

EMORY | Surgery

NOTABLE NEWS FROM THE DEPARTMENT OF SURGERY | JULY 29, 2015



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Dr. Coopersmith and Dr. Ford receive third R01



Mandy Ford, Craig Coopersmith

If two basic science investigators already share two R01 grants, a major achievement in itself, how does one define their receipt of a third?

"Remarkable, especially considering the present climate of fierce competition for NIH dollars," says **Dr. John Sweeney**, chair of the Emory Department of Surgery. "But, considering Dr. Coopersmith and Dr. Ford's combined track record of successful team science, it's not that surprising."

The newly funded study, entitled "Targeting 2B4 Coinhibitory Signals During Sepsis-Induced Immune Dysregulation," will join the two ongoing R01s helmed by **Dr. Craig Coopersmith**, vice chair of research of the Department of Surgery, and **Dr. Mandy Ford**, scientific director of the Emory Transplant Center. The three studies address different aspects of the immunological host response in sepsis.

The prior studies are investigating the interplay between cancer and sepsis and the impact of chronic alcohol abuse on the pathophysiology of the highly lethal disease, while the new study will dig deeper into the roots of the systemic immune dysregulation that switches on the immune suppression that is a major contributor to sepsis-induced mortality.

"Certain studies in models of chronic viral infection have found that coinhibitory

molecules each play distinct and non-redundant roles in weakening T cells, suggesting that the particular constellation of distinct coinhibitory molecules expressed on the surface of T cells when an immune response is triggered correlates to different stages and degrees of T cell function and/or exhaustion," says Dr. Ford. "With that in mind, we sought to determine which novel coinhibitory molecules might participate in the immunosuppressive phase that increases the risk of mortality during sepsis."

Drs. Ford and Coopersmith are focusing on the 2B4 molecule, which encodes a cell surface receptor expressed on immune cells that play a significant role in the host-rejection of both tumors and virally infected cells. After a series of animal studies, the scientists found that the absence of 2B4 rendered the test subjects six times less likely to experience mortality after sepsis. Preliminary data also suggested that 2B4 modifies immune dysregulation during sepsis, and analysis of human T cells during acute septic injury revealed an increase in the expression of 2B4.

Building on these conclusions, the study aims to determine how 2B4 contributes to sepsis-induced mortality, the cell type(s) by which it mediates its effects, and when it contributes to sepsis-induced mortality during the disease process. An innovative feature of the proposal is that the mice used will have developed memory T cells at a frequency similar to that of adult humans due to having survived various acute infections—standard laboratory mice only contain a very small percentage of memory T cells.

"Interrogation of the mechanisms by which inhibition of 2B4-mediated coinhibitory signals protects mice from death during sepsis is critical for the potential future translation of immunomodulatory strategies to target this pathway to prevent death in septic patients," says Dr. Ford.

Study has final goal of creating PAD decision support tool



Shipra Arya

The American Heart Association has approved activation of its NCRP (National Committee for Responsive Philanthropy) Winter 2015 Mentored Clinical and Population Research Award for Emory vascular surgeon **Dr. Shipra Arya's** study, "Predicting Lower Extremity Amputation and Cardiovascular Disease Risk with Peripheral Arterial Disease." Of the 48 applications submitted for the award, Dr. Arya's was one of only five to be chosen. The award includes two years of funding.

NCRP Clinical and Population Awards offer incentive to early career investigators to develop appropriate and supportive mentoring relationships while engaging in high quality, introductory and pilot clinical studies. Research funded by the awards should guide future strategies for reducing cardiovascular disease and stroke, foster new research in clinical and translational science, and encourage community- and population-based activities.

Dr. Arya's mentor for the study will be Emory preventive cardiologist **Dr. Peter Wilson**, director of epidemiology and genomic medicine at the Atlanta VA Medical Center. Dr. Wilson is a distinguished clinician and investigator whose research focuses on metabolic and cardiovascular disease in populations. Prior to coming to Emory in 2006, he served 20 years as director of laboratories at the Framingham Heart Study in Massachusetts.

Dr. Arya's study will work towards correcting the fact that peripheral arterial

disease (PAD) is not as well recognized as coronary artery disease (CAD), though it is almost equally associated with high risk of heart attack, stroke, and amputation. Due to this disparity, providers often do not treat PAD aggressively enough. In addition, many PAD patients are unaware of their risks, do not seek treatment, or don't comply with recommended measures such as smoking cessation, increased exercise, medical management (blood pressure, diabetes, and cholesterol control), or surgery.

