journals and a member of the Eastern Association for the Surgery of Trauma (EAST), American Association for the Surgery of Trauma, Society of Critical Care Medicine, and the Health Policy Advisory Council of the American College of Surgeons.

As 2019 came to a close he had published more than eight peer-reviewed articles, including a study of the effect of metabolic syndrome on severely injured trauma patients that was picked up by Reuters Health News. He had also delivered 11 national and three regional presentations, with a highlight being his receipt of the Health System Science Resident Award at the American Medical Association Research Symposium—his winning abstract

compared the utility of two indices in predicting violent injuries and deaths based on community factors.

“His achievements are exceptional. He is setting a remarkable example of how to be a vital researcher while being a fellow,” says Craig Coopersmith, program director of the SCC fellowship.

Tracy typically designs his own projects. Many stem from performance improvement and have frequently been unfunded, giving him the freedom to investigate his own concerns without having to consider a particular grant’s criteria.

Recently, he was awarded EAST’s John M. Templeton, Jr., MD Injury Prevention Research Scholarship to develop an app named SERVE, or Shared Engagement, Recovery and Violence Elimination. SERVE will be designed to give trauma victims a central source for coordinating all components of their continued treatment, including calendar alerts for appointments; instructions for injury management; and messaging access to providers, managers, and emergency staff.

“There is a real need for technology like this for underserved patients,” says Tracy. “Navigating the health system is challenging enough, let alone if you have minimal resources. This tool could assist in breaking the cycle of violence and incomplete care after discharge.”

This circle of connection—seeing a problem, fixing it, and then applying the fix—is the ultimate reward of Tracy’s research. “Surgery is my first passion. The surgery supports the research, and ideally, the research strengthens the surgery, assisting me and others in doing our best for the patient.”

RESEARCH

BY THE NUMBERS

According to preliminary analysis of National Institutes of Health (NIH) rankings, the Emory Department of Surgery placed sixth for all departments of surgery nationwide in total research funding in FY2019, with faculty in the department receiving over \$13.7M in grants. Especially considering the department's 12th position in FY2014, this latest ranking displays a remarkable climb.

Christian Larsen, Rachel Patzer, Andrew Adams, Craig Coopersmith, Lily Yang, Muralidhar Padala, Luke Brewster, Mandy Ford, John Calvert, and I. Raul Badell continued to place high in NIH funding for department of surgery-based principal investigators.

"This new ranking is a testament to the remarkable breadth of research performed in Emory Surgery," says Coopersmith, vice chair of research for the department. "We have international leaders in basic research, in health services research, in clinical trials, and in predictive analytics, and together we are paving the way for a brighter future for our patients tomorrow."

Lasting impression

At the 2019 American Transplant Congress, the American Society of Transplantation (AST) honored Mandy Ford, scientific director of the Emory Transplant Center, with the Basic Science Investigator Award. The AST bestows this esteemed award to scientists who have made substantial contributions to transplantation medicine and show great promise for continuing to do so.

As a leading researcher in the study of the cellular mechanisms of T cell responses in transplantation and immunosuppression, Ford's ultimate goal is to identify novel targets to attenuate these processes and improve clinical outcomes.

She is a vital member of an Emory research team with transplant surgeon-scientists Andrew Adams and Christian Larsen that is spearheading development of novel third-generation costimulation blockers—drugs that interfere with T cell function and halt immune rejection of a transplanted organ—as better and less toxic immunosuppression in transplantation. Based on her foundational studies with Adams in experimental transplant

models over the last decade, this team was awarded a five-year, \$5.6M NIH grant to fund a clinical trial of the costimulation blocker lulizumab in renal transplant recipients.

Ford's current portfolio includes several private foundation grants, two NIH R01s, the Emory Transplant Center's T32 training grant, and three R01-funded collaborative studies with Emory surgical critical care expert Craig Coopersmith. The latter studies are investigating the impact of chronic alcohol abuse on the pathophysiology of sepsis, the roots of the systemic immune dysregulation that switches on the immune suppression that is a major contributor to sepsis-induced mortality, and the interplay between cancer and sepsis.

