Division Details

Division Data Summary

Research and Training Details

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Clinical Activities and Training

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Significant Accomplishments

New Developments in Cystic Fibrosis

Cystic fibrosis is a disorder affecting over 30,000 patients in the US and >70,000 worldwide. Mutations in the CF gene lead to defects in the CFTR protein, which works as a regulator of salt and water movement throughout the body. CF patients develop problems with mucus in the lungs and abnormal food absorption that lead to lung infections, poor growth, and death in early adulthood. Although improvements have been made in CF patient care for several decades, all previous therapies have targeted downstream symptoms of CF rather than early steps in the disease cascade.

2012 has been very exciting for the CF community in that the first drug that targets the root cause of CF gained FDA approval (kalydeco or ivacaftor, Vertex Pharmaceuticals). This pill helps restore activity to one of the mutant proteins that causes CF (G551D, found in about 5% of CF patients). Adult and pediatric patients with CF caused by this mutation that were treated with kalydeco had >10% improvements in lung function, gained more weight than the untreated patients, and reduced their risk of pulmonary exacerbations by >50%.

A second drug, lumicaftor, completed phase II clinical trials in CF patients with the most common CF causing mutation (F508del, found in nearly 90% of CF Patients). These studies were led by Dr. Clancy at CCHMC and demonstrated its capacity to restore function in patients carrying this mutation. Phase II studies are in progress, and Phase III studies are targeted for late 2012.
NIH Training Grant Awarded

Our division was one of only two pediatric pulmonary centers in the United States to receive the National Institute of Health Ruth L. Kirschstein National Research Service Award (NRSA) program this year. The program provides funding for research training opportunities for medical students in basic or clinical research in pediatric pulmonary and sleep medicine areas. This research program is active in the summer between the first and second years of medical school. Eight applicants in the inaugural class were selected from students applying from medical schools in the South, Midwest and East Coast. Students were matched with mentors covering a variety of pediatric respiratory research areas including asthma, cystic fibrosis, lung cancer and sleep apnea. The strengths of our research programs, combined with an enthusiastic faculty and a well-organized summer program, provide an excellent opportunity to attract physician trainees at critical stages in their careers and increase the likelihood they will want to further pursue research as physician-scientists.

Carolyn Kercsmar awarded grant from Schroth Family Charitable Trust

In December 2011, the PNC Bank Charitable Trust Committee awarded the Asthma Center a grant of $150,000 from the John A. Schroth Family Charitable Trust. The funding supports a project to develop multimedia discharge instructions for patients with asthma, helping to improve asthma control and decrease re-admissions.

Carolyn Kercsmar, MD, Director of the Asthma Center, will lead this innovative project, focused on helping families with low health literacy. The specific aims of the study are to create and examine the acceptability of multimedia discharge instructions for caregivers of hospitalized children with asthma, particularly those with poor health literacy levels. The project will also determine the short-term efficacy of providing personalized, multimedia discharge instructions to caregivers of children hospitalized for treatment of asthma exacerbation. The study will feature the child and parent as “stars” in their own educational video to enhance viewing and increase understanding of asthma management skills. Overall goals are to reduce the use of emergency department and inpatient services due to asthma, and to improve the percentage of patients with well controlled asthma in the Greater Cincinnati community. Cincinnati Children's is known to be a leader in innovative programs and local children can benefit from our advances in asthma care. Knowledge gained from an effective care model created in Cincinnati can also spread to other programs nationwide.

Significant Publications


Injury to the distal respiratory epithelium has been implicated as an underlying cause of interstitial lung disease (ILD). This study utilized a mouse model of human ILD associated with surfactant protein C (SP-C) deficiencies to investigate whether rapamycin, an immunosuppressant drug that can regulate cell growth, proliferation, and survival, could ameliorate induced fibrosis in the lungs when administered either preventatively or therapeutically. Results of this study suggest that the use of novel therapeutics will be required to treat individuals with SP-C-deficient ILD.