To redress the lack of PAD-related data, Dr. Arya and her team will analyze clinical data maintained by the VA Informatics and Computing Infrastructure (VINCI)—a partnership between the VA Office of Information Technology and the Veterans Health Administration Office of Research and Development—and the Reduction of Atherothrombosis for Continued Health (REACH), an international registry. Managed by a multidisciplinary group of investigators, REACH seeks to illuminate cardiovascular risk factors in stable outpatients with established atherothrombotic disease (EAD), and has been collecting data on approximately 55,000 patients in 44 countries for the past several years. PAD is a common complication of EAD.

After developing predication models based on this data that will estimate risk for such outcomes as amputation, heart attack, stroke, and death according to various patient factors, Dr. Arya plans on creating a web-based app that will serve as a PAD decision support tool (DST). The DST will assist both patients and providers in recognizing, acknowledging, and controlling for risk factors and in determining how aggressive treatment should be.

"This study will form the basis for further translational research work in assessing the impact of the risk prediction models and DSTs on increasing PAD awareness of treatment approaches, adherence to guidelines, and patient responsiveness and compliance," says Dr. Arya.

Drs. McConnell and Rajani invited to join editorial boards



Kevin McConnell, Ravi Rajani

Dr. Kevin McConnell is joining the editorial board of *SHOCK*, the premier journal in the areas of the basic and clinical studies of shock, trauma, sepsis, inflammation, ischemia, and related pathobiological states. Dr. McConnell's own basic science and translational research focuses on the trafficking of immune

cells and the use of immune modulating agents in trauma and critical illness.

In 2013, Dr. McConnell received a Shock Society Research Fellowship for Early Career Investigators to study lymphocyte activation and trafficking in sepsis, followed by an NIH K08 Award in 2014 to determine how the immune system is disrupted by sepsis, how that disruption can be prevented, and how the immune system can be modulated to fight the disease.

Dr. Ravi Rajani will serve on the editorial board of *Annals of Vascular Surgery*, one of the most respected forums for reports of clinical series, new investigations, experimental work, and new drug or medical device trials.

After joining Emory in 2011 as director of vascular and endovascular surgery at Grady Memorial Hospital, Dr. Rajani expanded the hospital's endovascular capability to treat vascular disease and vascular trauma. He also introduced refinements to the hospital's vascular ultrasound lab.

Residents' research funded by AST and ASTS



Blayne Sayed

General surgery residents **Dr. Blayne Sayed** (PGY4) and **Dr. Steven Kim** (PGY3) have received research awards from the American Society of Transplantation (AST) and the American Society of Transplant Surgeons (ASTS). Dr. Sayed's study, funded by AST's Translational Science Fellowship Grant, is concerned with the increased incidence and severity of acute rejection following renal and liver transplantation in patients on a belatacept-based immunosuppression regimen. Meanwhile, an ASTS Scientist Scholarship will fund Dr. Kim's series of non-human primate studies designed to translate tolerance induction strategies involving mesenchymal stromal cells to clinical application.

Both awards require mentors. Dr. Sayed's will be **Dr. Mandy Ford**, and Dr. Kim's will be **Dr. Andrew Adams**.

In recent years, the development of clinical therapies involving mesenchymal stromal cells (MSCs) to achieve transplantation tolerance has increased because MSCs are able to suppress T cell function and proliferation and can preferentially differentiate T cells toward a regulatory phenotype. T cells are key components of the immune system and at the core of adaptive immunity. Dr. Kim's study will characterize MSCs in vitro in rhesus macaques to test the hypothesis that MSC therapy can be used as an adoptive cellular therapy to induce immune tolerance to renal allografts in a non-human primate model. The study will then assess the therapy's immunosuppressive effects in combination with costimulation blockade while also evaluating the effects of gamma IFN- γ licensing prior to administration.

"By gaining a better understanding of the complex mechanisms by which MSCs exert their protective effects, we hope to get closer to transferring the therapy to human patients," says Dr. Kim.

While clinical trials of belatacept-based immunosuppression as compared to calcineurin inhibitor-based therapy following renal transplantation have demonstrated superior graft function and similar patient and graft survival, higher rates of reversible acute rejection have also been found with the relatively new drug.

"Our lab has identified expanded numbers of two types of T cells in belatacept-treated renal transplant recipients with documented acute rejection," says Dr.



Steven Kim

Sayed. "Our hypothesis is that heritable changes in gene activity and expression, or epigenetics, can regulate how these T cells develop, function, and may confer resistance to belatacept immunosuppression and predispose susceptible recipients to rejection."