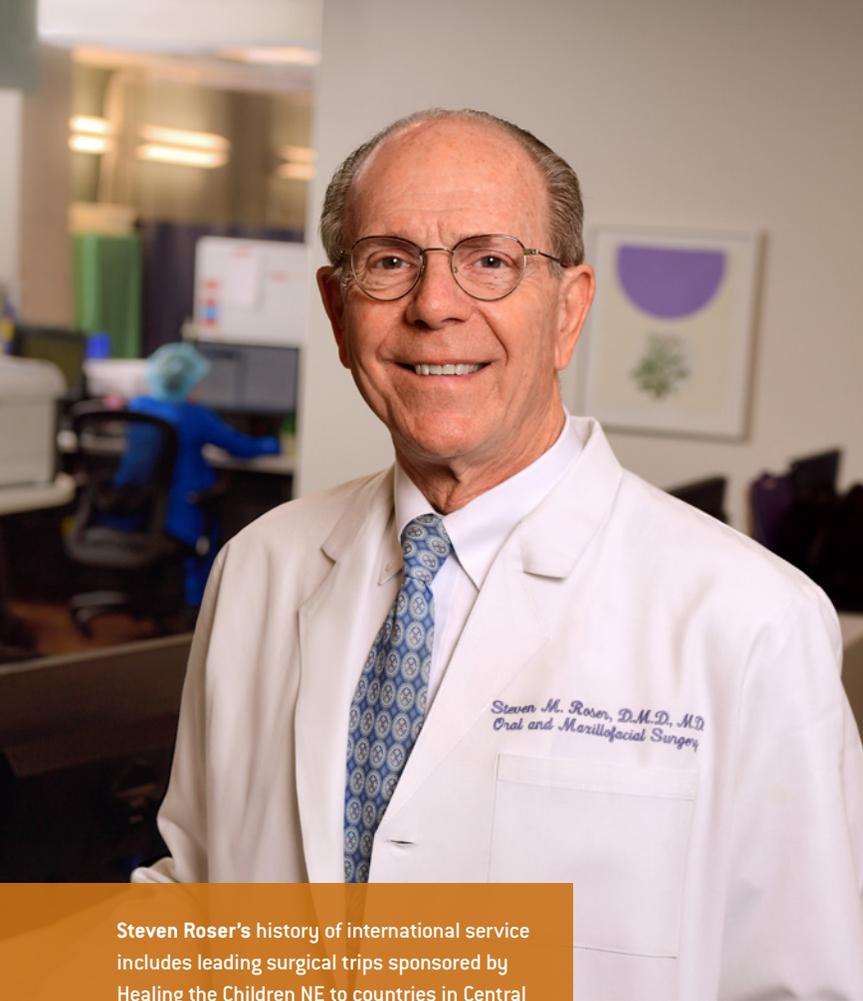
"Dr. Ford is unquestionably one of the leading transplant immunologists of her generation," says Larsen, who was Ford's mentor during her postdoctoral immunology fellowship at Emory from 2004-2007. "Her research over the past decade is distinguished by its innovation, impact, and widening influence, and has provided not only mechanistic insight, but also revealed therapeutic implications."

Outward bound

Steven Roser, chief of the Division of Oral and Maxillofacial Surgery, received an Imagine, Innovate, and Impact (I³) Nexus Research Award from the Emory School of Medicine to fund the launching of the Emory Global Perioperative Health Working Group, a multidisciplinary organization composed of members from Emory clinical-academic departments, Emory Healthcare Nursing, and Hospital Procedural Operations. Roser founded the group to create Emory's first coordinated effort to address gaps in perioperative care



2018-2019 AST president Dianne McKay presenting Mandy Ford with the Basic Science Award.



Steven Roser's history of international service includes leading surgical trips sponsored by Healing the Children NE to countries in Central and South America to provide such procedures as cleft lip and cleft palate repair.

and emergency services in low and middle income countries (LMICs), with an emphasis on training, education, and research.

I³ Nexus Awards are granted to proposals that develop new interdisciplinary research projects that can impact health or generate biomedical knowledge.

