

Surgery News

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DEC 2023

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Staff Highlights



Meet Dr. R. Taylor Ripley

R. Taylor Ripley, M.D., associate professor of surgery in the David J. Sugarbaker Division of Thoracic Surgery, has recently been appointed director of clinical trials for the Office of Surgical Research. In this role, he provides leadership and oversight for the clinical trials programs, manages communication of these programs, manages department clinical trials resources, facilitates clinical research seminars and related department programs and supports other efforts relevant to the successful growth and expansion of our broader clinical research efforts.

Dr. Ripley is also the director of the Mesothelioma Treatment Center and Thoracic Surgical Research and co-leads the Thoracic Oncology Working Group for the Dan L Duncan Comprehensive Cancer Center. He is a nationally recognized, board-certified thoracic surgeon and an expert in mesothelioma and thoracic surgical oncology. Dr. Ripley is the vice president of the Board of Directors for the Meso Foundation and is on the steering committees for the IASLC Meso Staging Project and the National Mesothelioma Virtual Database. He leads investigator-initiated clinical trials and an NIH-funded translational laboratory.

Dr. Ripley trained extensively in the care of patients with mesothelioma under world-renowned surgeons during his fellowship at Memorial Sloan-Kettering Cancer Center in New York. He also completed a fellowship in surgical oncology at the NCI, NIH. Dr. Ripley did general surgery residency at the University of Colorado and received his medical degree from Vanderbilt University.

When he's not working, Dr. Ripley enjoys traveling with his three kids such as visiting the launch pad at the Starbase in Boco Chica.



Happenings



4th Annual Advances in Critical Care Conference

The 4th Annual Advances in Critical Care Conference, held October 13 and 14 was an overwhelming success. The conference brought in experts from around the country, across six different institutions at the Texas Medical Center, and highlighting some of the brightest of our Baylor faculty for a chance to delve into the latest developments in critical care.

“The conference stands as a testament to the success of collaborative learning in advancing patient care,” says conference co-chair Subhasis Chatterjee, M.D. “We are all inspired and ready to implement insights we gained from the conference in our daily practice. I am especially proud of the organizing committee for a 52/48 male-to-female faculty ratio making this one of the most equitable meetings I’ve ever attended.”

Special thanks to conference organizers, including Subhasis Chatterjee, M.D., Jose Diaz-Gomez, M.D., Christopher Howard, M.D., Galina Toneva, M.D., Holly Clayton and Amy Westwick, as well as support from Jordan Lockhart, Sharon Galloway and Scott Holmes.

Lung Institute Clinicians Lead Sessions at CHEST 2023

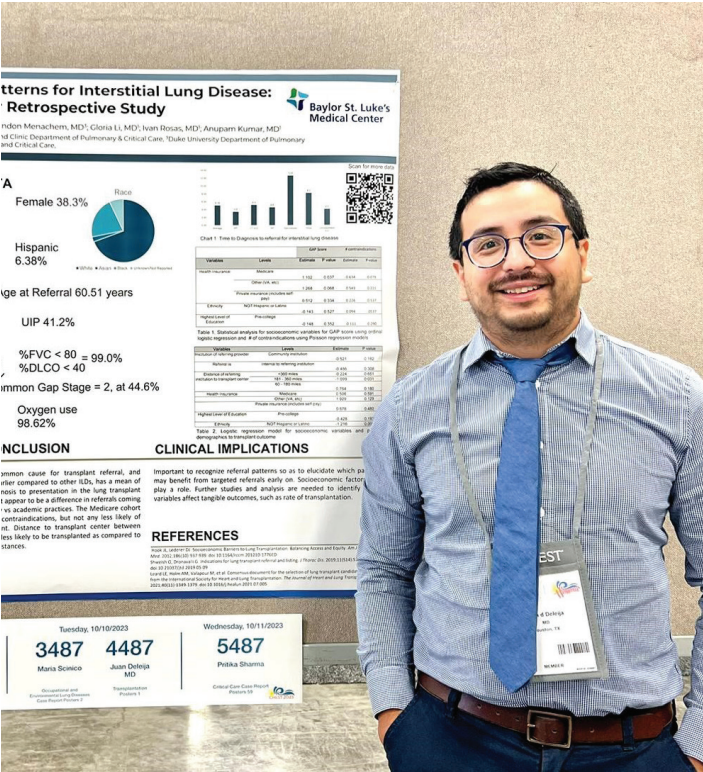
Clinicians, researchers and fellows from the Lung Institute attended the American College of Chest Physicians (CHEST) conference to stay abreast of the latest advancements in care. CHEST is the professional home for more than 22,000 pulmonary, critical care and sleep medicine professionals who seek clinical education and mentorship to the worldwide chest medicine community and the annual conference