Using cells derived from healthy individuals and transplant recipients, the study will evaluate these various T cell subsets pre-and post-transplant to determine whether patients with documented graft rejection have a predictable epigenetic phenotype. In addition to advancing the understanding of why certain patients may be prone to rejection upon taking belatacept, the work will further define the significance of these T cell subsets and elevate the importance of epigenetic investigations to the study of transplant immunology.

Welcome our new faculty



Cletus Arciero

CLETUS A. ARCIERO, MD

Associate Professor of Surgery, Division of Surgical Oncology

Dr. Arciero received his MD from the Uniformed Services University of the Health Sciences, F. Edward Hébert School of Medicine, in 1998. His postgraduate training included a general surgery residency at Walter Reed Army Medical Center, a research fellowship at Windber Research Institute, and a surgical oncology fellowship at the Fox Chase Cancer Center.

Dr. Arciero recently retired as a Colonel from the United States Army, having served for 25 years. Among the numerous medals he received was the Legion of Merit for a career marked by exemplary service. His positions in the field included chief of surgery of both the 31st and the 256th Combat Support Hospitals in Iraq, and chief of surgery of the 452nd Combat Support Hospital in Kuwait in support of combat operations in Afghanistan.

He has served as chief of surgical oncology, chief of general surgery, and program director of the general surgery residency at Dwight D. Eisenhower Army Medical Center in Fort Gordon. He recently completed nine years as an American Cancer Society Commission on Cancer Liaison Physician.

At Emory, Dr. Arciero's clinical locations will include Emory University Hospital and Emory Johns Creek Hospital, where he will focus on breast surgery. He will also serve as the associate program director of the Breast Oncology Fellowship Program.



I. Raul Badell

I. RAUL BADELL, MD

Assistant Professor of Surgery, Division of Transplantation

Dr. Badell received his MD from Baylor College of Medicine in 2006, after which he came to Emory for his general surgery residency and abdominal organ transplantation fellowship, which he completed in June 2015. Within this period of clinical training, he completed a pre-doctoral research fellowship in pathology at the University of Rochester School of Medicine and a post-doctoral research fellowship in transplant immunology at the Emory Transplant Center under the direction of **Dr. Christian Larsen**.

During his clinical fellowship he re-engaged with the Emory Transplant Center's research enterprise and focused on basic immunology and clinical trial

investigations. His clinical practice consists primarily of kidney/pancreas transplantation. His research interests involve basic transplant immunology and clinical investigations aimed at optimizing the use of belatacept in kidney transplant recipients.



Seth Rosen

SETH A. ROSEN, MD

Assistant Professor of Surgery, Division of Surgical Oncology

Dr. Rosen received his MD at New York University School of Medicine in 1996. He developed an interest in inflammatory bowel disease and colorectal cancer as a general surgery resident at the University of Chicago, and established a colorectal cancer registry as a resource for future clinical research. In 2002, he completed his colorectal surgery residency at the Cleveland Clinic Florida.

Following his training, Dr. Rosen joined Atlanta Colon & Rectal Surgery and practiced primarily at Wellstar Cobb and Emory Johns Creek hospitals. Over the next 10 years, he initiated several new procedures and technologies within his hospital systems, including the Procedure for Prolapsing Hemorrhoids (PPH); Doppler-assisted hemorrhoid artery ligation; Transanal Endoscopic Microsurgery (TEMS); and Stapled Transanal Resection of the Rectum (STARR), which he was the first surgeon to perform in Georgia.

Dr. Rosen is currently considered a "center of excellence" for robotic colorectal surgery, and dedicates much of his time to performing, teaching, and developing new techniques related to the burgeoning field.



Preeti Subhedar

PREETI D. SUBHEDAR, MD

Assistant Professor of Surgery, Division of Surgical Oncology

Dr. Subhedar received her MD from Marshall University in 2009. She completed her general surgery residency at Emory in 2014 and a breast fellowship at Memorial Sloan Kettering Cancer Center in 2015.

Her clinical interests are providing comprehensive, multidisciplinary care for patients with breast disease. Her research interests include investigating healthcare disparities in breast cancer treatment and developing treatment methods tailored to breast cancer molecular subtypes.