"Trauma is now the leading cause of death and disabilities in patients age 15-29 in LMICs," Roser says. "The dearth of surgical services for needs resulting from such non-communicable conditions as diabetes, cardiovascular disease, maternal fetal health, and cancer is also critical. This award supports the initiation of our three year plan to assist LMICs in building their perioperative capacity by developing education and research programs and communication technologies."

Group members have been gathering data on global surgery efforts at other institutions and establishing contacts with counterparts in Haiti, Ethiopia, Puerto Rico, Bolivia, Nicaragua, and other LMICs. These relationships have been reinforced by members' participation in such efforts as the Emory-Haiti Alliance, a consortium of Emory medical students, residents, faculty physicians, and mid-level practitioners that makes surgical trips to Haiti (Roser joined the alliance in 2017), and the Emory general surgery residency rotations at Hawassa University Comprehensive Specialized Hospital in Ethiopia, a

training site co-sponsored by the American College of Surgeons and the College of Surgeons of East, Central and Southern Africa.

"We hope to become a vital interdisciplinary and administrative core for these and other Emory-based global programs to gather and update needed data, identify shortfalls and opportunities, and execute their initiatives while contributing to ours," Roser says.

The working group will also spend the first year of the startup plan classifying gaps in perioperative and emergency care in LMICs in cooperation with their local counterparts, developing and implementing data collection processes regarding these gaps, measuring quality and safety issues such as the unknown incidence of surgical site infections in many LMIC healthcare facilities, and finalizing sustainable goals. These undertakings will require training in research methodology and research networking for LMIC health providers.

The second year will involve supporting education and research needs in LMICs that have been identified as priorities in the gap analyses, securing funding and mentoring for new global perioperative fellowships and Emory student research, strengthening

and widening the partnership network with faculty in the LMICs, and exploring possible shared ventures with industrial companies and foundations from high income countries as well as international entities like the World Bank.

By its third year, the group intends to continue strengthening its priorities with LMIC and global perioperative partners, and to develop alliances with the Emory Global Health Institute, Rollins School of Public Health, Goizueta Business School, and Nell Hodgson Woodruff School of Nursing.

New appointment to benefit Grady research

Sheryl Gabram-Mendola has been on the front lines of the treatment and management of patients with breast cancer from metro Atlanta and adjacent communities since she began directing the AVON Comprehensive Breast Center at Grady Memorial Hospital in 2005. Between then and now, her Grady-based positions have expanded to include Surgeon-in-Chief, Chief of the Division of Emory Surgery at Grady, and Deputy Director of the Georgia Cancer Center for Excellence at Grady, and she has continued working to decrease disparities for breast



cancer patients through community education outreach and by providing access to high quality care for all patients in the Grady Health System.

Gabram-Mendola's personal research experiences—with funding received from such sources as the AVON and Merck foundations and Georgia Cancer Coalition for projects that include examinations of the rehabilitation needs of breast cancer patients, analyses of the impact of various quality metrics and algorithms on patient care at Grady, and cultivating community awareness of earlier detection of breast cancer—have given her a heightened awareness of the types of environmental resources and support mechanisms that can stimulate research in a safety-net institution. As she assumes her inaugural appointment to the Ada Lee Correll Chair in Surgery, she plans to use these additional resources to enhance research activity at Grady.

Ada Lee Correll and her husband and philanthropic partner Alston "Pete" Correll Jr., chair of the Correll Family Foundation, have a substantial connection with Grady. Ada Lee co-founded the Annual White Coat Grady Gala in 2011, and Pete led the successful effort to save the hospital from financial crisis in 2007. He

now chairs the board of the Grady Health Foundation, which raises funds in support of the health system.

"I owe it to the Corrells, Emory, and Grady to use this gift to reinforce my commitment to Grady's academic mission," Gabram-Mendola says. "I will apply it to expanding our faculty's research capabilities at Grady, and to adding additional research opportunities for our fellows, residents, and medical students, particularly since Grady's large and diverse patient population affords vast opportunities for significant studies. Our planned first steps are to hire a boots-on-the-ground statistician for the Grady campus and more Grady-dedicated research coordinators to support additional clinical trials."

