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*Photos in this annual report showing people without masks and not practicing social distancing were taken prior to the COVID-19 pandemic.*
Dear Friends and Colleagues,

In the UAB Department of Pediatrics, we seek to discover new knowledge in order to improve the health of the children of Alabama, the region, and the world. While this work is certainly impacted by COVID-19, it doesn’t stop. In fact, it accelerates because there are new questions to answer. In this Annual Report, we describe some of our COVID-19 research, and policy efforts (pages 10-13). We also responded to our national dialogue this year and reaffirmed our strong stand against systemic racism, our commitment to diversity, equity and inclusion and our belief that racism is a public health crisis. We will not achieve health or justice until we achieve health and justice for all.

The clinical advances and research breakthroughs we describe throughout this Annual Report have a direct impact on children’s lives. That impact will be our legacy. We present evidence of this impact as measured by major research accomplishments, grants, publications and awards. In 2020, the Department of Pediatrics faculty had 375 publications and in FY 2020, we had funding from the National Institutes of Health (NIH) totaling $21.5 million and total research funding of $33.1 million. This puts us in the top 15 Departments of Pediatrics in the country. We achieved this 16% increase in NIH funding and 8% increase in overall funding compared with last year, with a diversified portfolio of grants including many new investigators. We have grown from eight NIH funded investigators in 2013 to 21 NIH funded investigators this year; many of these new investigators have been supported by the department’s investments in their research programs, by pilot and feasibility awards from the Children’s of Alabama Kaul Pediatric Research Institute and by the combined investments from the department and Children’s of Alabama in research infrastructure.

The department aims to build on these successes, expand the size and, importantly, the impact of our research in the coming years. We anticipate continued growth not only in our core areas of significant accomplishment—virology, therapeutic drug development, cancer, neonatology and outcomes—but also in newer areas where the recruitment of talented young researchers will ensure continued and expanded success.

In addition to our research accomplishments, our focus on safety and quality is always paramount. For the 11th consecutive year, U.S. News & World Report ranked Children’s of Alabama’s pediatric specialty services among the top 50 in the nation. Nine specialties were ranked: Cancer, Cardiology & Heart Surgery, Gastroenterology & GI Surgery, Neonatology, Nephrology, Neurology & Neurosurgery, Orthopedics, Pulmonology, and Urology. We are proud to be one of only 30 children’s hospitals in the country ranked in at least nine specialties.

Our clinical mission is to deliver exceptional, safe and accessible care to improve the outcomes for children in Alabama and elsewhere. This year we had the added responsibility of caring for children with COVID-19. Through November 2020, we cared for 194 patients who were positive for SARS-CoV-2, 993 Patients Under Investigation (PUI) for suspected COVID-19 and 28 patients with known or suspected Multisystem Inflammatory Syndrome in Children (MIS-C). From the simple to the most complex conditions, we continue to work as a team to deliver the best care. Our achievements simply would not be possible without the physicians, nurses and staff who bring their talents and passion to the care of children every day, from everywhere in the state, the region and the nation. This coming year, we are finding ways to further increase access to our providers using telemedicine, improve provider-to-provider communication and identify even more subspecialty services that we can offer to our patients and those who help care for them.

I am very hopeful that 2021 will be better than 2020. No matter what the next year holds, please know that one thing always remains in focus: our commitment to serving the patients and families who look to us for healing and hope. Thank you for being part of that most worthy endeavor.

Mitchell B. Cohen, M.D.
Katharine Reynolds Ireland Chair of Pediatrics
University of Alabama at Birmingham
Physician in Chief, Children’s of Alabama
Gregory Friedman, M.D., associate professor in the Division of Pediatric Hematology/Oncology, received an R01 grant for a Phase 1 immunotherapy clinical trial of engineered herpes virus G207 for the treatment of malignant cerebellar brain tumors in children. This will be a first-in-human study of an oncolytic herpes virus inoculated in the cerebellum. Standard therapies such as chemotherapy and radiation are very damaging to a child’s developing brain and too often are ineffective. Viral immunotherapy offers a targeted, less toxic and more effective approach. G207 is a herpes virus that has been genetically altered so that it does not harm normal cells but can infect and kill tumor cells. When infused into a malignant brain tumor, the virus enters tumor cells and replicates. It then kills the cells and releases the virus’s progeny to infect and kill other tumor cells nearby. Importantly, the virus also induces a strong immune response by the body’s immune system, which can then attack and kill the tumor and potentially prevent tumor progression or recurrence. The primary goal of this grant for Dr. Friedman and his team is to demonstrate the safety and tolerability of the treatment in children with malignant cerebellar brain tumors. Their secondary aims are to assess the effectiveness of the therapy and the immune response generated by the treatment.

UAB receives grant to assess whether a one-dose antibiotic can prevent maternal and infant sepsis

by Savannah Koplon

Wally Carlo, M.D., professor in the Division of Neonatology, and Alan Tita, M.D., Ph.D., professor in the Department of Obstetrics and Gynecology, are conducting a clinical trial to assess whether a single oral dose of the antibiotic azithromycin during labor reduces the risk of maternal and infant bacterial infection and death in seven low- and middle-income countries. This trial received funding from the National Institutes of Health and the Bill & Melinda Gates Foundation. According to the World Health Organization, infections like sepsis during pregnancy and in the weeks after birth account for roughly 10 percent of maternal deaths and 16 percent of newborn deaths worldwide. The clinical trial — A-PLUS, a randomized, placebo-controlled, parallel multicenter trial — will help researchers test a low-cost intervention that has already shown promise in preventing death in smaller studies. Investigators plan to enroll up to 34,000 women at NICHD Global Network sites in Bangladesh, the Democratic Republic of the Congo, Guatemala, India, Kenya, Pakistan and Zambia. Half of the women will receive a single 2-gram dose of oral azithromycin, and the other half will receive a placebo, while being monitored for infection and signs of fever during their hospital stay and up to six weeks post-delivery.
High-Impact Research: Grants

UAB researcher receives NIH grant for renal disease research in sickle cell anemia patients

by Brianna Hoge

J effery Lebensburger, D.O., associate professor in the Division of Pediatric Hematology/Oncology, has been awarded an R01 grant by the National Institutes of Health. This grant will fund a research project designed to improve scientific rigor for identifying renal disease in patients with sickle cell anemia. Up to 70 percent of adults with sickle cell anemia will develop chronic kidney disease, and many will progress to requiring dialysis or kidney transplantation. The research will facilitate monitoring renal disease progression that is specific to patients with sickle cell anemia, setting the stage for identifying methods to detect kidney disease at an earlier timepoint.

Study testing behavioral intervention to prevent CMV, major cause of hearing loss in young children

by Matt Windsor

E ven though cytomegalovirus has infected a large portion of the world, it keeps a low profile. Nearly one in three children in the United States are infected by age 5 and more than half of American adults have been infected by age 40, according to the Centers for Disease Control and Prevention. The infection stays with them for life, but for most people this herpes virus — which comes from the same family as chickenpox and most often is referred to as CMV — brings no symptoms. When infection occurs in the womb, however, it can cause a range of complications. CMV is the leading infectious cause of hearing loss in young children, for instance.

One in 200 babies is born with CMV infection. Karen Fowler, DrPH, professor in the Division of Pediatric Infectious Diseases, is leading a new five-year, nearly $3 million grant from the NIH’s Eunice Kennedy Shriver National Institute of Child Health & Human Development to study a behavioral intervention in mothers that aims to prevent maternal CMV infection in pregnancy. The study builds on previous research by Dr. Fowler and colleagues, funded by a grant from the Centers for Disease Control and Prevention, that showed women could make behavior changes to reduce their CMV risk during pregnancy in response to an intervention. The new study will include a short video explaining CMV, how it spreads and how to reduce the risk of acquiring an infection, followed by 12 weeks of reminders and encouragement to participants through text messages.
High-Impact Research: Grants

UAB receives grant to study the impact of healthcare provider-focused intervention on HPV vaccine uptake in childhood cancer survivors

Childhood cancer survivors are at increased risk for developing HPV-related second cancers such as cervical cancer and oropharyngeal cancer. Prior research led by Wendy Landier Ph.D., professor in the Division of Pediatric Hematology/Oncology, has shown that uptake of the HPV vaccine in childhood cancer survivors remains very low. She also found that lack of healthcare provider recommendation for the HPV vaccine was associated with non-initiation of the HPV vaccine in childhood cancer survivors. The National Cancer Institute has awarded funding to UAB under the Childhood Cancer Survivorship, Treatment, Access and Research (STAR) Act of 2018/Beau Biden Cancer Moonshot initiative to support a five-year research study aimed at increasing HPV vaccine uptake among childhood cancer survivors. The researchers will adapt an existing evidence-based, healthcare provider-focused intervention in the pediatric oncology setting. The planned study will evaluate the effectiveness of the intervention in increasing HPV vaccination rates among childhood cancer survivors 9-17 years of age, and will evaluate the feasibility, acceptability and appropriateness of the intervention for use in the pediatric oncology setting, from the perspective of the healthcare providers. In addition to UAB five additional pediatric oncology sites will participate in the trial, including Emory University, Baylor College of Medicine, the University of Minnesota, Wake Forest University, and Oregon Health & Science University.

UAB receives grant to study impact of protein-enriched human milk in preterm infants

by Savannah Koplon

Ariel Salas, M.D., MSPH, assistant professor in the Division of Neonatology, received a K23 grant from the NIH Eunice Kennedy Shriver National Institute of Child Health and Human Development. Salas will use the grant to study how protein-enriched human milk diets could increase lean body mass and diversity of the gut microbiome in extremely preterm infants. Postnatal growth failure occurs in approximately 60 percent of extremely preterm infants. The randomized trial will determine the effects of early protein intake on the gut microbiome and the accretion of lean body mass in premature infants born at the limits of viability, 28 weeks’ gestation or less. Dr. Salas believes that early administration of protein-enriched human milk diets could improve growth by promoting lean body mass accretion, stimulating maturation of the gastrointestinal tract and modifying the gut microbiome.
Racial/ethnic disparities in rates of potentially lifesaving care practices are decreasing over time

by Savannah Koplon

Published in the Journal of the American Medical Association Network, a cohort study determined that racial and ethnic disparities in important care practices and outcomes—including antenatal corticosteroids, caesarean delivery and late-onset sepsis—decreased over time in extremely preterm infants. The cohort study, led by Colm Travers, M.D., assistant professor in the Division of Neonatology looked at more than 20,000 preterm infants from 25 academic medical centers born between 22 and 27 weeks’ gestation from 2002 to 2016, looking to determine whether racial/ethnic disparities in care practices and outcomes were decreasing or increasing among extremely preterm infants. The study found that improvements in mortality and most major morbidities did not differ by race or ethnicity of mother and baby. A major finding was the decrease in disparities in the use of antenatal corticosteroids, which are given to mothers before delivery to improve survival and other major outcomes in preterm infants. Furthermore, the rate of late-onset sepsis—which was initially higher among Black and Hispanic infants—decreased more rapidly compared with white infants so that rates converged during the most recent years. However, rates of moderate to severe neurodevelopmental impairment increased over time in all groups regardless of race or ethnicity.

Higher-volume feedings help postnatal growth in preterm infants

by Savannah Koplon

Findings from a randomized clinical trial determined that preterm infants who received higher-volume feedings improved postnatal growth as compared to those who did not. Published in The Journal of Pediatrics, higher-volume feedings increased growth velocity, weight, head circumference, length and mid-arm circumference compared with usual-volume feedings without adverse effects. The randomized clinical trial with 1:1 parallel allocation included 224 infants with a birth weight of 1,001-2,500 grams born at less than 32 weeks’ gestation. The infants were randomized to receive either a higher than normal or a usual-volume feeding after reaching full enteral feedings. This trial, led by Colm Travers, M.D., assistant professor in the Division of Neonatology, demonstrated that higher volume feedings can help preterm infants grow without adverse effects.
A dual antenatal therapy benefits extreme preterm babies better than either alone or none

by Jeff Hansen

Extremely preterm children have very low birth weights, underdeveloped organs, and risks of long-term problems or disabilities. Antenatal treatment of the mother and fetus offers an opportunity to improve outcomes in preterm children. Antenatal magnesium sulfate or antenatal corticosteroids have known benefits to reduce problems like cerebral palsy, respiratory distress syndrome, necrotizing enterocolitis or death, and both treatments are recommended for infants born between 24 and 33 weeks of gestation. The effect of both combined in extremely premature children, versus either alone or none, has not been studied, though both are often given in routine care. Researchers, led by Samuel Gentle, M.D., assistant professor in the Division of Neonatology, report that antenatal treatment with both magnesium sulfate and corticosteroids together yields an increased benefit for children born at 22 to 26 weeks of gestation, compared to no antenatal treatment or with either therapy alone. This multicenter, prospective observational study included six universities, a nonprofit research institute and the National Institutes of Health Neonatal Research Network. The research was published in the journal Obstetrics & Gynecology.

BMT survivor study finds significant breast cancer risk in young women who received total body irradiation

by Matt Windsor

A new study led by Smita Bhatia, M.D., MPH, professor in the Division of Pediatric Hematology/Oncology, and Andrew McDonald, M.D., assistant professor in the Department of Radiation Oncology, found that patients who received total body irradiation (TBI) at age 30 or younger had a 4.5-fold increase in their risk of developing breast cancer later in life compared with the general population. The research, published in the Journal of Clinical Oncology, also found increased risk of breast cancer among women exposed to alkylating agents and anthracyclines as part of blood or marrow transplantation (BMT). This study provides evidence for mammographic screening for women at risk because of exposure to TBI, alkylating agents or anthracyclines for early detection of breast cancer. The study is part of a large initiative funded by the National Institutes of Health with Dr. Bhatia serving as the principal investigator, to examine the long-term complications in survivors of BMT. The authors plan to further study how different aspects of TBI dose and delivery technique are related to second cancers. The overarching goal is to improve treatment techniques for future patients undergoing BMT as part of their cancer care.
Blood or marrow transplantation (BMT) is a potentially lifesaving treatment for patients with leukemia, myeloma, lymphoma and other hematologic malignancies. But BMT also can bring long-lasting side-effects, including cognitive impairment that leaves patients unable to resume work or normal activities. A 2018 study by UAB researchers led by Noha Sharafeldin, Ph.D., assistant professor in the Division of Hematology/Oncology, and Smita Bhatia, M.D., MPH, professor in the Division of Pediatric Hematology/Oncology, found that up to 40 percent of patients who have allogeneic BMT, in which they receive cells transplanted from others, continued to have cognitive impairment at three years after BMT.

In a new study, the first of its kind, the same UAB research team, identified a combination of genetic factors associated with cognitive impairment after BMT. The researchers used the information to pinpoint patients at highest risk for deficits in a large patient cohort, significantly enhancing risk predictions compared with demographic or clinical characteristics alone. The study is published in the Journal of Clinical Oncology.
Investigational compound remdesivir, developed by UAB and NIH researchers, being used for treatment of novel coronavirus

by Savannah Koplon

The investigational drug remdesivir, developed through research conducted through the Antiviral Drug Discovery and Development Center, or AD3C, and centered at the University of Alabama at Birmingham, is being used to treat select infected patients in the United States and in China who have been affected by the outbreak of novel coronavirus (2019-nCoV).

UAB was awarded a $37.5 million, five-year U19 grant from the National Institute of Allergy and Infectious Diseases Centers of Excellence for Translational Research to study and develop treatment for high-priority emerging infections. Work has been taking place in earnest to develop drugs for emerging influenza, flaviviruses (dengue, West Nile virus and Zika), coronaviruses that cause SARS and MERS, and alphaviruses such as Venezuelan equine encephalitis virus and chikungunya. The grant is a multi-institutional collaboration to accelerate drug discovery for these emerging infections and is a public-private partnership between academic institutions and Gilead Sciences.

Remdesivir, developed to treat the coronavirus causing MERS, was found to have significant activity against the 2019-nCoV strain when the outbreak began in the Chinese city of Wuhan. Importantly, remdesivir had demonstrated efficacy in treating other medically important coronaviruses MERS and SARS in cell culture and animal models. Based on the compassionate plea requests of treating physicians in the United States, Gilead Sciences released remdesivir for use in a few patients, although the drug has not yet been tested for safety or efficacy in these diseases. "The release of remdesivir for safety and efficacy studies is a major accomplishment for the AD3C – namely the U19 grant – as it shows significant and swift advance of antiviral drugs to help treat and respond to emerging infectious disease outbreaks on an international scale and, importantly, to anticipate the introduction of these infections in the United States," said Richard Whitley, M.D., Distinguished Professor at UAB and principal investigator of the U19 grant.

Gilead Sciences and supporting researchers and clinicians are working with health authorities from the World Health Organization and in China to establish a placebo-controlled study to determine whether remdesivir is safe and effective in treating 2019-nCoV.

"The collaboration between UAB, our colleagues at Southern Research, Vanderbilt University and the University of North Carolina, along with our pharmaceutical partner Gilead Sciences, is indicative of our collaborative approach to respond to outbreaks in real time, and in helping communities worldwide fight 2019-nCoV. This is a prime example of how the research we are conducting at UAB plays a critical role in treating patients on a global scale and our contribution of substantial scientific advances," Whitley continued.

Whitley expressed that the potential for mutation of 2019-nCoV means that UAB’s AD3C and partners will need to build backup molecules for potential testing and treatment in the near future.

The World Health Organization has declared the 2019-nCoV outbreak a “public health emergency of international concern.”

UAB is the lead institution for AD3C and research conducted; but the team unifies scientists experienced in virology, viral immunology, pathogenesis, medicinal chemistry and translation to human disease from UAB, University of North Carolina, Vanderbilt University, Emory University, Washington University, The University of Texas Medical Branch, Southern Research, the Emory Institute of Drug Discovery, the University of Colorado, Denver, and Oregon Health & Science University.
David Kimberlin, M.D., professor in the Division of Pediatric Infectious Diseases, is the American Academy of Pediatrics (AAP) liaison for the CDC’s Advisory Committee on Immunization Practices. This committee decides on the national recommendation for the use of the COVID-19 vaccine.

Dr. Kimberlin also serves on the expert group of the Departments of Sexual and Reproductive Health and Research (SHR) and Maternal, Newborn, Child and Adolescent Health and Ageing (MCA) at the World Health Organization (WHO) to review evidence on mother-to-child transmission of SARS-CoV-2 and to create a consensus case definition. This group works with the WHO to examine and interpret the evidence and develop case definitions on mother-to-child transmission. They will also assist with identifying gaps and formulating recommendations for research and reporting of mother-to-child of SARS-CoV-2.

In addition to these roles, Dr. Kimberlin is also a member of the AAP committee recommending national management of babies born to COVID-positive mothers and a member of the AAP committee recommending national management of children with MIS-C.

Dr. Cron co-PI on grant to study treatment of Cytokine Storm Syndrome in COVID-19

Dr. Cron, M.D., Ph.D., Pediatric Rheumatology, and Winn Chatham, M.D., Rheumatology, have been awarded a grant to study the treatment of Cytokine Storm Syndrome in COVID-19 patients. They will serve as co-PIs on their project titled, “Early Identification and Treatment of Cytokine Storm Syndrome in COVID-19.”

The grant was awarded by the School of Medicine and Hugh Kaul Precision Medicine Institute from COVID-19 research funding. It was one of 14 projects selected to receive funding to study various implications of COVID-19. Over 50 applications were submitted for consideration.

The project is a small clinical trial to compare standard of care to standard of care plus anakinra treatment in COVID-19+ adults at UAB with signs of cytokine storm syndrome. Drs. Cron and Chatham will use the funding for whole genome sequencing and laboratory explorations as related to cytokine storm syndrome.
Early results from the United Kingdom’s RECOVERY trial this summer were a welcome piece of good news in the midst of the COVID-19 pandemic. Critically ill patients on ventilators who received dexamethasone, a corticosteroid drug, were at a one-third lower risk of dying than those who did not receive the drug. Patients receiving oxygen therapy, but not on ventilators, had a 20% lower risk of dying. Nature, the scientific journal, called it a “coronavirus breakthrough.”

Better yet, as Nature noted, dexamethasone is both cheap and commonly used. The trouble is, “dexamethasone is already in short supply,” said Randy Cron, M.D., Ph.D., professor of pediatrics and medicine at UAB. So Cron and Winn Chatham, M.D., professor of medicine at UAB, are conducting a pilot study of another corticosteroid, methylprednisolone. Outside of COVID-19, oncologists often use dexamethasone to treat hemophagocytic lymphohistiocytosis, a cytokine storm syndrome seen in patients with blood cancers such as leukemias and lymphomas. Rheumatologists such as Cron treat cytokine storm syndrome (where it is commonly called macrophage activation syndrome) in patients with lupus and rheumatoid arthritis using methylprednisolone.

“Methylprednisolone is more readily available than dexamethasone,” Cron said. “The thought is if both are equally effective, then physicians can use what is available to them to treat COVID-19 cytokine storm syndrome.” And, “by implication, other glucocorticoids will likely be equally effective at the glucocorticoid equivalent dosing.”

COVID-19 and cytokine storm

Cron is a leading expert on cytokine storm syndrome, a potentially life-threatening overreaction by inflammatory immune proteins known as cytokines. (In 2019, he published the first textbook on cytokine storm syndrome.) “Cytokines are there to fight off infections and ward off cancers,” Cron said. “But when they are out of control, they can make you very ill.”

Anyone battling a serious infection, regardless of cause, may experience a cytokine storm, Cron said. In addition to blood cancers and rheumatic diseases, cytokine storm syndrome is seen in herpes virus family member infections, and case reports have noted nearly 100 different infectious agents that can cause cytokine storms. In patients with COVID-19, clinicians increasingly see cytokine storm syndrome as a major factor in poor outcomes. Cytokine storm syndrome develops in a large percentage of COVID-19 patients who are ill enough to require hospitalization, Cron said.

Why glucocorticoids?

Glucocorticoids, such as dexamethasone and methylprednisolone, are both “used to calm the cytokine storm,” Cron said. “They have very broad-ranging effects on the immune system, including decreasing production of pro-inflammatory proteins and decreasing function of multiple immune cell types.”

In a pilot project that was one of 10 recently funded by UAB’s urgent, high-impact COVID-19 grant initiative, Cron and Chatham, plan to enroll at least 30 patients hospitalized with COVID-19 pneumonia who have features of cytokine storm syndrome.

The World Health Organization initially recommended against use of glucocorticoids in treating COVID-19 because studies of their effectiveness when used against coronaviruses in SARS and MERS outbreaks had varying results, and glucocorticoids increase the risk of secondary infection in patients. “Nevertheless, out of desperation, many overwhelmed centers have resorted to glucocorticoids in treating COVID-19 cytokine storm syndrome,” Cron and Chatham wrote in their project proposal, and early reports “have shown promising results.” These drugs’ effectiveness at calming cytokine storms means the benefits of short-term use outweigh concerns about secondary infections, Cron said. “They can be tapered over time to keep the cytokine storm syndrome under control while the patient improves clinically and by lab markers of disease,” he said.

Study details

Patients in the study will be randomized to receive either 6mg daily of dexamethasone or 32mg daily of methylprednisolone. The goal is to reduce the need for invasive mechanical ventilation and ICU care. “We believe methylprednisolone will minimize ICU admissions and enhance survival,” wrote Cron and Chatham in their project proposal.

Methylprednisolone and dexamethasone have similar side-effect profiles, “but are often used at different glucocorticoid equivalent dosing” — methylprednisolone tends to be used at higher doses — “and they have different pharmacokinetics, which has implications for tapering dosing when patients are recovering,” Cron said.
Researchers at UAB have been awarded a $1.1 million two-year U01 grant from the National Institutes of Health (NIH) to study adaptive immunity and persistent SARS-CoV-2 replication in children with hematologic and malignant disorders. Funding for years 3 and 4 will be contingent on the progress of the study.

The overall objective of this project is to determine whether children with hematologic and malignant disorders on immunomodulatory therapy shed SARS-CoV-2 for prolonged periods because of the inadequate immune response and to examine the relationship between virus replication and the level of adaptive immunity.

Suresh Boppana, M.D., William Britt, M.D., and Swetha Pinninti, M.D., in the Division of Pediatric Infectious Diseases, are the co-principal investigators on this grant. Kimberly Whelan, M.D., and Christy Bemrich-Stolz, M.D., in the Division of Pediatric Hematology/Oncology and Allan Zajac, Ph.D., in the Department of Microbiology, are co-investigators on this project.

“We have noticed that children with hematologic and malignant disorders on chemotherapy or other immunomodulatory therapy infected with SARS-CoV-2 remain persistently PCR positive for viral RNA in the respiratory tract for prolonged periods,” explained Dr. Boppana. “This finding raises the possibility that specific qualitative or quantitative deficits in adaptive immune responses in some individuals can result in ineffective control of virus replication and prolonged virus shedding.” The major goal of this study is to quantitatively define adaptive immune responses to SARS-CoV-2 in a cohort of children with varying levels of immune responsiveness and to stratify these responses in terms of control of virus shedding from the upper respiratory tract.

The research team developed a biorepository of specimens including nasopharyngeal, nasal, saliva, and rectal swabs from a cohort of infected children to develop a better understanding of the natural history and virological and immunological characteristics of the SARS-CoV-2 infection and will utilize this cohort and biorepository for this project.
The Department of Pediatrics is committed to creating an environment where all faculty, fellows, residents and staff feel respected and valued regardless of their race, ethnicity, gender or sexual orientation. In partnership with the School of Medicine, we believe that diversity and inclusion are crucial to the pursuit of excellence in our three pillars: research, education and patient care.

As a department, we are working to establish initiatives to cultivate a more diverse and inclusive environment for our faculty, trainees and staff.

DEPARTMENT OF PEDIATRICS DIVERSITY DASHBOARD

Diversity, Equity & Inclusion

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DIVERSITY, EQUITY, AND INCLUSION COUNCIL

The Pediatric Diversity, Equity and Inclusion (DEI) Council aims to increase recruitment and retention of underrepresented in medicine (URiM) pediatric residents, fellows, and faculty, promote opportunities for mentorship amongst UAB medical students, pediatric residents, fellows, faculty, and staff, and foster a culture of diversity, inclusion and cultural responsiveness amongst pediatric residents, fellows, faculty, patients, and other healthcare providers.

This year the council sponsored recruitment activities for underrepresented in medicine pediatric residency applicants and informal meetings of the faculty and trainees with students on visiting rotations from Meharry Medical School. The Council has also facilitated a department wide social justice book club to facilitate dialogue and foster a more inclusive environment.

The co-directors for DEI for the Residency Program are Drs. Ana Xavier and Chrystal Rutledge. Dr. Tina Simpson serves as the DEI Faculty Liaison. Along with partners in the Department of Medicine, the DOP DEI Leadership Team co-developed and facilitated a series of workshops on racism and healthcare for the Graduate Medical Education community.

CO-DIRECTORS – RESIDENCY PROGRAM
DIVERSITY, EQUITY & INCLUSION

Chrystal Rutledge, M.D., assistant professor
Division of Pediatric Critical Care

Ana Xavier, M.D., associate professor Division of Pediatric Hematology/Oncology

DIVERSITY, EQUITY & INCLUSION FACULTY LIAISON

Tina Simpson, M.D., professor Division of Adolescent Medicine
### Department Leadership

**Mitchell Cohen, M.D.**  
Chair  
Department of Pediatrics

**Smita Bhatia, M.D., MPH**  
Vice Chair for Outcomes

**Peter Glaeser, M.D.**  
Vice Chair for Clinical Affairs

**Michele H. Nichols, M.D.**  
Vice Chair for Education

**Tina Simpson, M.D.**  
Vice Chair for Faculty Development

**Tamera Coyne-Beasley, M.D., MPH**  
Vice Chair for Community Engagement

**David Kimberlin, M.D.**  
Vice Chair for Clinical and Translational Research

**Lauren Nassetta, M.D.**  
Chief Wellness Officer

**Richard J. Whitley, M.D.**  
Vice-Chair for Research

### DIVISION DIRECTORS

<table>
<thead>
<tr>
<th>Division Director</th>
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<tr>
<td>Terry Wall, M.D.</td>
<td>Academic General Pediatrics</td>
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<td>Tamera Coyne-Beasley, M.D., MPH</td>
<td>Adolescent Medicine</td>
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<td>Prescott Atkinson, M.D., Ph.D.</td>
<td>Pediatric Allergy &amp; Immunology</td>
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<td>Yung R. Lau, M.D.</td>
<td>Pediatric Cardiology</td>
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<td>Michael Taylor, M.D.</td>
<td>Child Abuse Pediatrics</td>
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<td>Nancy Tofil, M.D., M.Ed.</td>
<td>Pediatric Critical Care</td>
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<td>Laura McGuinn, M.D.</td>
<td>Developmental &amp; Behavioral Pediatrics</td>
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<td>Peter Glaeser, M.D.</td>
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<td>Ambika Ashraf, M.D.</td>
<td>Pediatric Endocrinology &amp; Diabetes</td>
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<td>Reed Dimmitt, M.D., MSPH</td>
<td>Pediatric Gastroenterology, Hepatology &amp; Nutrition</td>
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<td>Girish Dhall, M.D.</td>
<td>Pediatric Hematology/Oncology</td>
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<td>Erin Shaughnessy, M.D.</td>
<td>Pediatric Hospital Medicine</td>
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<td>Richard J. Whitley, M.D.</td>
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<td>David Kimberlin, M.D.</td>
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<td>Waldemar A. Carlo, M.D.</td>
<td>Pediatric Nephrology</td>
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<td>Namasivayam Ambalavanam, M.D.</td>
<td>Pediatric Neurology</td>
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<td>Daniel Feig, M.D., Ph.D.</td>
<td>Pediatric Pulmonaryology and Sleep Medicine</td>
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<td>Leon S. Dure, M.D.</td>
<td>Pediatric Rehabilitation Medicine</td>
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<td>Hector Gutierrez, M.D.</td>
<td>Pediatric Rheumatology</td>
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<td>Drew Davis, M.D.</td>
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<td>Randy Cron, M.D., Ph.D.</td>
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## CHILDREN’S OF ALABAMA ENDOVED CHAIRS

William Bew White Jr., Chair in Child Neurology................................................................. Leon Dure, M.D.
Frederick W. Renneker III Endowed Chair for Pediatric Education ........................................... Michele Nichols, M.D.
Ann Dial McMillan Endowed Chair in Pediatric Critical Care ...................................................... Nancy Tofil, M.D.
Margaret M. Porter Chair in Pediatric Nephrology................................................................. Dan Feig, M.D.
Raymond K. Lyrene, M.D. Endowed Chair in Pediatric Pulmonary Medicine................................. Hector Gutierrez, M.D.
John W. Benton, M.D., Endowed Chair in General Pediatrics ..................................................... Terry Wall, M.D.
Sergio Stagno, M.D. Endowed Chair in Infectious Diseases .................................................. David Kimberlin, M.D.
C. Phillip McWane Endowed Chair in Pediatric Emergency Medicine ..................................... Peter Glaeser, M.D.
Thomas N. Carruthers Jr. Endowed Chair in Pediatric Cardiology ........................................ Yung R. Lau, M.D.
Beth Gordy Dubina Endowed Chair in Pediatric Hospital Medicine ....................................... Erin Shaughnessy, M.D.
David Dixon Endowed Chair in Pediatric Gastroenterology .................................................... Reed Dimmitt, M.D.
Derroll Dawkins Endowed Chair in Adolescent Medicine .................................................... Tamera Coyne-Beasley, M.D.
Thomas Lowder Chair in Developmental Pediatrics .......................................................... Laura McGuinn, M.D.
Ralph Frohsin Endowed Chair in Pediatric Endocrinology .................................................. Ambika Ashraf, M.D.
Virginia Walker Jones Endowed Chair in Neonatology ................................................................. Namasivayam Ambalavanan, M.D.
Benjamin Russell Endowed Chair in Pediatric Hematology/Oncology ................................ Girish Dhall, M.D.

## CHILDREN’S OF ALABAMA ENDOVED PROFESSORSHIPS

Child Abuse Pediatrics Professorship......................................................................................... Michael Taylor, M.D.
Hugh Dillion, M.D., Endowed Professorship in Pediatric Infectious Diseases ............................... Suresh Boppana, M.D.
Waldemar A. Carlo, M.D., Endowed Professorship in Clinical Neonatology .............................. Carl Coghill, M.D.

## UAB ENDOVED CHAIRS

Loeb Eminent Scholar Chair in Pediatrics....................................................................................... Rich Whitley, M.D.
Katharine Reynolds Ireland Chair of Pediatrics........................................................................ Mitch Cohen, M.D.
Edwin M. Dixon Chair in Neonatology .................................................................................... Wally Carlo, M.D.
Arthritis Foundation Alabama Chapter Endowed Chair in Pediatric Rheumatology ...................... Randy Cron, M.D.
Charles A. Alford, M.D. Endowed Chair in Pediatric Infectious Diseases .................................... Bill Britt, M.D.
Gay & Bew White Endowed Chair in Pediatric Cancer Outcomes ............................................. Smita Bhatia, M.D.

## UAB ENDOVED PROFESSORSHIPS

Sarah Katherine Bateh Endowed Professorship for Rett Syndrome ........................................... Alan Percy, M.D.
Endowed Professorship in Pediatrics ....................................................................................... Liz Worthey, Ph.D.
The UAB Department of Pediatrics at Children’s of Alabama is comprised of 19 Subspecialty Divisions each with a research, educational, and clinical focus. To find research initiatives, areas of clinical excellence, educational efforts and learn more about the faculty, click on the division of interest below.

**CONTENT PER DIVISION INCLUDES**

- Pediatric Faculty
- Featured Research
- 2020 Publications
- Participation in National Research, Quality Improvement and Learning Networks
- Extramural Awards, Recognition & Leadership Roles
- 2020 New Faculty
- Fellowship & Training Programs
The research conducted by the UAB Division of Academic General Pediatrics focuses largely on advocacy and quality improvement (QI).

Elizabeth Cason Benton, M.D., FAAP
• As the director of the Alabama Child Health Improvement Alliance (ACHIA), Dr. Benton leads this QI initiative through partnerships with practitioners, payers, families and organizations that deliver care to improve health outcomes of children in the state. In 2020, 14 practices across Alabama participated in ACHIA’s Healthy Beginnings Early Screening Quality Improvement Collaborative. Practices worked to improve screening processes and to close referral gaps around critical early screenings for postpartum depression, development, autism, and social emotional concerns. In addition, the peer-to-peer learning platform was highly valued as practices reorganized to address COVID needs.

DeeAnne Jackson, M.D., MPH
• Dr. Jackson worked with Drs. Mark Powell and Sara Anne Lester from the UAB Department of Anesthesiology to evaluate the effects on breastfeeding rates of the Early Recovery after Surgery (ERAS) protocol for women undergoing scheduled caesarean sections.
• In collaboration with the Powerinsight team, they are collecting data on the use of antibiotics and blood cultures among infants born at 35 weeks gestation and older at UAB and are in the process of analyzing trends since implementation of the Early Onset Sepsis Calculator.

Morissa Ladinsky, M.D.
• Dr. Ladinsky continues working with Dr. Shawn Galin in the UAB Department of Medicine and others to develop a programmatic expansion of the UAB School of Medicine Standardized Patient Program around LGBTQ curricular metrics. This will make the UAB School of Medicine one of only two US medical schools to utilize transgender individuals as standardized patients to enhance medical students’ abilities to communicate with this growing underrepresented population.
• Co-lead with Drs. Tina Simpson, Adolescent Medicine, and Chrystal Rutledge, Pediatric Critical Care, on the UAB Pediatrics Curricular Innovation and Health Equity Scholars Special Interest Group. This initiative will enhance curricular content for UAB Pediatrics trainees as well as structured learning for a core group of scholars around improved health equity and active dismantling of barriers to health embedded in systemic racism.
• Co-author of the Alabama Perinatal Quality Collaborative’s Neonatal Opioid Withdrawal Project. A statewide QI endeavor uniting Alabama delivery hospitals in optimizing the quality of care provided to pregnant women facing opioid use disorder and their neonates.
UAB Pediatric Primary Care Clinic receives Patient-Centered Medical Home Recognition

This year the UAB Pediatric Primary Care Clinic was awarded recognition by the National Committee for Quality Assurance (NCQA) Patient-Centered Medical Home Program.

In order to achieve NCQA Patient-Centered Medical Home Recognition, the UAB Pediatric Primary Care Clinic had to meet certain standards that emphasize the use of systematic, patient-centered, coordinated care. This recognition will help the Pediatric Primary Care Clinic support their patients through access, communication and patient involvement.

“In the UAB Pediatric Primary Care Clinic, we have already been providing many aspects of the level of care required for Patient-Centered Medical Home Recognition,” said Candice Dye, M.D., medical director for the Pediatric Primary Care Clinic. “Having the official recognition and certification from the NCQA is a huge gain for our patients and clinic. Our team worked extremely hard to organize and submit the various needed documents to achieve this. We are very excited to partner with NCQA with this Patient-Centered Medical Home certification to provide even more comprehensive care to our wonderful and deserving patients and their families in Primary Care Clinic.”

The NCQA Patient-Centered Medical Home program reflects the input of the American College of Physicians (ACP), American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP) and American Osteopathic Association (AOA) and others. It was developed to assess whether clinician practices are functioning as medical homes and recognize them for these efforts.

“NCQA Patient-Centered Medical Home Recognition raises the bar in defining high-quality care by emphasizing access, health information technology and coordinated care focused on patients,” said NCQA President Margaret E. O’Kane. “Recognition shows that the UAB Pediatric Primary Care Clinic has the tools, systems and resources to provide its patients with the right care, at the right time.”

Treating Birmingham’s children for three decades: UAB’s Pediatric Primary Care Clinic celebrates 30th anniversary

by Teheem Khan

Thirty years ago, the primary focus of pediatric residency training was providing subspecialty experiences to future pediatricians. However, many residents would leave their training to pursue primary care careers out in the community, without a foundation of primary care-specific care and experiences.