Residency/Fellowship transitions

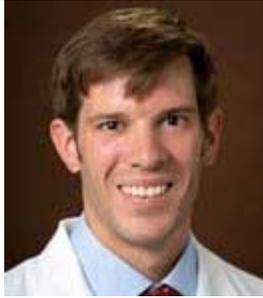
GENERAL SURGERY

Outgoing chief residents

Robert Allen, vascular surgery fellowship, University of Texas Southwestern Medical Center; **Amareshwar Chiruvella**, minimally invasive surgery fellowship, University of Nebraska; **Brendan Dewan**, fellowship in thoracic surgery, University of Colorado Denver; **Juliet Emamaullee**, transplant fellowship, University of Alberta; **Denis Foretia**, faculty, Johns Hopkins; **Alessandrina Freitas**, plastic surgery fellowship, University of Virginia; **Richard Lee**, thoracic surgery fellowship, Medical University of South Carolina; **Benjamin Martin**, endosurgery fellowship, Emory; **Snehal Patel**, endocrine fellowship, University

of Pittsburgh; and **Ximena Pinell**, plastic surgery fellowship, Emory.

Incoming categorical residents



Paul Brock, Mercer University SOM



Nicholas Chan, Case Western Reserve SOM



Stacy Coulthard, Eastern Virginia Medical School



Amanda Fobare, Boston University SOM



Jessica Liu, Emory



Tyler Merceron, Vanderbilt University SOM



Amanda Mueller, University of Wisconsin SOM



Crystal Pickeral, Florida State University COM



Megan Quinn, Emory

Incoming preliminary residents



Yoram Baum, Universita di Firenze



Shenan Bradshaw, Emory University



Nosayaba Enofe, University of Benin



Mark Henry, Tufts University



Brian Kinard, Emory



Andrew Leung, Emory



Daniel Maxwell, Philadelphia COM



Gabriele Miotto, Universidade Federal do Rio Grande do Sul



Mohammed Said, Northwestern University



Elizabeth Wendel, Harvard Medical School

BREAST FELLOWSHIP

Outgoing fellows

Meredith Holley Redden will see patients at the Breast Care Program at Northside Hospital, and **Troy Shell** will be joining Physicians Regional Healthcare System in Naples, FL.

Incoming fellows

Lisa Marie Lai completed her general surgery residency at SUNY Upstate Medical University, and **Adriana Suarez-Ligon** did her general surgery residency at Rutgers New Jersey Medical School.

BURN FELLOWSHIP

Outgoing fellows

Ashley Rogers is doing an anesthesiology fellowship at Virginia Commonwealth University, and **Rachael Williams** is a surgical critical care resident at Grady Memorial Hospital.

Incoming fellows

Jeromy Patterson completed three years of general surgery training at Washington Hospital Center in DC and Lincoln Medical Center in the Bronx, followed by a research fellowship at SUNY Downstate Medical Center, and **Elias Tsirakoglou** completed his general surgery residency at Saint John's Episcopal Hospital in Queens, NYC.

CARDIOTHORACIC SURGERY

Outgoing residents

Shair Ahmed, Norton Thoracic Institute, Phoenix; **Jared Murdock**, private practice in Baton Rouge; and **Jay Patel**, Memorial Hospital of South Bend, Beacon Health System, South Bend, IN.

Incoming residents

Ray Chihara from Indiana University is the new three-year resident, and **Amalia Winters** from the University of Utah and **Xiaoying Lou** from Northwestern University are the new six-year integrated residents.

Congenital cardiac surgery fellowship

Outgoing fellow **Mohammed Ghanamah** will practice in Saudi Arabia. **Farshad Anvari**, the incoming fellow, completed his cardiothoracic surgery residency at Emory.

ENDOSURGERY FELLOWSHIP

Outgoing fellows

Sujata Gill has joined Northwest Georgia Medical Clinic, and **Jamil Stetler** was appointed to the Emory general surgery faculty.

Incoming fellows

Benjamin Martin, general surgery residency, Emory; and **Mihir Maheshkumar Shah**, residency, Cleveland Clinic Foundation.

ORAL AND MAXILLOFACIAL SURGERY

Outgoing residents

Samuel Beck, Military-Navy; **Ajay Ganti**, Florida Craniofacial Institute Fellowship, Tampa; **Ibrahim Haron**, Northern Virginia Oral and Maxillofacial Surgery Associates; and **Michael Rosenthal**, Northwestern Oral and Maxillofacial Surgeons, PC.

Incoming intern

Chelsea Mitchell, University of Maryland.

Incoming four-year residents

Timothy Jaeger, Harvard School of Dental Medicine; **Michael Yuan**, University of Florida.

Incoming six-year residents

Joseph Cho, University of Pennsylvania; **David Lee**, University of California.