Constructive disagreement

Emory transplant surgeon Raymond Lynch is an abiding advocate for patients with end stage liver disease and hepatocellular carcinoma (ESLD/HCC) who live in poor, rural, and remote communities and experience great disparities in liver transplant access. He has published extensively on the subject and is a strong voice in the allocation policies debate.

His voice had never resounded louder than it did in December 2018, when the United Network for Organ Sharing (UNOS) announced a pivot in its liver allocation policy from one where transplant centers generally had first choice of organs donated in their areas, to another that distributed livers to the sickest patients within 150, 250, or 500 nautical miles of donor hospitals, with the latter group given immediate priority. Dubbed the acuity circles policy, the new standard was to take effect on April 30, 2019.

"This policy shift is a perfect example of how the scale of the inequalities that exist for disadvantaged groups and what causes them are poorly understood," says Lynch. "Low-income, rural residents have less access to care than people in large cities, and therefore less chance of being diagnosed with liver disease and getting on the waiting list. Statistical modeling shows that with the acuity circles model, transplant centers in New York would gain more than 100 livers annually over a state-based system, creating a vacuum effect in places like Tennessee, Michigan, Georgia, Alabama, and Louisiana."

As he began marshalling resources to oppose the change, Lynch also took first steps towards building a national liver disease patient



Ada Lee Correll and Sheryl Gabram-Mendola. "The Corrells' generosity in creating this academic chair and choosing me as its first appointee is an incredible culmination of my 14-year journey at Emory," says Gabram-Mendola.

registry similar to the United States Renal Data System, which collects, analyzes, and distributes information about chronic kidney and end-stage renal disease in the U.S.

“A comprehensive registry would give a factual basis to the reality of these inequalities, as well as define how living in disadvantaged communities reduces access to liver transplant referral, evaluation, waitlisting, and transplantation, and increases waitlist mortality.”

and overlay it with Emory and Piedmont’s adult liver transplant records from Jan. 1, 2010, through Dec. 31, 2017, including referrals, evaluations, listings, transplants, and deaths. The results would characterize ESLD/HCC prevalence and barriers to transplant waitlist access and survival among Georgia residents by degree and level of occurrence.

In May 2019, the Georgia Clinical & Translational Science Alliance awarded a pilot grant to fund COBALT, several days



“The selection of Georgia and its two transplant centers is ideal for COBALT, given the heterogeneity of communities with regard to transplant access and the opportunity to show collaborative effort by two centers in the same state as a model for broader partnership to overcome disparities,” says Raymond Lynch.

To start, Lynch proposed the formation of a Georgia-based registry culled from the liver transplant programs at Emory University and Piedmont hospitals, the only adult transplant programs in the state. Named COBALT (Collaborative to Overcome Barriers in Access to Liver Transplantation), the partnership would produce a detailed atlas of ESLD/HCC disease in the state by integrating records on liver disease emergency department visits, hospitalizations, and deaths throughout Georgia with sociodemographic indices, geolocation data, and registry information on proximity to subspecialty care.

COBALT would then perform stratified analyses on this data to determine key predictors of increased morbidity and mortality,

before Lynch appeared as the expert witness in an injunction to block the acuity policy brought by Emory University Hospital and Piedmont Hospital; additional transplant centers in Michigan, Kansas, Missouri, and elsewhere; and people on the waiting list. After several motions, the United States District Court for the Northern District of Georgia agreed to the plaintiffs’ request, and directed the Department of Health and Human Services, defendant in the case, to halt implementation of the acuity circles model and revert back to the liver allocation system based on donation service areas and regions. That injunction will remain in place while the court continues to consider the appropriateness of the acuity circles model.

“We hope the court will continue to block the acuity circles model,” says Lynch. “While I think the prior policy is better for the patient, it is still not perfect and could be challenged again. Initiatives like COBALT, particularly in its projected, final form as a multistate coalition, will contribute critical information to inform policies that honestly and fairly consider the realities of supply and demand in liver transplantation.”