In an effort to provide important primary care experience to residents, and offer local patients a primary care clinic option conveniently based in the University of Alabama at Birmingham and Children’s of Alabama, efforts began to develop a clinic centered on primary care-specific services, which became the Pediatric Primary Care Clinic at UAB and Children’s. The success of the clinic is a testament to the evolving needs of the community and those of training pediatricians.

Evolution over three decades

Before 1990, pediatric patients received their primary care checkups by meeting residents in various open clinic spaces within available space at Children’s – whatever happened to be open that afternoon. At the time, the “clinic” was simply a cart rolled around by a nurse in absence of a true clinic space.

Recognizing the many shortcomings of this approach, the UAB Department of Pediatrics and Children’s teams committed designated space and staff to open the PCC with two nurses and a registration clerk. Three moves and 30 years later, the PCC has evolved into a general pediatrics clinic that provides a spectrum of primary care for children from birth to 18 years old.

What was once a rolling cart has grown into an 18-room clinic with 14 full-time employees, 13 attending physicians and more than 90 pediatric resident physicians who provide well and sick care to children across the Birmingham metro area. Recently PCC hired a social worker who will work exclusively with the clinic to help address social determinants of health and, thus, barriers to health care and life in general for its patients.

“We are unique in that we are a UAB clinic but located within Children’s of Alabama,” said Candice Dye, M.D., associate professor of medicine in the Department of Pediatrics and medical director of the PCC. “Often patients have received some of their care within either or both of the UAB or Children’s systems, so they feel more comfortable with their primary care being here too. Existing for 30 years means that we are well established in the community, and we often have patients who come to us for their care because their parents were our patients when they were children. It’s really special to take care of generations of patients from the same family.”

Initially started in the UAB School of Medicine, the PCC today functions as a part of the University of Alabama Health Services Foundation, providing pediatric primary care for the community as well as a training site for the next generation of pediatricians. The PCC is UAB’s only completely pediatric primary care clinic and is located in the Park Place building on the Children’s campus.

Training the next generation of pediatricians

PCC has long been an integral part of training future pediatricians for the Birmingham community, state of Alabama and beyond. Since its doors opened, the PCC has trained more than 700 residents and counting. While some of those residents have moved on from UAB and the Magic City, many have remained local to provide primary care for Alabama’s children, a testament to the impact of the training PCC fosters.

In its inception, the clinic was open only in the afternoon, with each resident coming to clinic one afternoon a week.

“Initially, the goal was to provide primary care experience for the residents to prepare them for their pediatric careers, many of whom would work full time in primary care,” said Terry Wall, M.D., professor of medicine and division director of the Division of Academic General Pediatrics, which oversees the PCC. “Over the years, the goal has broadened to become a high-quality health care and educational center, expanding the clinic and its services.”

PCC is significant to its alumni residents because it is the place where many first experienced the joy of caring for children and adolescents.
“They get to follow a baby through all of the checkups of the first year, and then see them grow into toddlers by the time they graduate from residency,” said Carolyn Ashworth, M.D., senior pediatrician at the PCC and former division director of Academic General Pediatrics. “Residents also have the privilege of filling out health forms for 18-year-olds going to college or those enrolling in the military and the residents celebrate with teens as they find their passion in trade vocations. The full spectrum of care is truly provided and taught.”

2020 PUBLICATIONS


Quality Management in Healthcare. 2020 29(3), 129-135. Improving asthma conditions for children and adolescents by expanding the statewide learning collaborative model through Health Homes. Fifolt, M., Johnson, HH, Benton EC.

PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

Morissa Ladinsky, M.D., is a member of the Quality Improvement Center for Collaborative Community Court Teams, Jefferson County Site Steering Committee, a collaboration between Family Court, DHR and Medicine around enhanced care for mothers facing substance dependence and their children.

DeeAnne Jackson, M.D., MPH serves on the Executive Leadership Committee of the Alabama Perinatal Excellence Collaborative. Through this role, she has been active in planning and presenting a series of webinars on hospital policies and management of infants born to women who are positive for COVID-19. She has started the planning stages of a Quality Improvement project to improve birth-hospital preparedness for care of infants born to women who are HIV positive.

Dr. Jackson is also working with other providers from the UAB Divisions of Pediatric Infectious Diseases, Infectious Diseases and Adolescent Medicine, as well as the Alabama Department of Public Health and other HIV providers in Alabama, on a task force to address an increase in perinatal transmission of HIV in the state.

EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Morissa Ladinsky, M.D.

• Dr. Ladinsky serves on Mayor Randall Woodfin’s LGBTQ+ Advisory Board for the city of Birmingham.
• She serves on the Board of Directors for the Children’s Policy Council of Jefferson County.
• She serves on the Alabama Medicaid Medical Advisory Council.
• Additionally, she is a member of the Governor’s Opioid Council/Alabama Opioid Overdose and Addiction Council. This group is developing data driven priorities and strategic objectives to guide our state’s coordinated response to the opioid crisis.

Jaime McKinney, M.D.

• Dr. McKinney was promoted to the American Board of Pediatrics Oversight Advisory Committee. She continues to push the ABP to integrate more health equity and racial justice content on the National General Pediatrics Certifying Exam.
• She was selected as co-chair for UAB’s Medical Alumni Association URiM Recruitment Committee.
• She continues to serve on the Admissions Selection Committee for the UAB School of Medicine.
• Selected as Medical Director for Medicaid’s Alabama Care Network Mid-State (Jefferson and Shelby County).

2020 NEW FACULTY

Rachel Klein, M.D.
Assistant Professor

Sugantha Krishnan, M.D.
Assistant Professor
FEATURED RESEARCH

The UAB Division of Adolescent Medicine performs transdisciplinary investigations that include behavioral science, intervention and outcomes research, as well as assessments of psychosocial and physiologic changes during growth and development. Specific areas of research include: immunizations, improving outcomes for people living with HIV, HIV prevention, nutrition research, quality improvement, randomized clinical trials, health disparities and adolescent health risk and resiliency research.

Tamera Coyne-Beasley, M.D., MPH

- Dr. Coyne-Beasley serves as co-principal investigator (PI) on 15-1175 PCORI, PESRAMHIP: Patient Empowered Strategy to Reduce Asthma Morbidity in Highly Impacted Populations. In Black and Hispanic adults, that bear a disproportionate burden of asthma morbidity, can PARTICSS improve outcomes of importance to patients, providers, and the health-care system. (Dr. Coyne-Beasley was the PI prior to leaving the University of North Carolina)
  Sponsored by the Patient-Centered Outcomes Research Institute

- Dr. Coyne-Beasley serves as co-investigator on Prevention of Lower Urinary Tract Symptoms (PLUS). This study seeks to understand the impact of voiding and toileting behaviors on bladder health and lower urinary tract symptoms in adolescents and young adults.
  Sponsored by the National Institutes of Health (NIH).

Tina Simpson, M.D., MPH

- Dr. Simpson serves as principal investigator and medical faculty for the Leadership Education in Adolescent Health (LEAH) Program. The LEAH Program offers trainees interdisciplinary leadership education through a comprehensive core of clinical, didactic, research and experiential curricula in the following disciplines: medicine, nursing, nutrition, psychology, and social work. The program is committed to improving the health status of adolescents, particularly those in the southeastern region of the U.S by training the next generation of adolescent health professionals in a model center of excellence in training, research and service that is adolescent-centered/family-involved, culturally competent and community-based. Heather Austin, Ph.D., serves as psychology faculty.
  Sponsored by the Health Resources and Services Administration (HRSA).

- Dr. Simpson serves as site PI, Research Project 2, on the National Transdisciplinary Collaborative Center for African American Men’s Health grant. The goal is to build community coalitions that will select, refine, implement, and evaluate a school-linked intervention for African American socially disadvantaged boys aged 8-14 years and their caregivers, with the goal of reducing boys’ externalizing symptoms, risk behavior, receipt of school-based disciplinary action, and juvenile justice involvement.
  Sponsored by the National Institutes of Health

- Dr. Simpson serves as the PI for UAB Family Clinic Ryan White (RW) Part D program. The Family Clinic provides interdisciplinary comprehensive HIV care to women, infants, children, and youth.
  Sponsored by Health Resources and Services Administration (HRSA).
Stephenie Wallace, M.D., MSPH

- Dr. Stephenie Wallace and Dr. Tina Simpson serve as co-principal Investigators on the Leadership Education in Maternal and Child Health Nutrition Program grant sponsored by the Maternal and Child Health Bureau (MCHB). The Leadership Education in Pediatric Nutrition Program strives to improve the nutritional health status of infants, children, adolescents and families by providing leadership training, education, and collaboration to health professionals to improve their knowledge and skills in MCH nutrition and physical activity. The program provides nutrition education through training, research and service.

Samantha Hill, M.D., MPH

- Dr. Hill serves as co-investigator on Administrative Supplement Opportunity: Strategic Partnerships to End the HIV Epidemic in America’s Racial and Ethnic Minority Populations- Promoting PrEP Use Among African-American AGYW in the Deep South At-risk for HIV, Provider and Client Perspectives. This is a qualitative study evaluating provider and youth perspectives and experiences with PrEP access in urban, suburban, and rural Alabama. Sponsored by the NIH Center for AIDS Research (CFAR)/ AID Research Centers (ARC).

- She also serves as clinical point person/provider managing prescribing on EPrEP: Testing an electronic PrEP initiation and maintenance home care system to promote PrEP among adolescent MSM in rural and small-town areas. The aim of this grant is to facilitate extended access to PrEP among MSM in rural settings. Sponsored by the National Institute of Child Health and Human Development (NICHD).

OTHER STUDY INVOLVING ADOLESCENT MEDICINE FACULTY

Project ETC: Educate, Test, Connect- HIV Education, Testing, and Linkage to Care for High Risk Negative Individuals
HIV prevention, education, and testing initiative for adolescents and adults in outpatient substance abuse treatment facilities. Sponsored by Centers for Disease Control (CDC)/Alabama Department of Public Health (ADPH)

UAB Obesity Strategically Focused Research Network: Intergenerational Transmission of Obesity
To initiate a concerted multidisciplinary approach to identify the mechanisms by which the in utero environment of mothers with obesity, Metabolic Syndrome, and Gestational Diabetes impact body weight and metabolism long after birth and promote the intergenerational transmission of obesity. Sponsored by American Heart Association

Establish: Impact of Early Life Stressors on Blood Pressure and Vascular Function in Adolescents and Children
Characterize the impact of early stress events on long-term function of blood vessels in regards to blood pressure and cholesterol control. Sponsored by Kaul Pediatric Research Institute

Communities Invested for Positive Youth Development
This project allows for implementation of an evidence-based intervention aimed at reducing risk taking behaviors among adolescents attending an area youth serving organization. Sponsored by the University of Minnesota

Tailored Motivational Interviewing Implementation Intervention Effectiveness Trial in Multidisciplinary Adolescent HIV Care Settings
Study seeks to determine primarily the effect of the TMI implementation intervention on provider fidelity (adherence plus competence) and secondarily HIV care continuum outcomes. Sponsored by Adolescent Medicine Trials Network for HIV/AIDS Interventions

Ending the HIV Epidemic: A Plan for America Initiative
This project proposes to conduct qualitative research with providers and African American Adolescent Girls and Young Women in the community in order to explore barriers and facilitators to PrEP prescription, access and use thereby informing interventions to reduce HIV infection in underserved populations in the Deep South. Sponsored by UAB Center for AIDS Research

The UNC/Emory Center for Innovative Technology (ITECH) across the Prevention and Care Continuum
This project assesses the use of electronic PrEP initiation and maintenance home care system to promote PrEP among adolescent MSM in rural and small town areas. Sponsored by National Institute of Child Health and Human Development (NICHD)

UAB Family Clinic RW Part D COVID19 Response
This grant provides supplemental emergency COVID assistance for women, infants, children and youth living with HIV and affected by the COVID-19 global pandemic. Sponsored by Health Resources and Services Administration (HRSA).

UAB Family Clinic Part B COVID19
This grant provides supplemental emergency COVID assistance for people living with HIV and affected by the COVID-19 global pandemic. Sponsored by Alabama Department of Public Health (ADPH)/United Way of Central Alabama

Evaluating Parental Support as a Strategy to Increase PrEP Adherence among Adolescents and Young Adults
Qualitative study to examine the attitudes and acceptability surrounding use of parents to improve AYA PrEP adherence. Sponsored by UAB Center for AIDS Research
2020 PUBLICATIONS


BMJ Open. 2020 Mar 8;10(3):e030883. What types of dissemination of information occurred between researchers, providers and clinical staff while implementing an asthma shared decision-making intervention: a directed content analysis. Ludden T, Shade L, Welch M, Halladay J, Donahue J, Coyne-Beasley T, Bray P, Tapp H.


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EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Heather Austin, Ph.D.

- Dr. Austin was selected to serve a three-year term starting in 2020 on the Society for Adolescent Health and Medicine Health Services- Mental Health Committee.
- She was appointed as a liaison to the American Psychological Association Deep Poverty Initiative.
- She is a national council member for the Division of Maternal and Child Health Workforce Development (DMCHWD) to organize a leadership program for a grantee virtual meeting.
- She is co-editor, The Alabama Psychologist, a quarterly newsletter published by the Alabama Psychological Association (APA) which offers news of interest to psychologists in the state and one CEU to members for reading and answering questions related to brief scientific articles included in the newsletter.

Tamera Coyne-Beasley, M.D., MPH

- Dr. Coyne-Beasley selected for the 2020 Adele D. Hofmann Visiting Professor in Adolescent Medicine and Health. The Hofmann Professorship is one of the Society for Adolescent Health and Medicine’s (SAHM) highest honors.
- She was elected to board of directors for the National Foundation for Infectious Diseases. She will serve a three-year term from July 2020 to June 2023. As part of her role on the board of directors, Dr. Coyne-Beasley will also serve on the NFID Continuing Professional Education Committee.
- She was the 2020 Masland Visiting Professor at Boston Children’s, Harvard University.
- Dr. Coyne-Beasley was invited to join the Institute for Advanced Clinical Trials for Children. In this role, she will help principal investigators of clinical trials to develop protocols and procedures to recruit more children and adolescents and to improve the diversity of their participants.
- She is a key informant with Health Services Research, Policy, and Administration’s Transitions of Care from Pediatric to Adult Services for Children with Special Healthcare Needs.
- Dr. Coyne-Beasley was elected to the Governing Council of NCD Child. NCD Child is a global multi-stakeholder coalition championing the rights and needs of children, adolescents, and young people who are living with or at risk of developing non-communicable disease.
- She is a member of the Committee on Pediatric Research of the American Academy of Pediatrics, a liaison for the Society for Adolescent Health and Medicine
- She is a NIH Study section member, NICHD, Health Behavior and Context Committee.
- She is a member of the Diversity, Inclusion and Equity Committee of the American Pediatric Society.

Nefertiti H. Durant, M.D., MPH

- Dr. Durant is co-chair for the Diabetes and Obesity Committee, Coronary Artery Risk Development in Young Adults (CARDIA) Study.
- She is a mentor for the UAB Connect Diversity and Inclusion Mentorship Program.
- She is an editorial member for the Editorial Board of Childhood Obesity.
- She is a Castle Connolly 2020 Top Doctor.

Samantha Hill, M.D., MPH

- Dr. Hill is a member of the Southeastern Pediatric and Adolescent HIV Collaborative.
- She is a journal reviewer for AIDS and Behavior.
- She is the president of the UAB Minority Health and Research Center Young Professionals Board.
Tina Simpson, M.D.

- Dr. Simpson was selected to join the Diversity Committee of the Society for Adolescent Health and Medicine.
- She was selected B-Metro Magazine’s List of Top Doctors.
- She was selected Best Doctors in America.
- She is a board member for the Alabama Campaign for Adolescent Sexual Health.

Stephenie Wallace, M.D.

- Dr. Wallace was elected president of the Southeast Region of the Society for Adolescent Health and Medicine.
- She is a member of the American Academy of Pediatrics’ Committee on Adolescence Health that is responsible for developing adolescent health policy statements.

**ADOLESCENT MEDICINE FELLOWSHIP PROGRAM**

The UAB Adolescent Medicine Fellowship Program provides a wide array of clinical and scholarly experiences enabling fellows to gain sufficient knowledge and skills in all areas of adolescent health and medicine. As part of their clinical curriculum, fellows train in both primary care and subspecialty consultation. During their training, our fellows gain experience in interdisciplinary collaboration in research, teaching, advocacy and clinical care. Our fellows are actively involved in the teaching of medical students, residents, and other health care trainees. As part of their scholarly activities, our fellows can participate in master’s level training in public health, health administration, or other health-related fields, as suits their individual interests. Our fellows also participate in the interdisciplinary Maternal and Child Health (MCH) Bureau funded Leadership Education in Adolescent Health (LEAH) Training Program, which encompasses MCH leadership training, community program development and involvement, policy and advocacy training and professional networking opportunities.

**2020-2021 Fellows**

Charisse Graham, M.D.
First Year Fellow
Residency: Morehouse School of Medicine

Hannah Hulsey, M.D.
Third Year Fellow
Residency: University of South Carolina/Palmetto Health Children’s Hospital

**Program Director**
Tina Simpson, M.D., MPH

**Program Coordinator**
Adrianne Marbury, MPA

**LEADERSHIP EDUCATION IN ADOLESCENT HEALTH PROGRAM (LEAH)**

The purpose of the University of Alabama at Birmingham (UAB) Leadership Education in Adolescent Health (LEAH) Program is to improve the health status of adolescents and young adults, particularly those in the southeastern region of the U.S. This purpose will be accomplished by:

1. Training health professionals, at the graduate and post graduate levels in the 5 core adolescent health disciplines (medicine, nutrition, nursing, psychology and social work) as well as Maternal and Child Health (MCH) pipeline students to become MCH leaders in the field of adolescent health, through an interdisciplinary, theory-informed approach that integrates biological, developmental, mental health, social, economic, educational, and environmental health training within a public health framework.

2. Developing and implementing continuing education programs for health professionals in the region and nation as well as providing consultation and technical assistance through collaboration with public health, education, youth development, and human service agencies.

3. Developing, providing and/or enhancing exemplary, interdisciplinary, comprehensive clinical care services in environments that are adolescent-centered, community-based, culturally and linguistically competent.

4. Providing for the conduct of collaborative research and policy development by faculty and trainees aimed at improving adolescent health and wellbeing and eliminating health inequities for adolescents and young adults including those with special health care needs.

**2020-2021 Trainees**

Monica Abdul-Chani
LEAH Psychology Pre-Doc
Graduate Student: University of Alabama at Birmingham
LEADERSHIP EDUCATION IN PEDIATRIC NUTRITION (LEPN)

The purpose of the Leadership Education in Pediatric Nutrition (LEPN) Program is to improve the nutritional health status of infants, children, adolescents and families by providing leadership training, education, and collaboration to health professionals to improve their knowledge and skills in MCH nutrition and physical activity. Long-term training is provided for graduate and post-graduate dietitians, which includes stipend support. Training is also provided to other nutrition and health professionals via the Pediatric Intensive Course, Advance Motivational Interviewing, and Behavioral Counselling Institute. Faculty and trainees participate in clinical and community research related to nutrition and physical activity. Some areas of research interest include: childhood/adolescent obesity, eating disorders, school-based interventions, and behavioral counseling. Interdisciplinary care focuses on child and adolescent health and nutritional issues including obesity, eating disorders, metabolic diseases, musculoskeletal health, weight loss, weight gain, and sports nutrition.

2020-2021 Trainees
Ashley Blackwell
LEPN/LEAH Trainee
Graduate Student: Samford University

Breanne Hurst
LEPN/LEAH Trainee
Graduate Student: University of Alabama at Birmingham

Program Directors
Stephenie Wallace, M.D., MSPH
Co-Principal Investigator

Tina Simpson, MD, MPH
Co-Principal Investigator
FEATURED RESEARCH

The UAB Division of Pediatric Allergy & Immunology faculty are dedicated to research in the field of allergy and immunology and advancing knowledge in the diagnosis and care of patients with allergic diseases such as drug allergy, food allergy, asthma and atopic dermatitis and those with primary and secondary immunodeficiencies. Since 1990, the division has been home to the UAB Allergy & Immunology Fellowship Program, which continues to graduate one or two fellows annually. The faculty have ongoing collaborations with clinical immunologists at the NIH that have resulted in the identification of novel immunodeficiency diseases in several patients and extended knowledge in the clinical manifestations, diagnosis and treatment of these disorders. Prescott Atkinson, M.D., Ph.D., has a long-standing collaboration with the UAB Diagnostic Mycoplasma Lab studying the role of these parasitic bacteria in chronic diseases such as asthma and in opportunistic infections in patients with primary and secondary immunodeficiencies.

2020 PUBLICATIONS


EXTRAMURAL AWARDS & LEADERSHIP ROLES

Prescott Atkinson, M.D. Ph.D.
- Dr. Atkinson serves on the Accreditation Council for Graduate Medical Education (ACGME) Review Committee for Allergy & Immunology and is a member of the ACGME Allergy & Immunology Milestones Workgroup.
- He is director of the UAB Cellular Immunobiology Laboratory.
- He is a member of the Alabama Newborn Screening Advisory Board.
- He was elected as the new president of the United States Organization for Mycoplasma.
- Dr. Atkinson was awarded the inaugural Alabama Avocational Paleontologist Award (ALAP). This award was created to honor amateur paleontologists who have made outstanding contributions to the field of paleontology in Alabama.
- He is a member of the Board of Regents of the Alabama Museum of Natural History and Vice President of the Alabama Paleontological Society.

Amy CaJacob, M.D.
- Dr. CaJacob serves as the medical director of Camp WheezeAway, the annual asthma summer camp and works in fundraising for the camp to fund transportation for low-income children to and from camp.
- She is the outgoing president of the Alabama Society of Allergy, Asthma and Immunology.

Suthida Kankirawatana, M.D.
- Dr. Kankirawatana serves as a member of the Alabama Newborn Screening Advisory Board.

ALLERGY & IMMUNOLOGY FELLOWSHIP PROGRAM

The UAB Allergy & Immunology Fellowship Program strives to train and educate fellows to be empathic and prepared to practice as an allergist in any setting. Our fellows receive intensive clinical training in allergic and immunologic diseases in children with division faculty. During their training, fellows participate in research and quality improvement projects under the mentorship of UAB research faculty and are also encouraged to pursue electives in specialties with considerable overlap in our field. Fellows and division faculty meet twice weekly for didactic seminars in basic and clinic science and attend a monthly journal club/case presentation session with community allergist/immunologists.

2020-2021 Fellows

Reena Patel, D.O.
First Year Fellow
Residency: Palm Beach Consortium for Graduate Medical Education

JaneMarie Freeman, M.D.
Second Year Fellow
Residency: UAB

Program Directors
Prescott Atkinson, M.D., Ph.D.
Program Director

Amy CaJacob, M.D.
Associate Program Director

Katie Grisanti, M.D.
Associate Program Director

Program Coordinator
Scott Defreese
The UAB Division of Pediatric Cardiology & Cardiac Intensive Care had a productive year in research. The division continues to be a leader in multi-institutional collaborations such as NEPHRON, the Congenital Catheterization Research Collaborative (CCRC), Advanced Cardiac Therapies Improving Outcomes Network (ACTION). In 2020, the division continued their collaboration with the Todd and Karen Wanek Family Program for Hypoplastic Left Heart Syndrome (HLHS). This collaboration will help provide valuable research and clinical options for our patients with HLHS, one of our most vulnerable patient populations. Members of our team are assisting in valuable efforts toward expanding our knowledge of Xenotransplantation and its potential use in our patient population. The division is currently participating in several Industry Sponsored Research Protocols, as well as various Investigator Initiated/Bench Research Projects with multiple other divisions throughout UAB.

Important innovations/novel findings from our research in 2020:

• Data from our CCRC collaboration presented at multiple conferences throughout the year.
• Data from our NEPHRON collaborative has been presented as oral presentations at international conferences such as American Heart Association and Pediatric Cardiac Intensive Care Society.
• Publication of a multi-institutional analysis of Peritoneal dialysis use after the arterial switch operation.
• Publication of solvent/detergent plasma for coagulation management postoperative in cardiac patients.
• Publication of standardization of perioperative feeding in patients undergoing the arterial switch operation.
• Publication of transcatheter pulmonic valve implantation.
• Publication of percutaneous repair of raghib syndrome.
• Publication of the use of ultrasound for stent optimization during percutaneous coronary intervention.
• Publication of a systematic review of outcomes for congenitally corrected transposition of great arteries.
• Publication of the relevance of infants immune systems in relation to xenotransplantation.
• Publication of granulocyte colony stimulating factor and risk for rejection in heart transplantation.
• Publication of xenotransplantation acceptance among parents and health care providers.
• Publication of practice trends in the care of patients with hypoplastic left heart syndrome.
• Publication of anti-pig antibody in infants.
• Publication of a multi-institutional study looking at Fontan immunophenotype and post-transplant outcomes.
• Publication of ABO incompatible listing practices and the impact on outcomes.
• Publication of racial differences and attitudes toward xenotransplantation.
• Publication of attitudes to xenotransplantation by surgeons and physicians.
• Presented findings of our investigator initiated study of patients who received pooled plasma during cardiopulmonary bypass versus those who received standard hospital issued single-donor plasma.
• Continue to enroll in a phase 3 randomized trial of subjects to either endoxaban tosylate versus standard care therapy for prevention of thromboembolic events children with heart disease and have been featured in national newsletters highlighting our research participation.
• Continue to enroll in the first-ever national collaboration looking at standardizing immunosuppressant therapy six months post-cardiac transplantation.
• Continued enrollment in a post-approval study implanting the SAPIEN XT Transcatheter Heart Valve and have been featured in national newsletters highlighting our study participation.
• Currently enrolling patients in a phase 4 trial randomizing subjects to apixaban to standard of care therapy for treatment of venous thromboembolism.
• Continue to collect specimens for our biorepository, now with more than 500 individual patient samples.
• Started enrollment in a multi-institutional trial administering umbilical cord collected stem cell injections in patients undergoing Stage II palliation for HLHS versus a control group of subjects who do not receive stem cell injections.
• Contributed data to an international collaborative looking at catecholaminergic polymorphic ventricular tachycardia.
• Contributed data to an multi-institutional collaborative looking at dual chamber versus single chamber ventricular pacing in isolated congenital complete heart block in infancy.
• Contributed data to a multi-institutional project looking at the physiology of the Fontan Liver after Cardiac Transplantation.
• Contributed data to a multi-institutional project looking at placements of transcatheter pulmonary valves.
• Contributed data to a multi-institutional project looking at Fontan patients who received ventricular assist devices.
• Collected data for an investigator initiated study to determine if there is a biomarker that can help predict lung injury after cardiac surgery.
• Contributed data for a multi-institutional project looking at perintubation cardiac arrest in congenital heart patients.
• Continue to collect data as part of our collaboration in the national CCRC registry.
• Collected data for an investigator initiated study to try and determine the clinical morbidities associated with delayed sternal closure after cardiac surgery.
• We have been chosen as a site for the new Edwards Lifesciences study looking at long term safety data for the new Sapien S3 pulmonary valve.
• Samples from our biorepository have been used to try and see the relationship between free heme and nitric oxide on post-operative acute kidney injury.
• We continue to contribute data to the NPCQIC registry.
• We performed analysis on free T3 and free T4 for an investigator initiated study in cardiac patients after heart surgery.
• Our division had multiple poster research presentations at four scientific conferences in 2020.
• We have been chosen as a site for the new Edwards Lifesciences study looking at long term safety data for the new Sapien S3 pulmonary valve.
• Contributed data to a multi-institutional project looking at placements of transcatheter pulmonary valves.
• Contributed data to a multi-institutional project looking at Fontan patients who received ventricular assist devices.
• Collected data for an investigator initiated study to determine if there is a biomarker that can help predict lung injury after cardiac surgery.
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• We continue to contribute data to the NPCQIC registry.
• We performed analysis on free T3 and free T4 for an investigator initiated study in cardiac patients after heart surgery.
• Our division had multiple poster research presentations at four scientific conferences in 2020.
• A member of our team was asked to speak on our outcomes of patients with delayed sternal closure during the PC4 national meeting.

2020 PUBLICATIONS


PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

The Division of Cardiology and Cardiac Critical Care participates in the following Quality Improvement Networks:

- PC4- Cardiac Intensive Care Unit Data on outcomes
- STS- Pediatric and Adult Congenital Heart Disease surgery outcomes
- ACC-Impact- Pediatric and Adult Heart Catheterization outcomes
- PediMac- Extracorporeal Ventricular Device outcomes
- InterMac- Adult Ventricular Assist Device outcomes in patients with congenital heart disease
- ELSO- ECMO outcomes
- NPC-QIC- Complex congenital heart disease outcomes
- Pediatric Heart Transplant Study
- UNOS- Organ Transplantation Outcomes
- CCRC- Comparison of Management Strategies for Symptomatic Young Infants with Tetralogy of Fallot: A Multicenter Congenital Catheterization Research Collaborative Study
- ACTION- Advanced Cardiac Therapies Improving Outcomes Network to Improve the Health of Pediatric and Congenital Heart Disease Patients with Heart Failure
- PCMR (process initiated)- Pediatric Cardiomyopathy Registry
- CPVT- Improving Diagnosis and Treatment in Catecholaminergic Polymorphic Ventricular Tachycardia

Multicenter Randomized Trial of Everolimus in Pediatric Heart Transplantation

The goal of this study is to compare the effects of arms of immunosuppression therapy in Pediatric Heart Transplant recipients

Role: PI - Waldemar F Carlo, M.D.

Prospective, multi-center, double-blind, randomized, placebo-controlled, parallel-group study assessing the efficacy and safety of macitentan in Fontan-palliated adult and adolescent subject

Role: PI - F Bennett Pearce, M.D.

New Enrollment SAPIEN XT Post-Approval Study (COMPASSION XT PAS)

Role: PI - Mark A Law, M.D.

Sponsored by: Edwards Lifesciences
An Open-Label, Randomized, Parallel-Group, Multicentre, Observational Trial to Evaluate Safety and Efficacy of Edoxaban Tosylate in Children from 38 Weeks Gestational Age to Less than 18 Years of Age with Cardiac Diseases at Risk of Thromboembolic Events
Role: PI - Mark A Law, M.D.
Sponsored by: Daiichi Pharmaceuticals, Ltd

A randomized, open-label, active controlled, safety and extrapolated efficacy study in pediatric subjects requiring anticoagulation for the treatment of a venous thromboembolic event
Role: PI - Leslie Rhodes, M.D.
Sponsored by: Pfizer Pharmaceuticals, Ltd.

PEDIATRIC CARDIAC CRITICAL CARE FELLOWSHIP PROGRAM

The UAB Pediatric Cardiac Critical Care Fellowship Program is dedicated to educating future cardiac intensivists in the independent management and care of pediatric patients with congenital and acquired heart disease. This one-year fellowship is uniquely designed to provide training based on our fellow’s previous clinical experience and focuses on developing clinical skills and knowledge specifically in pediatric cardiac critical care. As the only Pediatric Cardiothoracic Surgery Center in the state of Alabama, our fellow is exposed to a wide-breath of both acute and chronic congenital and acquired heart disease in children and young adults. This exposure includes pre- and postoperative care of neonates and children with congenital heart disease, medical management of patients with heart failure and arrhythmias, ventricular assist devices, ECMO, and heart transplantation. As part of their training, our fellow participates in multidisciplinary research with opportunities available in both clinical and basic science research.

2020-2021 Fellows
Veronica Godsey, M.D.
First Year Fellow
Residency: West Virginia University

Program Director
Leslie Rhodes, M.D.

Program Coordinator
LaTanya Brown

PEDIATRIC CARDIOLOGY FELLOWSHIP PROGRAM

The UAB Pediatric Cardiology Fellowship Program offers an innovative training opportunity to develop clinical excellence and the skills needed to be an independently practicing pediatric cardiologist. Our fellows are exposed to a broad diversity of congenital and acquired cardiac disease as well as ample opportunities for scholarly activity, advocacy and leadership. During their training, our fellows participate in multidisciplinary research with mentorship from division faculty. Our goal is to provide our fellows with the knowledge and skills necessary to become proficient and effective in identifying reasonable research hypotheses.

2020-2021 Fellows
Matthew Clark, M.D.
First Year Fellow
Residency: University of Missouri, Columbia

Christian Tan, M.D.
Second Year Fellow
Residency: University of South Florida

Stephen Clark, M.D.
Third Year Fellow
Residency: UAB

Program Directors
Mark Law, M.D.
Program Director

Robb Romp, M.D.
Associate Program Director

Program Coordinator
Ina Schaffer
FEATURED RESEARCH

Michael Taylor, M.D., is the principal investigator for the following two ongoing studies:

Screening for non-viral sexually transmitted infections in children being evaluated for sexual abuse: a comparison of nucleic acid amplification tests vs. culture and wet preparations.

Aim: To evaluate the performance of nucleic acid amplification tests (NAATs) to detect infection with Neisseria gonorrhea, Chlamydia trachomatis, and/or Trichomonas vaginalis in children being evaluated for possible sexual abuse in comparison to culture and wet preparation slides (vaginal).

Methods: Patient population: All children under 18 years of age who were seen for an examination due to concerns for possible sexual abuse at the Children’s Hospital Intervention and Prevention Services (CHIPS) Center and all children under 18 years of age seen by the Pediatric Sexual Assault Nurse Examiner (SANE) nurses in the Children’s of Alabama emergency department during a four-year period from January 1, 2014 through December 31, 2017.

Child Abuse Medical Systems Survey 2019-2020

Aim: This is a project to survey child abuse medical providers in all 50 US States, Puerto Rico, and Washington, DC. The goal is to identify any regional and/or statewide networks, then to identify how the identified networks function. Information obtained from the proposed surveys will be used to demonstrate to potential funding agencies in Alabama what other states have done to develop and/or maintain a medical system for child abuse. We intend to share the child abuse medical network information obtained by this project with the participants who choose to receive it. The database would also serve as a valuable resource across the country to help primary healthcare providers direct potential victims of child maltreatment to the appropriate networks of medical providers specifically trained to care for such individuals.

EXTRAMURAL AWARDS & LEADERSHIP ROLES

David Bernard, M.D.

• Dr. Bernard serves as the medical director of Children’s of Alabama Sexual Assault Nurse Examiner (PSANE) Program and serves on the Shelby County Multidisciplinary Team and the Shelby County Child Death Review Committee.

• He serves as the coordinator and moderator for the Alabama Child Abuse Web Based Quarterly Review sessions that involves many of the medical providers performing examinations of potentially abused children for the 35 Alabama Child Advocacy Centers.

Melissa Peters, M.D.

• Dr. Peters serves both on the Child Death Review Committees and the Multidisciplinary Teams for the city of Bessemer and for Jefferson County.
• She also serves on the Federal Human Trafficking Task Force for the Northern and Middle Districts of Alabama, the Alabama State Human Trafficking Task Force, the Child Trafficking Solutions Protocols Work Group for Jefferson County, BEAMS (Bringing the Exploitation of Alabama’s Minors to a Stop) Advisory Board, and the Steering Committee for the Prevention of Child Maltreatment Fatalities for the Alabama State Department of Human Resources.

Kara Huls, M.D.

• Dr. Huls serves as the assistant medical director for the Children’s of Alabama Sexual Assault Nurse Examiner (PSANE) Program.

Michael Taylor, M.D.

• Dr. Taylor is a Governor’s appointee member of the Alabama Child Death Review System State Child Death Review Team.
• He is a member of the American Academy of Pediatrics (AAP) Council on Child Abuse & Neglect and the AAP Child Death Review Section.
• He serves as the Alabama Chapter-AAP appointed representative to the Alabama Health Care Human Trafficking Training Program Commission.
• He is the medical director for the new Alabama Child Abuse Medical System (ALCAM) statewide medical network for healthcare providers performing medical exams of children under investigation for potential maltreatment that is beginning in 2021.
The UAB Division of Pediatric Critical Care has many important research endeavors housed both within and outside of our division.

**Michele Kong, M.D.,** is leading basic and translational science research focusing on acute lung injury and respiratory viral infections. She recently completed a phase 2 trial of azithromycin treatment in children with Respiratory Syncytial Virus (RSV)-induced respiratory failure. In addition, she is delineating the role and impact of protease dysregulation in the pathogenesis of RSV infection. She is also the site principal investigator (PI) for several NIH and CDC studies that focus on pediatric acute respiratory distress syndrome (ARDS) management and understanding the epidemiology and pathophysiology of COVID disease in children. Dr. Kong also leads the Sensory Initiative at Children’s of Alabama that aims to remove diagnosis and management barriers related to sensory and communication challenges in non-neurotypical children.

**Robert (Robby) Richter, M.D.,** is studying endothelial disruption and activation in the setting of sepsis under the mentorship of Amit Gaggar, M.D., Ph.D., Division of Pulmonary, Allergy and Critical Care, UAB Department of Medicine, and Namasiyam Ambalavanan, M.D., Division of Neonatology. In collaboration with Jean-Francois Pittet, M.D., Division of Critical Care, UAB Department of Anesthesiology and Perioperative Medicine, Rakesh Patel, Ph.D., Division of Molecular and Cellular Pathology, Department of Pathology, and Jillian Richter, Ph.D., Division of Acute Care Surgery, UAB Department of Surgery, he is performing novel research to clarify the mechanisms contributing to endothelial cell expression of angiopoietin-2. He was awarded a multi-year Kaul Pediatric Research Institution grant in January 2018 and is currently funded by a UAB Faculty Development Grant. Dr. Richter is also the medical director of Children’s of Alabama Pediatric Intensive Care Unit (PICU) extracorporeal membrane oxygenation (ECMO). In collaboration with pediatric surgeons, perfusionists, and ECMO specialists, Dr. Richter oversees the deployment and management of ECMO in the PICU and leads quality initiatives with the goal of providing state-of-the-art care for children with cardiovascular and/or respiratory failure.

**Leslie Hayes, M.D.,** leads the division’s quality improvement efforts with two major projects this year including early mobility and delirium screening. She and her team have presented their findings at several national meetings, including Society for Critical Care Medicine and the Institute for Healthcare Improvement. Dr. Hayes is also the director for our clinical database, Virtual Pediatric Systems (VPS), and manages its use for research and quality improvement in the PICU.