Group photo of Lung Institute faculty, trainees and friends



Baylor fellows in CHEST Challenge Championship finished in the top 10



Pulmonary critical care fellow Juan Deleja, M.D., presents at CHEST 2023



Rubabin Tooba, M.D., pulmonary and critical care fellow, gives presentation on endobronchial tumors

During the conference, Gabriel Loor, M.D., surgical director of lung transplantation at Baylor St. Luke's and associate professor of surgery at Baylor College of Medicine, moderated a session on overcoming challenges in chronic lung allograft dysfunction (CLAD). Several fellows in training presented unique cases ranging from transplant of patients with HIV to management of pulmonary hypertension after transplant. This session included speakers from the Cleveland Clinic and Stanford University and the panel discussed the latest strategies on diagnosing and treating CLAD. Also from the Lung Institute, Nicola Hanania, M.D., pulmonary and critical care physician at Baylor College of Medicine, gave updates on the latest treatment strategies for COPD. Additionally, a team from Baylor College of Medicine competed in the annual CHEST Challenge Championship.



Pulmonologist Muhammad Khyzar Hayat Syed, M.D.

CARING HANDS

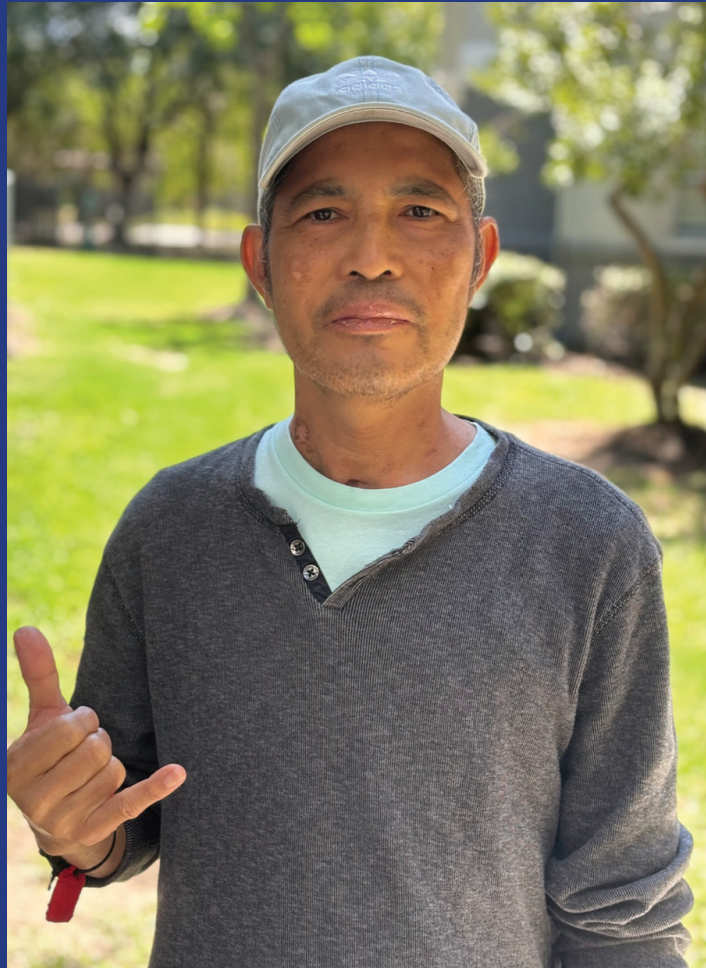
Lung Institute Team Saving Lives From Across the Globe

It is almost 4,000 miles from Honolulu, Hawaii to Houston and an approximate 8-hour flight. But the trip is not an issue for organ transplant patients who travel great distances for lifesaving care by the Lung Institute at Baylor Medicine.

“I can barely remember how I got to Houston. I am very thankful to Baylor for accepting me as their patient and giving me another chance to breathe again,” patient Benjamin Calimbas said.