Obscure avenues to protecting the heart

Heart failure, heart attacks, extreme cardiac events; virtually everyone is familiar with these terminologies. But the complex systems of cause and effect that exist within the micro-dimensions of inner body chemical and physiological processes and influence these happenings can appear arcane and mysterious. These are the territories where cardiac basic science and translational therapies investigator John Calvert plies his craft, evinced by such projects as determining the cardio-restorative potential of hydrogen sulfide for heart failure patients and evaluating the cardio-protective capabilities of nitric oxide.

But Calvert’s bottom line is simple and direct: he is striving to develop novel therapeutic approaches to treating and/or guarding against the damage caused by acute cardiac dysfunctions. And a new potential agent for this purpose is attracting his attention: DJ-1, a protein originally associated with neuroprotection and studies of Parkinson’s disease that is also expressed in the heart.

“We know that DJ-1 is a cytoprotective protein that is activated in response to stress, and suspect that it could attenuate the development of heart failure as well,” he says.

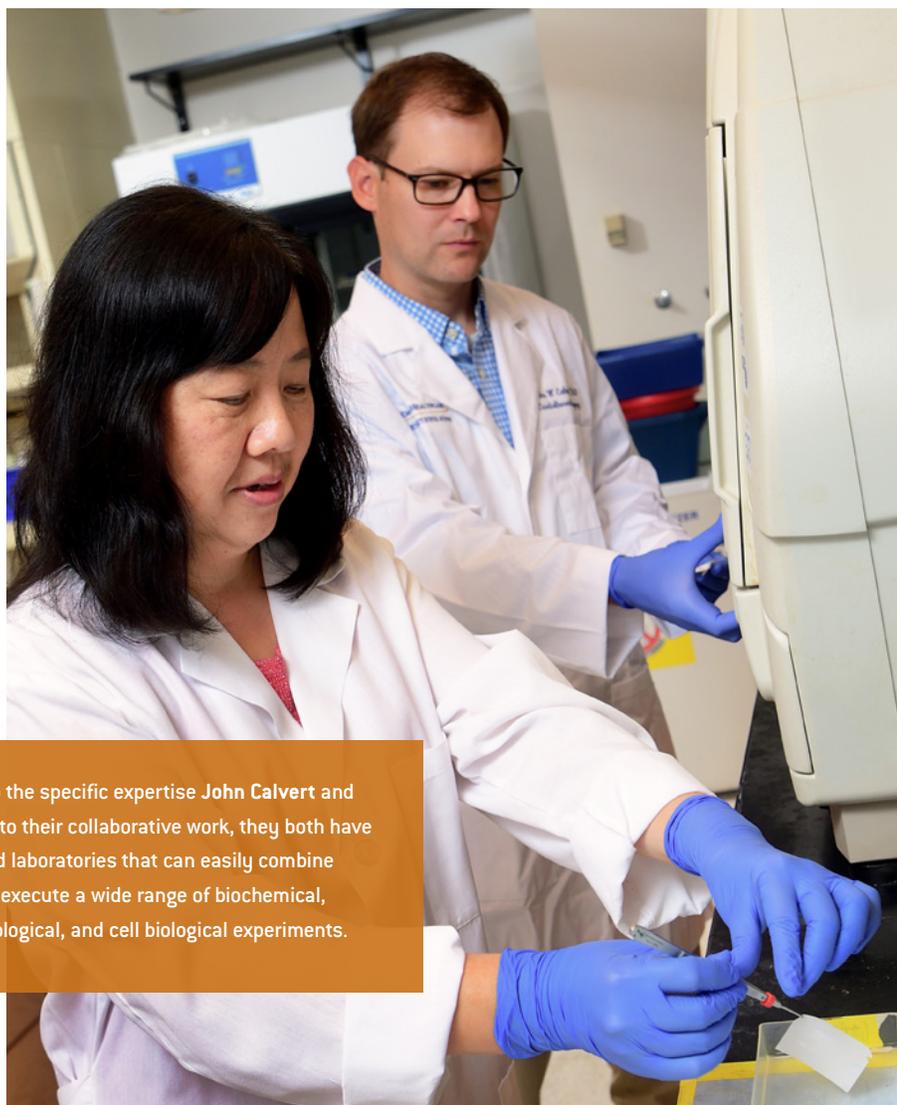
With the support of a four-year NIH R01 grant, Calvert and Lian Li, vice chair of the Emory Department of Pharmacology and Chemical Biology and an expert on DJ-1 and its connection with Parkinson’s, are dissecting the possible treatments DJ-1 may provide in protecting or repairing cardiac function after ischemic injury.