**Jeremy Loberger, M.D.,** leads our ventilation liberation efforts. He has made substantial progress both in the unit and via publications in helping to identify and successfully extubated children at the earliest opportunity. He is continuously collecting ventilation data on children in the PICU and currently maintains a database of over 900 ventilation courses at Children’s of Alabama.

**Vidit Bhargava, M.D.,** is our director of PICU ultrasound. He has developed a curriculum for both pediatric critical care and neonatology fellows. He is publishing this work. He is an ultrasound educator for the Society of Critical Care national ultrasound course.

**Mark Buckmaster, M.D.,** leads the deep sedation service. He is involved with a national pediatric sedation network focusing on best sedation practices in children. He has recently published a book chapter on pediatric sedation.

**Madhura Hallman, M.D.,** leads a Tracheostomy Decision Support Service, which is a multidisciplinary effort to standardize decisions about invasive long-term ventilation in complex pediatric patients with chronic respiratory failure. She directs our divisions’ other efforts to better support families in the PICU, such as developing a family peer support network. She also completed advanced
communications training for serious illnesses through VitalTalk and together with other pediatric VitalTalk Faculty she has led communications training courses for pediatric fellows.

Faculty are actively involved with education and simulation research.

Will Sasser, M.D. and Priya Prabhakaran, M.D., are involved with important education projects focusing on medical students, residents and PICU fellows. Dr. Prabhakaran is the program director of the fellowship program. Dr. Sasser is a member of a multicenter education research collaborative (EPIC Investigators: Education in Pediatric Intensive Care) focused on education topics related to PICU fellows. He serves as director of Education for the PICU and is an assistant program director for the Pediatric Residency Program.

Chrystal Rutledge, M.D., and Kristen Waddell, CRNP, have developed an important simulation outreach program, COACHES (Children’s of Alabama Community Healthcare Education Simulation Program), to assist hospitals throughout the state with pediatric emergency preparedness. Dr. Rutledge is the medical director of Children’s of Alabama Pediatric Critical Care Transport. She provides guidance and education to the critical care transport team and assists with development and revision of transport protocols and guidelines. In 2020, she was appointed co-director of Diversity, Equity and Inclusion (DEI) for the UAB Department of Pediatrics Residency Program. As a part of this new leadership role, Dr. Rutledge is assisting with recruitment efforts to improve diversity within the residency program and developing a formalized DEI educational curriculum for the pediatrics residents. She is also a part of a team that is developing a Health Equity Scholars Program for pediatrics residents who are interested in having a more in depth educational experience surrounding DEI and social determinants of health. She is also co-leader of the Professional Success Program for the UAB Department of Pediatrics Residency Program. This program is designed to offer additional performance improvement support to residents who need additional assistance with meeting ACGME Core Competency requirements.

Nancy Tofil, M.D., and Dr. Rutledge work on many simulation education studies and best practices of cardiopulmonary resuscitation within the INSPIRE (International Network for Simulation-based Pediatric Innovation, Research, Education) Network.

2020 PUBLICATIONS


Crit Care Med. 2020. 48(10)e916-e926. Evaluating pediatric sepsis definitions designed for electronic health record extraction and multicenter quality improvement. Scott HF, Brill JI, Paul R, et al. including Loberger J.


Pediatr Qual Saf. 2020 Dec 28;6(1):e369. Quality Improvement Methodology to Optimize Safe Early Mobility in a Pediatric Intensive Care Unit. Neha Gupta, Amber Sones, Maegan Powell, Johanna Robbins, Stephanie Wilson, Amy Hill, Christy Thomas, Sara Ledbetter,
PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

Michele Kong, M.D., is the site PI for several multi-centered trials including:
- The NIH funded PROSpect trial that seeks to determine the effects of prone positioning and high frequency ventilation on pediatric ARDS. We are currently the leading enrollment center for this study that involves more than 45 centers worldwide.
- CDC funded Overcoming COVID study that aims to characterize the demographics, clinical features, outcomes, and resource utilization of children requiring hospitalization during the COVID epidemic. The prospective arm of the study aims to further our understanding of the pathogenesis/pathophysiology of COVID-19 disease in children.
- The ADAPT trial that investigates the current approaches for pediatric traumatic injury.
- The NIH Funded Influenza Vaccine Effectiveness trial that is a multicenter prospective observational study of influenza infection among critically ill children hospitalized in pediatric Intensive Care Units or stepdown units in the United States. The trial is designed to evaluate the influenza vaccine effectiveness for preventing severe and life-threatening influenza-associated illness in children 6 months to 17 years of age.
- The PICFLU trial that aims to identify genetic factors underlying disease susceptibility and severity in children with influenza virus-related critical illness.
- Many of these trials involve the international study group, Pediatric Acute Lung Injury and Sepsis Investigators (PALISI).

Nancy Tofil, M.D.
- Dr. Tofil serves on the executive committee of The International Network for Simulation-based Pediatric Innovation, Research and Education (INSPIRE).
- She is the co-director of the Research Presentation Committee.
- She was also on the Meeting Organizing Committee for the 12th annual International Pediatric Simulation Symposium and Workshops.

Madhura Hallman, M.D.
- Dr. Hallman is a site co-investigator for the COVAC-TP trial, a multicenter trial funded by Johns Hopkins All Children’s Hospital Foundation investigating the safety, dose-requirements, and exploratory efficacy of enoxaparin as in-hospital venous thromboembolism (VTE) prophylaxis in children hospitalized with COVID-19 and MIS-C.
- Dr. Hallman is also the site PI for the upcoming NIH-funded Post-Intensive Care Syndrome-pediatrics (PICS-p) study through the PALISI network. This is a prospective longitudinal cohort study that aims to evaluate patient and family longitudinal outcomes and the trajectory of recovery in children who survive critical illness over a period of two years.
- As part of the POST-PICU investigators through PALISI, Dr. Hallman is involved in efforts to develop a core outcomes set to describe post-intensive care recovery in children. Dr. Hallman is also active in PALISI through the following working groups: POST-PICU investigators, Chronic Critical Illness/Long Term Ventilation, and the newly formed Social Determinants of Health interest group.

Jeremy Loberger, M.D.
- Dr. Loberger is the physician champion for sepsis at Children’s of Alabama. He leads a multidisciplinary team in a quality improvement project focused on the early identification and treatment of patients with sepsis.
- This is part of the Children’s Hospital Association collaborative on Improving Pediatric Sepsis Outcomes (IPSO). This collaborative includes more than 50 children’s hospitals across the United States. He and his team have given multiple presentations within that organization on their work.

EXTRAMURAL AWARDS & LEADERSHIP ROLES

Michele Kong, M.D.
- Dr. Kong joined board of directors for Callahan Eye Hospital.
- She is a member of the Faculty Council for the UAB Medical Humanitarianism Interest Group.
- She was an invited presenter for the NHLBI/NICHD sponsored Viral LRTI in Infancy and Early Childhood-Immunological and
Developmental Correlates workshop at the NIH.

Chrystal Rutledge, M.D.
- Dr. Rutledge won the 2020 Dean’s Excellence Award for Service, Junior Faculty.

Nancy Tofil, M.D., M.Ed.
- Dr. Tofil won the 2020 Dean’s Excellence Award for Education, Senior Faculty.

2020 NEW FACULTY

PEDIATRIC CRITICAL CARE FELLOWSHIP PROGRAM

The UAB Pediatric Critical Care Fellowship Program combines research and clinical experiences to prepare our trainees to be excellent intensivists and successful in the academic setting. Our program is the only fully accredited comprehensive critical care fellowship program in the state of Alabama. We have a 100 percent pass rate for first-time board taker of the American Board of Pediatrics Subspecialty board exam in Pediatric Critical Care Medicine. As the only Level I pediatric trauma center and ECMO center in the state, fellows encounter a wide variety of common and rare critical illnesses representing all subspecialties and acquire the necessary skills to become excellent academic intensivists. They learn to diagnose and care for patients with a wide variety of conditions such as multiple traumas, respiratory failure, surgical diagnoses, shock, and multi-organ failure dysfunction. During their training, our fellows also devote time and effort to academic interests including research projects (clinical, translational, or bench research), and are able to select a research mentor from across all specialties on the UAB campus.

2020–2021 Fellows
Luke Burton, M.D.
First Year Fellow
Residency: Greenville Health System

Ananya Manchikalapati, M.D
First Year Fellow
Residency: Icahn School of Medicine at Mount Sinai, New York City Health and Hospitals, Elmhurst, NY

Joshua Cooper, M.D.
Second Year Fellow
Combined Critical Care & Infectious Diseases
Residency: UAB

Nick Rockwell, M.D.
Second Year Fellow
Residency: UAB

Lece Webb, M.D.
Second Year Fellow
Residency: University of South Carolina/Greenville Health System

Felicia Sifers, M.D.
Third Year Fellow
Residency: University of Oklahoma

Emily Walroth, M.D.
Third Year Fellow
Residency: University of South Carolina/Greenville Health System

Program Director
Priya Prabhakaran, M.D.

Program Coordinator
Keundria Steele
The Division of Developmental-Behavioral Pediatrics is devoted to improving the system of care and care delivery for children with autism and related neurodevelopmental disorders. Faculty and staff participate in multidisciplinary clinical care, training, and research. Research spans a variety of areas, including development of an autism registry and bio-banking repository for autism etiological research in collaboration with the UAB Department of Neurobiology. The division is a member of the NIH Neonatal Research Network for neonatal follow up, including neonatal opioid exposure with the Division of Neonatology. Division faculty also collaborate with researchers on Rett syndrome and tuberous sclerosis in the Division of Pediatric Neurology.

Fred Biasini, Ph.D., continued to serve, until his untimely passing in September 2020, as the principal investigator for the US Maternal and Child Health Bureau (MCHB) funded University Centers for Excellence in Developmental Disabilities (UCEDD) and Leadership Education in Neurodevelopmental Disabilities (LEND) programs.

Sarah O’Kelley, Ph.D., serves as a collaborator on a number of multidisciplinary research projects, including work with Dr. Martina Bebin on Tuberous Sclerosis Complex (TSC) longitudinal studies and Dr. Rajesh Kana (UA) on fMRI evaluation of ASD reading and social skills interventions. She served as the UCEDD and LEND training director until September when she advanced to the role of PI of both programs after Dr. Biasini’s passing.

Myriam Peralta, M.D., serves as co-principal investigator, with Dr. Namasivayam Ambalavanan, UAB Division of Neonatology, of the Outcomes of Babies with Opioid Exposure (OBOE) project, a NICHD funded multicenter project to evaluate long-term neurodevelopmental outcomes and structural brain changes by MRI in infants exposed to opioids in the perinatal period. Dr. Peralta also serves as the follow-up PI for the UAB Center of the NICHD Neonatal Research Network (NRN). She is the follow up co-investigator for the PREMOD trial: A randomized Controlled Trial of Umbilical Cord Milking vs. Delayed Cord Clamping in Premature Infants. Dr. Peralta is the follow up investigator for the Randomized Clinical Trial Comparing the Overall Adverse Event Rate of Inguinal Hernia Repair (IHR) prior to NICU Discharge vs. IHR after NICU discharge and beyond 55 weeks post menstrual age in premature infants.

Kimberly Stringer, M.D., continues as a co-investigator for the Early Childhood Health Promotion System for High Need Program which is a Human Resources and Services Administration (HRSA) sponsored grant through the University of Mississippi Medical Center. The goals of this project are to increase the prevalence of developmental screening rates throughout Mississippi, establish a well-trained workforce in regards to early childhood development, and achieve policy change and sustainability based on the novel system developed.
2020 PUBLICATIONS


PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

Project ECHO® (Extension for Community Health-care Outcomes) is a live videoconferencing model that hosts educational events between the sub-specialists and primary care clinicians. The local provider uses this knowledge to manage patients in their community while receiving ongoing mentoring from subspecialists through the interactive ECHO sessions. Project ECHO: Autism, led by Justin Schwartz, M.D., completed its most recent cycle in early 2019. This multidisciplinary, cross-organizational team connected with primary care providers in pediatrics and family medicine to promote best practices in autism care. ECHO Autism is currently collaborating with the UAB School of Public Health to assess provider needs related to care for children with autism in preparation for future ECHO Autism cycles. Dr. Schwartz served in an advisory role to the Pediatric Access to Telemental Health System (PATHS) program at Children’s of Alabama, particularly regarding their Project ECHO® component.

EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Snehal Khatri, M.D.
• Dr. Khatri serves as the Civitan-Sparks clinical director.

Sarah O’Kelley, Ph.D.
• Dr. O’Kelley serves as a clinical advisor for the UAB Regional Autism Network (RAN).
• She has served as proxy and now executive committee member of the Alabama Interagency Autism Coordinating Council (AIACC) as the UCEDD representative. She is also the chair of the Birth to 5 Standards of Practice subcommittee of the AIACC, which has included leadership within a related workgroup developing strategies for early identification, diagnosis, and intervention for children with ASD in the state Early Intervention system.
• She serves as the coordinator for the child-related experiences for pre-doctoral psychology interns within the UAB-VAMC.
Psychology Internship Consortium.
• She continues as chair of the planning committee for the annual Alabama Autism Conference.

Myriam Peralta, M.D.
• Dr. Peralta serves as an executive member of the American Academy of Pediatrics (AAP) Section on Developmental and Behavioral Pediatrics (SODBP).
• She serves as a member of the subcommittee on Autism representing SODBP on the AAP Council on Children With Disabilities (COCWD).
• She participated in the development of teaching cases related to the follow up of the high-risk infant within the Society of Developmental-Behavioral Pediatrics (SDBP) Early Childhood special interest group’s NICU follow up group.
• She serves with the UAB Center for Women’s Reproductive Health.
• She continues to participate in the Home Visiting Collaborative Improvement and Innovation Network HRSA grant (WCC CoIIN) through the UAB School of Public Health.

Sarah Ryan, Ph.D.
• Dr. Ryan was accepted into the UAB Healthcare Quality and Safety Master of Science Program and completed her first two semesters of coursework this year.
• She and Dr. Justin Schwartz lead the division’s QI efforts to improve services and transition to telehealth during COVID.

Justin Schwartz, M.D.
• Dr. Schwartz serves as an executive committee member of Alabama Interagency Autism Coordinating Council (AIACC) as the Alabama Chapter of the American Academy of Pediatrics representative. The Alabama state legislature created the AIACC to work with stakeholders to establish a long-term plan for a system of care for individuals with ASD and their families.
• He serves as the chair of the Diagnostics and Health subcommittee of the AIACC.
• He participated in the Alabama Chapter of the American Academy of Pediatrics Alabama Child Health Improvement Alliance (ACHIA) Quality Improvement Network to conduct a project to improve the developmental screening and referral services in primary care pediatric offices throughout the state.
• He continues as the director of the pediatric resident rotation in Developmental-Behavioral Pediatrics.
• He and Dr. Sarah Ryan lead the division’s QI efforts to improve our services and our transition to telehealth during COVID.
• He was appointed as UCEDD and LEND training director in December of this year.

Kimberlly Stringer, M.D., M.P.H.
• Dr. Stringer serves as a mentor in UAB Connect mentoring program. One of her mentees, Allison Stephens, M-2 was the recipient of the Society of Developmental Behavioral Pediatrics (SDBP) 2020 Exploring DBP program, which provides a scholarship to allow pediatric residents and medical students who are interested in a developmental-behavior pediatrics career the opportunity to attend the annual SDBP meeting.
• She was appointed to serve as the SDBP Practice Committee Liaison to the SDBP Diversity, Equity, and Inclusion Committee.
• She serves as an executive board member for the Jefferson County Child Developmental Council, a local Head Start agency, advising the agency on best practices to evaluate development.
Researchers in the UAB Division of Pediatric Emergency Medicine are working on a number of multicenter studies involving infectious diseases in young infants, coordinated by the National Pediatric Emergency Medicine Clinical Research Network. The division has additional important research focus areas including:

- Education
- Injury prevention (research followed by advocacy/interventions)
- Pain management in the Emergency Department
- Quality improvement

Christine Campbell, M.D., developed a Quality Improvement Curriculum for pediatric emergency medicine fellows and was successful in obtaining national approval for department quality improvement projects to qualify for Part 4 Maintenance of Certification.

Kara Huls, M.D., received external funding supporting her sheltered time devoted to her focus in human trafficking.

2020 PUBLICATIONS


David Bernard, M.D.
- Dr. Bernard continues as the medical director of the Children's of Alabama Sexual Assault Nurse Examiner (SANE) Program and is actively involved regionally assisting other hospitals in the development of their own SANE programs.

Terri Coco, M.D.
- Dr. Coco is a member of the national American Academy of Pediatrics Urgent Care Committee and the subcommittee responsible for writing a fellowship curriculum.

Christina Cochran, M.D.
- Dr. Cochran was named the recipient of the UAB Emergency Medicine Pediatric Emergency Medicine Instructor of the Year Award.

Shea Duerring, M.D.
- Dr. Duerring was named the assistant state EMS medical director, tasked with directing the Alabama Pediatric EMS system. This position is funded by the state. He is involved locally, regionally, and nationally focusing on the pediatric education of prehospital providers.

Kara Huls, M.D.
- Dr. Huls serves as the assistant medical director for the Children’s of Alabama Sexual Assault Nurse Examiner (PSANE) Program.

Laurie Marzullo, M.D.
- Dr. Marzullo was awarded the inaugural Introduction to Clinical Medicine Clinical Skills Scholars Argus Award by UAB medical students.

Kathy Monroe, M.D.
- Dr. Monroe is an elected member of the Executive Council for Injury, Violence, and Poison Prevention for the American Academy of Pediatrics nationally and is presently the Education Chair for the COIVPP council.
- In addition, she is a board member and abstract chair for Injury Free Coalition for Kids.

Michele Nichols, M.D.
- Dr. Nichols was named the 2020 recipient of the Robert S. Holm, M.D., Award.
- Dr. Nichols received Southern Society for Pediatric Research (SSPR) Pediatric Educator Award 2020
- She is on the Business Model Committee of the National Association of Program Directors.
- She has been a board member of the Injury Free Coalition for Kids since 2003.

Annalise Sorrentino, M.D.
- Dr. Sorrentino is an elected member of the national American College of Emergency Physicians (ACEP) Steering Committee.
- She is the education chair of the Alabama Chapter of American College of Emergency Physicians and the medical director of an annual nine state regional conference sponsored by ACEP.
- She was awarded a CTL-QEP Teaching Innovation Grants to support new approaches to instruction and learning in a team environment. Dr. Sorrentino is using the “escape room” concept as a tool to promote collaboration and critical thinking among teams of students.

Carmelle Wallace, M.D.
- Dr. Wallace is the assistant district representative for District X (AL, GA, FL, Puerto Rico) of the AAP Section on Early Career Physicians.

Marjorie Lee White, M.D.
- Dr. White is active in the international simulation community. She serves on the executive committee of the International Simulation Data Registry.
- She is the program chair and executive committee member for the American Academy of Pediatrics Section on Simulation and Innovative Learning.
- She is on a board subcommittee of the International Pediatric Simulation Society.
- She was also to be a standing member of the Healthcare Systems & Value Research Study Section (HSVSR) of the Agency for Healthcare Research and Quality. Dr. White will serve a four-year term.
- Dr. White is also the vice chair of the Safety II and Resilience Engineering Affinity Group, Society for Simulation in Healthcare.

2020 NEW FACULTY

Jared Buchan, M.D.
Instructor

Carmelle Wallace, M.D., MPH, DTMH,
Assistant Professor
PEDIATRIC EMERGENCY MEDICINE FELLOWSHIP PROGRAM

The UAB Pediatric Emergency Medicine Fellowship Program has been in existence for over 30 years. We are the only Level 1 pediatric trauma center in the state and the fifth busiest pediatric emergency department in the country. This exposes our fellows to a wide range of patient experiences and provides them with the necessary skills to become excellent emergency medicine physicians. Our fellows have an intensive didactic educational conference curriculum that includes research, quality improvement, journal club, evidence-based medicine, patient safety, radiology and interesting cases. We offer various electives and a significant amount of protected research time throughout the training program. Our research program includes online courses in epidemiology and biostatistics, lectures and mentorship with a scholarly project to be completed during fellowship.

2020-2021 Fellows
Reid Burks, M.D.
First Year Fellow
Residency: University of Alabama at Birmingham

Kevin Gutermuth, M.D.
First Year Fellow
Residency: University of Alabama at Birmingham

Mickinzie Morgan, M.D.
First Year Fellow
Residency: Texas Tech Health Science Center

Eric Jorge, M.D.
Second Year Fellow
Residency: University of Alabama at Birmingham

Emily Skoog, M.D.
Second Year Fellow
Residency: Baylor Scott & White

Alicia Webb, M.D.
Second Year Fellow
Residency: University of Alabama at Birmingham

Ryan Roddy, M.D.
Third Year Fellow
Residency: University of Arkansas for Medical Sciences

Stephen Ruffenach, M.D.
Third Year Fellow
Residency: Phoenix Children’s Hospital

James Statler, M.D.
Third Year Fellow
Residency: Memorial Health University Medical Center

Program Directors
Terri Coco, M.D.
Program Director

Christina Cochran, M.D.
Assistant Program Director

Program Coordinator
Aaliyah Williams
FEATURED RESEARCH

Research from the UAB Division of Pediatric Endocrinology & Diabetes spans from the bench to the bedside. Through their research, division faculty and fellows strive to make an impact on the lives of patients. The division works in close collaboration with members of Comprehensive Diabetes Center, Nutrition Obesity Research Center (NORC), Gregory Fleming James Cystic Fibrosis Research Center, and the UAB Center for Clinical and Translational Science.

The division’s research includes cystic fibrosis (CF), type 1 diabetes, type 2 diabetes, lipid disorders, lipoprotein metabolism, congenital hypothyroidism, thyroid nodules, thyroid and parathyroid disorders, polycystic ovary syndrome, non-alcoholic fatty liver disease, dietary intervention, and the effect of pyridine nucleotides on both endoplasmic reticulum redox and calcium uptake.

CYSTIC FIBROSIS RESEARCH

The research of Michael Stalvey, M.D., has parlayed from the translational models of cystic fibrosis (CF) to now include large-scale clinical studies. His sentinel paper describing improved growth in CF children treated with CFTR correction has ignited the interest into the idea of an intrinsic defect in growth.

Dr. Stalvey, recently launched a new study in infants and children with CF with support from the Cystic Fibrosis Foundation. He is co-principal investigator of the “A Prospective Study to Evaluate Biological and Clinical Effects of Significantly Corrected CFTR Function in Infants and Young Children (BEGIN)” along with Bonnie Ramsey, M.D., Lucas Hoffman, M.D., Ph.D., and Sonya Heltshe, Ph.D. from the University of Washington and Seattle Children’s Hospital. This $11 million multi-center trial, including 30+ CF Centers across the US, will coordinate the study of children with CF for the next seven years, setting the framework for research priorities for years to come. Dr. Stalvey’s team of investigators will collect natural history data in these very young CF children (less than six years), encompassing multiple facets of disease that are unique to children with CF at this age. The BEGIN study will set the stage for the next frontier – correcting CFTR function in infants and young children, hopefully delaying the onset or even preventing the most feared complications of CF.

Dr. Stalvey is also the national PI for the PROMISE Endocrine Sub-Study: “A Prospective Study to Evaluate Biological and Clinical Effects of Significantly Corrected CFTR Function (PROMISE).” This prospective, multi-center, observational study is designed to measure the clinical effectiveness of triple combination modulator therapy in individuals with cystic fibrosis (with one or more copies of the F508del mutation), assess salutary effects across a number of CF disease manifestations, and collect specimens for future research. The major focus of the endocrine sub-study is to evaluate glucose metabolism, growth, bone metabolism and body composition in CF in response to the triple combination modulator therapy.

DIABETES RESEARCH

The pathogenesis of type 1 diabetes mellitus (T1DM) involves autoimmune destruction of pancreatic beta cells leading to total insulin dependence. Gamma aminobutyric acid (GABA) is a common bioactive compound that has been shown to both prevent and reverse diabetes in animal models. Kenneth McCormick, M.D., led the first human trial of GABA in children with new onset T1DM. This was a phase 1, investigator-initiated, double-blind, placebo-controlled trial of low-dose GABA that enrolled 97 children age 4-18 years. Preliminary metabolic data were presented at the international EASD conference in Barcelona, Spain this September. GABA was
remarkably well-tolerated and had an excellent safety profile. Glucagon was significantly inhibited by GABA and there was no change in circulating c-peptide. The immunologic results from the study are expected this year. Dr. McCormick and his team are highly optimistic that, pending FDA approval, higher doses of GABA, or a long-acting preparation, will be efficacious in preserving insulin-secreting beta cells. The team will present the scientific results of the study, both metabolic and immunologic, next year.

There is a continued upward trend in the prevalence of obesity in children. There is also a relative increase in the prevalence of type 2 diabetes (T2D) in children between 10 and 19 years of age. Growing research in adults demonstrates that variations in the gut microbiome may play a crucial role in the development of obesity and the progression to T2D. Ambika Ashraf, M.D., is investigating the role of gut microbiota in children with obesity, prediabetes, and T2D, a first of its kind study. This novel approach will help us determine whether there are differences in gut microbiota in children with obesity, prediabetes, and T2D and whether the gut microbiota predicts response to treatment. This study will provide a new pathogen-host interaction paradigm contributing to the response to therapy in T2D and will lead to larger studies of personalized therapeutics, utilizing microbiome manipulation.

Bhuvana Sunil, M.D., is investigating the racial differences in post prandial lypemia on a lipoprotein profile assay and early markers of vascular endothelial dysfunction in children and adolescents with type 2 diabetes (T2D). T2D in children has increased dramatically. African American (AA) adolescents compared to Caucasians (CA) have a higher rates of insulin resistance and T2D. Despite the increased clustering of multiple cardiovascular risk factors such as obesity, insulin resistance, prediabetes and diabetes, the AA subjects tend to have relatively normal lipid profiles. Limited published information is known about the etiology of racial differences in cardiovascular risk in patients with T2DM. This study is designed to test the hypothesis that atherogenic postprandial lipoprotein profiles and inflammatory markers will be associated with worse markers of endothelial dysfunction in AA than CA with T2D. In this study we will use special tests to analyze lipoprotein sub particles, inflammatory markers and early markers of vascular dysfunction in adolescents. The study is novel as we propose to study the changes in lipoprotein profiles after a meal, a real-life scenario, for the first time in an adolescent population with T2D and compare their response to adolescents with obesity without T2D.

Jessica Schmitt, M.D., Erin Greenup, D.O., UAB pediatric endocrinology fellow, and Drs. Ashraf and Sunil are working on several diabetes related projects aimed at understanding the epidemiology of type 1 and type 2 diabetes, diabetic ketoacidosis, hyperglycemic hyperosmolar syndrome and cerebral edema in children in the state of Alabama.

ENDOCRINOLOGY AND METABOLIC RESEARCH

Drs. Sunil and Ashraf are currently working on a research study of low carbohydrate diet in children with dyslipidemia and metabolic syndrome. The ongoing research assesses this lipid lowering dietary outcome using advanced lipoprotein measure and cardiovascular risk measures.

Dr. Ashraf is collaborating with Dr. Amy Goss from the UAB Nutrition Sciences Center, on evaluating a randomized control trial on low carbohydrate diet vs. standard diet intervention for children with non-alcoholic liver disease. The study involves 12 weeks of controlled low carbohydrate diet intervention study for the entire family, assessment of liver fat by MRI, metabolomics, euglycemic clamps, and then six months of ‘free living’ dietary intervention.

Another ongoing research project that Drs. Sunil and McCormick are working on includes evaluation of the cortisone / cortisol ratios before and after the dietary intervention in children with non-alcoholic fatty liver disease. The premise is that a low carbohydrate diet will reduce intracellular glucose 6 phosphate which, in turn, lowers the endoplasmic pyridine redox (NADPH/NADP) and shifts tissue production of active cortisol to inactive cortisone by bidirectional 11β-hydroxysteroid dehydrogenase in hepatocytes and adipocytes. Therefore, a low CHO diet will improve the disordered peripheral glucocorticoid metabolism characteristic of obesity.

Polycystic ovarian syndrome (PCOS) is a condition of hyperandrogenism, dysfunctional ovulation and polycystic ovaries. To investigate potential genes, which could contribute to the development of PCOS, candidate gene studies were done. One candidate gene identified was DENND1A found on chromosome 2. Christy Foster, M.D., is working on investigating the amount of mRNA of DENND1AV2 in the urine and serum is increased in adolescent females with PCOS.

Pallavi Iyer, M.D. is working to analyze genomic data from thyroid fine needle aspiration biopsy samples of children to find a molecular test that will help guide clinical decisions for children. Her research will detect gene alterations and fusion genes and correlate them with clinical findings. These novel markers could be used diagnostically for all children with suspicious thyroid nodules.

Hussein Abdullatif, M.D., directs the UAB/ Children’s of Alabama site for multi-center research studies for children Prader Willi syndrome. The studies evaluate the safety and efficacy of the investigational drugs, Livoletide and Cabetocin, as a potential novel treatment for Prader-Willi syndrome.

Alabama is one of 12 states that employs two newborn screens for the diagnosis of congenital hypothyroidism (CH) and congenital adrenal hyperplasia (CAH), with our state lab measuring both T4 and TSH on all screens. Gail Mick, M.D., and Leslie Pitts, CRNP published in Hormone Research Pediatrics, “Eight-years of experience with two NBS screens in Alabama”. Importantly, this comprehensive study included three-year follow outcome data demonstrating that 17% of CH is detected by the second screen and one-fifth of these children have permanent hypothyroidism. A separate publication, in press, examines the outcome of neonates who presented on NBS with a combination of low T4 and low TSH. Continuing their commitment to early diagnosis and treatment of CH, Dr. Mick and Leslie Pitts have recently completed a one-year, pilot study to determine whether a lower second screen TSH cut-off would detect previously undiagnosed CH. Their evidence was confirmatory and new state guidelines are anticipated next year.

Pyridine nucleotides serve an array of intracellular metabolic functions such as safeguarding against reactive oxygen species, enzyme detoxification pathways and the regulation of ion fluxes. In particular, the maintenance of a steep calcium gradient between the cytosol and endoplasmic reticulum (ER) is crucial for cell viability. As reported in Physiologic Reports this year, Dr. McCormick and Xudong Wang demonstrate that pyridine nucleotides regulate ER calcium flux. They propose a novel nutritional model of pyridine nucleotide-mediated endoplasmic reticulum calcium uptake.
2020 PUBLICATIONS


2020 PUBLICATIONS: PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

Giovanna Beauchamp, M.D. and Gail Mick, M.D.

ECHO® (Extension for Community Health-care Outcomes) is a live videoconferencing model that hosts educational events between the sub-specialists and primary care clinicians. The spirit of ECHO is to increase knowledge by encouraging all participants to share medical expertise, ask questions and learn from each other. Indeed, it is a valuable learning environment for both the subspecialists and providers. Drs. Beauchamp, Mick and Michelle Couter, CRNP completed a highly successful endo-ECHO in 2020 on “Pediatric Diabetes and Obesity”. This topic was selected because Alabama faces a staggering health crisis in obesity and diabetes. 118 providers from 3 countries (US, Canada, UK), 5 states in US, and 23 counties in Alabama participated in THE series. Based on rave reviews and ongoing requests from our primary care colleagues for more ECHO programing, the Endo-ECHO team will launch an expanded and updated Diabetes program in 2021.

Mary Lauren Scott, M.D. and Jessica Schmitt, M.D., are participating in the Quality Improvement Collaborative of the T1D Exchange.

Pallavi Iyer, M.D., and Dr. Herb Chen, M.D., Chair of Department of Surgery, are co-editors of a book dedicated to the care of children with thyroid and parathyroid disorders. Thyroid and Parathyroid Disorders in Children: A Practical Handbook is designed to offer an approach to diagnosing and treating children with thyroid and parathyroid diseases from international experts in the medical and surgical fields, several of whom are UAB faculty members. The 16 chapter-book is divided into two section: thyroid and parathyroid, discussing both common and rare disorders along with medical treatments and surgical techniques. Several UAB pediatric endocrinologists*, surgeons, and pathologist are contributing authors for this book.

Laboratory evaluation of the thyroid function
Diana Lin, M.D. (UAB pathologist)
Jessica Schmitt, M.D.*

Imaging of the thyroid gland
Pallavi Iyer, M.D.*

Congenital Hypothyroidism
Gail Mick, M.D.*
EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Hussein Abdullatif, M.D.
- UAB Pediatric Clerkship Director
  - Pediatric Clerkship awarded 2019 Argus Award for Best Clerkship
- UAB Healthcare Educators Academy
  - Member of the Steering Committee
- COMSEP (Council on Medical Student Education in Pediatrics)
  - Member of Wellness Task Force
- Pediatric Endocrine Society
  - Education Committee

Ambika Ashraf, M.D.
- Pediatric Endocrine Society
  - Co-chair, Education Council
  - Established Lipid Special Interest Group (SIG) within the Pediatric Endocrine Society
  - Co-chair of the PES Lipid SIG
  - Member, “Drugs and Therapeutics and Rare Diseases” committee
- AAP National Conference and Exhibition (NCE)
  - Chairperson for Section on Endocrinology (SOEn) the 2019 Annual NCE conference
- The American Board of Pediatrics
  - Member, Sub-Board of Pediatric Endocrinology
- Castle Connolly’s Exceptional Women in Medicine
- Center for Clinical and Translational Science Panels Program Member

Christy Foster, M.D.
- Pediatric Endocrine Society
  - Education Committee

Pallavi Iyer, M.D.
- American Academy of Pediatrics Pediatrics Review and Education Program (PREP) Endocrinology Editorial Board
- Pediatric Endocrine Society
  - Member of the “Drugs and Therapeutics and Rare Diseases” Committee
- UAB Clinical Scholar Program
- Clinical Skills Scholar, “Introduction to clinical medicine for 1st and 2nd year students”—instructing students the essential skills of history taking and physical examination

Mary Lauren Scott
- Juvenile Diabetes Research Foundation
  - Board of Directors
- Southeastern Diabetes Education Services Camp Sugar Falls, The Mario Foundation
  - Medical Director

Michael Stalvey, M.D.
- Cystic Fibrosis Foundation
  - Physician Training Program Evaluation Working Group
  - Strategic Planning Group
  - Research and Research Training Grants Review Committee
  - Clinical Research Advisory Board
- Cystic Fibrosis Foundation, Alabama Chapter
  - Board of Directors
- Cystic Fibrosis Canada
  - Targeted Research Review Panel
- Natural Sciences and Engineering Research Council of Canada (NSERC)
- Pediatric Endocrine Society
  - Education Committee
- University of Alabama at Birmingham Faculty Senate
  - Senator
  - UAB Faculty Senate Research Committee
- UAB Healthcare Leadership Academy, Class of 2019
- UAB GME Wellness Subcommittee

Bhuvana Sunil, M.D.
- Pediatric Endocrine Society
  - Co-chair of APPS subcommittee
The UAB Pediatric Endocrinology Fellowship Program consists of a three-year comprehensive experience that incorporates clinical care, research activities, and evidence-based learning.

Our curriculum is a balance of inpatient and outpatient clinic rotations, with ample time devoted to developing research and/or career interest. Clinical management of outpatient and inpatient endocrine disorders is the emphasis of the first year of training. The second and third years are devoted to pursuing research opportunities in an area of basic or clinical research under the supervision of a faculty preceptor. Fellows are encouraged to participate in other institutional clinical experiences here at UAB, including genetics, reproductive endocrinology and adult endocrinology. Research experiences are available through our division or vast resources here at UAB. These research opportunities may include basic science, clinical or transitional research, as well as projects in medical education.

2020-2021 Fellows

Heath Pelham, M.D.
First Year Fellow
Residency: University of Tennessee Health Science Center

Whitney Smith, M.D., Ph.D.
First Year Fellow
Residency: University of Mississippi

Margaret Marks, M.D.
Second Year Fellow
Residency: University of Alabama at Birmingham

Leen Matalka, M.D.
Second Year Fellow
Residency: University of Alabama at Birmingham

Jurhee Freese, M.D.
Third Year Fellow
Residency: University of Arkansas for Medical Sciences

Erin Greenup, D.O.
Third Year Fellow
Residency: University of South Florida

Program Directors
Michael Stalvey, M.D.
Program Director

Mary Lauren Scott, M.D.
Associate Program Director

Program Coordinator
Toni Davison
FEATURED RESEARCH

The UAB Division of Pediatric Gastroenterology, Hepatology & Nutrition focuses on research that mirrors our growth in developing specialty programs. Specific highlights include:

• Our Inflammatory Bowel Disease (IBD) Program continues to be a significant member of the multi-institutional collaborative ImproveCareNow (ICN). This collaborative is developed to assist caregivers in benchmarking patient outcomes. We continue to excel in clinical outcomes compared to programmatic benchmarks. In addition, our IBD Program has spearheaded several ICN multi-center research projects.

• The Alabama Center for Eosinophilic Disease continues to partner with Cincinnati Children’s Hospital Medical Center to study novel gene mutations in our patients with eosinophilic esophagitis (EoE). This partnership is focusing on inheritance patterns with EoE, specifically racial/ethnic differences.

• We continue to be a site investigating a novel medication for the treatment of EoE. This research will provide the first FDA approved ready to administer oral topical corticosteroids for EoE.

• The Intestinal Rehabilitation (IR) Program is part of an international network developing a database of patients with intestinal failure. As part of that effort, we are studying quality of life in our patients and have developed a novel quality instrument. Over the past year, we have established an IR collaborative in the Southeast to study outcomes and specific therapies.

• Marissa Gowey, Ph.D., has developed a novel study to understand pediatric obesity. The initiative is a family-based program focusing on executive function. Since last year, she has started enrolling families and collecting data for future research projects and funding.

• David Galloway, M.D., is studying changes in the intestinal microbiome in patients with short bowel syndrome and intestinal failure. In addition, he is studying the role of ethanol locks for central venous catheters used for the delivery of parental nutrition.