In this clinical trial, the safety, tolerability, and pharmacodynamics of the cystic fibrosis transmembrane conductance regulator (CFTR) modulator VX-809, which is known to increase the cell-surface density of functional F508del-CFTR in vitro, were evaluated in adult cystic fibrosis patients homozygous for this CFTR mutation. VX-809 was found to have an adverse-event profile similar to placebo, suggesting it to be safe and well-tolerated, and demonstrated biological activity with a positive impact on CFTR function in the sweat gland. Future studies will determine how VX-809-induced CFTR-function improvements in the sweat gland relate to those measurable in the respiratory tract and to long-term measures of clinical benefit.


Pressure ulcers are commonly acquired in pediatric institutions and are a key indicator of the standard and effectiveness of patient care. This report provides results from a quality improvement program that was instituted to develop and test potential interventions for the prevention of tracheostomy-related pressure ulcers (TRPUs) in an effort to improve the care of tracheostomy-dependent patients. Results included a significant decrease in the percentage of patients who developed TRPUs, from 8.1% during the baseline period to 0.3% after intervention. Education, ongoing assessment of skin integrity, and the use of devices that minimize pressure at the tracheostomy-skin interface were found to be interventions that can be integrated into daily workflow and that effectively reduce TRPUs, even among patients at high risk for them.


Low-income and minority adolescents are at high risk for poor asthma outcomes, due in part to possible problems with adherence to self-care techniques. Acceptability, feasibility, and effect sizes of an adherence intervention for low socioeconomic status minority youth with moderate- and severe-persistent asthma were tested in this study. Motivational interviewing, problem-solving skills training, and tailored text messaging were considered acceptable and feasible by participants, and resulted in improved asthma symptoms based on clinically meaningful medium to large effect sizes.


The Childhood Adenotonsillectomy Trial (CHAT) established in this study was designed to assess neuropsychological and health outcomes in children randomized to receive early adenotonsillectomy (AT) procedures as compared to Watchful Waiting with Supportive Care in order to evaluate the effectiveness of AT for not only improving sleep-disordered breathing, but also for improving clinically relevant outcomes, such as neurocognitive function, behavior, and quality of life. Key elements in the design and implementation of a controlled trial for a widely used "standard practice" surgical intervention in a pediatric population are defined, establishing a useful template for other pediatric controlled studies or other studies that evaluate surgical interventions.

Division Publications


7. Carle AC, Dewitt EM, Seid M. *Measures of health status and quality of life in juvenile rheumatoid arthritis: Pediatric Quality of Life Inventory (PedsQL) Rheumatology Module 3.0, Juvenile Arthritis Quality of Life Questionnaire (JAAQ), Paediatric Rheumatology Quality of Life Scale (PRQL), and Childhood Arthritis Health Profile (CAHP).* *Arthritis Care Res (Hoboken).* 2011; 63 Suppl 11:S438-45.


36. Saldana SN, Hooper DK, Froehlich TE, Campbell KM, Prows CA, Sadhasivam S, Nick TG, Seid M, Vinks AA,


Faculty, Staff, and Trainees

Faculty Members

Raouf Amin, MD, Professor

Leadership Director, Division of Pulmonary Medicine;; Endowed Chair, Hubert and Dorothy Campbell Professorship in Pediatric Pulmonology

Research Interests Cardiovascular morbidity of sleep apnea in children
Thomas Boat, MD, Professor
Leadership Executive Associate Dean, University of Cincinnati College of Medicine

R. Paul Boesch, DO, Assistant Professor
Leadership Director, Transitional Care Center
Research Interests Chronic pulmonary aspiration; mucus hypersecretion

Ronald Bokulic, DO, Associate Professor
Lisa Burns, MD, Assistant Professor
Research Interests CF Transition of Care; Pulmonary Vascular Disease

Barbara Chini, MD, Associate Professor
Leadership Director, Pulmonary Fellowship Program
Research Interests Sleep Disordered Breathing, Outcomes Research, Self-Management of Chronic diseases