Calvert and his team have already published evidence that DJ-1 is triggered several hours after the onset of acute myocardial ischemia-reperfusion, and that it remains active in the heart for up to seven days following injury onset. They also found that DJ-1 deficient mice had worse cardiac dysfunction in response to ischemic-induced heart failure compared to normal mice, as well as elevated levels of hypertrophy, fibrosis, and inflammation.

“Most importantly, we documented that the genetic delivery of DJ-1 reduced the development of ischemic-induced heart failure,” he says.

Calvert and Li will build on this prior knowledge and more deeply investigate DJ-1’s protective role in the heart during the early restoration of blood flow that follows a major heart attack. They aim to confirm their supposition that DJ-1 is a cardiac deglycase and thereby able to protect and/or rejuvenate other cardiac proteins that have been damaged by a process called glycation stress, which reduces sugars and other protein components. They will also determine if DJ-1 promotes the cardioprotective actions of antioxidant enzyme Thioredoxin 1, and clarify their preliminary data that DJ-1 opposes the ischemic-induced stimulation of the Arkadia protein.

“We believe that our findings may not only shed light on the novel mechanisms by which DJ-1 exerts its cardioprotective effects, but will define an innovative cytoprotective-signaling paradigm that has the potential to provide novel treatment for a number of human diseases in addition to heart failure,” says Calvert.



In addition to the specific expertise **John Calvert** and **Lian Li** bring to their collaborative work, they both have well equipped laboratories that can easily combine resources to execute a wide range of biochemical, molecular biological, and cell biological experiments.

NEW FACULTY



STEPHANIE BUSBY, MD, did her acute care surgery and surgical critical care fellowships at Grady Memorial Hospital. Her clinical locations are the trauma/surgical critical care service at Grady and the critical care center at Emory Johns Creek Hospital.



Pediatric surgeon **A. ALFRED CHAHINE, MD**, has won more than 20 teaching awards. He comes to Emory from the George Washington School of Medicine & Health Sciences and Children's National Health System in Washington, D.C.



PAUL CHAI, MD, specializes in complex neonatal surgery and minimally invasive cardiac surgery. He is chief of pediatric cardiothoracic surgery as well as co-chief of the Heart Center at Children's Healthcare of Atlanta.



MANI DANESHMAND, MD, from Duke University Medical Center, is director of the Emory Heart & Lung Transplantation and Mechanical Circulatory Support programs, and director of the Emory ECMO Program.



THOMAS GRANCHI, MD, MBA, is the new chief of burn surgery at Grady Memorial Hospital. Prior to joining Emory, he served as the medical director of the burn treatment center at the University of Iowa.



JESSICA HARDING, PhD, an epidemiologist, will work on improving data collection and quality related to kidney disease and transplantation as a member of the Transplant Health Services and Outcomes Research Program.



TIFFANY LIANG, MD, is based at the vascular surgery service at Emory University Hospital Midtown. She received her MD from the Medical College of Georgia and completed her vascular surgery residency at Indiana University School of Medicine.



ANUJ MAHAJAN, MD, was a vascular and endovascular surgeon at the North Atlanta Vascular Clinic and Vein Center. His primary clinical location is the vascular surgery service at Emory University Hospital.



JAY MILLER, MD, held private practice positions at Emory University Hospital Midtown and Piedmont Atlanta Hospital through Peachtree Vascular Associates, and specializes in aneurysm repair, carotid artery disease, endovenous laser ablation, stents, and varicose veins.



ROHIT MITTAL, MD, directs the burn outcomes research program and the burn reconstruction service at the Burn Center of Grady Memorial Hospital. His clinical specialties include the use of lasers to improve morbidity of wound scarring.