2020 PUBLICATIONS


Vanessa Cardenas-Soto, M.D.
- Dr. Cardenas-Soto serves on the International Committee for the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN).

Mitch Cohen, M.D.
- Dr. Cohen serves on the board of directors of ImproveCareNow.
- He serves on the External Advisory Committee of the Consortium of Eosinophilic Gastrointestinal Researchers.

Traci Jester, M.D.
- Dr. Jester is the co-chair of the Pediatric Affairs Committee for the National Scientific Advisory Committee of the Crohn's and Colitis Foundation.
- She serves on the Digital Asset Governance Committee for ImproveCareNow.

Rachel Kassel, M.D.
- Dr. Kassel is a member of the NASPghan Nutrition Committee is the Co-Leader in a study focused on the weaning of enteral tube feeding in children.

PEDIATRIC GASTROENTEROLOGY, HEPATOLOGY AND NUTRITION FELLOWSHIP PROGRAM

The UAB Pediatric Gastroenterology, Hepatology and Nutrition Fellowship Program is designed to provide fellows with the background and experience to diagnose and manage patients with acute and chronic diseases of the digestive system (esophagus, stomach, intestines, liver and pancreas), including those that are life-threatening, and to conduct research in this specialized field. The patient population is sufficiently varied and complex diseases and volume ensure that residents have the opportunity to become clinically competent in the management of common as well as uncommon gastrointestinal, hepatobiliary, and pancreatic diseases in patients ranging from infancy through young adulthood. Fellows will be guided in developing clinical judgement and decision-making skills in cost-effective, efficient evaluation and management of a wide variety of presenting complaints. Our program offers fellows the opportunity to train and develop skills in appropriate laboratory testing, procedures including indications, preparation, techniques and interpretations. During their training, fellows are provided mentoring and opportunities for clinical or laboratory-based research with support from division faculty.

2020-2021 Fellows
Gabriel Lugo, M.D.
First Year Fellow
Residency: University of Alabama at Birmingham
Ana Coronado Reyna, M.D.
First Year Fellow
Residency: State University of New York, Brooklyn

Claire Keith, M.D.
Second Year Fellow
Residency Training: University of Alabama at Birmingham

Carter Wallace, M.D.
Second Year Fellow
Residency Training: University of Alabama at Birmingham

Adam Cohen, M.D.
Third Year Fellow
Residency Training: University of Alabama at Birmingham

Taylor Woodfin, M.D.
Third Year Fellow
Residency Training: University of Alabama at Birmingham

Program Directors
Jeanine Maclin, M.D.
Program Director

Vanessa Cardenas Soto, M.D.
Assistant Program Director

Program Coordinator
Bonnie Hawkins
The UAB Division of Pediatric Hematology and Oncology is committed to advancing research and taking findings from the bench to the bedside and then to the community. The division’s research efforts are coordinated by the Alabama Center for Childhood Cancer and Blood Disorders, a collaboration between the UAB Department of Pediatrics and Children’s of Alabama. Additionally, the division works in close collaboration with members of the O’Neal Comprehensive Cancer Center at UAB, the UAB Institute for Cancer Outcomes and Survivorship (ICOS), the UAB Center for Clinical and Translational Science, the UAB School of Public Health. These multidisciplinary collaborations serve as a rich resource to accelerate the pace of discovery across the entire trajectory of disease from diagnosis to survivorship and end of life. We are one of only 21 sites nationwide to participate in the Children’s Oncology Group (COG) Pediatric Early Phase Clinical Trials Network (PEP-CTN), one of 23 sites nationally to be a member of the Neurofibromatosis Consortium, and one of 23 members of National Pediatric Cancer Foundation Sunshine Project, which allows us to have access to latest cutting-edge clinical trials for our patients with poor prognosis malignant tumors.

ONCOLOGY RESEARCH

NEURO-ONCOLOGY PROGRAM

An example of discoveries taken from bench to bedside include the research led by Gregory Friedman, M.D., in the field of neuro-oncology. Dr. Friedman has demonstrated that the deadliest subgroup of medulloblastoma is highly sensitive to a genetically modified herpes simplex virus (HSV). His innovative first-in-children phase 1 study using modified HSV to attack difficult-to-treat brain tumors began recruiting patients from across the U.S. in 2016. This study has now completed enrollment, including successfully treating a child at Nationwide Children’s Hospital (external site), with encouraging results. Additionally, this is first therapy shown to convert ‘immunologically cold’ pediatric high-grade gliomas to ‘hot’ with a significant increase in immune cells after treated with modified HSV (G207), which is critical for successful anti-cancer immunotherapy approaches. Another clinical trial combining G207 with radiation therapy in patients with recurrent malignant tumors of the cerebellum is now open for enrollment at UAB. This translation of engineered herpes simplex virus therapy is FDA-approved and supported by the National Institutes of Health (NIH).

Girish Dhall, M.D., joined UAB in 2019 as the division director of the UAB Division of Pediatric Hematology, Oncology, and Blood and Marrow Transplant (BMT). Dr. Dhall is a national leader in the field of pediatric neuro-oncology. He chairs the “Head Start” 4
clinical trial, which is an investigator-initiated, multi-institutional, international, clinical trial using intensive induction chemotherapy and consolidation with high-dose chemotherapy with autologous hematopoietic stem cell rescue in order to avoid cranial irradiation for infants with malignant CNS embryonal tumors. Emily Waite, PharmD is the lead pharmacist for this clinical trial and efforts are underway to make Children’s of Alabama the central radiology review site for this international study.

**LEUKEMIA, LYMPHOMA, AND HISTIOCYTOSIS PROGRAM**

Matthew Kutny, M.D., serves as UAB’s institutional principal investigator and is a member of the myeloid disease steering committee within the COG. In this role, he leads efforts to develop clinical trials testing novel treatments for childhood leukemia. He is the study chair for an international trial of acute promyelocytic leukemia open at over 100 institutions. He is also the national study chair of APAL2020B, a COG clinical trial of a CD123 targeted immunotherapy for relapsed leukemia. His research efforts focus on improving treatment cure rates while also decreasing treatment toxicity.

Ana Xavier, M.D., is a lead investigator for the NK/T cell Lymphoma/Leukemia Consortium. She is a principal investigator for the novel clinical trial “Pilot Study Using Induction Chemo-Immunotherapy followed by Consolidation with Reduced Toxicity in Advanced Stage Mature Non-anaplastic T-cell or NK-Lymphoma/Leukemia in Children, Adolescents, and Young Adults (AYA),” which is currently being activated at several institutions across the US. This study will inform new treatment approaches in children and AYA patients with advanced stage mature T-cell lymphomas and NK cell lymphoma/leukemia, a patient population for whom current therapy offers only very poor outcomes. In addition, this study will provide valuable biological data to permit better understanding of the pathophysiology of T/NK-cell lymphomas in children and AYAs. This will be the first prospective multi-institutional trial targeting pediatric and AYA mature T/NK cell lymphoma study. In addition, she is one of the principal investigators for the Pediatric Ohio-New York Center Immunotherapy clinical trial with the aim to investigate reducing the burden of oncologic chemo-radiotherapy and radiation exposure from diagnostic imaging utilizing targeted immunotherapy in children and AYA patients with lymphoma.

**SOLID TUMOR PROGRAM**

Jamie Aye, M.D., in collaboration with Dr. Elizabeth Beierle, UAB Department of Surgery, seeks to advance our current knowledge of pediatric solid tumors through the Tumor Xenograft Project. Despite recent advances in pediatric cancer care, the treatment and outcomes for many pediatric solid tumors has not significantly changed. Primary human tumors directly implanted into mice more accurately recapitulates the features of patient tumors compared to current cell-based models. Using primary human patient tumor models, the Children’s of Alabama-UAB Pediatric Tumor Bank and Tumorgraft Development Program’s long-term goal is to identify agents that are effective treatments for children with tumors having specific genetic and molecular profiles and to move these agents into the clinical realm. The program currently has approximately 153 patient tumors banked. Preliminary studies have demonstrated the tremendous potential of this rare resource with new discoveries featured in multiple peer-reviewed publications. Ongoing studies are investigating the use of novel retinoic acid derivatives in neuroblastoma, role of PIM3 Kinase in hepatoblastoma, CDK 4/6 inhibitors in osteosarcoma, and immunotherapeutic approaches for treatment of solid tumors in general. Dr. Aye is also a member of the Intermediate Risk Rhabdomyosarcoma Working Group within COG.

Elizabeth Alva, M.D., is the director of Pediatric Cancer Predisposition Clinic. She leads a national COG clinical trial, APEC1621K, which is investigating the use of AG-120 (ivosidenib) in patients with tumors harboring IDH1 mutations, and is the institutional principal investigator for Beat Childhood Cancer Consortium clinical trials in solid tumors.

**BLOOD & MARROW TRANSPLANTATION PROGRAM**

Another example of bench-to-bedside research is in the field of blood or marrow transplantation (BMT), where Frederick Goldman, M.D., is attempting to understand the pathogenic mechanisms of bone marrow failure syndromes, congenital immune deficiencies and translating this information to the promotion of novel agents and stem therapies for these disorders. His translational research laboratory is addressing unmet needs in hematopoietic disorders using innovative gene correction technology, coupled with BMT, to develop safer cures.

**HEMATOLOGY RESEARCH**

**SICKLE CELL DISEASE PROGRAM**

The UAB Division of Pediatric Hematology and Oncology has a strong team dedicated to cutting-edge research in the field of sickle cell disease. Jeffrey Leibensburger, D.O., MSPH, section head of Hematology, continues to focus his research efforts on understanding the progression to chronic kidney disease that affects about one fourth of adults with sickle cell anemia. He received a grant from the NIH to conduct a multicenter study that will develop a novel approach to defining kidney function in children and adults with sickle cell anemia. Additionally, he is performing a Patient-Centered Outcomes Research Institute (PCORI)-funded study to develop safer cures.

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**HEMATOLOGY RESEARCH**

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THROMBOSIS AND BLEEDING PROGRAMS

Hope Wilson, M.D., is conducting research to define clinical care for children with a history of thrombosis and persistent thrombotic risk factors. She received a prestigious trainee award to the ASH Clinical Research Training Institute to refine this research. Christy Bemrich-Stolz, M.D., MSPH, is participating in the AThN database and conducting research in patients with COVID-19. Drs. Bemrich-Stolz and Wilson, in collaboration with the UAB Division of Adolescent Medicine have developed women’s and children bleeding disorders clinic.

ADDITIONAL HEMATOLOGY RESEARCH

The UAB Pediatric Hematology Program receives over 900 referrals each year for children with blood disorders. Dr. Goldman is developing a bone marrow failure clinic to care for children with diseases such as Fanconi’s Anemia, Diamond Blackfan Anemia and Dyskeratosis Congenita. The Hematology section is also a member of the ITP Consortium of North America to improve the care for children with Immune-mediated Thrombocytopenia.

INSTITUTE FOR CANCER OUTCOMES AND SURVIVORSHIP

Smita Bhatia, M.D., MPH, is the founding director of the School of Medicine Institute for Cancer Outcomes and Survivorship (ICOS). Several division faculty are members of the Institute. The mission of ICOS is to reduce the burden of cancer and its sequela across all segments of population through interdisciplinary research, health promotion and education. ICOS has been very active over the past year. Currently, the Institute has 16 faculty members with a primary research focus on cancer outcomes, with the total funding of more than $40 million since its inception in 2015.

Dr. Bhatia was awarded the National Cancer Institute Outstanding Investigator Award in 2018, providing her with funding for the next seven years to identify childhood cancer survivors at highest risk for long-term complications. As part of this initiative, she has a multi-institutional study at more than 100 institutions to understand the molecular pathogenesis of treatment-related complications. Using this resource of more than 4,000 DNA samples, she has identified genomic variants that modify radiation-related subsequent neoplasm and anthracycline-related cardiac dysfunction. This has led to improved models to identify survivors most at risk for these complications.

She also received funding from the National Cancer Institute to understand the pathogenesis of therapy-related leukemia in patients with lymphoma receiving autologous stem cell transplantation. In addition, Dr. Bhatia has been funded by the Leukemia Lymphoma Society (LLS) and the NIH (through a U01 mechanism) to construct a cohort of 10,000 BMT survivors to understand the burden of morbidity borne by the survivors. This cohort has demonstrated that BMT survivors carry a substantial burden of morbidity with the highest risk seen in allogenic BMT recipients with a history of chronic graft versus host disease. These findings have informed the need for lifelong follow up of BMT survivors. She is also developing FDA-approved and NIH-funded strategies to reduce the risk of radiation-related breast cancer in survivors of Hodgkin lymphoma. She has demonstrated that non-adherence to oral mercaptopurine used to sustain durable remissions in children with acute lymphoblastic leukemia (ALL) is prevalent and is associated with high risk of relapse. She worked closely with Dr. Landier to develop a randomized clinical trial to improve adherence using personalized text messaging and directly supervised therapy (funded by the National Cancer Institute). Findings from this study have informed a large multi-institutional study embedded in a COG therapeutic trial to enhance adherence. She has developed an infrastructure and leads the effort in maintaining continuous follow-up of all patients treated on COG therapeutic trial across the US. She is chairing four national cooperative group studies. Within COG, she serves on the Executive Committee and as Vice Chair of the Survivorship and Outcomes Committee.

Wendy Landier, Ph.D., deputy director of ICOS, received funding from the NIH to understand the facilitators and barriers to HPV vaccination in childhood cancer survivors, and test the immunogenicity and safety of using this vaccine in childhood cancer survivors. Findings from this study informed the next large initiative at six participating institutions to improve HPV vaccination rates in childhood cancer survivors by educating the healthcare providers. She has also received funding from the Alex’s Lemonade Stand Foundation to develop a patient-family education intervention for children with newly diagnosed cancer and from Kaul Pediatric Research Institute (KPRI) to develop an educational smartphone app for parents of children with a new diagnosis of cancer. She, along with Dr. Bhatia have led the efforts in developing the COG Long-term Follow-up Guidelines in survivors of childhood cancer. Current efforts are centered on updating the guidelines. Within COG, she is the past Chair of the Nursing Discipline, and serves on the Scientific Council.

Julie Wolfson, M.D., MSHS, has received funding from Hyundai Hope on Wheels and the Rally Foundation for Childhood Cancer Research to form a national multi-site consortium and investigate disparities in AYA patients with ALL. She is leading two national intergroup studies within the NCI cooperative groups looking at AYAs with ALL, one focused on health care delivery and the other focused on medication adherence. She also continues to lead a prospective study, which is seeking to identify reasons for outcome disparities among children and AYA with cancer treated at UAB/ Children’s of Alabama. Her publications have focused on the role of patient-level and facility-level factors in survival and relapse among AYAs across malignancies. Within COG, she serves as a member of the steering committees for Cancer Care Delivery Research along with the AYA Discipline.

Emily Johnston, M.D., MPH, has received funding from the St. Baldrick’s Foundation, the Leukemia Lymphoma Society, Alex’s Lemonade Stand, Kaul Pediatric Research Institute (KPRI)and the Conquer Cancer Foundation, in order to improve the quality of end-of-life care of children dying of cancer and other life-threatening illnesses. She has published extensively on the prevalence and patterns of high-intensity care received at end-of-life in children dying of cancer, and is currently developing strategies to ensure that children receive goal-concurrent care at end-of-life.

Donna Murdaugh, Ph.D., is a board-certified neuropsychologist, and is funded by the UAB Center for Clinical and Translational Science KL2 career development award in order to develop cognitive remediation programs for patients with sickle cell disease. She is also conducting a cognitive remediation intervention trial in survivors of childhood acute lymphoblastic leukemia to facilitate transition of
healthcare from a pediatric to an adult facility.

Aman Wadhwa, M.D., is funded by the St. Baldrick’s Foundation to determine the association between body composition and subsequent toxicities in children with cancer.

Purnima Singh, PhD, MPH works closely with Dr. Bhatia in understanding the molecular pathogenesis of treatment-related complications in cancer survivors.

GENOMIC DATA SCIENCE

Liz Worthey, Ph.D., is the director for the Center for Genomic Data Sciences and a member of the UAB Division of Pediatric Hematology, Oncology, & BMT. She has an additional appointment in the Department of Pathology. Dr. Worthey’s research interests include the development and application of omic, informatic, and data science-based methods and technologies in order to identify and understand causal molecular variation in rare, undiagnosed or misdiagnosed disease. Her laboratory also focuses on the identification and study of variation that alters an individual’s response to therapeutics or modifies clinical presentation, progression, and/or outcome. She undertook the first clinical application of genomics in medicine and has assisted in the development of genomics based MDx. Dr. Worthey’s teams have identified the genetic underpinnings of more than 30 genetic disorders and diagnosed more than 2,000 patients with rare disease. Her tools and algorithms have been used to diagnose around 10,000 patients.

2020 PUBLICATIONS


Ethn Health. 2020 Sep 8;1-14. The influence of perceived racial bias and health-related stigma on quality of life among children with sickle cell disease. Anna M Hood, Lori E Crosby, Eva Hanson, Lisa M Shook, Jeffrey D Lebensburger, Avi Madan-Swain.


J Pain Symptom Manage. 2020 Sep 2;S0885-3924(20)30725-9. To Disclose or Not to Disclose: A Case Highlighting the Challenge of Conflicts in Pediatric Disclosure. Isaac Martinez, Anna Hoppmann, Sam Perna, Paul Byrd, Joanne Wolfe, Jamie Aye, Emily E Johnston.


JAMA Netw Open. 2020 May 1;3(5) e204783. Assessment of Sarcopenia Measures, Survival, and Disability in Older Adults Before and After Diagnosis With Cancer. Williams GR, Chen Y, Kenz K, McDonald A, Shachar SS, Klepin HD, Kritchekwsky S, Bhatia S.

JAMA Oncol. 2020 Apr 2. Better Understanding the Importance of Palliative Care for Pediatric Patients. Johnston EE, Rosenberg AR.


Dr. Worthey was named the inaugural holder of the Endowed Professorship in Pediatrics.

Dr. Wilson was selected to participate in the 2020 Class of the American Society of Hematology (ASH) Clinical Research Training Institute (CRTI). A prestigious honor, the institute is year-long education and mentoring program for hematology fellows and junior faculty.

Dr. Lebensburger was selected to serve on the Scientific Review Subcommittee for the American Society of Hematology Sickle Cell Disease Clinical Trials Network.

Dr. Landier was elected to the American Pediatric Society (SPAC). The SIOP SPAC was founded in 2008 and consists of experts in specific fields of pediatric oncology.

Dr. Dhall was appointed the deputy director of the Neurofibromatosis Clinical Trials Consortium.


EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Smita Bhatia, M.D.

- Dr. Bhatia was selected by the American Society for Transplantation and Cellular Therapy Survivorship Special Interest Group (SIG) to receive the inaugural Lifetime Achievement Award. This award recognizes a SIG member for their outstanding work and dedication to survivorship practice in hematopoietic cell transplantation (HCT).
- She is a member of the National Cancer Policy Forum of the National Academy of Sciences Engineering and Medicine.
- She received the 2020 Dean’s Excellence Award for Mentorship, Senior Faculty.
- She is on the Scientific Advisory Board for St. Jude Children’s Research Hospital, University of Minnesota Comprehensive Cancer Center, University of California, San Diego Comprehensive Cancer Center, UCSF Pediatric Oncology T32 program, University of Minnesota Hematology T32 program
- She is the Chair of the CCSS Genetics Working Group
- She serves on the Editorial Board for the Journal of Clinical Oncology; she is the Section Editor for Cancer and the Senior Editor for Cancer Epidemiology Biomarkers and Prevention
- She is a member of the NCI Clinical Trials and Translational Research Advisory Committee
- She is a member of the AACR Science Policy and Government Affairs Committee

Girish Dhall, M.D.

- Dr. Dhall was appointed the deputy director of the Neurofibromatosis Clinical Trials Consortium.
- He was selected to join the International Society for Paediatric Oncology (SIOP) Scientific Programme Advisory Committee (SPAC). The SIOP SPAC was founded in 2008 and consists of experts in specific fields of pediatric oncology.
- He is a member of the O’Neal Cancer Clinical Trials Taskforce.

Wendy Landier, Ph.D.

- Dr. Landier was elected to the American Pediatric Society
- She is the past chair of the COG Nursing Committee
- She is a member of the COG Scientific Council

Jeffery Leibensburger, D.O.

- Dr. Leibensburger was selected to serve on the Scientific Review Subcommittee for the American Society of Hematology Sickle Cell Disease Clinical Trials Network.

Hope Wilson, M.D.

- Dr. Wilson was selected to participate in the 2020 Class of the American Society of Hematology (ASH) Clinical Research Training Institute (CRTI). A prestigious honor, the institute is year-long education and mentoring program for hematology fellows and junior faculty.

Liz Worthey, Ph.D.

- Dr. Worthey was named the inaugural holder of the Endowed Professorship in Pediatrics.
PEDIATRIC HEMATOLOGY/ONCOLOGY FELLOWSHIP PROGRAM

The UAB Pediatric Hematology/Oncology Fellowship Program emphasizes the development of clinical expertise, scholarship skills and teaching abilities in the training of our fellows. As the state’s only comprehensive center for pediatric blood and malignant disorders, treating 90 percent of all pediatric cancer and other blood disorders patients diagnosed in Alabama, our program provides fellows with sufficient clinical experience with both inpatients and outpatients who have hematologic and oncologic disorders to develop their skills in diagnosing and managing both common and unusual problems. During their training, our fellows undertake an in-depth study of a specific area of pediatric hematology and oncology. This project may involve laboratory-based research or joining a clinical research project that is ongoing within the division. In some circumstances our fellows may obtain a Master of Science in Public Health or a Ph.D. as a component of their training.

2020-2021 Fellows

Elizabeth Gunn, M.D.
First Year Fellow
Residency: Carolinas Medical Center

Abbey Rocco, M.D.
First Year Fellow
Residency: St. Louis University

Sara Claire Hutchins, M.D.
Second Year Fellow
Residency: University of Mississippi Medical Center

Kathryn Six, M.D.
Second Year Fellow
Residency: Carolinas Medical Center

Anna Hoppmann, M.D.
Third Year Fellow
Residency: University of Alabama at Birmingham

Lauren Smith, M.D.
Third Year Fellow
Residency: Nationwide Children’s Hospital

Program Director
Kimberly Whelan, M.D.

Program Coordinator
Sherterica Evans

PEDIATRIC NEURO-Oncology FELLOWSHIP PROGRAM

The Division of Pediatric Hematology & Oncology established the Pediatric Neuro-Oncology Fellowship Program in 2020. This one-year clinical training program has been designed to enhance the fellow’s knowledge of pediatric brain and spinal cord tumors including biology, diagnosis, clinical course, treatment options, outcomes and areas of research. The fellowship can be further structured to meet the specific interests and experiences of each individual applicant.

Program Directors
Katie Metrock, M.D.

Program Coordinator
Onetra Robinson
FEATURED RESEARCH

IN PRINT

Adolfo Molina, M.D. and Susan Walley, M.D.


Limited work has directly compared the role of different neighborhood factors on pediatric asthma outcomes. This retrospective cross-sectional study of children with asthma, explored the effects of neighborhood deprivation and residential instability on pediatric asthma outcomes. Increasing residential instability was independently associated with more severe chronic asthma, greater risk of ED readmission, and greater risk of rehospitalization.

Susan Walley, M.D.


This study of almost 3000 middle and high school students in Alabama assessed the impact of a one-session school-based educational curriculum on the harms of tobacco based on the Stanford Tobacco Toolkit. We found that there was improved knowledge of the harms of e-cigarette use as well as decrease in intent to try e-cigarettes and cigarettes. This is work that impacts the community and is multi-institutional (collaborators from Stanford) and involves learners (Lauren Silverwood is a medical student) and funded by the Alabama Department of Public Health Youth Tobacco Prevention Program.

Cassi Smola, M.D.


The leading cause of death in children is motor vehicle crashes. This pre/post educational intervention study was conducted with ED nurses in an urban setting. Education targeting child passenger safety and counseling behaviors resulted in significant ED nursing knowledge on this topic, as well as improved intent to counsel.

Nichole Samuy, M.D. and Chang Wu, M.D.


This study of Pediatric Hospital Information Systems data aimed to identify the burden of potentially unnecessary pediatric emergency department transfers and factors associated with these transfers. Necessary transfers were defined a priori as transfers with the disposition of death or admission >24 hours, or for patients who received sedation, advanced imaging, operating, or critical care charges. Of over 1.5 million encounters, 87.7% met definition for potentially unnecessary transfer. Several factors...
including weekend transfer were positively associated with potentially unnecessary transfer; commercial insurance was negatively associated. Additional study is needed.

Erin Shaughnessy, M.D.


This international, multidisciplinary research effort developed evidence-based appropriateness guidelines for pediatric vascular access (the Michigan Appropriateness Guide for Intravenous Catheters in Pediatrics: miniMAGIC). Guidelines covered infants and children from birth through age 18, across a wide variety of conditions and indications for vascular access. Objectives of the work are to provide guidance to clinicians with goals of optimizing delivery of care while minimizing harm such as venous thromboembolism, catheter dysfunction, and bloodstream infection. Recently, a free smartphone app (miniMAGIC) was developed to support use of the recommendations at the point of care.

WORKS IN PROGRESS

Nichole Samuy, M.D., and Paul Scalici, M.D., are site co-investigators for the KIDCARE Trial, a multi-site, national comparative effectiveness study of infliximab versus a second dose of IVIG for Kawasaki disease refractory to initial IVIG treatment. The study has completed enrollment and is in data analysis. Drs. Samuy and Scalici are also the site co-investigators for the CHARMS study, which is a multi-site, national observational data collection study investigating the relationship between Kawasaki disease and COVID-19 associated Multisystem Inflammatory Syndrome in Children. Both studies are funded by the Patient Centered Outcomes Research Institute (PCORI).

Erinn Schmit, M.D., is the chair of the Safe Sleep Task Force at Children’s of Alabama. This multidisciplinary task force has worked to improve practices at Children’s of Alabama and to educate parents and staff on the importance of safe sleep recommendations for infants. The task force has received both grant and donor funding to purchase sleep sacks as a discharge gift for all admitted infants and to purchase crib caddies to keep extraneous care items out of cribs. “Improving Adherence to Safe Sleep Guidelines for Inpatient Infants”, a quality improvement (QI) project by Safe Sleep Task Force members, won first place in the poster presentation competition at the inaugural Safety and Quality Day at Children’s of Alabama.

Adolfo Molina, M.D., Mary Orr, M.D., Chang Wu, M.D., and UAB pediatric hospital medicine (PHM) fellow graduates Drs. Hannah Gardner Jennifer Hoefert, recently completed a project implementing a protocol to wean high flow nasal cannula oxygen for children with bronchiolitis. Implementation of the standardized process was associated with a significant reduction in mean length of stay and mean time on supplemental oxygen. The initiative demonstrates the potential for safely reducing healthcare utilization in patients with bronchiolitis. The work was presented as a platform presentation at the Pediatric Academic Societies meeting.

Second-year PHM fellow Dr. Samantha Hanna and Dr. Molina have worked towards addressing healthcare disparities in our patient population especially during these difficult times. Specifically, food insecurity in Alabama has previously been described to effect up to 20% of the population prior to COVID and the subsequent financial impacts. Through their efforts all hospitalized children to Children’s of Alabama are now screened for food insecurity. A positive screen triggers an automatic social work evaluation that includes free meals for families during hospitalization, assistance with WIC/SNAP application, and a list of food banks.

Meghan Hofto, M.D., is a co-investigator on a National Institutes of Allergy and Infectious Diseases multi-institution study of community acquired pneumonia in children from six months to five years of age, comparing outcomes in patients assigned to five days of antibiotic to those receiving the standard 10-day antibiotic course.

Susan Walley, M.D., was named co-PI for Healthy Alabama 2030: Live HealthSmart. Dr. Walley will work on the smoking cessation portion of the project. She will focus on improving access to tobacco cessation resources and reducing tobacco use in the state. Currently 20.5% of adults in Alabama use tobacco products.

2020 PUBLICATIONS


on behalf of the Journal of Hospital Medicine leadership team (including Erin E. Shaughnessy).


PARTICIPATION IN QI AND LEARNING NETWORKS

Dr. Adolfo Molina is site leader for an AAP Value in Inpatient Pediatrics multi-institutional quality improvement initiative to improve appropriate antibiotic selection and duration for three common pediatric infectious diseases (community-acquired pneumonia, skin and soft tissue infections, urinary tract infections). Drs. Schmitt and Hofto, as well as representatives from the Divisions of Pediatric Infectious Disease, Pediatric Emergency Medicine, and Pharmacy are all contributing to this important effort.

Dr. Brian May is a member of the American Council of Graduate Medical Education Pediatric Milestones Working Group, whose goal is to review and revise milestones for pediatric resident education.

Dr. Susan Walley is PI of American Cancer Society Tobacco-Free Generation Campus Initiative grant. The goal of this grant is to utilize a learning community for adoption and implementation of a 100% smoke- and tobacco-free campus policy.

EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Stephanie Berger, M.D.
- Dr. Berger received the 2020 Argus Award for Best Career Advisor given by the UAB medical students.
- She was nominated to participate in the Innovation’s Academy’s “Train the Trainer” program. This program is a unique, interdisciplinary approach to analyze and develop solutions for current challenges in healthcare delivery.

Meghan Hofto, M.D.
- Dr. Hofto serves as co-chair of the Global Health Special Interest Group of the Academic Pediatric Association.

Lauren Nassetta, M.D.
- Dr. Nassetta was named the Chief Wellness Officer (CWO) for the department. She will be a central and senior advocate for prioritizing and promoting the well-being of all professionals, especially faculty, in the department.

Adolfo Molina, M.D.
- Dr. Molina received the Educational Achievement Award for junior faculty from the Department of Pediatrics in 2020.

Robert Pass, M.D.
- Dr. Pass received the Lifetime Achievement Award in Pediatric Healthcare from the Department of Pediatrics in 2020.

Nichole Samuy, M.D.
- Dr. Samuy completed her Master of Science in Health Informatics (data analytics track) from the University of Alabama at Birmingham in 2020.

Erin Shaughnessy, M.D.
- Dr. Shaughnessy was named the Beth Gordy Dubina Endowed Chair in Pediatric Hospital Medicine.
- She serves as co-chair of the APA Hospital Medicine Special Interest Group, serves as a Deputy Editor for Reviews and Perspectives at the Journal of Hospital Medicine, and chaired the Pediatric Hospital Medicine national conference in 2020.
- She achieved certification in the inaugural year of Pediatric Hospital Medicine being an officially recognized subspecialty by the American Board of Pediatrics.
Susan Walley, M.D.
- Dr. Walley received the Service Achievement Award for senior faculty from the Department of Pediatrics in 2020.
- She also spoke as part of an expert panel at a congressional staff briefing as the American Academy of Pediatrics representative and medical expert for the Congressional Caucus to End the Youth Vaping Epidemic. This was an informational session to provide updated statistics and information on the youth vaping epidemic and changes to the FDA policy guidelines for e-cigarettes.
- She chairs the AAP Executive Committee for the Section on Tobacco Control.
- She is a member of the AAP Julius Richmond Center of Excellence Tobacco Consortium Member and Nominating Committee member.
- Dr. Walley also serves on the AAP PREP Hospital Medicine Editorial Board.
- She achieved certification in the inaugural year of Pediatric Hospital Medicine being an officially recognized subspecialty by the American Board of Pediatrics.

Chang Wu, M.D.
- Dr. Wu completed a term as co-chair of APA Region 8 in July 2020.

2020 NEW FACULTY

Brittany Martin, M.D.
Instructor

Erin Shaughnessy, M.D., MSHCM
Associate Professor

PEDIOATRIC HOSPITAL MEDICINE FELLOWSHIP PROGRAM

The UAB Pediatric Hospital Medicine (PHM) Fellowship Program as accredited by the Accreditation Council for Graduate Medical Education (ACGME) in 2020, the first year this honor was available. The program was one of the first programs in the country to do so.

The mission of the UAB Pediatric Hospital Medicine Fellowship is to prepare the future leaders in the field of hospital medicine as confident experts in the care of the hospitalized child. The fellowship stresses excellence in clinical care, scholarship, and education.

The majority of our fellows pursue additional graduate-level training during their fellowship, including studies in health care quality and safety, medical education, and public health.

2020-2021 Fellows
Michelle Duplantier Veters, M.D.
First Year Fellow
Pediatric Residency: Louisiana State University

Meenu Sharma, D.O.
First Year Fellow
Pediatric Residency: Memorial Health University, Savannah

Samantha Hanna, M.D.
Second Year Fellow
Pediatric Residency: Vanderbilt University

Alexandra Healy, M.D.
Second Year Fellow
Pediatric Residency: University of Louisville

Program Directors
Chang Wu, M.D.
Program Director

Erinn Schmit, M.D.
Assistant Program Director

Program Coordinator
Sherterica Evans
Multiple projects extend the division’s studies of CMV infections. A significant effort, led by Suresh Boppana, M.D., Karen Fowler, Ph.D., and Shannon Ross, M.D., is the completion of the National Institute on Deafness and Other Communication Disorder (NIDCD)-funded CMV and Hearing Multicenter Screening (CHIMES) study. These data have provided new insights into the changing natural history of congenital CMV infection. This study enrolled more than 100,000 infants from seven hospitals in the U.S. and was organized and administered by Drs. Boppana and Fowler. New findings from the study included the development of a highly sensitive and specific PCR-based assay for testing newborn saliva samples to identify babies infected with CMV and lack of sensitivity of newborn blood spots collected for routine screening to detect CMV infected babies.

Other major findings of the study included a significantly higher prevalence of congenital CMV infection in African-American women and teens than previously reported, and the failure of newborn hearing screening to identify a significant proportion (~ 40%) of infants with CMV-associated hearing loss at birth. Most recently, the CHIMES data were utilized to establish the cost savings that would be achieved by a universal screening program for congenital CMV infections. The landmark findings from this pivotal study are being used to develop new guidelines on caring for infants and children locally, nationally, and internationally.

Ongoing work continues using the CHIMES study data. Some of the studies include describing the natural history of hearing loss in children with congenital CMV infection, evaluating the increased risk of congenital CMV infection in offspring of adolescent mothers, and assessing the role of maternal CMV serostatus in delivering small for gestational age infants.

Swetha Pinninti, M.D., focuses her efforts on defining the prevalence and severity of vestibular and balance disorders in children with asymptomatic congenital CMV infection with hearing loss and those with normal hearing. The goals of this work are to define the burden of vestibular involvement, develop screening methods for early identification of children with vestibular and balance disorders and develop effective intervention measures to improve outcomes. Dr. Pinninti is also studying the association between sexually
transmitted infections and genital tract shedding of CMV.

Some of Dr. Fowler’s current work focuses on behavioral interventions to prevent maternal CMV infections during pregnancy. A recent CDC funded behavioral intervention study recruited young pregnant women into a 12-week cognitive-behavioral intervention to increase knowledge about congenital CMV and decrease self-reported risk behaviors. The results demonstrated that it is possible to raise awareness about congenital CMV and reduce CMV risk behaviors in young CMV seropositive pregnant women. Currently studies are proposed to evaluate whether these behavior changes result in lowering maternal infection during pregnancy thereby reducing congenital CMV infection rates in their offspring.

Internationally, William Britt, M.D., and Drs. Boppana and Fowler have ongoing projects in Brazil and South Africa (supported by the NIH). In Brazil, more than 30,000 women and their newborn infants are being enrolled in studies to define the natural history of congenital CMV infection in a population of women with universal immunity to CMV, a critical question in the design of prophylactic vaccines for this infection. These studies will also address the potential impact of behavioral interventions in the prevention of reinfections in pregnant women. These studies are supported by the NIH and Merck Co.

Veronica Sanchez, Ph.D., and Drs. Britt, Boppana, Ross, and Pinninti all lead robust laboratory research programs as well, with studies in basic molecular virology, virus-host interactions, correlates of protection. A significant effort led by Drs. Britt and Larisa Pereboeva, M.D., has been focused on understanding the role of virus-induced inflammation and brain development in a small animal model of CMV infection of the developing central nervous system. This system has pointed to the role of inflammation in altered cell positioning in the developing brain, a finding that recapitulates aspects of the pathology of brain disease in infants with congenital CMV infection. A second major focus of this project is defining mechanisms of hearing loss in infants with congenital CMV infections. This small animal model closely recapitulates the findings of hearing loss in infants with congenital CMV infection, and findings generated from studies in this system have identified mechanisms of hearing loss, which include virus-induced inflammation.

Additional studies by Drs. Britt and Sanchez aim to improve understanding of fundamental aspects of virus replication and virus-host interactions, including several projects directed at dissecting the role of the functional components of the infected cell in the efficient production of infectious virus from an infected cell – a project that can be translated into the identification of novel targets for antiviral agents. In addition, these studies have developed a new and previously unknown function of novel modes of regulation of cellular function, viral micro RNA molecules.

Shannon Ross, M.D., leads research centered on identifying markers of hearing outcome in congenital CMV. Utilizing next-generation sequencing technologies and informatics, Dr. Ross is investigating the contribution of genetic heterogeneity of viruses shed in different compartments (mouth, blood, urine, etc.), to identify biomarkers for the development of hearing loss. In addition, she is investigating the role of neuroimaging in identifying infants with congenital CMV that are at risk for hearing loss.

ANTIVIRAL THERAPIES PROGRAM

Major clinical trials of the treatment of life-threatening viral infections have been performed by David Kimberlin, M.D., and Richard Whitley, M.D. Over the past two decades, their NIH-funded work has established the standard of care for the management of neonatal herpes simplex virus (HSV) disease and congenital cytomegalovirus (CMV) infection. Studies being completed now include assessment of whether there is benefit in starting antiviral therapy later in childhood for children with hearing loss caused by congenital CMV. They also are determining the appropriate dose of these medications to use in babies born extremely premature. A study of the treatment of babies with asymptomatic congenital CMV infection recently has been halted due to toxicity, and will be converted to a large natural history study to assess for biomarkers of clinical outcome (hearing loss) that may improve the risk: benefit ratio of future clinical studies in this population. Studies of potential biomarkers for neonatal HSV infections also are being completed at this time.