PEDIATRIC SURGERY

Avraham Schlager, the outgoing fellow, is joining Akron Children's Hospital. Incoming fellow **Erik Pearson** is from the University of Utah.

PLASTIC SURGERY

Outgoing residents

Brian Arslanian, private practice, Atlanta; **Carrie Chu**, microsurgery fellowship, UT Southwestern; **Claire Duggal**, private practice, Annapolis, MD.

Incoming independent residents

David Lo, Duke University; **Drew Metcalfe**, Emory; **Ximena Pinell**, Emory.

Incoming integrated residents

Paul Ghareeb, Emory; **Alexandra Hart**, Emory; **Ryan Burke**, Michigan State University; **James "Walter" Dutton**, West Virginia University.

TRANSPLANTATION FELLOWSHIP

Idelberto Raul Badell, the outgoing fellow, is joining the faculty of the Emory division of transplantation (see above). **Michael Berger**, the incoming fellow, has just completed a pediatric endosurgery fellowship at UAB.

TRAUMA/SURGICAL CRITICAL CARE

Incoming trauma fellows

Travis Arnold-Lloyd, Albany Medical Center; **Amanda Celii**, Allegheny General Hospital; and **Paul Evans**, Barnes-Jewish Hospital.

New surgical critical care residents

Mary Colvin and **Dipan Patel** completed the Emory trauma fellowship. **Rachael Williams** completed the Emory burn fellowship.

Outgoing surgical critical care residents

M. Andrew Davis, Baylor College of Medicine; **Leslie Ghisletta**, Rutgers Robert Wood Johnson Medical School/Hospital; **Katherine Kohler**, Atlanta Medical Center; and **Philip Prest**, Palmetto Health, Richland Memorial Hospital, University of South Carolina.

VASCULAR SURGERY AND ENDOVASCULAR THERAPY

Outgoing residents

Reshma Brahmhatt, University of Tennessee Health Science Center, Methodist University Hospital, Memphis; **Michele Taubman**, Miami Vascular Specialists.

Incoming residents

Veer Chahwala, Jackson Memorial Hospital–University of Miami; **JohnPaul Chizea**, Temple University Hospital, Philadelphia.

Upcoming events

EVENT	DATE/TIME	LOCATION
<p>SURGICAL GRAND ROUNDS Interprofessional Communication and Collaboration Presented by Anuradha Subramanian, MD – Assistant Professor of Surgery, Trauma/Surgical Critical Care at Grady Memorial Hospital, Department of Surgery, Emory University School of Medicine – Associate Program Director, Trauma/Surgical Critical Care Fellowship, Department of Surgery, Emory University School of Medicine – Medical Director, Surgical Intensive Care Unit, Grady Memorial Hospital</p>	7:00 a.m.-8:00 a.m., August 6, 2015	EUH auditorium
<p>SURGICAL GRAND ROUNDS Treating Patients with Ebola Virus Disease: Lessons Learned Presented by Bruce S. Ribner, MD, MPH – Professor of Medicine, Division of Infectious Diseases, Department of Medicine, Emory University School of Medicine – Medical Director, Serious Communicable Diseases Unit, Emory University Hospital</p>	7:00 a.m.-8:00 a.m., August 13, 2015	EUH auditorium
<p>Department of Surgery Division Chiefs Meeting</p>	5:30 p.m.-7:00 p.m., August 18, 2015	Surgery Education Office, EUH, H108 & H110
<p>SURGICAL GRAND ROUNDS 39th Annual J.D. Martin Visiting Professorship Leadership Presented by Carlos A. Pellegrini, MD – Henry N. Harkins Professor and Chair, Department of Surgery, University of Washington School of Medicine</p>	7:00 a.m.-8:00 a.m., August 20, 2015	EUH auditorium

<p>SURGICAL GRAND ROUNDS Lower Extremity Reconstruction and Limb Salvage Presented by Karan Desai, MD – <i>Chief Resident, Department of Surgery, Emory University School of Medicine</i></p>	<p>7:00 a.m.-8:00 a.m., August 27, 2015</p>	<p>EUH auditorium</p>
<p>2015 Georgia Society of the American College of Surgeons Annual Meeting & Day of Trauma Registration is free for residents and \$150 for faculty members of GSACS.</p>	<p>August 28-30, 2015</p>	<p>Grand Hyatt Buckhead More info. and online registration</p>
<p>5th Annual Winship Win the Fight 5K Atlanta Braves president John Schuerholz is grand marshal.</p>	<p>October 3, 2015</p>	<p>More info.</p>