At the Emory Structural Heart and Valve Center, **GAETANO PAONE, MD, MHA**, focuses on valve repair and replacement, coronary artery bypass graft surgery, transcatheter aortic valve replacement, and other related, less invasive valve technologies.



GUSTAVO PARRILLA, MD, is a heart and lung procurement surgeon for the Division of Cardiothoracic Surgery. Prior to joining Emory, he was deputy chief of the lung transplant division at Hospital Universitario Favaloro, Buenos Aires.



JASON SCIARRETTA, MD, is a member of the trauma and surgical critical care service at Grady Memorial Hospital. Formerly, he was on the University of South Carolina faculty and practiced at Grand Strand Medical Center's Level I trauma center.



FAWWAZ SHAW, MD, specializes in pediatric and adult congenital cardiac surgery and extracorporeal membrane oxygenation. Prior to Emory, he was the surgical director of extracorporeal life support at WVU Medicine Children's Hospital, Morgantown, WV.



A vascular surgeon at Emory University Hospital Midtown, **GEORGE SKARDASIS, MD**, opened metro Atlanta's first vascular laboratory at the hospital and was its medical director for 40 years.



JENNIFER WILLIAMS, MD, did her general surgery residency at Harbor-UCLA Medical Center. Upon completing her colon and rectal surgery fellowship at the Cleveland Clinic Foundation, she joined the colon and rectal surgery service at Emory University Hospital Midtown.



LEI ZHU, PHD, is working on translational projects related to pancreatic cancer and breast cancer theranostics with nanotechnology in the Surgical Oncology Nanomedicine Research Lab of Lily Yang, MD, PhD, where he also completed his postdoctoral research fellowship.

2019 FACULTY AWARDS & DISTINCTIONS

Cletus Arciero, MD

- Breast Committee, NRG Oncology

I. Raul Badell, MD

- Poster of Distinction, 2019 American Transplant Congress

Timothy Buchman, PhD, MD

- Editor-in-chief, *Critical Care Explorations*

John Calvert, PhD

- Programming Committee, Basic Cardiovascular Sciences Scientific Sessions, American Heart Association

Grant Carlson, MD

- Aesthetic Surgery Design Task Force, Plastic Surgery Foundation
- Oncoplastic Breast Surgery Committee, American Society of Plastic Surgeons

Edward Chen, MD

- 2019 Socrates Teaching Award, Thoracic Surgery Residents Association
- 2019 Case of the Year, American College of Radiology

Craig Coopersmith, MD

- Named to Emory's Millipub Club in 2019 for publishing a paper that garnered more than 1,000 citations

S. Scott Davis, MD

- Co-editor, *The SAGES Manual of Hernia Surgery, 2nd Edition*

Keith Delman, MD

- 2019 Parker J. Palmer Courage to Teach Award, ACGME

Megan Durham, MD

- Advisory Committee for Pediatric Anorectal Training, American College of Surgeons

Yazan Duwayri, MD

- Health Policy Scholarship Committee, American College of Surgeons/Society for Vascular Surgery

Felix Fernandez, MD

- Chair, Society of Thoracic Surgeons (STS) Workforce on National Databases

- Richard E. Clark Paper in General Thoracic Surgery, STS 55th Annual Meeting

Seth Force, MD

- Kamal A. Mansour Professor in Thoracic Surgery, Emory School of Medicine

Mandy Ford, PhD

- 2019 Basic Science Investigator Award, American Society of Transplantation

Theresa Gillespie, PhD, MA, BSN

- Fellow, American Academy of Nursing

Wendy Greene, MD

- Program Chair Elect; Chair, Video Educational Program: Southeastern Surgical Congress

Robert Guyton, MD

- Arnall Patz Lifetime Achievement Award, Emory Medical Alumni Association & Emory University

Carla Haack, MD

- Hidden Gem Award, Emory School of Medicine

Michael Halkos, MD, MSc

- Named to Emory's Millipub Club in 2018 for publishing a paper that garnered more than 1,000 citations

Elizabeth Hechenbleikner, MD

- Resident and Fellow Training Committee, Society of American Gastrointestinal and Endoscopic Surgeons