New studies being conducted include leading the NIH’s assessment of Acute Flaccid Myelitis (AFM) and conducting a large multicenter natural history study of neonatal entervoiral and parechoviral sepsis. Clinical Phase 1 trials of valacyclovir and eteromovir in neonates are in development, as is a longitudinal followup study to determine the durability of treatment benefit on hearing in children previously enrolled in studies in the 2000s.

All of these studies are conducted through their multicenter, NIH-funded network. This group consists of up to 35 study sites in the United States, Canada, Peru, and the United Kingdom.

Scott H. James, M.D., utilizes conventional and next-generation DNA sequencing techniques to identify and characterize treatment-emergent antiviral resistance and viral subpopulations with diminished susceptibility to antiviral drugs from treated babies.

ANTIVIRAL DRUG DEVELOPMENT AND DISCOVERY PROGRAM

Scott H. James, M.D., leads an interdisciplinary team of investigators to help select molecules with optimal antiviral activity against a broad array of DNA viruses. In partnership with the NIH’s in vitro antimicrobial screening program, as well as through independent research collaborations, Dr. James’ group provides preclinical data to support human clinical trials. The expertise of his laboratory has been expanded from herpesviruses and poxviruses to all the DNA viruses including the adenoviruses, polyomaviruses, and paploviruses. This was made possible by investments in new instrumentation to increase efficiency and analytical capacity into highly automated 384-well assays that greatly increased the productivity of the laboratory while lowering research costs. Under the guidance of the late Mark N. Prichard, Ph.D., and continuing under the current leadership of Dr. James, preclinical work performed in this laboratory has helped to advance the development of five drugs for the treatment of viral infections into clinical trials: maribavir (for CMV), brincidofovir (for CMV), tecovirimat (for smallpox), and most recently, filociclovir (for CMV), N- Methanocarbathymidine (for VZV), and ABI-1968 (for HPV). In the past year, Dr. James and his research team have authored or co-authored eight published manuscripts on antiviral therapy and drug development.

Dr. James’ antiviral program employs the study of antiviral drug resistance to help understand the molecular mechanisms of action of novel compounds and to help manage their clinical use. Molecular biology and reverse genetic techniques are used to identify the molecular targets of antiviral drugs in DNA viruses and to describe the essential functions of these enzymes in viral replication. For example, a seminal contribution of Dr. Prichard was in defining the function of the CMV UL97 protein kinase, establishing its critical function in the production of infectious virus from an infected cell – a project that can be translated into the identification of novel targets for antiviral agents.
role in lytic replication, and demonstrating that it acts to phosphorylate ganciclovir. Dr. James led preclinical studies of the novel compounds cyclopropavir and brincidofovir, including mechanism of action studies, in vitro efficacy and toxicity assays, and genomic studies of laboratory-generated resistant strains of CMV. In partnership with the Collaborative Antiviral Study Group, our team also investigates the emergence of resistance to antiviral therapies during clinical trials in infants and children with viral infections and has characterized the rates of resistance in pediatric patients.

**MOLECULAR DIAGNOSTIC VIROLOGY LABORATORY**

Under the leadership of William Britt, M.D., the Molecular Diagnostic Virology Laboratory provides an essential service for the University of Alabama Hospital and Clinics and Children’s of Alabama.

- Same-day diagnostic services of infections of the central nervous system (CNS) and respiratory system allows for targeted therapeutic approaches and the institution of relevant hospital infection control policies for hospitalized patients, resulting in improved patient care. This testing includes SARS-CoV-2.
- Same-day turn around for CNS viral infections is not available either commercially or at hospital laboratories other than the services provided by the Diagnostic Virology Laboratory.
- Quantitative assays of herpesviruses utilized for monitoring transplant recipients.
- In addition, specialized testing is available upon request for investigation of hospital acquired infections.
- Assay development for specific agents as required by clinical services at UAB and Children’s Hospital.

**EMERGING INFECTIONS PROGRAM**

Stephanie Moore, Ph.D., and Richard Whitley, M.D., and have built a team of experienced scientists in virology, viral immunology, pathogenesis and medicinal chemistry from eight partnering academic institutions, plus Southern Research, to develop small molecule therapeutics for the treatment of emerging viral infections under the umbrella of the Antiviral Drug Discovery and Development Center (AD3C). Members of several genera of RNA viruses that are major causes of human disease, bioterrorist threats or emerging infectious diseases are being studied. Projects focus on coronaviruses that cause SARS and MERS, alphaviruses cause Venezuelan equine encephalitis virus and chikungunya, flaviviruses (dengue, West Nile virus, and Zika) and influenza A virus.

The team utilizes the existing data and compounds to perform proof of principle studies in animal models, thereby delivering potential small molecule therapeutics to the government.

The group has also evaluated a limited number of additional, novel compounds provided by collaborators at the Emory Institute for Drug Discovery (EIDD) and Gilead Sciences. Expertise exist in the AD3C for IND preparation and filing as well as Phase I studies with adequate resources. The projects are supported by three Cores: Administrative, the Assay, and the Medicinal Chemistry and Lead Development. The organization and interaction between all projects and Cores is monitored by the Administrative Core. This collaboration has already contributed significant data to an IND filed for MERS and two patents and proof of principle data for chikungunya.

**2020 PUBLICATIONS**

Whitley RJ.


PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

ANTIMICROBIAL STEWARDSHIP PROGRAM (ASP)

- The Antimicrobial Stewardship Program (ASP) team includes two Infectious Diseases trained medical directors (Shannon Ross, M.D., and Suresh Boppana, M.D.), an infectious disease pharmacist, a data analyst, six physicians that represent the various specialties within the department, hospital nurses and representation from Children’s of Alabama performance improvement and administration.
- The goal of the Children’s of Alabama ASP is to provide a collaborative, yet evidence based approach to managing infections in children. This means using the right antimicrobial at the correct dose for the appropriate duration in order to cure or prevent infection, while minimizing adverse drug events and emergence of resistance.
- The ASP team participates in the Solutions for Patient Safety ASP collaborative with the goal of reducing antimicrobial use in the hospital and infections with multi-drug resistant organisms (MDRO).
- The ASP is in full compliance with the Joint Commission and CMS antimicrobial stewardship standards. The ASP monitors antimicrobial use by reviewing days of therapy, bug and drug mismatches, as well as high risk antimicrobials and MDRO infections. For the last 24 months, antimicrobial usage and MDRO infection rates have decreased by over 10%.
- The ASP regularly reports antimicrobial use and MDRO data to the National Healthcare Safety Network (NHSN).
- The ASP provides daily monitoring of duplicate antimicrobials (with no indication), non-formulary antibiotics, high-risk antimicrobial use (such as vancomycin and meropenem), and candida isolates. The pharmacist monitors over 500 antimicrobial related activities each month, and makes an average of 5-8 interventions per day based on this monitoring that results in appropriate antimicrobial therapy.
- The ASP prepares and publishes the Children’s of Alabama hospital antibiograms annually to help guide practitioners on appropriate antibiotic use.
- A C. diff diagnosis and treatment pathway was implemented with >90% adherence to the pathway resulting in a decrease in the rates of C. diff to the target range over the past two years.
- The Children’s of Alabama ASP received the designation as an IDSA Antimicrobial Stewardship Center of Excellence. The Center of Excellence program recognizes institutions that have created stewardship programs led by infectious diseases (ID) physicians and ID-trained pharmacists that are of the highest quality and have achieved standards aligned with evidence-based national guidelines. Children’s of Alabama is one of only 10 children’s hospitals in the US that have received this designation.

INFECTION CONTROL

The Infection Control and Prevention team, that includes the medical director, the nurse manager, and three infection prevention nurses, work together to identify, investigate and develop processes to prevent infections acquired in the hospital.

- Over the past three years, they have worked closely with multi-disciplinary Solutions for Patient Safety teams to develop and educate the hospital staff about process bundles to prevent four of the hospital acquired conditions that are a focus of this nation-wide collaboration, CLABSI, SSI, CAUTI, and VAP.

EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Suresh Boppana, M.D.

- Dr. Boppana was elected to the Alpha Omega Alpha Honor Medical Society.

Cecelia Hutto, M.D.

- Dr. Hutto received the COVID-19 Service Achievement Award for senior faculty from the Department of Pediatrics in 2020.

David Kimberlin, M.D.

- Dr. Kimberlin was invited to join an expert group of the Departments of Sexual and Reproductive Health and Research (SRH) and Maternal, Newborn, Child and Adolescent Health and Ageing (MCA) at the World Health Organization (WHO) to review evidence on mother-to-child transmission of SARS-CoV-2 and to create a consensus case definition.

Claudette Poole, M.D.

- Dr. Poole was appointed as an associate scientist in the UAB Minority Health and Health Disparities Research Center.
- She received the COVID-19 Service Achievement Award for junior faculty from the Department of Pediatrics in 2020.
Shannon Ross, M.D.
• Dr. Ross was selected to be an ambassador for The Pew Charitable Trusts’ Stand Up To Superbugs initiative. Dr. Ross joined more than 40 other 2020 Stand Up To Superbugs Ambassadors in Washington, DC Feb. 25-27 to meet with the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria, leaders from CDC, FDA, and other key agencies and members of Congress and their staffs to urge action to fight the growing threat of antibiotic-resistant infections.

Sergio Stagno, M.D.
• Dr. Stagno was selected to be a member of the Alabama Healthcare Hall of Fame, Class of 2020. The Alabama Healthcare Hall of Fame was established in 1997 and honors those who have made major contributions to the service of healthcare in the state of Alabama.

Richard Whitley, M.D.
• Dr. Whitley was selected as the recipient of the 2020 National Foundation for Infectious Diseases (NFID) John P. Utz Leadership Award. This award recognizes Dr. Whitley’s leadership in the field of clinical virology and infectious diseases.

The Division of Pediatric Infectious Diseases received the Model of Team Excellence Award from the Department of Pediatrics in 2020.

PEDIATRIC INFECTIOUS DISEASES FELLOWSHIP PROGRAM

The mission of the Pediatric Infectious Disease Fellowship Program is to train, educate, and mentor fellows to become exceptional clinicians and researchers in the field of pediatric infectious diseases. We strive to prepare our trainees to be future leaders in healthcare who will advance the field of pediatric infectious diseases as innovative physician-scientists. Our trainees are immersed in a learning environment that values excellence in clinical care, scholarly activity and professionalism. We have special expertise in combined fellowship programs that include not only pediatric infectious diseases training but also neonatology, critical care medicine, and adult infectious diseases training. All of our former fellows over the past decade have easily passed their pediatric infectious diseases boards. During their training, our fellows gain experience in a wide variety of clinical conditions and settings, participate in quality improvement and patient safety initiatives and are provided with close mentorship and guidance for the development of successful research careers.

2020-2021 Fellows
Ayesha Ahmed, M.D.
First Year Fellow
Residency: University of Alabama at Birmingham

Joshua Cooper, M.D.
Second Year Fellow
Combined Infectious Diseases/Critical Care Fellow
Residency: University of Alabama at Birmingham

Audrey Lloyd, M.D.
Second Year Fellow
Combined Adult and Pediatric Infectious Diseases Fellow
Residency: Ohio State University

Nicole Samies, D.O.
Third Year Fellow
Residency: Geisinger Medical Center

Connie Trieu, M.D.
Third Year Fellow
Residency: Mercer University

Nazia Kabani, M.D.
Fourth Year Fellow
Combined Pediatric Infectious Disease and Neonatology
Residency: University of Alabama at Birmingham

Program Directors
Scott James, M.D.
Program Director

Claudette Poole, M.D.
Associate Program Director

Program Coordinator
Tracy Downey
The UAB Division of Neonatology is a founding member of the NIH Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Neonatal Research Network (NRN). Over its 35 years of existence, the NRN has defined the standards of multi-institutional collaborative research that has directly resulted in the increased survival and decreased morbidity rates of extremely low birth weight infants and other critically ill infants in the United States.

UAB investigators have led more NRN trials than investigators from any of the over 25 participating universities. UAB Neonatology is consistently one of the top centers in developing, leading, enrolling and analyzing the important randomized controlled trials and clinical studies conducted by the NRN. Division members have led three major innovative NRN studies: the SAVE Factorial Trial, the Cytokine Study and the SUPPORT Factorial Trial. A fourth innovative trial led by UAB neonatologists that tests the effects of caffeine late in the neonatal course and at home to shorten hospitalization and decrease apparent life-threatening events started enrollment in early 2019. So far, UAB has the highest enrollment of all NRN sites in this trial. A fifth trial led by UAB investigators (Budesonide in neonatal death/infections in 5,500 pregnant women at high risk for infection. The Bill and Melinda Gates Foundation has given UAB an additional grant that will fund an extension of this trial to randomize 28,500 low-risk women to conduct a second trial simultaneously.

The division is also funded by the Eunice Kennedy Shriver NICHD Global Network for Women’s and Children’s Health Research. Division researchers led seminal investigations of resuscitation and essential newborn care in 100 communities in six countries, which included almost 200,000 infants. These trials established the effectiveness of the interventions in reducing stillbirths and neonatal mortality and led to worldwide implementation of training, including the globally-implemented Helping Babies Breathe Program and the Essential Care for Every Baby Program introduced in 2014. We successfully competed for the next five-year cycle and will be funded through 2023. In addition, the major trial during this next cycle (Intrapartum Azithromycin) will be led by UAB investigators. This will be a randomized clinical trial to test the efficacy and safety of azithromycin in women during labor to reduce maternal and neonatal death/infections in 5,500 pregnant women at high risk for infection. The Bill and Melinda Gates Foundation has given UAB an additional grant that will fund an extension of this trial to randomize 28,500 low-risk women to conduct a second trial simultaneously.

The Division of Neonatology at UAB is the only site in the country funded to lead both NICHD neonatal networks (NRN and Global). Members of the division also conduct groundbreaking basic science research in control of breathing in preterm infants. Namasiyavam Ambalavanan, M.D., is the principal investigator of the UAB Research Center, which comprises one of the five research centers in NIH National Heart, Lung and Blood Institute (NHLBI) PreVENT consortium. This consortium collects and analyzes high-resolution cardiorespiratory data from a large cohort of very preterm infants to determine how abnormalities in control of breathing contribute to suboptimal outcomes following preterm birth. Dr. Ambalavanan is also the co-PI, with Dr. Myriam Peralta, UAB Division of Developmental and Behavioral Pediatrics, of the Outcomes of Babies with Opioid Exposure (OBOE) project, a NICHD funded multicenter project to evaluate long-term neurodevelopmental outcomes and structural brain changes by MRI in infants exposed to...
opioids in the perinatal period. Additionally, Dr. Ambalavanan is a co-PI, with Dr. David Askenazi. UAB Division of Pediatric Nephrology, on an U34 on acute kidney injury in neonates, and is an investigator on multiple other NIH-funded projects, including a R44 on a lab-on-chip project for multiple acute kidney injury biomarkers.

There are many ongoing extramurally funded projects with a research focus on bronchopulmonary dysplasia (BPD). Vivek Lal, M.D., is funded by an American Heart Association Scientist Development Grant and a new K08 to evaluate the role of the neonatal airway microbiome in the development of BPD. Jegen Kandasamy, M.D., has been awarded a research grant by the American Thoracic Society (ATS) to evaluate the role of mitochondria in hyperoxia-induced lung injury and BPD. Sam Gentle, M.D., and Rakesh Patel, Ph.D., UAB Department of Pathology, received R21 funding to evaluate the oral microbiome in preterm infants in relation to nitric oxide metabolism.

The division participates in quality improvement activities and research through the Children’s Hospital National Consortium. Carl Coghill, M.D., serves as the site sponsor. A large multicenter effort to coordinate perioperative handoffs has completed with major efforts in post op pain control led by Allison Black, M.D., and resuscitation debriefing led by Hannah Hightower, M.D., currently in progress. In addition, the division participates in several focus groups that include mortality, BPD, neural tube defects, gastrochisis, and NEC.

Nitin Arora, M.D., received funding through a P30 from NIAID & UAB Center for AIDS research (CFAR) to evaluate the effect of CART therapy on placental morphology and pregnancy outcomes; and a K01 grant to evaluate the interaction between Cytomegalovirus (CMV) and the maternal-fetal interface. Dr. Arora also invented solutions to UAB’s reusable personal protective equipment.

In collaboration with the UAB Department of Anesthesiology, the division also conducts research funded by the CounterACT Network of the NIH. The CounterACT network operates under the oversight of the Office of Biodefense Research and Surety (OBRS), and its main goal is to bolster medical readiness to care for victims of mass casualties by chemical threat agents. Tamas Jilling, M.D., is co-principal investigator, along with Sadis Matalon, Ph.D., UAB Department of Anesthesiology, of a U01 grant awarded by the CounterACT Program to perform preclinical studies in multiple animal models, to test the therapeutic efficacy of tadalafil (Cialis) as a countermeasure against pregnancy-specific toxicity of bromine gas inhalation.

Maran Ramani, M.D., was accepted into the Executive Master of Science in Health Administration (MSHA) program at UAB, CAHME-accredited and currently ranked as the #1 health care management graduate program in the country by U.S. News & World Report. The program is designed to prepare health professionals for senior management positions throughout the health field. Through this two-year program, Dr. Ramani is gaining new expertise in leadership, marketing, health economics, health policy, operational management, epidemiology, quality improvement, change management, strategic planning, and human resources management. With his new knowledge, he plays a key role in our division to achieve our vision and develop new strategic plans for the future.

Ariel Salas, M.D., is funded by a K23 grant from the NICHD. His research work aims to optimize quantitative and qualitative outcomes of growth and neurodevelopment in extremely preterm infants. He leads the Infant Nutrition Service Center which monitors body composition, nutritional practices, and growth of term and preterm infants before and after hospital discharge. Several research & QI projects from the UAB Division of Neonatology and the UAB Division of Maternal-Fetal Medicine are coordinated through this center.

Kent Willis, M.D., joined our division in July 2020 with the programmatic goal of studying the role of the mycobiome and gut-lung axis in BPD, and is now funded by a K08 from the NIH NHLBI and the UAB Microbiome Center.

Vivek Lal, M.D., founded new Birmingham-based cardio-respiratory health innovation platform company, ResBiotech. The company will focus on the invention, creation and monetization of medical technologies to solve major health challenges. ResBiotech’s first product will be ResBiotic, a proprietary personalized anti-inflammatory probiotic developed by Dr. Lal’s Pulmonary Microbiome Lab at UAB. ResBiotic, currently in preclinical development, will be given as a wellness supplement and pharmacobiotic drug therapy for respiratory illnesses in people of all ages.

2020 PUBLICATIONS


EXTRAMURAL AWARDS & LEADERSHIP ROLES

Namasivayam Ambalavanan, M.D.
• Dr. Ambalavanan won the 2020 Dean’s Excellence Award for Research, Senior Faculty.

Nitin Arora, M.D.
• Dr. Arora was the recipient of NIAID/NCATS Congenital and Perinatal Infections Consortium (CPIC) Pilot Award for his project, “Impact of human cytomegalovirus (HCMV) on placental morphology and neonatal outcomes in primary and non-primary infected pregnancies,” October 2020.
• He was the recipient of UAB Sparkman Center for Global Health Award for his project, “Characterizing the burden of congenital cytomegalovirus in Uganda” July 2020.
• He was the recipient of a Kaul Pediatric Research Institute (KPRI) award for his project “Interaction Between HCMV and FcRn to Understand Viral Transcytosis Across the Maternal-Fetal Interface.”

Allison Black, M.D.
• Dr. Black received the August 2020 Golden Collaborative Award for her leadership of her team in their Children’s Hospital Neonatal Consortium (CHNC) project, ERASE Post Op Pain, a developed algorithm for standardized post-operative pain management which has seen a twenty percent decrease in pain failures with no need for assisted ventilation.

Wally Carlo, M.D.
• Dr. Carlo was recognized for his service and commitment to the department and Children’s of Alabama with a named professorship the Waldemar A. Carlo Endowed Professorship in Clinical Neonatology.
• He was named as invited member to International Society of Global Health (ISoGH).
• He was named an invited member to National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) Data Safety Monitoring Board (DSMB) for “TNF-alpha Blockage with Certolizumab to Prevent Pregnancy Complications in High-Risk patients with APS” study.
• He was a recipient of invited editorial board member for Children.

Carl Coghill, M.D.
• Dr. Coghill was named the first holder of the Waldemar A. Carlo, M.D., Endowed Professor in Clinical Neonatology. This endowed professorship recognizes the compassionate patient care and superior teaching Dr. Coghill exhibits.

Samuel Gentle, M.D.
• Dr. Gentle was recipient of a Kaul Pediatric Research Institute (KPRI) award for his investigation entitled, “Reducing Adverse Delivery Outcomes Through Teleneonatology: a Feasibility Study.”

Ariel Salas, M.D.
• Dr. Salas was selected for the Pediatric Research November Issue Early Career Investigator Highlight by the Society for Pediatric Research.

Brian Sims, M.D.
• Dr. Sims was elected to the American Pediatric Society.

Nora Switchenko, M.D.
• Dr. Switchenko was accepted to the CCTS Clinical and Translational Science Training Program.

Kent Willis, M.D.
• Dr. Willis was accepted to the CCTS Clinical and Translational Science Training Program.

Maran Ramani, M.D.
• Dr. Ramani was selected to serve as Financial Committee Member to the Newborn Brain Society.
• He was accepted to membership of the Pediatric Research Society.

2020 NEW FACULTY

Viral Jain, M.D.
Assistant Professor

Kent Willis, M.D.
Assistant Professor

Nora Switchenko, M.D.
Assistant Professor

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NEONATOLOGY FELLOWSHIP PROGRAM

The UAB Neonatology Fellowship Program provides an excellent educational, clinical and research experience to help train the next generation of academic neonatologists. Our program provides ample experience and instruction to enable our fellows to develop special competence in the management of critically ill neonates. Fellows are also provided with instruction in the psychosocial implications of disorders of the fetus, neonate, and young infant, as well as in the family dynamics surrounding the birth and care of a sick neonate. As part of their training, fellows are also involved in a regional program that includes outreach education, patient consultation, and transport of ill neonates. The program also places an emphasis on excellence in basic science and clinical research with up to two thirds of the fellowship time dedicated to research. The program offers a robust curriculum of educational conferences and seminars opportunities for fellows. These include: Neonatal Patient Management Conferences, Perinatal Grand Rounds, and Developmental Physiology and Pathophysiology Seminars that are held weekly and Perinatal Mortality Conferences, perinatal journal clubs, and research seminars that are held monthly.

2020-2021 Fellows
Jacqueline Razzaghy, M.D.
First Year Fellow
Residency: Greenville Health System

Lucy Weaver, M.D.
First Year Fellow
Residency: University of Alabama at Birmingham

Zaki Yazdi, M.D.
First Year Fellow
Residency: Medical University of South Carolina

Amelia Freeman, M.D.
Second Year Fellow
Residency: University of Alabama at Birmingham

Vivek Shukla, M.D.
Second Year Fellow
Residency: SUNY (The State University of New York), Downstate, New York

Mary Silverberg, M.D.
Second Year Fellow
Residency: University of Alabama at Birmingham

Snehashis Hazra, M.D.
Third Year Fellow
Residency: Brookdale University Hospital Medical Center, Brooklyn, New York

Bianca Vamesu, M.D.
Third Year Fellow
Residency: Driscoll Children’s Hospital, Corpus Christi, Texas

Nazia Kabani, M.D.
Fourth Year Fellow
Combined Pediatric Infectious Disease/Neonatology
Residency: University of Alabama at Birmingham (UAB)

Program Directors
Namasivayam Ambalavanan, M.D.
Program Director

Manimaran Ramani, M.D.
Associate Program Director

Program Coordinator
Debbie Svensson
PEDIATRIC FACULTY

Dr. Daniel Feig .................................................. Director | Professor
Dr. David Askenazi ........................................... Professor
Dr. Erica Bjornstad ............................................. Assistant Professor
Dr. Sahar Fathallah-Shaykh ................................. Professor
Dr. Michael Seifert ........................................... Associate Professor
Dr. Tennille Webb ........................................... Assistant Professor

FEATURED RESEARCH

The UAB Division of Pediatric Nephrology leads research efforts in drug discovery and pharmacokinetics, as well as the assessment, progression and treatment of acute and chronic kidney disease in children.

David Askenazi, M.D., MSPH, is the director of the Pediatric and Infant Center for Acute Care Nephrology (PICAN). PICAN seeks to understand and improve outcomes in neonates and children who are at risk for abrupt kidney failure. Several ongoing projects highlight the ongoing mission. For example, PICAN pioneered the use of an adapted machine here at UAB/COA to treat neonates and premature infants with kidney failure who were too small for hemodialysis. The team has published single-center and multi-center reports on the use of this therapy in neonates and small children. As a result of this work, children as small as 1 kg can now receive this lifesaving therapy. With the publication of these results, this technology is now being used at over 10 major children’s hospitals across the country, including Cincinnati Children’s Hospital Medical Center, St. Louis Children’s Hospital, Children’s Hospital of Philadelphia and Seattle Children’s Hospital. Dr. Askenazi works with other faculty at UAB as they develop a novel external urine collection device for neonates, reduce harm from medications in children, and improve our understanding of novel urine tests for acute kidney injury. Dr. Askenazi is the founder and chair of the Neonatal Kidney Cooperative which studies the causes and outcomes of acute kidney injury in neonates. In collaboration with Daniel Feig, M.D., Ph.D., and members of the Hematology Section of the UAB Division of Pediatric Hematology/Oncology, Dr. Askenazi is also investigating the causes of renal impairment in patients with sickle cell disease.

Dr. Feig leads the Childhood Hypertension Program which has identified critical mechanisms involved in the development of adolescent onset essential hypertension, as well as the risk factors associated with hypertensive target organ damage. Previous clinical trials have demonstrated that elevated serum uric acid causes vascular damage and activation of the renin angiotensin system, resulting in high blood pressure that can be mitigated by uric acid-lowering therapy. The SURPHER (Serum Uric acid Reduction to Prevent HypERtension) trial is an ongoing study to assess the effectiveness of uric acid reduction in lowering blood pressure in young adults. This study found that even mild hyperuricemia results in increased risk for hypertension and chronic kidney disease in patients with type 2 diabetes through vascular injury associated mechanisms. It has also shown that reduction of serum uric acid causes and improvement the function of the endothelium, the lining of blood vessels.

A new branch of research, in collaboration with faculty in the School of Public Health, is the evaluation of the impact of early life stress on the development of vascular dysfunction that leads to hypertension and renal disease.

Sahar Fathallah, M.D., serves as medical director of dialysis and is the site investigator for nearly a dozen nationwide studies aimed to improve the care of children with chronic kidney disease and those requiring dialysis. She works tirelessly to improve the care of children with renal disease.

Michael Seifert, M.D., M.S.C.I., investigates ways to improve long-term outcomes in children who receive kidney transplants. In a seminal study, he has demonstrated that early immunologic activation, seen on surveillance kidney transplant biopsies, predicts long-term complications even before changes in laboratory values. These findings will alter how many programs monitor children with kidney transplants. His current NIH-funded studies are aimed at identifying biomarkers of kidney transplant dysfunction and new therapeutic targets to mitigate late transplant failure. He also leads the research efforts of a national quality improvement network [Improving Renal Outcomes Collaborative (IROC)] focused on reducing cardiovascular risk and rejection while improving quality of life for pediatric kidney transplant recipients. His efforts have resulted in the use of standardized protocols to control blood pressure and reduce late rejection in children with kidney transplants.
Tennille Webb, M.D., is collaborating with investigators in the Cardiac Intensive Care Unit to better understand the alterations in perfusion, cytokines and inflammation that lead to acute kidney injury in patients undergoing cardiac surgery. The goal of her program is to reduce complications, hospital time and morbidity and improve survival in these critically ill children.

Erica Bjornstad, M.D., Ph.D., M.P.H., continues her research and educational initiatives to improve kidney health worldwide, collaborating with UAB partners in Zambia. She strives to understand the epidemiology and risk factors of acute kidney injury in low-resource areas, such as Zambia. Her early work in Malawi demonstrated that there may be a promising bedside dipstick to triage those most at risk for kidney injury and bad outcomes in trauma patients. She also has been active in 2 large international registries to understand the impact of COVID-19 on kidney injury in children and adults.

In addition to these programs, the Division of Pediatric Nephrology has a robust portfolio of quality improvement efforts. On a local level we have projects that address two of the most severe complications of dialysis, anemia and hyperparathyroidism, and important aspects of renal transplantation including immune suppression medication titration, management of opportunistic viral infections and pre-clinic planning to improve efficiency and medication adherence.

2020 PUBLICATIONS


Pediatric Transplantation. 2020 Sep 1;1;3811. Promoting cardiovascular health post-transplant through early diagnosis and adequate management of hypertension and dyslipidemia. Chamaya O, Seifert ME.

PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

We are also involved in leadership of national quality improvement efforts..

IMPROVED RENAL OUTCOMES (IROC)

IROC is a national consortium of 17 pediatric renal transplantation programs. Generous donations have allowed us to both participate and lead aspects of this program. We have automated data collection that is now monitoring over 30 benchmark issues. We have initiated intervention programs aimed at improving blood pressure (BP) control after transplant, which is critical for organ longevity, and standardization of immune suppression induction. Upcoming projects include standardization of post-transplant biopsy schedules and therapy of asymptomatic acute rejection episodes that may presage future graft dysfunction.

Michael Seifert, M.D., leads the IROC Research Committee and is on the governance board.

STANDARDIZATION CARE TO IMPROVE OUTCOMES IN PEDIATRIC END STAGE RENAL DISEASE (SCOPE)

SCOPE is a collaborative of 78 pediatric nephrology programs to prevent infections in peritoneal and hemodialysis patients using large-scale collaboration to identify and disseminate effective interventions across pediatric care settings. In the past year, since we have joined SCOPE, our dialysis associated infection rates have fallen over 25%. This represents substantial cost savings and prevention of numerous infection related hospitalizations.

Sahar Fathallah, M.D., medical director of the Pediatric Renal Dialysis Unit, leads the local chapter.

NEGATION OF RENAL INJURY BY JUST-IN-TIME ACTION (NINJA)

NINJA is a collaboration between Children’s of Alabama and Cincinnati Children’s Hospital in which hospitalized patients receiving medications that can cause kidney injury are automatically identified by using the electronic medical record system and scheduled for dose adjustments and increased renal function surveillance. The rate of acute renal injury in inpatients has been decreased by over 60% resulting in substantially decreased morbidity across the hospital and reduced hospitalization duration. A very recent application of this program in the Neonatal Intensive Care Unit, a project only done at Children’s of Alabama has nearly eliminated medication associated acute kidney injury in our most vulnerable premature infants. The NINJA program has been so successful that in 2018 it will be the first new program added to the Solutions of Patient Safety consortium and instituted at 147 children’s hospitals worldwide.

David Askenazi, M.D., MPH, leads our site.

EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

David Askenazi, M.D.

- Dr. Askenazi is section editor for Acute Kidney Injury, Pediatric Nephrology, the Journal of the International Pediatric Nephrology Association.

- He holds a U34 Grant from National Institute for Digestive, Diabetes and Kidney Diseases to establish a consortium to study outcomes following acute kidney injury in neonates.

- He is the founder and chair of the Neonatal Kidney Cooperative which studies the causes and outcomes of acute kidney injury in neonates.
• He launched the NICKS (Neonatal and Infant Course on Kidney Support) program that shares our expertise and experience in caring for neonates with kidney disease with Renal and Neonatal staff world-wide.
• He had developed the Zorro-Flow, non-invasive neonatal urine collection device and has received funding from the Bill L. Harbert Institute for Innovation and Entrepreneurship to support the project.
• He was appointed to the KDIGO (Kidney Disease Improving Global Outcomes) AKI Steering Committee.
• He was selected to serve on International Pediatric Nephrology Association (IPNA) Special Projects Subcommittee.

Erica Bjornstad, M.D.
• Dr. Bjornstad was appointed to the ASPN (American Society of Pediatric Nephrology) Global Health Committee.
• She was appointed to the UAS School of Medicine Global Health Program Steering Committee.
• She was appointed to the KDIGO (Kidney Disease Improving Global Outcomes) Global Health Steering Committee.

Sahar Fathallah, M.D.
• Dr. Fathallah launched the “Food as Medicine,” dietary assistance program, for children with end stage renal disease. This program is supported by the “Children’s Table,” annual fundraiser, as well as numerous regional celebrity chefs.

Daniel Feig, M.D.
• Dr. Feig was elected to the American Academy of Pediatrics Section on Nephrology Executive Council.
• He served as chair of the American Board of Pediatrics, Nephrology Sub-Board Chairman. His two-year term ended Dec. 2019 and he now serves as a member of the Content Development Team for Maintenance of Certification in Pediatric Nephrology (MOCA-PedNeph).
• He is chair of the International Congress on Hypertension in Children and Adolescents in Warsaw, Poland, on May 24-26, 2019 and March 12-14, 2021.
• He is Education Chairman for the International Pediatric Hypertension Association.
• He is on the Program Committee for the Pediatric Academic Societies 2012-2021.
• He is a member of the Center for Clinical and Translational Science and serves on its executive committee.

Michael Seifert, M.D., M.P.H.
• Dr. Seifert is the chair for the Improving Renal Outcomes Collaborative (IROC) Research Committee.
• He was appointed Medical Director, Pediatric Renal Transplant Program, UAB and Children’s of Alabama as of October 2019.
• He became the leader of the Biorepository Core for the O’Brien Center for Acute Kidney Injury Research at the UAB School of Medicine in 2020.

Tennille Webb, M.D.
• Dr. Webb received a Loan Repayment Program award from the National Institutes of Health. She receives her award through the National Institute of Diabetes and Digestive and Kidney Diseases.

PEDIATRIC NEPHROLOGY FELLOWSHIP PROGRAM

The UAB Pediatric Nephrology Fellowship Program has been fully accredited for over 20 years. Our program combines an interdisciplinary experience in clinical training and collaborative research opportunities to train the next generation of academic pediatric nephrologists. The first year of fellowship concentrates on clinical training offering fellows exposure to a variety of patient experiences with intensive research training in the second and third years.

Our available research collaborations across UAB encompass basic science and adult and pediatric nephrology. Fellows have access to additional program training resources at the O’Brien Center, the UAB Comprehensive Transplant Institute, Health Disparities Research Center, and the Pediatric and Infant Center for Acute Nephrology (PICAN), along with the possibility of obtaining a master’s in public health.

2020–2021 Fellows
Kyle Deville, M.D.
First Year Fellow
Residency: University of Alabama at Birmingham

Priyanka Ameta, M.D.
Second Year Fellow
Residency: University of Florida, Pensacola

Program Directors
Daniel Feig, M.D.
Program Director
Michael Seifert, M.D.
Associate Program Director

Program Coordinator
Meagan Reagan
Dr. Alan Percy, M.D., has maintained funding and serves as the principal investigator for the multi-site Natural History Study (NHS) that initially addressed three aligned epigenetic disorders: Rett Syndrome (RTT), Prader-Willi Syndrome and Angelman Syndrome; more recently the focus has been on RTT, MECP2 Duplication disorder, and males and females with MECP2 mutations. This study is now in its final year, ending July 31, 2021.

Presently, the total group of participants represents the largest single study of individuals with classic or atypical RTT examined directly by qualified physicians and followed successively for up to at least 15 years. Over the past dozen years, numerous cross-sectional and longitudinal studies have emerged from the NHS covering a wide range of clinically relevant topics including but not limited to growth, development, phenotype-genotype correlation, seizures, awake breathing dysfunction, gastrointestinal dysfunction, scoliosis, puberty, diagnostic improvements, quality of life, clinical severity criteria, survival and emergence of parkinsonian features. Additional studies in the current iteration include neurophysiologic analysis of auditory brain stem and visual evoked responses, biomarker analyses, development of a reliable behavioral outcome measure and utilization of wearable devise to assess specific modalities including heart rate, blood pressure, respiratory patterns, stereotypic hand movements, and skin temperature. The Rett Syndrome Center of Excellence has also recruited Amitha Ananth, M.D., to serve as an investigator and clinician. In addition to the Natural History Study, Dr. Percy has begun implementation of four clinical research grants relating to treatment of various aspects of RTT. Dr. Ananth and Emily Gantz, D.O., are serving as co-site investigators in these studies. It is anticipated that Dr. Ananth will gradually assume Dr. Percy’s overall role as he prepares for retirement. Dr. Gantz is also a site investigator for the RECLAIM-DCP study, examining the effect of deutetrabenazine on dyskinetic movements in children with cerebral palsy.

Matthew Alexander, Ph.D., joined the division as a basic science investigator in 2016. The major focus of his laboratory is to study the epigenetic (non-DNA modifications) and genetic (DNA modifications) factors that regulate human neuromuscular diseases and to develop novel therapeutics for the treatment of these debilitating disorders. The laboratory takes a multi-systematic translational approach in using a combination of zebrafish and mouse disease modeling, along with using primary human samples to better understand the etiologies of these disorders and determine any potential avenues for therapeutic treatment. Duchenne Muscular Dystrophy (DMD) is the most prevalent muscular dystrophy that is studied; although there are additional projects in myotonic dystrophy type 1 (DMD1) and limb-girdle muscular dystrophy 21 (LGMD2I). Zebrafish are an excellent translational tool for use as they have low maintenance costs, high numbers of offspring (200-300 embryos per mating pair), ex vivo (outside of the womb) development and most importantly can rapidly uptake small molecules through their gills and skin during development. The laboratory performs important pre-clinical mouse testing of “hit” compounds for eventual opportunity for translational (e.g. DMD) use and applications (e.g. bench to bedside).

The success of Dr. Alexander’s lab is evidenced by the receipt of multiple NIH and industry sponsored awards, as well as participation in an institutional submission for a UAB Center for Precision Animal Modeling.