Calimbas was flown by special medical transport this summer after a case of what then seemed to be pneumonia progressed to respiratory failure that severely damaged both of his lungs. The once very healthy father of two could no longer breathe on his own. He was intubated and on mechanical ventilation. His son, Russell says, “My father had been a very healthy guy with no record of any sort of medical condition. He started having issues with his breathing in February so they had to intubate him. When there was no improvement, they had to put him on ECMO (extracorporeal membrane oxygenation) to support his heart and lungs.”

His healthcare team from Queen’s Medical Center in Hawaii tried everything they could to treat him. With no improvement, the only hope was a double lung transplant. The team started searching in earnest for a transplant center in the contiguous 48 states. However, because of multiple insurance issues, every institution they approached denied admission or the insurance costs were prohibitive,



except for Baylor St. Luke’s Medical Center in Houston. Puneet Garcha, M.D., medical director of lung transplantation at Baylor St. Luke’s and associate professor of pulmonary medicine at Baylor College of Medicine, and Gabriel Loor, M.D., surgical director of lung transplantation at Baylor St. Luke’s and associate professor of surgery at Baylor College of Medicine, ordered an immediate transplant evaluation.

“In addition to respiratory and kidney failure, Calimbas was suffering from

infection, gastrointestinal bleeding and physical deconditioning,” says Dr. Loor. “Every day that he remained on the ECMO device increased his risk of stroke, bleeding and further complications. “We felt we could get him strong enough to survive transplant surgery so he spent a month with our ICU nursing staff and therapists before we prepped for a bilateral lung transplant. We were able to secure a donor lung pretty quickly, and his health improved dramatically soon after the procedure.”

“I’m getting better every day now,” Calimbas said as he recuperated in Houston, three months post-surgery. He is cooking his favorite meal, Chicken Adobo and Pancit and going to physical therapy and occupational therapy every week. “I’m pretty much independent and getting back to normal strength,” he said.

His son, Russell, is a newly graduated nurse and the dramatic downturn his father took was shocking, even to him. “I work as a nurse in the ER back home at Queen’s Medical and I am used to seeing sick people every day but when it came to seeing my own dad in such a vegetative state, it really affected me. Now that he is out of the hospital, I’m really happy that we can go back to the way life was.”

“I’m getting better every day now, I’m pretty much independent and getting back to normal strength.”

Dr. Loor said that Calimbas’s prognosis is very good and a testament to the quality of the critical care here at the transplant program, which is really gaining an international reputation for treatment of advanced lung disease and transplant care.

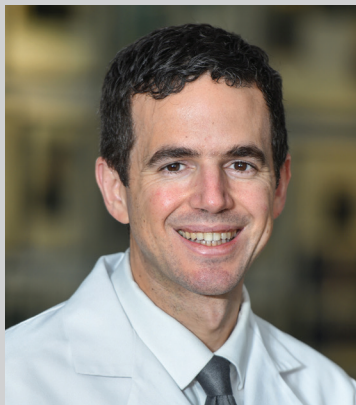
“Dr. Rosas and Dr. Loor and that whole transplant team were just wonderful,” Slagle says. “I really feel well cared for by that group.”

FUNDING



Ramiro Fernandez, M.D., assistant professor of surgery in the Division of Thoracic Surgery, has received the Advancing Clinical Excellence Grant from Baylor College of Medicine and Baylor St. Luke's Medical Center for his project "Enhancing patient mobilization in the postoperative period." This project focuses on improving mobilization of thoracic surgical patients in the postoperative period to aid in improving outcomes and reducing hospital length of stay.

Dr. Fernandez also received a grant from the Roderick Dr. MacDonald Research Fund at Baylor St. Luke's Medical Center to fund a pilot study "Mesenchymal stem cell derived exosomes ameliorate lung ischemia reperfusion injury." This study seeks to develop targeted therapy for primary lung allograft dysfunction (the most common cause of morbidity and early mortality in lung recipients) using stem cell derived exosomes. The findings of this study have the potential to greatly improve outcomes in lung recipients.



Gabriel Loor, M.D., received a \$300,000 grant from the JLH Foundation to support a series of research initiatives intended to substantially impact the future of lung transplantation.