William Jordan, MD

- President, Society for Clinical Vascular Surgery

- President, Georgia Vascular Society

William Kitchens, MD, PhD

- Chair Elect, Translational Scientific Review Committee, American Society of Transplantation Research Network

Omar Lattouf, MD, PhD

- Award of Honor, Medical Alumni Association, Emory University

Edward Lin, DO

- Editorial Board, *Journal of Gastrointestinal Surgery*

- 2019 Fellows Choice Award, Endosurgery Fellows, Emory School of Medicine

- 2019 Junior Resident Teaching Award, Emory Department of Surgery

Michael Lowe, MD, MA

- Surgery Committee, International Neoadjuvant Melanoma Consortium

- Corporate Relations Committee, Society of Surgical Oncology

Shishir Maithe, MD

- Editorial Board, *Hepatobiliary Surgery and Nutrition*

- Associate Editor, *Annals of Surgical Oncology*

- Scientific Medical Advisory Board, Cholangiocarcinoma Foundation

Gabrielle Miotto, MD, MeD

- Assistant National Secretary for the USA, International Society of Aesthetic Plastic Surgery

Sharon Muret-Wagstaff, PhD, MPA

- 2019 Presidential Service Award; Chair, Research Committee: Society for Simulation in Healthcare

Muralidhar Padala, PhD

- Inaugural Innovation for Impact Award, Emory School of Medicine

Dominic Papandria, MD

- Co-editor, *Operative Dictations in Pediatric Surgery*, Springer International Publishing

Ronald Parsons, MD

- Director, Membership Committee, Georgia Surgical Society

Ankit Patel, MD

- Development Committee, Society of American Gastrointestinal and Endoscopic Surgeons

Rachel Patzer, PHD, MPH

- Board of Directors, Surgical Outcomes Club

Barbara Pettitt, MD

- Reviewer, Surgery Subject Examination, National Board of Medical Examiners

Ravi Rajani, MD

- John Hunter Distinguished Fellow in Vascular Surgery, Society for Vascular Surgery

- Chair, Program Committee, Vascular and Endovascular Surgery Society

- Editorial Board, *Journal of Vascular Surgery*

Monica Rizzo, MD

- Scientific Program Committee, Society of Surgical Oncology

Seth Rosen, MD

- Fellow and Resident Committee, Southeastern Surgical Society

Steven Roser, DMD, MD

- Distinguished Service Award, International Association of Oral and Maxillofacial Surgeons

Juan Sarmiento, MD

- Editorial Board, *Journal of Gastrointestinal Surgery*

Marty Sellers, MD, MPH

- Organ Procurement Organization Committee Representative, OPTN/UNOS Joint OPO-Operations and Safety Subcommittee on ABO typing

Virginia Shaffer, MD

- Representative of the Association for Academic Surgery, 2019 Argentinian Surgical Society Meeting

Mihir Shah, MD

- Membership Committee, Society of Surgical Oncology

Joe Sharma, MD

- William C. McGarity Chair of Surgery, Emory School of Medicine

- Best Clinical Abstract, 2019 Quality and Safety Conference, American College of Surgeons

Randi Smith, MD, MPH

- Injury Prevention and Violence Control, Eastern Association for the Surgery of Trauma

- Panelist, National Trauma Research Action Plan (NTRAP)

Jahnvi Srinivasan, MD

- Board Member, Georgia Society of American College of Surgeons

Charles Staley, MD

- Co-chair, Regional Cancer Therapies Meeting Committee, Society of Surgical Oncology

- Section Editor, Gastric Cancer, *Annals of Surgical Oncology*

Jamil Stetler, MD

- Treasurer/Secretary, Georgia Chapter, American Society for Metabolic and Bariatric Surgery

Toncred Styblo, MD, MS

- Operative Standards for Cancer Surgery Accreditation Project Committee, Commission on Cancer, American College of Surgeons

Patrick Sullivan, MD

- Committee on Colorectal Disease Site Work Group, Society for Surgical Oncology

Lily Yang, PhD

- Named to Emory's Millipub Club in 2019 for publishing a paper that garnered more than 1,000 citations



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