Michael Lopez, M.D., Ph.D., continues to develop a collaborative research program in pediatric neuromuscular disease, under the mentorship of Drs. Peter King and Matthew Alexander. In addition, he has assumed the role of the primary neuromuscular specialist within the division.
Dr. Lopez’ work investigating novel TGF-beta/microRNA signaling pathways associated with Duchenne muscular dystrophy pathology has led to several funding awards including an NIH pediatric loan repayment award. Kaul Pediatric Research Institute New Investigator award, and the Child Neurology Career Development Program award (NIH K12). Dr. Lopez received a Mentored Clinical Scientist Research Award (NIH K08). Dr. Lopez is also collaborating with Dr. Matthew Alexander and Dr. Liz Worthey, Division of Pediatric Hematology/Oncology, in a study aimed at solving the molecular diagnosis and identifying novel myopathy genes of a cohort of 10 patients with undiagnosed myopathies.

Tony McGrath, M.D., now serves as the pediatric resource for the national Stroke Consortium, which will be recruiting patients for a natural history study of childhood arterial ischemic stroke. Dr. McGrath was recently named the UAB site investigator for the iACQUIRE study, which will be examining the potential benefits of constraint therapy for infants with perinatal acquired arterial ischemic stroke.

Dr. McGrath functions as a consultant on the U01 HD052102-02 research cooperative addressing disease burden for HIV-infected children, and as a sub-investigator for U01 HL078787-05S1, a trial examining features of cerebrovascular events in children with sickle-cell disease. He is a sub-investigator with Jayne Ness, M.D., Ph.D., on an industry sponsored multiple sclerosis (MS) therapy trials. Finally, he is a medical monitor for a phase 1 clinical trial of a modified herpesvirus vector to treat childhood brain tumors.

As the head of the only pediatric MS center in the South, Dr. Ness has accumulated a large panel of children with a variety of demyelinating disorders. She is currently the site investigator for two industry sponsored clinical trials. One examining the safety and efficacy of tocilizumab in neuromyelitis optica spectrum disorders and the other addressing safety and efficacy of oral fingolimod versus intramuscular beta-interferon in MS.

Lydia Marcus, M.D., who serves as a co-investigator in the MS clinic and in MS clinical trials, is also a site investigator and protocol committee member for the NIAID/DMID sponsored natural history study of acute flaccid myelitis.

Leon Dure, M.D., is the coordinating investigator for an international drug treatment trial in cerebral palsy in children. This is the only study of its kind, and is now in year two of recruitment. He is also finishing an open label extension study of Adrabetadex in the treatment of Niemann-Pick Type C disease.

In collaboration with Martina Bebin, M.D., in the UAB Department of Neurology, Monisha Goyal, M.D., serves as co-PI for two NIH funded studies of tuberous sclerosis. The first involves the identification of biomarkers for autism-spectrum disorders, and the second examines EEG biomarkers as well as treatment strategies in tuberous sclerosis. Dr. Goyal is the principal site investigator for three industry-sponsored studies of the efficacy and safety of cannabidiol in Dravet syndrome and Lennox-Gastaut syndrome.

Pongkiat Kankirawatana, M.D., has focused exclusively on industry sponsored epilepsy studies. He is currently the site investigator for two studies examining lacosamide as an adjunctive therapy for partial onset seizures, as well as an intravenous equivalency study of lacosamide. He is also recruiting patients with new onset epilepsy to compare safety and tolerability of topiramate vs levetiracetam. One study of an investigational drug for super-refractory epilepsy has recently closed enrollment and an open label study of lacosamide safety and tolerability is in the development/regulatory stages.

Ismail Mohamed, M.D., is our representative to the Pediatric Epilepsy Research Consortium and has taken over our recruitment for a multicenter study of treatment and outcomes in infantile spasms. He is also a participant in the Experimental Program to Stimulate Competitive Research initiative examining the dynamics of seizure and memory networks.

Krisztina Harsanyi-Jilling, M.D., as a faculty member of the Sleep Center is currently collaborating with the UAB neonatology group on the NIH-funded PREVENT trial, a study in which premature infants have nocturnal polysomnograms prior to discharge and then a few months after discharge to attempt to determine normal variants and to ascertain the impact of sleep-disordered breathing in the development of chronic lung injury.

**2020 PUBLICATIONS**


Epilepsy Behav. 2020 Apr 12;107:107050. Poverty, insurance, and region as predictors of epilepsy treatment among US adults. Szafirski M, Wolfe JD, Tobias JGS, Mohamed I, Szafirski JP.


EXTRAMURAL AWARDS & LEADERSHIP ROLES

Matthew Alexander, Ph.D.
- Dr. Alexander received the 2020 Dean’s Excellence Award for Research, Junior Faculty.
- He was also selected to receive the 2020-2021 McNulty Civilian Scientist Award. This honor is given on behalf of the McNulty Civilian Scientist Committee and the UAB Civilian International Research Center. Dr. Alexander was selected in recognition of his excellence in neurodevelopmental disorders research and will help fund continuation of his work.

Leon Dure, M.D.
- Dr. Dure was selected to serve on the Alabama Board of Genetic Counselors.
- He is the chair the Match Committee for the Child Neurology Society.
- He was a member of the joint Program Committee for the 2020 International Child Neurology Congress.

Monisha Goyal, MD.
- Dr. Goyal serves on the National Professional Advisory Board Committee of the Epilepsy Foundation of America.
- In collaboration with the American Academy of Pediatrics and the Alabama Department of Public Health, she is also working to expand telemedicine in Alabama to children with epilepsy.

Krisztina Harsanyi-Jilling, M.D.
- Dr. Harsanyi-Jilling was appointed for a four year term to the Match Oversight Committee of the Child Neurology Society.

Kathryn Lalor, M.D.
- Dr. Lalor was selected to be a member of the NEAD Investigator Group (incl. Goyal M).
- She was recognized by the Birmingham Business Journal as an Emerging Leader in Health, Innovation, and Tech.
- Dr. Lalor was selected to be a member of the Epilepsy Foundation Alabama Chapter Professional Advisory Board.
- She was recognized by the Birmingham Business Journal as an Emerging Leader in Health, Innovation, and Tech.

2020 Academic Annual Report
Sarah Novara, M.D.

- Dr. Novara was invited to join the College of Sciences and Mathematics (COSAM) Dean’s Leadership Council at Auburn University. The Council is a diverse group of alumni who reflect the breadth of the sciences and mathematics and are models in their community.

Scott Turner, DNP

- Dr. Turner is the president-elect of the Association of Child Neurology Nurses. He is a national leader in the field of pediatric headache, leading two Quality Improvement Initiatives for the American Headache Society.

**CHILD NEUROLOGY RESIDENCY PROGRAM**

The UAB Child Neurology Residency Program is a five-year categorical residency program designed to educate and empower our residents to be well-trained, patient-centered child neurologists. As the largest pediatric referral center in the state of Alabama, our residents are exposed to a wide array of neurologic disorders in our general pediatric neurology clinics and in other clinic settings which include: the Center for Pediatric Onset Demyelinating Disorders Clinic, Tourette Syndrome Clinic/CBIT, Neurogenetics Clinic, Rett Syndrome Clinic, UAB Tuberous Sclerosis Clinic in collaboration with UAB Genetics, Ketogenic Diet Clinic, and MDA Clinic. We utilize a state-of-the-art simulation center at Children’s of Alabama to provide simulation education for our residents. Our program believes in the power of mentorship and lifelong learning and strives to ensure that our residents are well-rounded and ready for autonomous practice upon graduation.

Sarah Novara, M.D., was named program director for the UAB Child Neurology Residency Program in Fall 2020. Prior to becoming program director, Dr. Novara served as the assistant program director for the residency program. She has been in that role since starting on faculty in October 2017 and has trained in program leadership and medical education under our former program director, Dr. Tony McGrath.

**2020-2021 Residents/Fellows**

**Completing training in General Pediatric Residency Program**

- **Joshua Butler, M.D.**
  - PGY 1
  - Medical School: Medical College of Georgia

- **Destini Smith, M.D.**
  - PGY 1
  - Medical School: University of South Alabama

- **Khaled Al-Robaidi, M.D.**
  - PGY 2
  - Medical School: University of Jordan

- **Sarah Grace Engel, M.D.**
  - PGY 2
  - Medical School: Medical University of South Carolina

**Completing Child Neurology portion of training**

- **Erin McLeod, M.D.**
  - PGY 3
  - Medical School: University of Alabama at Birmingham

- **Matthew Lustig, M.D.**
  - PGY 4
  - Medical School: Medical College of Georgia

- **Katie Thaggard, M.D.**
  - PGY 4
  - Residency: Pediatrics, University of Mississippi Medical Center

- **Brittney Jones, M.D.**
  - PGY 5
  - Medical School: Howard University

**Program Director**
Sarah Novara, M.D.

**Program Coordinator**
Charmaine Echols
Pediatric Pulmonology & Sleep Medicine

PEDIATRIC FACULTY
Dr. Hector Gutierrez .......................................... Director | Professor
Dr. Guillermo Beltran Ale .................................. Assistant Professor
Dr. Jennifer Guimbellot .................................. Assistant Professor
Dr. Tom Harris ........................................... Associate Professor
Dr. Wyn Hoover .................................................. Professor
Claire Lenker, LICSW .................................. Associate Professor
Dr. Isabel Lowell ........................................... Professor
Dr. Mary Halsey Maddox .................................. Associate Professor
Dr. Teri Magruder ........................................... Associate Professor
Dr. Anis Nourani ........................................... Assistant Professor
Dr. Gabriela Gates ........................................... Assistant Professor
Dr. Gabriela Gates ........................................... Assistant Professor
Dr. Ammar Saadoon Alishlash .................................. Assistant Professor
Dr. Brad Troxler ........................................... Associate Professor
Dr. Brett Turner ........................................... Assistant Professor

FEATURED RESEARCH
The UAB Division of Pediatric Pulmonology and Sleep Medicine maintains a broad research portfolio that complements the clinical programs, with focus areas in aerodigestive disorders, asthma, bronchopulmonary dysplasia (BPD), cystic fibrosis (CF), neuromuscular disorders (NMD), sleep medicine, and sickle cell disease (SCD).

AERODIGESTIVE DISORDERS
Tom Harris, M.D., founded the Children’s of Alabama Aerodigestive Program. It provides multidisciplinary care for children with feeding and respiratory issues. Guillermo Beltran Ale, M.D. joined the program in 2020. Current clinical research projects include investigating the optimal medical management of dysphagia, surgical correction of laryngeal defects, and quantifying the prevalence of eosinophilic esophagitis in children with chronic cough.

ASTHMA
The program is led by Terri Magruder, M.D., MPH, and Isabel Virella-Lowell, M.D. It oversees the care of over 3,000 patients, many of them with severe or difficult to treat asthma.

Dr. Magruder, in collaboration with UAB Division of Pulmonary and Critical Care Medicine, is an investigator on the recently funded NIH P42 Grant Impact of Airborne Heavy Metals on Lung Disease and the Environment. This project focuses on investigating asthma in children exposed to heavy metals in north Birmingham. She is also collaborating with UAB School of Public Health faculty to investigate the health care utilization patterns of pediatric Alabama Medicaid recipients who have asthma.

Dr. Magruder works in collaboration with Division of Pediatric Hospital Medicine to lead the inpatient asthma clinical pathway at Children’s of Alabama. This quality improvement initiative is entering its 10th year and has shown sustained improvement in reducing asthma length of stay and improved care consistency for children requiring hospitalization.

Dr. Lowell is the pediatric principal investigator for the American Lung Association’s Airways Clinic Research Center (ACRC) at UAB. The ACRC is a network of 35 clinical research centers around the nation dedicated to asthma and chronic obstructive pulmonary disease (COPD) research. Dr. Lowell works with the other network members to help design and implement asthma clinical trials to advance our understanding and management of this prevalent airway disease. She is currently the principal investigator on an ACRC study looking at improving adherence to treatment in asthma utilizing telehealth care medication therapy management.

Drs. Lowell and Magruder have also helped design a comprehensive database to track the division’s pediatric asthma patients. This database is used to track individual and collective patient outcomes, provide data for quality improvement projects, and identify potential subjects for clinical research trials.

BRONCHOPULMONARY DYSPLASIA.
Brett Turner, M.D., leads the bronchopulmonary dysplasia (BPD) program. This academic clinical initiative aims to provide the highest quality evidence-based, interdisciplinary, family-centered care for infants and children with BPD and other chronic lung diseases of infancy and improve their health and developmental outcomes. Currently, the program serves between 150 and 175 unique patients per year, referred locally from the neonatal intensive care units at UAB and Children’s of Alabama, along with community nurseries around the state. Specific quality improvement initiatives aimed at improving transition success from the inpatient to outpatient settings and reducing nutritional failure are ongoing and focus on enhancing caregiver education surrounding the child’s disease.
and their specific needs. Evaluation of infants’ long-term pulmonary outcomes in the program is achieved through a robust clinical database of more than 900 infants and over 4000 individual clinical encounters. A recent collaboration with Samford University McWhorter School of Pharmacy Capstone Project has evaluated the role of inhaled corticosteroids in reducing hospitalization rates and the need for systemic steroids.

**CYSTIC FIBROSIS**

*Gabriela Oates, Ph.D.*, conducts research on the social determinants of health in cystic fibrosis and other chronic diseases. She integrates individual and area-level measures of the socioeconomic environment with clinical data for health services and outcomes research. She investigates the contribution of tobacco smoke exposure for cystic fibrosis disease progression and leads studies on cystic fibrosis self-management and patient-centered care using mobile health (mHealth) tools. This work is supported by grants from the Cystic Fibrosis Foundation, the National Institutes of Health, and the Kaul Pediatric Research Institute.

*Tom Harris, M.D.*, investigates novel targets for therapeutic intervention in cystic fibrosis (CF). He currently focuses on microRNA (miRNA) which are small (~22 base pair) non-coding nucleotide sequences that destabilize messenger RNA transcripts and inhibit protein translation. Dr. Harris discovered that miR-145 impedes CFTR expression and response to CFTR directed therapeutics. miR-145 antagonists improve efficacy of CFTR modulators. With the miR-145 binding sequence on CFTR known, Dr. Harris is now pursuing the refined approach of utilizing antisense oligonucleotides (ASOs) to block the miR-145 target on F508del CFTR. He is now extending these investigations to additional genotypes and therapeutic approaches including nonsense mutations for which no FDA approved therapies are currently available. His work in CF-related miRNA recently have attracted support from the Cystic Fibrosis Foundation (CFF) and National Institutes of Health (NIH) support to trial miRNA antagonists and miRNA target site blockers in CF animal models. Dr. Harris has also led several pharmaceutical trials of CFTR correction at UAB that have led to FDA approval in the pediatric population.

*Jennifer Guimbellot, M.D., Ph.D.*, studies personalized medicine for cystic fibrosis. Her CFF and NIH K23 - supported research involves individualized pharmacokinetic analysis and pharmacogenomics approaches to gain insights into tailoring modulator therapy to provide maximal therapeutic benefit for every CF patient. Her team has also developed multiple personalized models for predicting the effectiveness of CFTR modulators in CF patients and those with acquired CFTR dysfunction. Using cells from the nose, lower airway and sweat gland, her laboratory continues to develop minimally invasive, personalized models for individuals with pulmonary disease. She has had support from the Cystic Fibrosis Foundation (CFF), the National Institutes of Health (NIH), and the Kaul Pediatric Research Institute to develop these models.

*Hector Gutierrez, M.D.*, leads the Cystic Fibrosis Clinical Center. His research objectives are to implement and investigate quality improvement, outcomes measurement, and management of both clinical and non-clinical processes using CF as a model to improve the quality and value of clinical care, which ultimately results in greater survival. By applying quality improvement methodologies, assessment and optimization of care processes, and team functioning, his work has demonstrated significant improvement in CF’s key measures of clinical outcomes. This work is supported by grants from the Cystic Fibrosis Foundation and the Kaul Pediatric Research Institute.

*Isabel Lowell, M.D.*, is the pediatric director of the Cystic Fibrosis Therapeutics Development Network and the Airways Clinical Research Center at UAB. She is a PI on a number of large multiclinical trials in cystic fibrosis looking at new therapies, the expansion of highly effective modulator therapies and the simplification of CF respiratory care. She also is involved in smaller trials looking at adherence in asthma, self-efficacy in cystic fibrosis, infection control measures in cystic fibrosis and the relationship between oral disease and lung disease in cystic fibrosis.

**NEUROMUSCULAR DISORDERS**

*Bradley Troxler, M.D.*, leads the Muscular Dystrophy Care Center and the CureSMA Care centers. These centers provide care to greater than 300 patients annually and provide the latest disease-modifying therapies, including gene therapy, risdiplam, nusinersen and exon-skipping therapy. This multi-specialty program offers exemplary care to these patients.

**SICKLE CELL DISEASE**

*Ammar Saadoon Alishlash, M.D.*, in collaboration with the UAB Division of Pediatric Hematology/Oncology, launched the Sickle Cell Pulmonary Program at Children’s of Alabama, which encompasses both basic research and clinical components. Dr. Alishlash’s lab investigates the pathogenesis and management of pulmonary complications of Sickle Cell Disease (SCD). He uses SCD mouse model in collaboration with the UAB Division of Pediatric Hematology/Oncology, launched the Sickle Cell Pulmonary Program at Children’s of Alabama, which encompasses both basic research and clinical components. Dr. Alishlash’s lab investigates the pathogenesis and management of pulmonary complications of Sickle Cell Disease (SCD). He uses SCD mouse model to investigate the mechanisms and therapeutic approaches of acute chest syndrome and SCD-associated pulmonary hypertension. The clinical component involves screening, developing protocols and treating SCD patients for pulmonary complications such as asthma, pulmonary hypertension, acute chest syndrome and sleep disordered breathing. Dr. Alishlash has a designated clinic for SCD patients with pulmonary disorders.

**SLEEP MEDICINE**

*Brad Troxler, M.D.*, is the medical director of the Children’s of Alabama Sleep Disorder Center. This Center annually performs around 2,000 pediatric sleep studies and provides clinical care to hundreds of patients each year. The Sleep Center faculty (Dr.s Mary Halsey Maddox, Pedro Anis Nourani, and Brad Troxler) are currently involved in NIH funded research to ascertain the impact of sleep-disordered breathing in the development of chronic lung injury in premature infants with Dr. Ambalavanar (UAB Neonatology). *Mary Halsey Maddox, M.D.*, is working with the Neurosurgery Department to evaluate the impact of sleep-disordered breathing on patients with Chiani malformations and spina bifida.

**OTHER RESEARCH**

*Hector Gutierrez, M.D.*, is a co-investigator on Dr. Akila Subramaniam’s (PI, UAB Division of Maternal-Fetal Medicine) NIH-funded study Childhood Pulmonary and Related Outcomes after Pernatal Exposure to Adjunctive Azithromycin Prophylaxis for Cesarean Delivery: C/SOAP Follow-up Study. The study hypothesizes that perinatal exposure to adjunctive azithromycin compared to standard cesarean prophylaxis alone is not associated with increased childhood pulmonary morbidity by age seven.
Gabriela Oates, Ph.D. received funding to conduct high-impact COVID-19 research from the UAB Research Office. She is also an investigator of two COVID-19 studies funded by the National Institutes of Health: (1) the Alabama Community-Engagement Research Alliance Against COVID-19 (Alabama CEAL), which will help increase enrollment in COVID-related clinical trials among disproportionately affected populations; and (2) the COVID-19 Testing Model among Vulnerable Populations: From Community Engagement to Follow-Up, which will implement a three-component mobile community-based COVID-19 testing model and evaluate its impact for improved access, acceptance, uptake, and follow-up to testing.

2020 PUBLICATIONS

BOOK CHAPTERS

PEER REVIEWED ARTICLES


PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

Hector Gutierrez, M.D., and Gabriela Oates, Ph.D., are co-PIs of the Cystic Fibrosis Foundation funded CF Training Network: Latin America, a quality improvement initiative. It is aimed to train multidisciplinary CF teams in Latin America in three critical aspects: delivery of evidence-based CF care adapted to local healthcare settings, the establishment of a CF patient registry and data infrastructure to support such care, and engagement and education of the local CF patient community and stakeholders. The network is developing and implementing a structured, sustainable training program for CF centers in Latin America, starting with teams from Chile, Argentina, and Mexico. Teams from other Latin American countries have started collaborative work with CFTN-LA member centers.

Dr. Gutierrez is the site PI for the Cystic Fibrosis Foundation Cystic Fibrosis Learning Network (CFLN), a 30+ academic CF clinical center consortium. This initiative is a network-based learning health system. It aims to share purposes and outcomes, build community, facilitate the effective use of technology (with enhanced registries, commons, social media), and enriches a learning system. Dr. Gutierrez is the site PI for the Cystic Fibrosis Foundation Cystic Fibrosis Learning Network (CFLN), a 30+ academic CF clinical center consortium. This initiative is a network-based learning health system. It aims to share purposes and outcomes, build community, facilitate the effective use of technology (with enhanced registries, commons, social media), and enriches a learning system. CFTN-LA member centers.

Dr. Oates is also the site PI of the CF Foundation/Boston Children's Hospital study, Feasibility of a Mobile Medication Plan Application with Therapies Research Consortium, which tests interventions that enhance adherence to therapies and self-management of cystic fibrosis.

Dr. Oates is also the site PI of the CF Foundation/Boston Children’s Hospital study, Feasibility of a Mobile Medication Plan Application with Therapies Research Consortium, which tests interventions that enhance adherence to therapies and self-management of cystic fibrosis.

EXTRAMURAL AWARDS, RECOGNITION & LEADERSHIP ROLES

Jennifer Guimbellot, M.D., Ph.D.

• Dr. Guimbellot continues to serve as a member of the American Academy of Pediatrics Section on Clinical Pharmacology and Therapeutics (SOPCT) Executive Committee. Her three-year term began on November 1, 2019 and run through 2022.
• Dr. Guimbellot also co-chaired and was an invited speaker in the the “Challenges in Precision Medicine” symposium at the 2020 North American Cystic Fibrosis Conference.
• She is a member of the planning committee for the Cystic Fibrosis Foundation Career Development Retreat 2020 and a workshop leader.
• She was selected for the inaugural class of the Children’s of Alabama (COA) Scholars Program. The COA Scholars Program was created to acknowledge and support the academic efforts of junior faculty in the Department of Pediatrics. This program is providing funding to support academic and scholarly enrichment activities of the faculty selected for the program.

Hector Gutierrez, M.D.

• Dr. Gutierrez is the co-chair of the Cystic Fibrosis Foundation (CFF) Global Advisory Committee. The committee’s goal is to provide expertise, assistance with implementation science, and innovative strategies to improve clinical outcomes.
• He is also a member of the CFF’s taskforce for an International Minimal Dataset in CF Registries.
• He is part of a research group examining the COVID-19 data in CF Registries, a combined effort of the CFF, The UK CF Trust, and the European Cystic Fibrosis Society.

Wyn Hoover, M.D.,

• Dr. Hoover was invited to serve on the Cystic Fibrosis Foundation Advisory Board and CF Foundation Professional Education Committee.
• Dr. Hoover is also completing his 5th year on the UAB School of Medicine Admissions Committee.

Other Publications


Gabriela Oates, Ph.D.

- Dr. Oates was invited to chair the Cystic Fibrosis Foundation Food Insecurity Committee and to serve as Advisor in the Cystic Fibrosis Foundation Racial Justice Working Group.
- She also serves on the Cystic Fibrosis Foundation Mobile Health Working Group.

Hector Gutierrez, M.D.

- Dr. Gutierrez is the co-chair of the Cystic Fibrosis Foundation (CFF) Global Advisory Committee. The committee's goal is to provide expertise, assistance with implementation science, and innovative strategies to improve clinical outcomes.
- He is also a member of the CFF’s taskforce for an International Minimal Dataset in CF Registries.
- He is part of a research group examining the COVID-19 data in CF Registries, a combined effort of the CFF, The UK CF Trust, and the European Cystic Fibrosis Society.

2020 NEW FACULTY

Guillermo Beltran Ale, M.D.
Assistant Professor

Pedro Anis Nourani, M.D.
Assistant Professor

PEDIATRIC PULMONOLOGY FELLOWSHIP PROGRAM

The UAB Pediatric Pulmonary Fellowship Program strives to train highly competent physician-educators and scientists. Our program provides the clinic knowledge necessary to diagnose and manage pediatric patients with acute and chronic respiratory disorders, including those that are life-threatening. Training in our program is complemented by our UAB Pediatric Pulmonary Center, which is one of five educational programs funded through a competitive federal grant through MCHB and HRSA that focuses on building leadership skills and promotes awareness of childhood respiratory disease. Clinical training is designed to develop the subspecialty resident’s competence in the clinical diagnosis, pathophysiology and medical treatment of respiratory disorders in pediatric patients within an interprofessional healthcare team. Clinical care is provided for children with a remarkable variety of lung diseases and breathing disorders, such as asthma, sleep-disordered breathing, apnea, central hypoventilation, cystic fibrosis, ciliopathies, bronchiectasis, interstitial lung diseases, bronchopulmonary dysplasia, bronchiolitis, pneumonia, chronic respiratory insufficiency, thoracic tumors, and congenital lung anomalies. A significant portion of training consists of scholarly activity, during which fellows develop and hone skills necessary to be successful as effective subspecialists, advocates, clinical investigators, and pulmonary scientists.

2020-2021 Fellows

Kyle Bliton, M.D.
First Year Fellow
Residency: University of Alabama at Birmingham

Mohini Gunnett, M.D.
Second Year Fellow
Residency: Children’s Hospital at Sacred Heart

C. Miles Fowler, M.D.
Third Year Fellow
Residency: Palmetto Health Children’s Hospital/University of South Carolina

Vignesh Nayak, M.D.
Third Year Fellow
Residency: University of Florida

Program Directors

Wynton Hoover, M.D.
Program Director

Brett Turner, M.D.
Associate Program Director

Jennifer Guimbellot, M.D.
Assistant Program Director

Program Coordinator

Leslie Jones
PEDIATRIC SLEEP MEDICINE FELLOWSHIP PROGRAM

The UAB Sleep Medicine Fellowship Program offers fellows clinical teaching and formal didactics provided by faculty with diverse backgrounds and expertise, evenly spanning faculty with primary training in adult/pediatric pulmonary medicine, and adult/pediatric neurology. The sleep disorder centers of UAB and Children’s of Alabama attract patients with a broad spectrum of sleep disorders, from the state and beyond, offering fellows the opportunity of first-hand experience with common and rare disorders.

2020-2021 Fellows
Ted Robinson, M.D.
First Year Fellow
Residency: Memorial Health University, Savannah

Anthony Staples, D.O.
First Year Fellow
Residency: Cleveland Clinic

Program Director
Krisztina Harsanyi-Jilling, M.D.

Program Coordinator
Leslie Jones

PEDIATRIC PULMONARY CENTER

The UAB Division of Pediatric Pulmonology and Sleep Medicine is the proud to have one of six Pediatric Pulmonary Centers (PPCs) in the nation. The purpose of the PPC is to develop leaders who will improve the health of children with respiratory conditions through the provision of family-centered care. This is accomplished through interprofessional training, patient and family care and education, research, consultation, and the provision of continuing education and technical assistance.

Dr. Brad Troxler, Claire Lenker, MSW, and Valerie Tarn, MS, RD were successful in being funded with a 5-year Maternal Child Health Bureau grant to support the PPC and to continue to provide interdisciplinary training to students in nursing, nutrition, social work, respiratory therapy, family leaders, and medical fellows.

Trainees
Jessica Allen
Family Trainee

Katelynn Twilley
Nursing Trainee

Montana Hunt
Nutrition Trainee

Tara Jones
Respiratory Therapy Trainee

Niya Bonner
Social Work Trainee

Program Directors
Brad Troxler, M.D.
Director

Claire V. Lenker, LiCsw, CCM, PIP
Co-Director

Valerie Tarn, MS, RD
Training Director

Education Coordinator
Leslie Jones
FEATURED RESEARCH

The UAB Division of Pediatric Rehabilitation Medicine seeks to generate new knowledge related to disabling conditions of childhood. Through close collaboration with the UAB/Lakeshore Research Collaborative, our division is working to develop wide-reaching interventions to improve the health and wellness of children with physical impairments through sports, fitness, recreation and lifestyle interventions.

The division had a highly productive research year. Notable achievements included three publications that summarized the current state of leisure-time physical activity (LTPA) research for children with disabilities:

1. a review of reviews synthesizing the highest level evidence to identify knowledge gaps, promising intervention elements, and research priorities;
2. a scoping review of the current effects and inclusivity of randomized controlled trials of LTPA interventions for children and adults with cerebral palsy; and
3. a book chapter summarizing physical inactivity among children with disabilities from an epidemiological perspective. These publications created a knowledge foundation that will drive further LTPA intervention research among children with disabilities and support the Division’s efforts to develop innovative interventions.

In addition to developing this knowledge base, Byron Lai, Ph.D., was awarded two research grants. The first award supports a pilot randomized controlled trial of home-based movement-to-music among 68 adolescents with cerebral palsy. The grant was an Early Investigator Award, provided by the American Academy of Cerebral Palsy & Developmental Medicine. Drew Davis, M.D., and James H Rimmer, Ph.D., were co-investigators on the grant. The trial is currently ongoing and the anticipated completion date is March 2021. The trial will determine whether an evidence-based movement-to-music program, developed for adults with physical disabilities, can improve physical activity levels among adolescents with cerebral palsy at home, or whether age- or disability-specific modifications are necessary. The results of this study will be used to develop a program that can be implemented in a larger effectiveness trial. Anecdotally, participants’ parents have consistently expressed a high-level of appreciation for the opportunity to maintain and improve their child’s health at the home during the COVID-19 Pandemic.

The second award, from the UAB Center for Engagement in Disability Health and Rehabilitation Sciences (CEDHARS), will support a survey to assess levels of physical activity and the impact of COVID-19 on the lives of adolescents with cerebral palsy. Huacong (Wendy) Wen, M.D., Ph.D., postdoctoral researcher with the UAB Department of Physical Medicine & Rehabilitation, will serve as co-principal investigator on this grant. The study will use quantitative and qualitative research methods to explore general problem areas in the lives of adolescents with cerebral palsy and identify characteristics of those who are impacted the most by COVID-19. Most importantly, it will identify potential ways of addressing problem areas through telehealth, which will be pursued through further research funding.

The division has also been involved with several pilot projects that will support opportunities to seek larger grant funding in 2021. Several members of the division, including Drs. Lai and Davis, and Erin Kimani-Swanson, M.D., collaborating with Betsy Hopson, and Brandon Rocque, M.D., completed a case study demonstrating that child wheelchair users with spina bifida could independently achieve health-enhancing volumes of exercise (150 minutes of moderate-to-vigorous intensity exercise per week) at home during the COVID-19 Pandemic, using a low-cost bundle of consumer available virtual reality equipment. The success of this study led to
the creation of a home-based group virtual reality exercise program that is currently being offered by Lakeshore Foundation to child members. The one-month program is led by a Lakeshore fitness instructor and Dr. Lai. The program includes six children in one wave and rotates new children into the program each month.

The division has also built a collaboration with the Early Mobility Team in the Pediatric Intensive Care Unit, with Leslie Hayes, M.D., Maegen Powell, PT, and Ann Grace Clement, PT, to test the feasibility of virtual reality gaming among children in the ICU. Dr. Lai is also collaborating with Rhett Wheeler, PT, and Karen McCormack, OT, in the Pediatric PT/OT Therapy Department, to build both onsite and home-based virtual reality programs for its patients. This collaboration resulted in a poster project that reported the anticipated benefits of Children’s of Alabama patients who have undergone robot-assisted gait training.

Additionally, Drs. Davis and Swanson-Kimani continued to collaborate with Despina Stavrinos, Ph.D. with UAB Department of Psychology to assess safety for returning to drive in adolescents who have received a mild traumatic brain injury. This work, through collaboration with the UAB Translational Research for Injury Prevention Laboratory (TRIP Lab), resulted in the funding of an NHI RO1 grant for which Dr. Stavrinos serves as principal investigator and Dr. Davis and Dr. Swanson-Kimani serve as co-investigators. This study is at the forefront of efforts nationally to learn more about the serious consequences of mild traumatic brain injury. The division also continued collaboration with leaders in the UAB Constraint Induced (CI) Therapy Research Group to develop new applications for CI therapy. This work resulted in the publication of a manuscript outlining incorporation of CI Therapy principles in the pediatric population in conjunction with a Magic Camp for children with hemiplegia.

2020 PUBLICATIONS


EXTRAMURAL AWARDS & LEADERSHIP ROLES

Drew Davis, M.D.
- Dr. Davis continued to serve as an item writer for the American Board of Physical Medicine and Rehabilitation.

Byron Lai, Ph.D.
- Dr. Lai was awarded the American Academy of Cerebral Palsy & Developmental Medicine – Early Investigator Award
- He also received the Center for Engagement in Disability Health and Rehabilitation Sciences (CEDHARS) Disability Health During the COVID-19 Era pilot funding grant.
- He completed his service as secretary on the board of the North American Federation of Adapted Physical Activity and hosted the bi-annual virtual webinar symposium.

2020 NEW FACULTY

Cynthia Wozow, D.O.
Assistant Professor
FEATURED RESEARCH

Members of the UAB Division of Pediatric Rheumatology excel in research of cytokine storms syndromes (CSS) in the pediatric population. Randy Cron, M.D., Ph.D., and co-editor, Ed Behrens (University of Pennsylvania), recently published the first ever textbook devoted to Cytokine Storm Syndrome. The division as a whole recently published their positive experience in treating pediatric CSS with interleukin-1 (IL-1) blockade. This study included 44 patients which is the largest cohort reported to date to be treated with recombinant human IL-1 receptor antagonist (anakinra). Children’s of Alabama and UAB are currently conducting the first ever randomized, double-blinded placebo controlled trial to explore IL-1 blockade for treating children and adults with MAS and the related condition, secondary hemophagocytic lymphohistiocytosis (sHLH).

With the COVID-19 pandemic, Dr. Cron’s expertise in CSS has been timely. He recently was funded for 2 clinical trials/grants with Winn Chatham, M.D., UAB Division of Clinical Immunology & Rheumatology. The first trial is exploring the role of anakinra in treating adults COVID-19 pneumonia. As part of these trials, whole genome sequencing of patient DNA is being conducted to identify risk factors for severe COVID-19 disease, as part of a collaboration with Dr. Devin Absher (HudsonAlpha Institute for Biotechnology).

Dr. Cron’s lab also continues to explore transcriptional regulation of the HIV-1 virus (cause of AIDS) as it relates to viral latency as part of an NIH funded project in collaboration with Dr. Olaf Kutsch, UAB Division of Infectious Diseases. He also continues his clinical research in the arena of temporomandibular joint (TMJ) arthritis in children with juvenile idiopathic arthritis (JIA).

Tim Beukelman, M.D., MSCE, serves as the scientific director of the Childhood Arthritis and Rheumatology Research Alliance (CARRA) Registry. The CARRA Registry, a multicenter prospective observational registry for children with arthritis became operational in 2015 and currently has more than 70 clinical sites enrolling patients. The primary aim of the registry is to evaluate the safety of therapeutic agents used to treat pediatric rheumatic diseases, and the secondary aim is to evaluate clinical outcomes and their determinants, including treatment. Dr. Beukelman has worked closely with other members of the registry executive committee to bring the registry to fruition and encourage the performance of Phase IV safety surveillance studies that satisfy FDA requirements. Current work is focused on expanding the capabilities of the registry to allow investigator initiated observational and interventional sub-studies to be layered on the existing registry infrastructure.

Dr. Beukelman is also the principal investigator of a pharmacoepidemiology project as part of the Agency for Healthcare Research and Quality (AHRQ) funded UAB Center for Education and Research on Therapeutics (CERTs). This project aims to use administrative claims data, such as Medicaid billing data, to further evaluate the safety of medications used to treat JIA with emphasis on serious infection and malignancy risk. These studies build upon this team’s prior successful publications and will allow for longer-term follow-up of patients, as well as the examination of newer biologic agents. Recently, Dr. Beukelman, in collaboration with Dr. Jeffrey Curtis, UAB Division of Clinical Immunology and Rheumatology, was awarded a grant from PCORI to compare the effectiveness and safety of novel biologic therapies.

Matthew Stoll, M.D., Ph.D., MSCS, explores the role of the microbiota in children and adults with spondyloarthritides. He has identified various bacterial species in patients with spondyloarthritis that are protective for disease and others which contribute to the pathology. Recently, Dr. Stoll has evaluated the metabolic diversity and functions in the gut microbiomes and shown diminished function in arthritis patients versus controls, as well as alterations in tryptophan metabolism that may alter immune function to allow for autoimmunity. Dr. Stoll, along with Dr. Cron, is also an expert in temporomandibular joint (TMJ) arthritis in children with juvenile idiopathic arthritis, and Drs. Cron and Stoll continue to explore the diagnosis and treatment of this common problem in children with chronic arthritis.
Melissa Mannion, M.D., MSPH, conducts research using epidemiologic analysis related to juvenile idiopathic arthritis (JIA) for which she recently received three years of grant funding as an Investigator Award for the Rheumatology Research Foundation. Specifically, she is interested in the use of medications to treat juvenile idiopathic arthritis (JIA), the outcomes of JIA in adulthood and the comparative effectiveness of treatment modalities. Her specific research topics include the risk of malignancy associated with biologic treatments and the transition of pediatric arthritis patients to adult rheumatologic care. Dr. Mannion also employs the pediatric rheumatology national quality improvement network, PR-COIN, to address related research questions by exploring this large database.

Emily Smitherman, M.D., MSCTR, studies patient-centered outcomes with an emphasis on developing and implementing healthcare system interventions to drive improvement in outcomes. To these ends, Dr. Smitherman was awarded grants in 2019 from the Lupus Foundation of America and two from the Childhood Arthritis and Rheumatology Research Alliance. Dr. Smitherman also employs the pediatric rheumatology national quality improvement network, PR-COIN, to address related research questions by exploring this large database.