The research initiatives include:

- Implementation of biomarkers in the clinical setting to guide decisions during lung transplantation
- Refinement of exosome RNA signatures to predict the outcomes after lung transplantation
- Assessment of pharmacologic and exosome strategies to reduce ischemia reperfusion injury at the cellular level in a simulated model of ischemia reperfusion
- Assessment of pharmacologic and exosome strategies to enhance lung performance and reduce discard rates in an experimental model of EVLP using human donor lungs turned down for transplant and animal lungs



R. Taylor Ripley, M.D., associate professor of surgery in the David J. Sugarbaker Division of Thoracic Surgery, has received two R01 grants for his projects "Targeting the Mitochondria to Overcome Resistance to Immune Checkpoint Inhibition in Malignant Pleural Mesothelioma" and "Novel strategies to improve mesothelioma therapy." Dr. Ripley will study mechanisms to overcome resistance to immune checkpoint inhibition by targeting the tumor cell's mitochondria. Additionally, he will study whether autophagy facilitates chemo-resistance in mesothelioma in conjunction with his colleagues at the University of Hawaii.

Dr. Ripley also received the DeGregorio Family Foundation Grant for Gastric and Esophageal Malignancies for the project "Targeting Mitochondrial Resistance to Apoptosis after Neoadjuvant Therapy in Esophageal Adenocarcinoma." For this project, Dr. Ripley will investigate whether a live-cell bioassay called BH3 profiling predicts which proteins to target to overcome therapeutic resistance in esophageal cancer.

CLINICAL TRIALS

R. Taylor Ripley, M.D., is opening a new trial in conjunction with collaborators from Duke University for patients with mesothelioma. Mesothelioma is a highly fatal disease with a survival rate of under 10% at five years. Recently, new advances with immunotherapy have improved survival but still only 23% of patients are alive at three years when treated with immunotherapy. Surgery with chemotherapy has resulted in the longest survival.

This trial is opening a study that aims to determine whether the combination of chemotherapy and immunotherapy prior to surgery is more effective in treating patients with mesothelioma. The investigators hope to see the highest survival rates with this new treatment combination in the trial "Combination of Induction Durvalumab and Tremelimumab alone versus Durvalumab and Tremelimumab with chemotherapy for Potentially Resectable Pleural Mesothelioma."

The research associated with this trial will be supported by National Cancer Institute R01 grant "Targeting the Mitochondria to Overcome Resistance to Immune Checkpoint Inhibition in Malignant Pleural Mesothelioma," to help improve response to therapy

For more information call 713-798-6376 or email lungsched@bcm.edu

PUBLICATIONS

Science Translational Medicine “SHP2 promotes sarcoidosis severity by inhibiting SKP2-targeted ubiquitination of TBET in CD8+ T cells” Sarcoidosis, an inflammatory lung disease with unknown cause, can progress to severe lung damage in some patients. In this study, Lindsay Celeda, Ph.D., and her team demonstrated that blocking the activity of a molecule called SHP2, associated with inflammation, reduced lung issues in mice with a condition resembling sarcoidosis. This success was linked to fixing a process that affects the degradation of a factor called TBET in certain immune cells. Additionally, it was found that high SHP2 activity led to increased inflammation in severe sarcoidosis patients, while blocking SHP2 in these patients reduced harmful effects. This study provides new insights and suggests that blocking SHP2 activity could be a potential treatment for severe sarcoidosis.

“Machines and donation after circulatory death (DCD) in lung transplantation” in Transplantation and Mechanical Support for End Stage Heart and Lung Disease. In Chapter 83 of this book, Dr. Loor describes the use of ex vivo lung perfusion as a novel therapy applied to donor lungs outside of the body before transplant and the use of donation after circulatory death to increase the donor lung population for lung transplantation. The book is the most comprehensive and up-to-date textbook available and delves into the medical and surgical treatment options for patients with end-stage heart and lung disease. Leading experts cover all aspects of the complex and resource-intensive therapies, including the basics of transplant immunology, databases, regulatory and ethical aspects of transplantation and conventional modalities of donor organ harvest.

The Lung Institute

Here are the locations you can find us:

7200 Cambridge St., Suite 6A
Houston, TX 77030
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6620 Main St.
Suite 1475
Houston, TX 77030
(832) 355-2285

1327 Lake Pointe Parkway
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Sugar Land, TX 77478
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17450 St. Luke's Way
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