2020 PUBLICATIONS


Arthritis Rheumatol. 2020 Feb 26. Reply to letter by Dr. Schoemaker et al. Ringold S, Schrands T, Creek EL, Beukelman T, Angeles-Han ST, Lovell DJ.

Arthritis Rheumatol. 2020 Jul.72(7):1059-1063. On the Alert for Cytokine Storm: Immunopathology in COVID-19. Lauren A Henderson, Scott W Canna, Grant S Schuler, Stefano Volpi, Pui Y Lee, Kate F Kernan, Roberto Caricchio, Shawn Mahmud, Melissa M Hazen, Olha Halyabar, Kacie J Hoyt, Joseph Han, Alexei A Grom, Marco Gattorno, Angelo Ravelli, Fabrizio De Benedetti, Edward M Behrens, Scott W Canna, Grant S Schulert, Stefano Volpi, Pui Y Lee, Kate F Kernan, Roberto Caricchio, Shawn Mahmud, Melissa M Hazen, Olha Halyabar, Kacie J Hoyt, Joseph Han, Alexei A Grom, Marco Gattorno, Angelo Ravelli, Fabrizio De Benedetti, Edward M Behrens, Scott W Canna, Grant S Schulert, Stefano Volpi, Pui Y Lee, Kate F Kernan, Roberto Caricchio, Shawn Mahmud, Melissa M Hazen, Olha Halyabar, Kacie J Hoyt, Joseph Han, Alexei A Grom, Marco Gattorno, Angelo Ravelli, Fabrizio De Benedetti, Edward M Behrens, Randy Q Cron, Peter A Nigrovic.


Genes Immun. 2020 Apr 15. The genetics of macrophage activation syndrome. Schuilert GS, Cron RQ.


J Rheumatol. 2020 Aug 1;jrheum.200283. Maintaining Hepatitis B Protection in Immunocompromised Pediatric Rheumatology and Inflammatory Bowel Disease Patients. Najla Aljaberi, Enas Ghularn, Emily A Smitherman, Leslie Favier, Dana M H Dylkes, Lara A Danziger-Isakov, Rebecca C Brady, Jennifer R Huggins.


Lancet Rheumatol. 2020 Jul 27:e370-e371. Coronavirus is the trigger, but the immune response is deadly. Randy Q Cron.


PARTICIPATION IN NATIONAL AND REGIONAL RESEARCH COLLABORATIVES, QUALITY IMPROVEMENT PROJECTS AND LEARNING NETWORKS

Timothy Beukelman, M.D, MSCE, serves as the scientific director of the North American Childhood Arthritis and Rheumatology Research Alliance (CARRA) disease registry.

Melissa Mannion, M.D, MSPH, and Emily Smitherman, M.D, MSCTR, serve on the national quality improvement network, Pediatric Rheumatology Care and Outcomes Improvement Network Quality Improvement (PR-COIN).

Randy Cron, M.D, Ph.D, is a core/founding member of the Macrophage Activation Syndrome Collaborative (MASC: Harvard University, University of Pennsylvania, University of Pittsburgh, University of Cincinnati, UAB) which is a newly formed quality improvement and research network. He also founded the research network, Pediatric Rheumatology of the South (ProS), in 2019.

2020 Academic Annual Report
**EXTRAMURAL AWARDS & LEADERSHIP ROLES**

**Timothy Beukelman, M.D., MSCE**
- Dr. Beukelman is an editorial board member for the journals, *Arthritis Care & Research*, and *Journal of Rheumatology*.
- He also gave an invited lecture at the 2020 Pediatric Rheumatology European Society (PRES) meeting on “Clinical trials – what they tell us and what they don’t”.

**Randy Cron, M.D., Ph.D.**
- He received a Letter of Recognition for Contributions to the COVID-19 Pandemic from the UAB School of Medicine.
- Dr. Cron was invited to serve as a visiting professor at the University of Mississippi.
- He was invited to speak at the American College of Rheumatology (ACR) Annual Scientific Meeting in 2020 and at the annual Histioctye Society meeting on the topic of “Characterization of DOCK8 as a novel gene associated with cytokine storm syndrome”.
- Dr. Cron moderated the Juvenile Arthritis Workgroup (JAW) session at the 2020 annual American College of Rheumatology Scientific meeting.
- He also serves on the editorial boards of *ACR Open Rheumatology*, *Frontiers in Immunology*, *Genes & Immunity*, and *Pediatric Rheumatology* peer-reviewed journals.
- Dr. Cron and his former trainee, Dr. Ed Behrens (University of Pennsylvania), co-edited and published the first ever textbook devoted to “Cytokine Storm Syndrome”.
- In 2020 alone, Dr. Cron gave over 40 lectures on cytokine storm syndrome, including COVID-19. Many were virtual grand rounds ranging from Saudi Arabia to India.
- Dr. Cron was an invited faculty/lecturer for both the Congress of Clinical Rheumatology and Harvard’s Advances in Rheumatology Course.
- Dr. Cron was awarded two separately funded grants for high-impact COVID-19 research from the UAB Research Office.

**Melissa Mannion, M.D., MSPH**
- Dr. Mannion serves as the medical director for CampMASH, a summer camp for children in Alabama with rheumatic diseases held in Mobile, AL.
- Dr. Mannion serves as the UAB Site Leader for the Pediatric Rheumatology Care and Outcomes Improvement Network (PR-COIN), and site Principal Investigator for the CARRA Registry.
- Dr. Mannion received a three-year development grant from the Rheumatology Research Foundation.

**Emily Smitherman, M.D., MSCTR**
- Dr. Smitherman was awarded research grants from the Lupus Foundation of America and 2 from the Childhood Arthritis and Rheumatology Research Alliance.
- Dr. Smitherman gave an abstract talk at the 2020 Pediatric Rheumatology European Society (PRES) meeting on “Medication Utilization and Renal Biopsy Patterns in Childhood-Onset Lupus Nephritis in the CARRA Registry”.

**Matthew Stoll, M.D., Ph.D., MSCS**
- Dr. Stoll was an invited speaker on topic of “The microbiota in Juvenile Idiopathic Arthritis: More than Meet the Gut” for the New York University Rheumatology Conference and the annual Pediatric Rheumatology Symposium (PRSYM).
- He was also an invited speaker on the topic of “Clinical and Pathologic Features of Psoriatic Juvenile Idiopathic Arthritis” at the Spondyloarthritis Research and Treatment Network (SPARTAN) annual meeting.
- Dr. Stoll was named to the Spondyloarthritis Research and Treatment Network (SPARTAN) Board of Directors as treasurer.

**Peter Wieser, M.D.**
- Dr. Wieser was recognized in Birmingham Parent Magazine as a Favorite Kids Doc.

**PEDIATRIC RHEUMATOLOGY FELLOWSHIP PROGRAM**

The Pediatric Rheumatology Fellowship Program at UAB was ACGME-approved in 2009, two years after the Division of Pediatric Rheumatology was created in 2007. The faculty has grown to six board-certified pediatric rheumatologists with four nurse practitioners, making it one of the largest programs in the southeastern United States. The program is designed for extensive clinical experience in the first year followed by protected time for fellow-directed scholarly activity in the second and third years with the flexibility to address the specific needs of each fellow. Our fellows have opportunities to participate in research training programs sponsored by the UAB Rheumatology Division in addition to the opportunities available to all pediatric fellows through the UAB Department of Pediatrics. Fellows not working in a basic science laboratory are strongly encouraged to get an advanced degree at UAB in public health, clinical epidemiology or a related field of interest. We are excited to be training our first dual medicine-pediatrics trained fellow. At graduation, our fellows are well prepared clinically in all aspects of pediatric rheumatology.

**2020-2021 Fellows**

**Daniel Reiff, M.D.**
First Year Fellow
Residency: University of Alabama at Birmingham

**John Bridges, M.D., M.S.**
Second Year Fellow
Combined Adult & Pediatric Rheumatology Fellow
Residency: University of Mississippi

**Program Director**
Randy Cron, M.D., Ph.D.

**Program Coordinator**
Scott DeFreese
The UAB Pediatric Residency Program is a resident driven program that provides diverse general pediatric training through extensive hands on experience and scholarly activities. During their training, residents have the opportunity to explore every aspect of pediatrics from outpatient to critical care medicine and every subspecialty within the field. Additionally, residents are able to participate in a variety of research projects with department faculty and community outreach and advocacy.

The residency program consists of 71 categorical pediatric residents. We also have three combined programs that participate in pediatric training. Our combined programs include Combined Internal Medicine/Pediatric Residency, Child Neurology Residency and Combined Medical Genetics/Pediatrics Residency. Our race percentage within our program are 5.6% Indian, 6.7% African American, 1.1% Hispanic, 2.2% Middle Eastern, 3.3% Asian and 81.1% Caucasian.

2020 GRADUATES
CATEGORICAL PEDIATRIC GRADUATES

Ayesha Ahmed, MBBS
Fellowship, Pediatric Infectious Diseases
UAB
Jennifer Anderson, M.D.
General Pediatrics
Colorado Springs, CO
Heather Baumann, M.D.
General Pediatrics
Dallas, TX
Kyle Bliton, M.D.
Fellowship, Pediatric Pulmonology
UAB
Elena Bryant, M.D.
General Pediatrics
Saint Simons, GA
Drew Buie, M.D.
General Pediatrics
Birmingham, AL
Rachel Calhoun, M.D.
Fellowship, Pediatric Palliative Care
University of Tennessee
Allison Davis, M.D.
General Pediatrics
Tallahassee, FL
Kyle Deville, M.D.
Fellowship, Pediatric Nephrology
UAB
Lisa McDivitt, M.D.
General Pediatrics
Birmingham, AL
E. Brooke Goar, M.D.
General Pediatrics
Haleyville, AL
Kevin Gutermuth, M.D.
Fellowship, Pediatric Emergency Medicine
UAB
Reema Klinger, M.D.
General Pediatrics
Selma, AL
Simisola Kuye, M.D.
Residency, Internal Medicine
University of Texas - Austin
Gabe Lugo, M.D.
Fellowship, Pediatric Gastroenterology
UAB
Brittany Marlin, M.D.
Academic Pediatrics
UAB
Rashmi Patel, M.D.
Fellowship, Pediatric Gastroenterology
University of Pittsburgh
N. Akwesi Poteh, M.D.
Fellowship, Pediatric Emergency Medicine
University of Louisville
Dan Reiff, M.D.
Fellowship, Pediatric Rheumatology
UAB
David Sanford, M.D.
General Pediatrics
Ann Arbor, MI
J. Andrew Watson, M.D.
Chief Resident 2020-2021
UAB
Lucinda Weaver, M.D.
Fellowship, Neonatology
UAB
Margaret Wester, M.D.
Chief Resident 2020-2021
UAB
COMBINED MEDICINE/PEDIATRICS GRADUATES

Emily Bufkin, M.D.
Academic Internal Medicine & Pediatrics
University of Texas-Southwestern

Caitlin Hill, M.D.
General Internal Medicine & Pediatrics
Austin, TX

Sarah Mayberry, M.D.
General Internal Medicine & Pediatrics
Gardendale, AL

Ryan Sheets, M.D.
Chief Resident 2020-2021
UAB

COMBINED PEDIATRIC/GENETICS GRADUATE

Catherine Gooch, M.D.
Academic Genetics
Washington University

EDUCATION

Our program provides residents with a stimulating, challenging, yet nurturing environment for learning. Our dedicated and bright faculty are critical elements in fulfilling this goal. They are dedicated to our program and residents, serving as teachers, role models, advisors and friends. Residents are trained to treat and diagnose a wide range of pediatric illnesses and diseases from common conditions to rarer “zebras” due to the large volume, high acuity and variety of patients seen at Children’s of Alabama. During their training, residents have the opportunity to participate in simulation education that greatly enhances their “hands-on” education.

RESEARCH

Research is an important part of our residents’ education and is encouraged and supported by the program. While research is not a requirement of our program, the majority of our residents have ongoing research projects, extensive involvement in quality improvement projects, and/or experience in clinical case presentations. Several residents present at regional and national meetings. For the past 10 years, 50% of our graduates have continued into academic fellowships.

The program offers multiple opportunities for the residents to participate in research during their residency. Some of these include:

- **Pediatric Research Academic Program:** research interest group that meets monthly to discuss basic research topics, set monthly goals, and network with each other as well as faculty.

- **Senior Talks:** Every graduating resident (PGY-3 Pediatric and PGY-4 MedPeds and Peds/Genetics) presents a 30-minute evidence-based medicine topic at a Resident Noon Conference throughout the year. Below are some of the topics that were presented in 2020:
  - “Strategies for Discussing Vaccine Hesitancy” – Dr. Lisa Frees
  - "LGBTQIA: Understanding Pediatric Sexual Minority Groups" - Dr. Drew Buie
  - "Implicit Bias and ACEs" – Dr. Elena Bryant
  - “A Primary Pediatricians Guide to Cerebral Palsy” – Dr. Emily Bufkin
  - "Food as Medicine” – Dr. Rashmi Patel
  - "Rheumatology Pearls for the General Pediatrician” – Dr. Dan Reiff
  - "Financial Wellness for the Resident Physician” – Dr. N. Akwesi Poteh

- **Quality Improvement Projects:** Every resident must participate in a QI project during their residency. They are able to join projects that have already been started by previous residents or create a new one depending on their interests. Below is a sampling of resident QI projects.
  - Addressing Adolescent Sexual Assault in Resident Medical Education
  - "Venous Thromboembolism”
  - "Improving the discharge process for Spanish-speaking only patients”
  - "Bridging the Gap: Improving Transition from Pediatric to Adult Care”
  - "Postpartum Depression Screening and Referral in Primary Care Clinic”
  - "Standardizing Inpatient Admissions for Patients Admitted to Children’s of Alabama on the Asthma Clinical Pathway”
  - "Establishing a Mortality & Mortality Conference in the UAB Pediatric Residency Program”

- **UAB Pediatric Science Day:** Pediatric residents can attend or present at this all-day Department of Pediatrics conference. (See fellowship program section for more information)

- **UAB ENRICH (Educational Research & Innovation in Clinical & Health Sciences) Week:** A week-long conference for healthcare educators that promotes teaching skills, fosters curriculum innovation, and showcases research in health education for the 21st century. Formerly RIME Week, the event was renamed in 2020 to be inclusive of interprofessional collaboration and scholarship among all health-related fields.

- **Founders’ Fund Grant:** These research grants are awarded annually to peer selected projects to help residents accomplish research goals. Each project is given $1,000. Below is a list of grants awarded this year:
  - “Improving Firearm Safety Counseling in Primary Care Clinic”
  - “Kids CAN DO Telehealth”
  - “Baby Shower for Young Mothers Program”
  - “Pediatric Research Academic Program”
  - “Procedural Competence in Pediatric Residents”
  - “STEP-PREP”
Attendance at national and regional meetings is supported by the Department of Pediatrics throughout the year. Below is a list of conferences our residents have attended this year:

- Southern Society for Pediatric Research (SSPR) - 18 residents presented at 2020 conference.
- The International Skeletal Dysplasia Society Biannual Meeting in Oslo

Abstracts were also accepted to:

- Injury Free Coalition for Kids
- UAB Department of Pediatrics Patient Safety and Quality Day
- UAB ENRICH (as above)
- NAACT Toxicology Conference 2020

Publications:

- Pediatric Emergency Care Journal
- Cardiology in the Young
- Current Opinion in Pediatrics
- European Journal of Rheumatology

We are very proud of the research accomplishments of our pediatric residents and grateful to the Department of Pediatrics faculty and fellows who have mentored and inspired their work.

ADVOCACY

Our program also offers residents opportunities to get involved in community outreach and advocacy. In the fall of 2003, our program established the Coat of Arms, our community outreach/advocacy organization. The Coat of Arms Committee (Community, Outreach, and Advocacy) helps to facilitate and organize residents’ advocacy efforts by providing volunteer opportunities for residents and partnerships with community organizations.

Over half of our residents are involved in community outreach activities and advocacy. Several residents are involved with the Alabama Chapter of the American Academy of Pediatrics (AAP) and participate in the state’s AAP meetings in the spring and fall as well as Pediatric Legislative Day in Montgomery, AL. Our interns have an injury prevention and advocacy experience to help them discover ways to become involved and make a difference.

Since 2007, the residents have organized the Spring Scramble 5K in the spring to promote healthy choices among our community’s youth and raise funds to directly support the health and well-being of the children in our community. The race is completely resident run and held in downtown Birmingham right by the hospital. Unfortunately this year’s race was postponed due to COVID-19 but we are hopeful in holding the next Spring Scramble May 2021.

Additional advocacy and community outreach projects and opportunities include:

- working in free health clinics
- medical directing in pediatric camps
- volunteering at health fairs
- serving on international medical teams
- partnerships with local schools
- Primary Care Clinic holiday gift collection
- Primary Care Clinic and Neonatal Intensive Care Unit book drive
Pediatric Fellowship Programs

The UAB Department of Pediatrics supports 19 fellowship programs (17 ACGME and two non-ACGME programs), representing 74 pediatric fellows. This past year our incoming class of nearly 30 fellows came from residency programs in 13 different states. Over the last 10 years our graduates have gone on to practice in 32 different states and seven foreign countries. Approximately 80% of our pediatric fellowship graduates go into academic medicine or seek additional training, while 20% go into private practice or other areas of interest (i.e., CDC, International Missions, etc.).

Over the last 15 years our fellowship programs have grown from 32 total fellows to 74 fellows in 2020. This growth has brought constant change and improvements to our programs. Major accomplishments for this year include:

- ACGME accreditation of the Pediatric Hospital Medicine Fellowship Program
- Addition of a new non-ACGME Pediatric Neuro-Oncology Fellowship Program

All fellowships benefit from a high clinical volume, wide diversity of patients and world class researchers as their mentors.

EDUCATION

UAB Pediatric fellows enjoy strong educational opportunities at both a department and individual fellowship program level. Some of the current opportunities include:

- **Fellow's Core Educational Series**
  - A two-year curriculum for all pediatric fellows that covers a variety of topics including research, career development, education-related topics, teaching and presenting skills, cultural competency, communication, advocacy and leadership. The entire second year is devoted to research techniques and research related topics.

- **Chu Educational Scholarship**
  - A competitive scholarship, open to all fellows, for educational initiatives such as advanced degrees, simulation training or quality improvement certificates.

- Memo of Understand (MOU) and Scorecards for program assessment
  - Annual assessments to allow programs to employ continuous improvement strategies.

- **Day-Long Workshops**
  - Educational workshops provided to programs on various ACGME topics including most recently on our upcoming Self-Study and 10-year Site Visit.

- **Simulation opportunities include crisis resources management techniques, advanced procedural training and difficult communication training in our Pediatric Simulation Center.**

- **Continuing education of our fellowship program directors and program coordinators through live presentations as well as frequent “newsletter” updates.**

RESEARCH

Research and research scholarship are of utmost importance to our pediatric fellowship programs. Research activities are a requirement of the American of Board Pediatrics (ABP) as well as the Accreditation Council for Graduate Medical Education (ACGME), but many of our fellows perform at a level well above the minimum expected requirements.

In the UAB Department Pediatrics, we offer some innovative opportunities and programs to assist our fellows to perform at high levels of research during their fellowship training. A few highlights include:

- **Annual Pediatric Science Day**
  - Started in 2016, this day long conference offers fellows the opportunity to present their ongoing research. On average, 50 pediatric presentations are showcased, including presentations by pediatric fellows, pediatric residents, post-docs, medical students and others. In 2020 it was a record-breaking year with close to 80 abstracts submitted. Each year a key note speaker is recruited as an integral, active participant during both the platform and poster sessions.

- **ENRICH (Educational Research & Innovation in Clinical & Health Sciences) Week**
  - A week-long conference for healthcare educators that promotes teaching skills, fosters curriculum innovation, and showcases research in health education for the 21st century. Formerly RIME Week, the event was renamed in 2020 to be inclusive of interprofessional collaboration and scholarship among all health-related fields.

- **Dixon Fellows**
  - A program initiated in 1988, aimed at supporting and preparing selected fellows for careers in academia. Since its inception, this program has aided in the training and research efforts of 81 fellows, with 29 of these remaining as active faculty at UAB.

- **T-32 Fellowship Positions**
  - The ability to support our strongest research fellows on training grants, including, for example, most recently in the Divisions of Pediatric Rheumatology and Pediatric Infectious Diseases.

- **Fellows’ Research Roundtable**
  - A twice monthly conference to allow fellow presentations of on-going research across all pediatric divisions. Faculty and fellows provide mentoring and feedback on all aspects of the projects.
Our fellows present at scientific conferences both nationally and regionally including Southern Society for Pediatric Research (SSPR), American Academy of Pediatrics National Conference and Exhibition (AAP-NCE), and Pediatric Academic Society (PAS) just to name a few. Highlighting some of the grants and awards received by our pediatric fellows:

- Founders’ Fund Grant for multiple fellows (i.e., Emergency Medicine and Critical Care)
- LEAH Pediatric Adolescent Medicine
- Kaul Pediatric Research Institute Grant (Hematology-Oncology)
- Pediatric Sedation Society Grant (Emergency Medicine)
- Finalist Clinical Sciences Young Investigator Award (Neonatology)
- Endowed Kennedy Fellow (Rheumatology)
- Cystic Fibrosis Foundation Fellow (Pulmonary)

To give you an idea about some of the specific projects our pediatric fellows are involved in, below you will see a selection of recent publications with the fellow’s name bolded:

**Abdulsalam O. Alsulami, M.D.—Pediatric Infectious Diseases**

**Anisha Bhatia, M.D.—Neonatal-Perinatal Medicine**

**John M. Bridges, M.D.—Pediatric Rheumatology**

**Stephen T Clark, M.D.—Pediatric Cardiology**

**Erika Bishop Crawford, M.D.—Pediatric Emergency Medicine**

**Aditi Dhir, M.D.—Pediatric Hematology/Oncology**

**Christopher Miles Fowler, M.D.—Pediatric Pulmonology**

**Amelia Freeman, M.D.—Neonatal-Perinatal Medicine**
- Respir Res. 2020 Sep 21;21(1):244. Airway nitrite is increased in extremely preterm infants with bronchopulmonary dysplasia. Samuel J Gentile, Amelia Freeman, Rakesh P Patel, Namasiyavam Ambalavanar, Charitharth V Lal.

**Anna Hoppmann, M.D.—Pediatric Hematology/Oncology**

**Jeremy Loberger, M.D.—Pediatric Critical Care**
- Pediatr Crit Care Med. A Respiratory Therapist-Driven Pathway Improves Timeliness of Extubation Readiness Assessment in a Single PICU. Loberger JM, Jones RM, Prabhakaran P.

**Daniel Reiff, M.D.—Pediatric Rheumatology**
Nicole Samies, D.O.—Pediatric Infectious Diseases
- Antiviral Res. 2020 Feb 7;104721. Prevention and treatment of neonatal herpes simplex virus infection. Samies NL, James SH.

Jessica Schmitt, M.D.—Pediatric Endocrinology & Diabetes

Mary Silverberg, M.D.—Neonatal-Perinatal Medicine

Sara Staples, M.D.—Neonatal-Perinatal Medicine

Connie Trieu, M.D.—Pediatric Infectious Diseases

Kyle Bliton, M.D.—Pediatric Pulmonology

Joshua Cooper, M.D.—Pediatric Infectious Diseases

OTHER UNIQUE FEATURES
- SWell Committee – Subspecialty Wellness Committee (SWell) is a group of energetic fellows who help plan monthly events for all fellows. Recent activities include Cookies & Cocoa, St. Patrick’s Day Social w/ cookie decorating, Virtual Trivia, and visits by Hand and Paw.
- Mini Quality Academy (MQA) – Half-day workshop to teach the basics of quality improvement projects.
- Health Disparities Academy – Half-day workshop focusing on health disparities and how this affects the health of our local population.

ACGME-APPROVED PEDIATRIC FELLOWSHIP PROGRAMS
- Adolescent Medicine
- Critical Care
- Hematology-Oncology
- Neonatology
- Sleep Medicine
- Allergy-Immunology
- Emergency Medicine
- Hospice-Palliative Care
- Nephrology
- Cardiology
- Endocrinology
- Hospital Medicine
- Pulmonary
- Child Neurology
- Gastroenterology
- Infectious Disease
- Rheumatology

NON-ACGME-APPROVED PEDIATRIC FELLOWSHIP PROGRAMS
Cardiac Critical Care Neuro-Oncology
2020–2021 UAB PEDIATRIC FELLOWS

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<thead>
<tr>
<th>Name</th>
<th>Fellowship Program</th>
<th>Fellowship Year</th>
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<tr>
<td>Charisse Graham, M.D.</td>
<td>Adolescent Medicine</td>
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<td>Hannah Hulsey, M.D.</td>
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<td>Reena Patel, D.O.</td>
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<td>JaneMarie Freeman, M.D.</td>
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<td>Erin McLeod, M.D.</td>
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<td>Brittney Jones, M.D.</td>
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<td>Audrey Lloyd, M.D.</td>
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<td>John Bridges, M.D.</td>
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<td>Joshua Cooper, M.D.</td>
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<td>Nazia Kabani, M.D.</td>
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<td>Jacqueline Razzaghy, M.D.</td>
<td>Neonatology</td>
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<td>Lucinda Weaver, M.D.</td>
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<td>Zaki Yazdi, M.D.</td>
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<td>Snehashis Hazra, M.D.</td>
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<tr>
<td>Veronica Godsey, M.D.</td>
<td>Pediatric Cardiac Critical Care</td>
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<td>Ananya Manchikalapati, M.D.</td>
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<td>Nicholas Rockwell, M.D.</td>
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<td>Lece Webb, M.D.</td>
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<td>Emily Dodenhoff, M.D.</td>
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<td>Felicia Sifers, M.D.</td>
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<td>Reid Burks, M.D.</td>
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<td>Kevin Guterinth, M.D.</td>
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<td>Mickinzie Morgan, M.D.</td>
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<td>Eric Jorge, M.D.</td>
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<td>Alicia Webb, M.D.</td>
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<td>Ryan Roddy, M.D.</td>
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<td>Stephen Ruffenach, M.D.</td>
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<td>James Statler, M.D.</td>
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<tr>
<td>Heath Pelham, M.D.</td>
<td>Pediatric Endocrinology &amp; Diabetes</td>
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<td>Whitney Smith, M.D., PhD</td>
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<td>Ana Coronado Reyna, M.D.</td>
<td>Pediatric Gastroenterology, Hepatology &amp; Nutrition</td>
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<td>Gabriel Lugo, M.D.</td>
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<td>Claire Keith , M.D.</td>
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<td>Carter Wallace, M.D.</td>
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<td>Adam Cohen, M.D.</td>
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<td>Taylor Woodfin, M.D.</td>
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<td>Elizabeth Gunn, M.D.</td>
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<td>Abbey Rocco , M.D.</td>
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<td>Sara Claire Hutchins, M.D.</td>
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<td>Kathryn Six, M.D.</td>
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<td>Lauren Smith, D.O.</td>
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<td>Meenu Sharma, D.O.</td>
<td>Pediatric Hospital Medicine</td>
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<td>Michelle Veters, M.D.</td>
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<td>Samantha Hanna, M.D.</td>
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<td>Alexandra Healy, M.D.</td>
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<td>Ayesha Ahmed, M.D.</td>
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<td>C. Miles Fowler, M.D.</td>
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<td>Daniel Reiff, M.D.</td>
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<td>Edward Robinson, M.D.</td>
<td>Sleep Medicine</td>
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<td>Anthony Staples, D.O.</td>
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Initially known as the Pediatric Research Institute, the Kaul Pediatric Research Institute (KPRI) was created by the Board of Trustees of Children’s of Alabama in 1989 to provide internal funding for junior faculty who were just beginning their academic careers. The initial funding came from proceeds (10%) of the Children’s Miracle Network telethon, with half committed to an endowment, and the other half to support grants submitted by faculty or professionals working at Children’s of Alabama. The first grants were awarded in 1993. Following the donation of an initial $5 million from the Kaul Foundation to increase the endowment, the Board of Trustees changed the name of this program to the Kaul Pediatric Research Institute (KPRI).

KPRI GRANT PROGRAM

Initially, four two-year grants of $20,000 per year were awarded. With the increase of the contributions to the KPRI and the growth of the endowment, multiple awards are made each year in the amount of $35,000 each for new investigators and $50,000 each for established investigators.

The program is competitive and peer-reviewed in an NIH format. Since 2008, $4,940,000 has been awarded for biomedical research. This represents 72 unique investigators receiving 82 awards, including 16 established investigator awards and 66 new investigator awards. KPRI recipients have received almost $60.7 million in funding. Of these 65 investigators, 53 remain at UAB.

The major goal of the KPRI grant program is to allow investigators to obtain data that will advantage applications for additional extramural funding. This will bring new knowledge to the care of children, leverage the investment of the KPRI, and allow projects to be competitive for the very best science on the national stage. A second, but important, goal is to ensure that a dedicated funding source is available to unique segments of the pediatric research and education.

2020 Awardees

NEW INVESTIGATOR AWARDS

Nitin Arora, M.D.
Assistant Professor
Division of Neonatology
Project title: Interaction Between HCMV and FcRn to Understand Viral Transcytosis Across the Maternal-Fetal Interface.

Marissa Gowey, Ph.D.
Assistant Professor
Division of Pediatric Gastroenterology
Project title: Targeting Self-Regulation in Family-Based Behavioral Treatment for Obesity and Cardiovascular Disease Prevention

Sam Gentle, M.D.
Assistant Professor
Division of Neonatology
Project title: Reducing Adverse Delivery Outcomes Through Teleneonatology: a Feasibility Study

Bhuvana Sunil, M.D.
Assistant Professor
Division of Pediatric Endocrinology & Diabetes
Project title: Disparities in Cardiometabolic Risk Factors in Youth with Type 2 Diabetes
KPRI QUALITY AND SAFETY AWARDS

In 2016 Children’s of Alabama and the Kaul Pediatric Research Institute (KPRI) began the KPRI Quality and Safety Award Program. The major goal of the this grant program is to allow teams to identify and address specific quality and safety issues that cannot easily be addressed using existing operational resources or structures.

This year, two grants were awarded. All funded applications are directed toward the improvement of child health care.

Colm Travers, M.D.
Assistant Professor
Division of Neonatology
Project title: Predicting Episodes of Bradycardia Among Infants with Apnea of Prematurity

Suresh Boppana, M.D.
Professor
Division of Pediatric Infectious Diseases
Project title: Role of HCMV Envelope Protein Glycosylation Patterns on Virus Neutralization

Ambika Ashraf, M.D.
Professor
Division of Pediatric Endocrinology & Diabetes
Project title: Gut Microbiome and Type 2 Diabetes in Children

Nicole Samies, D.O.
Fellow
Division of Pediatric Infectious Diseases
Project title: Review of Bacterial Tracheitis Diagnosis and Management

Mary Lauren Scott, Ph.D.
Associate Professor
Division of Pediatric Endocrinology & Diabetes
Project title: Improving Glycemic Control in High-risk Patients with Type 1 Diabetes

ESTABLISHED INVESTIGATOR AWARD

Ambika Ashraf, M.D.
Professor
Division of Pediatric Endocrinology & Diabetes
Project title: Gut Microbiome and Type 2 Diabetes in Children

Mary Lauren Scott, Ph.D.
Associate Professor
Division of Pediatric Endocrinology & Diabetes
Project title: Improving Glycemic Control in High-risk Patients with Type 1 Diabetes
The Dixon Pediatric Fellowships were endowed in 1988 by the Edwin Dixon family of Birmingham, Alabama. The Dixon Fellowships are competitive awards to assist in the training of fellows who intend to pursue an academic career with a research emphasis in pediatric subspecialties. Recipients receive salary support and a $5,000 per year discretionary fund to support research and continuing education activities. There are five Dixon Fellow training slots and funding for the program is shared between the Dixon Foundation and the Department of Pediatrics. Since the establishment of the fellowship, 81 awards have been given. Of the awardees, 29 remain as active faculty within the department. Among the alumni, there are seven division chiefs, seven endowed chairs, one clerkship director, nine division fellowship program directors or associate directors, three residency training program directors, one center director, one associate dean, and two department chairs.

The selection of fellows is made by a committee composed of Dixon family members and five former Dixon Fellows who evaluate a formal proposal submitted by the fellows with letters from their future mentors and division directors. Awardees are announced at the end of May each year during the delivery of the Bradford Dean Dixon Memorial Lectureship. To date, 38 lectures have been presented at Grand Rounds by notable leaders in the field of pediatrics.

2020–2021 DIXON FELLOWS

Miles Fowler, M.D., Third Year Fellow - Pediatric Pulmonology
Project Title: Adrenal Insufficiency (AI) in Cystic Fibrosis.
Dr. Fowler’s research involves screening pediatric patients with CF for AI using a survey based on signs and symptoms and a morning cortisol level as well as testing for the presence of the SNP that was associated with AI in patients with asthma.
Mentors: Jennifer Guimbellot, M.D., Ph.D., assistant professor - Division of Pediatric Pulmonary & Sleep Medicine, Isabel Virella-Lowell, M.D., professor - Division of Pediatric Pulmonary & Sleep Medicine, and Michael Stalvey, M.D., associate professor - Division of Pediatric Endocrinology & Diabetes.

Amy Freeman, M.D., Second Year Fellow - Neonatology
Project Title: The Nrf2 Pathway Protects against Hypoxia-Induced Lung Injury in Murine Models of Airway Microbial Dysbiosis.
Dr. Freeman will be exploring the direct role of microbiome on the lungs and the effect of dysbiosis on the redox balance during the development of BPD.
Mentor: Vivek Lal, M.D., associate professor - Division of Neonatology

Snehashis Hazra, M.D., Third Year Fellow - Neonatology
Project Title: Characteristics of Mesenchymal Stem Cells (MSC) derived from Wharton’s Jelly of Umbilical Cord of Extremely Preterm Infants in Relation to Outcome of Survival without Bronchopulmonary Dysplasia.
Dr. Hazra’s research involves delineating the characteristics of the MSC and MSC derived media/exosomes in infants with and without BPD, and to understand the molecular pathway through which MSC prevent and improve BPD.
Mentor: Namasivayam Ambalavanan, M.D., professor - Division of Neonatology

Vivek Shukla, M.D., Second Year Fellow - Neonatology
Project Title: Brain Magnetic Resonance Imaging-Based Radiomics Risk Prediction for Neurodevelopmental Outcomes in Neonates with Hypoxia-Ischemic Encephalopathy.
Dr. Shukla will use novel machine learning-based models for developing a risk prediction algorithm for neurodevelopmental impairments in neonates suffering from perinatal hypoxic-ischemic encephalopathy using MRI images acquired at or before one week after birth.
Mentor: Namasivayam Ambalavanan, M.D., professor - Division of Neonatology

Mary Silverberg, M.D., Second Year Fellow - Neonatology
Project Title: Oral Nitrate Supplementation in a Murine Bronchopulmonary Dysplasia Model.
Dr. Silverberg’s research involves testing oral nitrate supplementation to reduce histological lung injury and improve pulmonary function in a murine model of Bronchopulmonary Dysplasia (BPD).
Mentor: Rakesh Patel, Ph.D., professor - Department of Molecular & Cellular Pathology and Samuel Gentle, M.D., assistant professor - Division of Neonatology

GRADUATING DIXON FELLOWS ARE:

Abdulsalam Alsulami, M.D., Pediatric Infectious Diseases, joined the Department of Pediatrics at King Abdulaziz University, Jeddah, Saudi Arabia.
Aditi Dhir, M.D., Pediatric Hematology/Oncology, joined the University of Miami as an assistant professor.
Veronica Godsey, M.D., Pediatric Critical Care, remained at UAB to complete a pediatric cardiac critical care fellowship.
Nazia Kabani, M.D., Pediatric Infectious Diseases and Neonatology, continued her combined Pediatric Infectious Diseases and Neonatology fellowship here at UAB.
Charles Schlappi, M.D., Pediatric Hematology/Oncology, joined Pediatrics West Bessemer Clinic in Bessemer, AL.
The Department of Pediatrics each year honors faculty members for achievement and excellence in research, diversity and inclusion, education, service and mentoring. Faculty are nominated by their peers and those selected for each award have attained a level of excellence recognized by their peers due to their exceptional contributions for the development of the department and in turn, the achievers of tomorrow - our children.

2020 DEPARTMENT OF PEDIATRICS FACULTY ACHIEVEMENT AWARD WINNERS

RESEARCH ACHIEVEMENT AWARD
The Research Achievement Award is awarded based on research merit and impact on the appropriate field of research.

Senior Gregory Friedman, M.D.
Pediatric Hematology/Oncology

Junior Ariel Salas, M.D.
Neonatology

EDUCATIONAL ACHIEVEMENT AWARD
The Educational Achievement Award is awarded based on outstanding contributions to the teaching mission of the university.

Senior Michele Nichols, M.D.
Pediatric Emergency Medicine

Junior Adolfo Molina, M.D.
Pediatric Hospital Medicine

DIVERSITY AND INCLUSION AWARD
The Diversity and Inclusion Award recognizes faculty who have demonstrated sustained dedication to advancing the Department’s commitment to diversity and inclusion.

Senior Tina Simpson, M.D.
Adolescent Medicine

Junior Samantha Hill, M.D.
Adolescent Medicine

COVID-19 SERVICE ACHIEVEMENT AWARD
The COVID-19 Service Achievement Award was created this year to recognize individuals for their tireless effort and leadership during the COVID-19 pandemic.

Senior Cecelia Hutto, M.D.
Pediatric Infectious Diseases

Junior Claudette Poole, M.D.
Pediatric Infectious Diseases
SERVICE ACHIEVEMENT AWARD
The Service Award recognizes individuals who have exhibited sustained, significant and impactful clinical service or service through leadership or advocacy to the department, university or community.

Senior
Susan Walley, M.D.
Pediatric Hospital Medicine

Junior
Brett Turner, M.D.
Pediatric Pulmonology

COMMUNITY EDUCATOR AWARD
The Community Educator Award recognizes an outstanding community pediatrician partner and his/her exemplary commitment to the UAB DOP as a co-educator of medical students, residents and fellows.

Jennifer McCain, M.D.
Mayfair Medical Group

MENTORING ACHIEVEMENT AWARD
The Mentoring Achievement Award recognizes faculty who are outstanding mentors to junior faculty, fellows and other trainees within the university.

Namasilvayam Ambalavanan, M.D.
Neonatology

MODEL OF TEAM EXCELLENCE AWARD
The Model of Team Excellence Award recognizes a team or group of faculty that has demonstrated exceptional leadership and clinical, educational, or research accomplishments at the national/international level.

Division of Pediatric Infectious Diseases
David Kimberlin, M.D., Scott James, M.D., Richard Whitley, M.D., Claudette Poole, M.D., Karen Fowler, Ph.D., Cecelia Hutto, M.D., Shannon Ross, M.D., MSPH, Stephanie Moore, Ph.D., Swetha Pinninti, M.D., Suresh Boppana, M.D., William Britt, M.D., Larisa Pereboeva, M.D., Veronica Sanchez, Ph.D., and Sergio Stagno, M.D.

LIFETIME ACHIEVEMENT AWARD IN PEDIATRIC HEALTHCARE
The Lifetime Achievement Award in Pediatric Healthcare recognizes truly outstanding individuals who are making or have made exceptional contributions to pediatric healthcare through clinical services, education or research.

Robert Pass, M.D.
Pediatric Hospital Medicine
In 2015, the Chu Family donated a generous gift to Children’s of Alabama and the Department of Pediatrics to support educational initiatives. A portion of this donation was set aside to fund educational scholarships for pediatric fellows. The scholarship is selected on a competitive basis by a selection committee. This year the selection committee for the Chu Family Educational Scholarship selected two fellows to receive educational scholarships. These awards will provide funds for tuition, books and fees related to their educational endeavors.

2020 CHU FAMILY SCHOLARSHIP RECIPIENTS

Samantha Hanna, M.D.,
Second Year Fellow
Division of Pediatric Hospital Medicine
Educational Initiative: UAB Quality Academy Certificate Course

Alexandra Healy, M.D.,
Second Year Fellow
Division of Pediatric Hospital Medicine
Educational Initiative: UAB Quality Academy Certificate Course
The Founder’s Fund Endowment was developed in partnership with Children’s of Alabama in 2006 to honor three prominent former faculty members: Drs. Ralph Tiller, Paul Palmisano, and Bill Benton. This program was designed to specifically benefit the Pediatric Residency Program. The monies raised are held in an endowed account by Children’s of Alabama in the Kaul Pediatric Research Institute. Founder’s Fund grants are available every May for innovative education initiatives, clinical research, quality improvement or outcomes research that focus on residency education and advocacy. Approximately 10-12 grants are awarded each year in the amount of approximately $1,000 per year. It is a competitive process under the direction of the residency program directors.

Several of Founder’s Fund projects have resulted in significant advances in the manner by which we care for patients, patient and family education, training for medical students and residents and advocacy. At least ten projects have led to presentations by residents and their mentors at national and regional academic meetings (SPR/APS, SSPR, AAP).

2020 Founder’s Fund Grants - Project Titles and Investigators

**Obesity Prevention Birth-to-Two Years in Primary Care Clinic**
Cason Benton (PI)
Kelsey Thetford

**STEP-PREP**
Joe Bradsher (PI)
Neha Teekappanavar
Andrew Marshall
Channing Brown
Kirollos Rornan
Rachel Klein
Carlie Stein

**Well Child Check that is Anything But Well: Suicidal Teenager**
Candice Dye (PI)
Nancy Tofil

**Baby Safety Shower for Young Mothers**
Meghan Harrison (PI)
Abigail Martin
Grace Spears
Kathleen Vincent
Terri Coco
Kathy Monroe

**Pediatric RAP**
Kylee Miller (PI)
Kathy Monroe
Michele Nichols
Brad Troxler
Chang Wu

**Pediatric Neurology at UAB Podcast**
Salman Rashid (PI)
Khaled Al-Robaidi

**Improving Residency Physician History and Physical in Challenging Situations**
Nicholas Rockwell (PI)
Nancy Tofil
Michele Kong
Chrystal Rutledge

**Procedural Competence in Pediatric Residents**
Jeremy Ruhlmann (PI)
Alexis Ricci
Jordan Ashcraft
Michele Nichols
Nancy Tofil
Erinn Schmit

**Kids CAN DO Telehealth**
Stephen Russell (PI)
Channing Brown
Ryan Sheets
Andrew Watson

**Improving Firearm Safety Counseling in Primary Clinic**
Austin Wheeler (PI)
Katie Mascia
Abby Martin
Christina Hurley
Jennifer Joseph
Morissa Ladinsky
The UAB Department of Pediatrics established the Pediatric Research Office (PRO) in 2015 to renew its commitment to the generation of new knowledge in the diagnosis, treatment, and sequelae of pediatric diseases. The PRO seeks to "lower the energy of activation" in the design, conduct and analysis of research conducted within the Department of Pediatrics. The success of the PRO is reflected in the departmental accomplishments outlined in Dr. Cohen’s introduction to this year’s Academic Annual Report. In FY 2020, the Department of Pediatrics had funding from the National Institutes of Health (NIH) totaling $21.5 million, and total research funding of $33.1 million, reflecting a 16% increase in NIH funding and 8% increase in overall funding compared with last year. NIH-funded investigators have increased to 21 this year, and 19 of these investigators have used PRO services to advance their research.

The PRO is led by David W. Kimberlin, M.D., vice-chair for Clinical and Translational Research in the Department of Pediatrics. PRO personnel and associated partners provide assistance with the following core components of clinical and translational research:

- **Administrative Matters** – process issues related to UAB Administration and the UAB/Children’s of Alabama interface, facilitate integration with the UAB research enterprise, meet with research faculty and track departmental productivity.

- **Research Development and Training** – meet with investigators to discuss research interests and funding opportunities; develop timelines, assemble pre-submission review panels and scientific editing of applications; special expertise in the formulation of training plans for federal and private career development applications; support the submission of UAB paperwork related to the Fiscal Approval Process (FAP), OnCore, and the Shared Investigator Platform (SIP); help with COA processes and forms such as pre-registration for research subject and monitor visits; and assist with developing and negotiating industry budgets.

- **The Child Health Research Unit** – organize scheduling and oversight of this space, which includes six exam rooms, a triage area, a specimen processing laboratory, small and large conference rooms, and workspace with monitors.

- **Biostatistics and Research Design** – discussion of overall goals and study design, biostatistical analysis planning, sample size assessment, DSMB reports, final analyses at end of study, and final study report generation for use with manuscripts and grant applications.

- **Informatics** – retrieval of data from the EHR for feasibility assessments, preliminary data and research protocols while ensuring proper oversight of data requests.

- **Regulatory Support** – assistance with IRB applications and regulatory documents, liaison to the IRB, and provision of information related to standard operating procedures (SOPs).

- **Data Management** – assistance with database development and management (Teleform, SAS, EpInfo, REDCap), data analysis and modeling, and training related to data management.

- **Research Coordination through the Clinical Research Support Program (CRSP)** – coordinator assistance with study implementation, site management, and quality control; and Good Clinical Practice (GCP) training.

The services utilized by the PRO from 1/1/2019 to 10/2020 (N=441) are shown in the pie chart below:

- Research Coordination (CRSP) – 18%
- Data Management – 19%
- Regulatory Support – 12%
- Informatics – 6%
- Biostatistics and Research Design – 18%
- The Child Health Research Unit – 7%
- Research Development and Training – 7%
- Administrative Matters – 6%

SERVICES UTILIZED, 11/19–10/20 (N=441)
From November 2019 through October 2020, the PRO assisted investigators and their study teams with 401 projects that included 441 services (projects can have more than one service if, for example, one project requested help with both biostatistics and informatics). Help was provided to 197 unique users including faculty fellows and residents. Services were used by all 19 divisions in the department, as well as faculty conducting pediatric research in 14 other departments, including: Anesthesiology and Perioperative Medicine, Medicine, Microbiology, Neurobiology, Neurology, Neurosurgery, Obstetrics and Gynecology, Orthopedic Surgery, Otolaryngology, Psychiatry and Behavioral Neurobiology, Psychology, Sociology, Surgery, and Urology.

The breakdown of projects by type of user (not unique users) is as follows:

- 7 project requests from students (2%)
- 3 project requests from residents (1%)
- 26 project requests from fellows (6%)
- 2 project requests from instructors (1%)
- 102 project requests from assistant professors (25%)
- 55 project requests from associate professors (14%)
- 68 project requests were from professors (17%)
- 17 project requests from administrators (4%)
- 121 project requests from others (typically researchers, coordinators or study team members) (30%)

CHILD HEALTH RESEARCH UNIT

As noted above, the PRO manages the Child Health Research Unit (CHRU), which is a partnership between the UAB Department of Pediatrics, Children’s of Alabama and the UAB Center for Clinical and Translational Science (CCTS). It provides outpatient space for pediatric research to reduce barriers to the conduct of scientifically rigorous clinical and translational research. The CHRU opened in 2017 in a renovated, 2,547 square foot facility on the 3rd floor of Dearth Tower. This space includes a reception/registration area, a triage room, six well-equipped exam rooms, two conference rooms, workspace with monitors and locked storage, a lab with centrifuge and freezer for short-term storage, and an equipment storage room. There is also a CHRU Satellite Unit on the 7th floor, which is used primarily for pulmonary studies. This satellite unit has three exam rooms, a conference room, work areas for study teams, ECG and pulmonary equipment, refrigerated centrifuges, specimen storage, sterile hoods, a 40x-100x microscope, a hemocytometer, and an autoclave.

In FY20, CHRU use was reduced due to the COVID-19 pandemic. Combined, the main CHRU and the Satellite Unit were used by 29 unique investigators for 53 studies, with 462 visits.

VISIT NUMBERS BY DEPARTMENT/DIVISION

![Visit Numbers Chart]

- Peds/Pulmonary (9 studies) – 29
- Peds/Neurology (7 studies) – 48
- Peds/Nephrology (2 studies) – 21
- Peds/ID (3 studies) – 71
- Peds/Hematology-Oncology (2 studies) – 59
- Peds/Gastroenterology (3 studies) – 18
- Peds/Endocrinology (3 studies, lab only*) – 0
- Peds/Allergy (3 studies) – 48
- Neurology (1 study) – 14
- Neurobiology (1 study, lab only*) – 0
- Genetics (2 studies) – 49
- Medicine/Pulmonary (13 studies) – 103
- Medicine/ID (1 study) – 2
The UAB Department of Pediatrics Office of Faculty Development (OFD) was established to support the individual career development of our faculty and to advance institutional and departmental goals. The office is led by Dr. Tina Simpson, vice chair of Faculty Development and April Spencer, MBA, program manager. Ms. Spencer joined the OFD in August 2020, upon the retirement of Clare Mallette.

**The OFD seeks to create an academic environment and programs that**
1. support, enhance, and reward the professional activities of faculty;
2. promote recruitment, retention, and academic career advancement of all faculty;
3. enhance leadership development; and
4. foster diversity, equity, and inclusion.

**The OFD provides individual faculty development consultation on topics such as:**
- Transitioning to a Faculty Position
- CV Preparation Education and Assistance
- Promotion Readiness Consultation
- Professional Development Issues and Guidance
- Mentorship Identification and Education

CME opportunities are offered by the OFD for faculty through the 4th Fridays Lunch and Learn Series and Leadership Development Series. These series transitioned to a virtual environment this year and included presenters from UAB Learning and Development, UAB Center for Teaching and Learning, and the Collat School of Business Professional Development Office.

### 4th Fridays Lunch and Learn Series

<table>
<thead>
<tr>
<th>Date</th>
<th>Presentation</th>
<th>Presenter</th>
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| January 2020 | Living Compass                        | Lauren Nassetta, M.D.  
Division of Pediatric Hospital Medicine  
UAB Department of Pediatrics |
| February 2020 | Conducting Performance Evaluations    | William Edwards  
UAB Learning and Development |
| May 2020    | Saying No, and Preserving the Relationship | Gerriann Fagan  
UAB Learning and Development |
| June 2020   | Setting Expectations                  | JR Hartig, M.D.  
Divisions of General Internal Medicine and  
Academic General Pediatrics  
UAB Departments of Medicine and Pediatrics |
| July 2020   | Trauma Informed Care                  | Samantha Hill, M.D., MPH  
Division of Adolescent Medicine  
UAB Department of Pediatrics |
| August 2020 | Financial Series - Budget: Freedom or Punishment | Ryan L. Davis, Ph.D.  
Collat School of Business Professional Development Office |
| September 2020 | Leadership Fables                     | Lynn Nichols, Ph.D.  
Curry Bordelon, DNP, MBA  
UAB Center for Teaching and Learning |
| October 2020 | The UAB CV & Promotion Portfolio      | Tina Simpson, M.D., MPH  
Division of Adolescent Medicine  
UAB Department of Pediatrics |
Leadership Development Series

August 2020  Financial Series - Your Most Powerful Wealth-Building and Personal Finance Workshop  Ryan L. Davis, Ph.D.  Collat School of Business Professional Development Office


September 2020  Financial Series - Behavior not Performance! Investing for Tomorrow  Ryan L. Davis, Ph.D.  Collat School of Business Professional Development Office

October 2020  Adopting an Agile Mindset Part 2: Inspiring and Motivating Others  Elizabeth D. Wright, PMP®, PMI-ACP®, CSM, PAHM®  Collat School of Business Professional Development Office

Coaching Circles

In partnership with the UAB Office of Learning and Development, the OFD sponsors a Coaching Circles Program for department faculty. The program provides six months of facilitated group coaching sessions for 12 – 15 participants. Participating faculty have the opportunity to complete a series of self-assessments such as the DISC assessment and a 360-degree assessment. After consultation with an executive coach, individuals decide upon a focus area of growth, and then participate in facilitated group coaching sessions.

Coaching Circles Testimonials

“The coaching circle was extremely helpful in providing me with a new perspective in how to be effective at giving feedback and mentoring others. The meetings are conducted in a practical manner, with intentionality in applying each new skill to my everyday life. I also found practicing these skills with other members of my coaching circle group who have varying experiences and levels of experience valuable! It was a great experience!” Dr. Samantha Hill, Assistant Professor, Division of Adolescent Medicine

“I found coaching circles to be a unique approach to career development compared to traditional one-on-one coaching models. I enjoyed the longitudinal experience of discussing leadership and career development challenges with my colleagues. I still refer back to several of the tools from my coaching circles experience, such as the 360 evaluation. This is a great program for faculty looking for fresh perspectives on career development in a collegial and supportive environment.” Dr. Michael Seifert, Associate Professor, Division of Pediatric Nephrology

Leadership Development Journal Club

Graduates of the departmental Coaching Circles Program participate in a monthly leadership journal to foster ongoing leadership development and peer coaching opportunities.

Pediatric Faculty Excellence Awards

The OFD led the nomination and voting process to select and recognize outstanding pediatric faculty. Recipients of this year’s awards are listed below:

DOP Lifetime Achievement Award in Pediatric Healthcare  Dr. Robert Pass

Diversity and Inclusion Award  Dr. Tina Simpson – Senior  Dr. Samantha Hill – Junior

Educational Achievement Award  Dr. Michele Nichols – Senior  Dr. Adolfo Molina – Junior

Mentoring Achievement Award  Dr. Namasiyavam Amalavanan

Research Achievement Award  Dr. Gregory Friedman – Senior  Dr. Ariel Salas – Junior

Virtual Internship

During the summer of 2020, the OFD provided a virtual internship experience for a graduate student in the Illinois Institute of Technology Industrial/Organizational Psychology Program.

New Faculty Orientation & Recognition

The OFD recognized 22 new pediatric faculty at the October Department of Pediatrics Faculty Meeting.

Diversity, Equity and Inclusion

The OFD helps coordinate the activities of the Diversity, Equity, and Inclusion Council, which includes trainee, faculty and staff committees.
PEDIATRIC SURGICAL SUBSPECIALTIES

- Pediatric General Surgery ........................................ 125-127
- Pediatric Neurosurgery ............................................ 128-131
- Oral and Maxillofacial Surgery ................................. 132-133
- Pediatric Orthopedic Surgery ................................ 134-135
- Pediatric Cardiothoracic Surgery ............................. 136-137
- Urology ................................................................. 138-140
FEATURED RESEARCH

Dr. Mike Chen continues his leadership as the local PI for the NIH prospective observational study: Teen-Longitudinal Assessment of Bariatric Surgery (Teen-LABS) in its 9th year.

Dr. Elizabeth Beierle continues her research efforts focused on novel treatment strategies for pediatric solid tumors and utilizing patient-derived xenograft models of pediatric solid tumors to study these innovative therapies. This year her lab group has published important research describing certain specific tumorigenesis factors in hepatoblastoma. She continues to publish unique work with neuroblastoma tumor derived xenografts, focusing on pathways that support the cancer stem cell population.

Dr. Colin Martin has established a laboratory and clinical effort, as surgical director of the Children’s of Alabama/UAB Center for Advanced (CCAIR) Intestinal Rehabilitation, focused on improving outcomes in pediatric patients with necrotizing enterocolitis and short bowel syndrome. With a multidisciplinary effort, CCAIR has five active research protocols. His basic science focus continues to be defining the role of innate immunity in intestinal diseases of prematurity. Specifically, they are interested in how maternal psychological stress and the environment during pregnancy and shortly after birth shape developing neonatal immune function.

Dr. Rob Russell continues his investigation of coagulopathy following trauma. He continues translational research evaluating animal models of traumatic brain injury in relation to specific coagulation factors—von Willebrand factor and ADAMTS-13. In addition, he is the principal investigator on a NIH-funded national consensus conference evaluating resuscitation strategies in pediatric traumatic hemorrhagic shock.

GRANTS

Dr. Mike Chen continues as the Institutional PI for the NIH prospective observational study: Teen-Longitudinal Assessment of Bariatric Surgery (Teen-LABS).

Dr. Elizabeth Beierle has received grant funding from the Vince Lombardi Cancer Foundation (Bart Starr Award).

Dr. Rob Russell has received an NIH R13 grant (2020-2022) for a national consensus conference titled “Pediatric Traumatic Hemorrhagic Shock Consensus Conference and Research Priorities” and continues as the institutional PI for an NIH-funded study titled: “Timing of Inguinal Hernia Repair in Premature Infants: A Randomized Trial.”

PUBLICATIONS


A Novel Use of Artificial Intelligence to Examine Diversity and Hospital Performance. MS Mathis, TE Badewa, RN Obiarinze, LT Wilkinson, and CA Martin. Journal of Surgical Research. Accepted in Press.


A Novel Use of Artificial Intelligence to Examine Diversity and Hospital Performance. MS Mathis, TE Badewa, RN Obiarinze, LT Wilkinson, and CA Martin. Journal of Surgical Research. Accepted in Press.


**AWARDS/LEADERSHIP/RECOGNITION**

Dr. Mike Chen completed his term in the American Pediatric Surgical Association Board of Governors as Treasurer. He is the Liaison to the Payor Advocacy Advisory Committee and the Committee on Child Health Financing at the American Academy of Pediatrics. He serves as the Chair of the Pediatrics Committee of the Health Services Foundation and on the Board of the Health Services Foundation. Dr. Chen also serves on the Board of Trustees at Children’s of Alabama.

Dr. Elizabeth Beierle serves on the Clinical Pediatric Surgery Program Subcommittee for the American Surgical Association and is the Vice Chair for the International Relations Committee for the American College of Surgeons. She also continues on various committees serving the American Pediatric Surgical Association and the American Academy of Pediatrics.

Dr. Colin Martin was named the Vice Chair for Diversity, Equity, and Inclusion for the UAB Department of Surgery. He was selected to be a James Iv Traveling Fellow and a member of Surgical Biology Club II. He was also named the Associate Editor for Pediatric Surgery for the Journal of Surgical Research.

Dr. Rob Russell serves on the Publication Committee for the Society of University Surgeons and continues his service on the Pediatric Surgery Advisory Council. He will serve in his final year as Treasurer for the Pediatric Trauma Society.
PEDIATRIC FACULTY

Jeffrey P. Blount MD .........................................................Professor
Chair-Division of Pediatric Neurosurgery

Curtis J. Rozzelle MD .........................................................Professor
UAB Neurosurgery Residency Program Director

James M. Johnston MD ..................................... Associate Professor
Pediatric Neurosurgery Fellowship Director

Brandon G. Rocque MD ..................................... Associate Professor
Director of Pediatric Neurosurgery Research

FEATURED RESEARCH

The Division of Pediatric Neurosurgery is actively involved in a wide variety of research activities. Many of these projects are collaborative with our colleagues at other academic Pediatric Neurosurgery programs in North America and beyond. Other projects are single institution programs conducted solely at Children’s of Alabama/UAB. We have been regularly recognized by our peers and colleagues for the quality and breadth of research in Pediatric Neurosurgery that arises from our program.

These projects are important because they have the potential to fundamentally improve the way we provide care for children with Neurosurgical problems like brain tumors, congenital anomalies (like spina bifida), epilepsy or trauma. Only by carefully studying the outcomes of our clinical experience can we improve the care provided by making it safer, more effective, more efficient and less costly. In 2020, the faculty in the Division of Pediatric Neurosurgery produced 31 manuscripts, served on three editorial boards, three NIH RO1 awards, a PCORI award and were invited for more than two dozen invited lectures and presentations.

HIGH-IMPACT CLINICAL RESEARCH

The project of greatest clinical importance in 2020 pertained to treatment for high-grade intrinsic brain tumors with genetically modified attenuated herpes viruses. Earlier work by Drs. James Markert and Yancey Gillespie in the Department of Neurosurgery at UAB demonstrated promising results of transfected herpes viral therapy in the treatment of adult brain tumors. Dr. James Johnston, in collaboration with Dr. Gregory Friedman in the Division of Hematology-Oncology of the UAB Department of Pediatrics, has advanced this work in Pediatrics for the first time. A small cohort of pediatric patients treated at COA with transfected virus have shown very promising results. In these trials, a genetically modified attenuated herpes viruses is stereotactically injected around the site of brain tumor resection. Initially, this work was performed in a subgroup of medulloblastomas but the early results of intra-thecal delivery of modulated HSV were sufficiently promising that clinical indications have expanded to other very difficult to treat brain tumors. HSV G207 in Pediatric Malignant Cerebellar Tumors

COLLABORATIVE REGISTRIES

Collaborative research is the cornerstone of the best clinical research in surgery. Outcome studies no longer are small, single institutional observational reports. Rather, greater power and stronger study design are essential to truly ascertain the benefit of a surgical procedure. Large numbers of cases are obtained by participating in large registries and collaborative multi-center trials. Our division participates in many such registries:

**Hydrocephalus Clinical Research Network (HCRN)**—consists of 14 North American academic Pediatric Neurosurgery programs who collaborate to design research projects that investigate hydrocephalus, which is the most common condition treated in Pediatric Neurosurgery. Hydrocephalus arises when the natural circulation and re-absorption of cerebrospinal fluid is disturbed or disrupted. Traditionally, the treatment is placement of a ventricular shunt, but shunts have many problems, including infection and obstruction. New endoscopic procedures with an endoscope (ETV-CPC) have shown great promise in correcting hydrocephalus without the morbidity of shunts. The newest trial compares these two procedures directly using prospective, randomized study design. Dr.Curtis Rozzelle is the site P.I., and Anastasia Arynchyna, MPH is the site coordinator.
National Spina Bifida Patient Registry (NSBPR)—The NSBPR is a CDC-sponsored multi-center registry of patients with varied forms of spina bifida. A comprehensive variety of clinical variables are recorded. The Spina Bifida Program at UAB/Children’s of Alabama has led enrollment since the inception of the registry in 2009. There are currently 16 participating centers in North America. The NSBPR has led to more than 50 manuscripts in a variety of topics related to spina bifida care that are fundamentally impacting the care of patients with this important congenital anomaly. Jeffrey Blount, MD, MPH, and Betsy Hopson, MHSA, are the directors of the UAB/COA program. Ms. Hopson is a national expert on the NSBPR and she and Dr. Brandon Rocque are frequently consulted for their expertise on study design, implementation and logistics of the registry.

Cerebral Palsy Research Network (CPRN)—The CPRN is a new initiative with independent funding that is structured like the HCRN. Dr. Brandon Rocque is the Director and Principal Investigator of this program, which promises to fundamentally impact the care for children with cerebral palsy.

GLOBAL NEUROSURGERY

The COVID-19 pandemic restricted travel, and as such, adversely impacted our ability to directly support partner programs; however activity in Intersurgeon and our Epilepsy partnership with Vietnamese colleagues continued robustly.

Intersurgeon—Dr. Johnis a founding member of Intersurgeon. “InterSurgeon brings people together in the field of global surgery. This free service enables collaboration in clinical care, education and training, as well as the sharing of equipment and other resources. InterSurgeon is open to all members of the surgical team, as well as organisations working to improve the care of surgical patients worldwide.” (Intersurgeon.org)

Epilepsy Program—Dr. Rocque established a collaboration with Dr. Can and his trainees in Ho Chi Minh City developed a surgical epilepsy program in Vietnam leading to first surgical epilepsy procedures ever performed in that nation. Regular sharing of active cases continues from week to week, and the number of children in Vietnam who have received epilepsy operations continues to grow robustly. These children had no options for treatment before these interventions.

SELECT PEER-REVIEWED MANUSCRIPTS PUBLISHED IN FY20:


Hale AT, Adelson PD, Albert GW, Alden TD, Anderson RCE, Bauer D, Johnston J, Shannon CN, Limbrick DD. Factors associated with syrinx size in pediatric patients treated for Chiari malformation type I and syringomyelia: a study from the Park-Reeves Syringomyelia


INVITED PRESENTATIONS

Dr. Blount—
Visiting Professor:
• University of Kansas
• University of Rochester
• Weill-Cornell Medical Center

Indian Society of Pediatric Neurosurgery—Invited Guest Lecturer
“Clash of the Titans”—International Society of Pediatric Neurosurgery Online Seminar
ISPN Pediatric Neurosurgery Course

Dr. Rocque:
Visiting Professor—
• Dell Children’s Hospital, University of Texas at Austin
American Academy of Pediatrics—invited lecture

Dr. Johnston:
Pediatric Section of the AANS/CNS- Intersurgeon
INSTITUTIONAL AND NATIONAL LEADERSHIP

Jeffrey Blount, MD FAANS
Division Director, Division of Pediatric Neurosurgery
UAB Faculty Senate
Faculty Council of UAB
Editorial Board—Journal of Neurosurgery—Pediatrics
Editorial Board—Neurosurgery
Editorial Board—Child’s Nervous System
MPH completed at UAB School of Public Health

Curtis J. Rozzelle, MD FAANS
Residency Program Director—UAB Neurosurgery Residency
UAB Dean’s Committee for Graduate Education
PI—Hydrocephalus Clinical Research Network
Past President—Neurosurgical Society of Alabama
Member—AANS Board of Directors

James M. Johnston, MD FAANS
Fellowship Director, Pediatric Neurosurgery, UAB/COA
Co-Founder, Executive Board, InterSurgeon.org (UK)
Member at Large, Executive Committee, Joint Pediatric Section of AANS/CNS Fellowship
Director, Global Surgery Program, Children’s of Alabama Neurosurgical Society of America
Board of Directors and Volunteer Coordinator—FIENS
Pursuing MSc at London School of Hygiene And Tropical Medicine, UK
Chief Medical Officer, CNine Biosolutions LLC
Ad hoc review: World Neurosurgery

Brandon G. Rocque, MD MS FAANS
Director of Research—Pediatric Neurosurgery at UAB/COA
Board of Directors—FIENS
Site PI—Cerebral Palsy Research Network
Ad hoc review—multiple Pediatric Neurosurgery journals
PEDIATRIC FACULTY

Dr. Peter D. Waite..........Past Department Chair and Professor
Dr. Kathlyn K. Powell.....................Assistant Professor

FEATURED RESEARCH

Drs. Waite and Powell have a large service for cleft cranio-facial patients including bone grafting reconstruction and distraction of hypoplastic maxilla and mandible. They continue to follow these patients and assess the outcomes of surgeries.

Drs. Waite and Powell collaborate with Pediatric Rheumatology in complex management of Temporo-mandibular joint disease. There are ongoing studies assessing the long-term outcomes of mandibular distraction osteogenesis in neonates.

SIGNIFICANT PUBLICATIONS

Published:

Commentary—“Long-Term Postoperative Cone-Beam Computed Tomography Analysis of Secondary Bone Grafting in 79 Patients With Unrepaired Alveolar Clefts”.
Anver TD, Mirzai L, Li P, Powell KK, Waite PD.

A combined orthodontic/orthognathic approach in the management of obstructive sleep apnoea: Balancing treatment efficacy and facial aesthetics.
Shah N, Waite PD, Kau CH.

Authors’ Comments—Long-Term Postoperative Cone-Beam Computed Tomography Analysis of Secondary Bone Grafting in 79 Patients With Unrepaired Alveolar Clefts.
Anver TD, Mirzai L, Li P, Powell KK, Waite PD.

Enhancing the Orthognathic Surgery Experience: Treatment in 10 Weeks “Surgery First” Approach.
Salazar AG, Waite PD, Kau CH.


PENDING PUBLICATION

Surgical management of Juvenile Idiopathic arthritis related dentofacial deformities. JOMS
ERAS (enhanced recovery after surgery) for orthognathic surgery. JOMS
Is the oropharyngeal pack necessary in orthognathic surgery patients: a pilot study? ERAS reduces opioid use and PONV in orthognathic surgery.

ACTIVE IRBS

IRB-141216001 Retrospective Evaluation of Cleft Lip and Palate and Craniofacial Anomalies PI: Powell
IRB-3000000661 Long-Term Outcomes of Mandibular Distraction Osteogenesis in Neonates PI: Waite Co-PI: Powell/Schibler
IRB-300000401 Does young age at time of ICBG for alveolar cleft make a patient more likely to require a RED in the future? PI: Dr. Waite

DIVISION AWARDS AND RECOGNITION AND EXTRAMURAL AWARDS AND LEADERSHIP ROLES

This section only includes external, significant awards and honors as well as external leadership positions. We intended to exclude: grants, travel awards, fellow awards, and internal (UAB Pediatrics and Children’s of Alabama) awards. Participation in National Research, Quality Improvement & Learning Networks
Please include any national research, quality improvement & learning networks your faculty or division participate in.

NEW FACULTY IN 2020

Due to the COVID-19 pandemic we have decided to not update the faculty group photos for this year’s annual report. We can include a headshot of new faculty if you can send it, or we can have one taken.
RESEARCH HIGHLIGHTS

Participating in the following multi-institutional studies:

Dr. Shawn Gilbert—International Perthes Study Group
Dr. Shawn Gilbert—Congenital Pseudarthrosis Tibia BMP Multicenter study (D. of Defense, UAB lead site)

Drs. Shawn Gilbert and Michael Conklin—IMPACCT (Infrastructure for Musculoskeletal Pediatric Acute Care Clinical Trials)

Drs. Shawn Gilbert and Michael Conklin—AIS (Adolescent Idiopathic Scoliosis) Obesity Study

Dr. Michael Conklin—National Spina Bifida Patient Registry

Drs. Shawn Gilbert and Michael Conklin—AIS (Adolescent Idiopathic Scoliosis) Obesity Study

Dr. Michael Conklin—National Spina Bifida Patient Registry

Dr. Kevin Williams—member Pediatric Research in Sports Medicine

Dr. Amit Momaya selected as medical monitor for the ACL BEAR trial (multi-center study run out of Boston Children’s with new ACL repair technology)

Dr. Lisa Kafchinski—NCCN Bone Cancer Panel.

OTHER NOTABLES

Dr. Michael Conklin serves on the committee for development of Orthopedic Guidelines for Care of Individuals with spina bifida.

He serves on the Committee for Science and Publication, National Spina Bifida Patient Registry at the Center for Disease Control.

Dr. Shawn Gilbert has continued to serve as chair of the basic science content committee for the American Academy of Orthopaedic Surgery. He also serves on the Trauma and Disaster Preparedness committee of the Pediatric Orthopaedic Society of North America and on the leadership committee of the International Perthes Study group as the IRB/regulatory chair. He is outgoing President of the Alabama Orthopaedic Society.

Dr. Amit Momaya and COA Sports Medicine selected as the official medical provider for Hoover-Vestavia Soccer (elite youth soccer club)

Dr. Lisa Kafchinski—member of Young Supporters Board for the O’Neal Comprehensive Cancer Center

SIGNIFICANT PUBLICATIONS


FEATURED RESEARCH
The Division of Pediatric Cardiothoracic Surgery has an interest in research in three main areas as well as in the broad area of clinical outcomes research.

In the area of xenotransplantation, Dr. David C. Cleveland has developed a world-class research team in close collaboration with Dr. David CK Cooper at the University of Alabama at Birmingham. Current research efforts are primarily directed at developing a reproducible model of pediatric cardiac xenotransplantation using a baboon model. Additional areas of active investigation include the use of genetically engineered pigs as a source of bioprosthetic valves and attitudes and acceptance of xenotransplantation.

A second major area of academic investigation is in the development of a congenital heart surgery metadatabase. A joint collaboration among pediatric cardiothoracic surgery, pediatric cardiology, and critical care and pediatric cardiac anesthesia, efforts are well underway with the team at the Kirklin Institute for Research in Surgical Outcomes to develop a congenital database that would combine the vast number of current congenital databases into a single, easily searchable database that would be useful in quality improvement as well as with clinical outcomes research. The ultimate aim of the project is to eventually use this database as a predictive tool for individual patients through the mechanisms of machine learning.

A third area of academic investigation is in the use of umbilical cord stem cells to improve outcomes in patients with hypoplastic left heart syndrome (HLHS). Our program recently became the ninth program nationally to be selected to participate in a national clinical trial run by the Mayo Clinic and supported by the Todd and Karen Wanek Family Program for HLHS. The initial trial is exploring the utility of the intramyocardial injection of cord blood cells harvested at birth into the myocardium of HLHS patients undergoing their second stage palliation.

SIGNIFICANT PUBLICATIONS


Cleveland D, Banks AC, Hara H, Carlo WF, Mauchley DC, Cooper DKC. The case for cardiac xenotransplantation in neonates: Is now the time to reconsider xenotransplantation for hypoplastic left heart syndrome? Pediatr Cardiol. 2019 Feb;40(2):437-444


ADDITIONAL PUBLICATIONS


DIVISION LEADERSHIP ROLES AND PARTICIPATION IN QUALITY IMPROVEMENT AND LEARNING NETWORKS

Robert J. Dabal is currently a member of the Membership Committee of the Society of Thoracic Surgeons and has been invited to serve on the Congenital Database Taskforce also of the Society of Thoracic Surgeons.

The entire division also contributes to the Society of Thoracic Surgeons Congenital Database.
FEATURED RESEARCH

Dr. Tong is PI of a national multi-institutional renal trauma consortium assessing renal injury patterns and management in the pediatric population. She has a strong interest in spina bifida with multiple projects including the investigation of female sexual health and educational needs; challenges in pregnancy on women with spina bifida, and the impact of urinary continence procedures on renal function, obesity and mobility in children with spina bifida. Dr. Tong recently joined the Southeast Pediatric Urologic Research (SPUR) as a UAB representative.

Dr. Dangle has a strong interest in pediatric stone disease. He is currently working on a prospective assessment of pediatric demographics including gender distribution and dietary factors that influence stone metabolism. Dr. Dangle is the UAB PI for a multi-institutional PCORI study investigating Pediatric Stone Disease-PKIDS.

Dr. Kitchens is a founding member, and senior UAB associate, of SPUR (Southeastern Pediatric Urology Research). This regional consortium examines the prevalence of kidney stones and congenital anomalies. This is a multi-institutional collaborative research effort and includes, UAB, Vanderbilt, Emory, Duke and UNC. Dr Kitchens is currently working on a database of primary non-obstructing megaureters.

Dr. Joseph received continuation funding as the PI for two CDC-sponsored studies. The first is the National Spina Bifida Patient Registry, a multi-institutional study that is acquiring longitudinal patient data across the lifespan. This information is now used by all participating centers assessing various aspects of patient care and management. The second grant relates to the urologic management of the newborn with spina bifida, assessing the effect of a proactive treatment protocol with the goal of preserving renal function (UMPIRE). This multi-institutional study involving nine centers is now entering the second phase, years five through ten of life. Data reviewed from the first five years has already impacted changes to the original protocol.

SIGNIFICANT PUBLICATIONS

Saidian A, Kitchens DM. Is Urinary Retention Following Extravesical Ureteral Reimplantation Still a Concern? Current Bladder Dysfunction Reports: 15, 72-75, 2020

Pediatric Urologic Trauma, Boyd C, Gibson E, Dangle PP- Practical Pediatric Urology—An Evidence Based Approach—Prasad Godbole et al. (Eds): Practical Pediatric Urology, 978-3-030-54019-7, 459927_1_En, (Chapter 20)


Joseph DB, Baum MA, Tanaka ST, Frimberger DC , Misseri R ,Khavari R, Baillie Sg, Yerkes EB, Wood H Urologic Guidelines for the Care and Management of People with Spina Bifida JPRM 20/11/2020 DOI: 10.3233/PRM-200712
RECOGNITION AND EXTRAMURAL AWARDS LEADERSHIP ROLES

David Joseph, MD, is currently the Immediate Past-President of the American Board of Urology. He has been elected to Chair the committee on Lifelong Learning of the ABU beginning in 2020 and is responsible for development of the pilot on Continuing Urologic Certification. He was selected as a 2020 member to the ABMS Committee on Continuing Certification. Dr. Joseph was recently elected to the American Association of Genitourinary Surgeons, an association of leading academic urologists from the United States, Canada and around the world dedicated to the study of diseases of the genitourinary system. Active membership is limited to 75 in number. Dr. Joseph is currently a member of the ACGME Urology RRC. He was selected by the ACGME to serve on the 2020 Milestone Review Committee for the Pediatric Urology Fellowship programs.