John P. Clancy, MD, Professor
Leadership Thomas Boat Endowed Chair; Director, Clinical and Translational Research
Research Interests Airway and epithelial biology, examining novel targets to treat cystic fibrosis;

Joseph Crisalli, MD, Assistant Professor
Research Interests Pediatric Sleep, Exercise Physiology

Mathew Ednick, DO, Assistant Professor
Research Interests Pediatric Sleep, Sickle Cell Disease

William Hardie, MD, Professor
Leadership Director, Pulmonary Function Laboratory
Research Interests Molecular mechanism of pulmonary fibrosis, pediatric pulmonary function tests, pediatric pneumonia complications

Patricia Joseph, MD, Associate Professor
Research Interests Cystic fibrosis infections and quality improvement

Carolyn Kercsmar, MD, Professor
Leadership Director, Asthma Center; C-Director Pulmonary Medicine
Research Interests Asthma, inner city asthma, clinical outcomes and clinical trials, airway inflammation

Satish Madala, PhD, Instructor
Research Interests Immunoregulatory Mechanisms in pulmonary inflammation and fibrosis; Stromal cell contribution in pulmonary fibrosis

Karen McDowell, MD, Associate Professor
Research Interests Asthma self management, utilization of technology for chronic disease management, bronchoscopy and wheezing/asthma, health care effectiveness, outcomes.

Gary McPhail, MD, Assistant Professor
Leadership Associate Director, Fellowship Training Program
Research Interests Cystic fibrosis, quality improvement, clinical outcomes, pulmonary vascular disease

Hemant Sawnani, MD, Assistant Professor
Research Interests Pulmonary Management of children with Neuromuscular diseases; sleep disordered breathing in Duchenne Muscular Dystrophy; Infant Apnea; Obstructive Sleep Apnea; Outcomes in Sleep Medicine
Michael Seid, PhD, Professor  
**Leadership** Director, Health Outcomes and Quality of Care Research  
**Research Interests** Health outcomes for children with chronic health conditions, interventions to overcome barriers to care and adherence, clinical behavior and effects on self-management, quality improvement research

Abu Shamsuzzaman, MD, Assistant Professor  
**Research Interests** Sleep and Cardiovascular Diseases

Narong Simakajornboon, MD, Associate Professor  
**Leadership** Director, Sleep Disorders Center; Program Director, Sleep Medicine Fellowship  
**Research Interests** Sleep-disordered breathing in children, sleep apnea, restless legs syndrome, periodic limb movement disorders

Robert Wood, PhD, MD, Professor  
**Leadership** Director, Pulmonary Bronchology Program  
**Research Interests** Airway abnormalities; pulmonary alveolar proteinosis

Lisa Young, MD, Assistant Professor  
**Leadership** Director, Pediatric Rare Lung Diseases Clinical Program  
**Research Interests** Interstitial lung diseases, rare lung diseases, lymphangioleiomyomatosis

Joint Appointment Faculty Members

Kelly Byars, PsyD, Associate Professor (Psychology)  
**Research Interests** Current research focuses on improving the assessment and treatment of pediatric insomnia and pediatric obstructive sleep apnea

Daniel Grossoehme, DMin, BCC, Assistant Professor (Pastoral Care)  
**Research Interests** Religion/spirituality, adherence, coping, cystic fibrosis

Bruce Trapnell, MD, Professor (Neonatology and Pulmonary Biology)

Rhonda Szczesniak, PhD, Assistant Professor (Biostatistics & Epidemiology)  
**Research Interests** Current areas of interest are Mixture Models and Functional Data Analysis with focus on Bayesian statistics, primarily using Markov Chain Monte Carlo. Content-specific areas include integration of fMRI and MEG modalities; developing statistical models to assess impact of OSA; CF outcomes research

Clinical Staff Members

- Moutazz Abdulhadi, RPSGT,  
  *Respiratory Therapist*
- Denetra Bamonte, RRT, RPSGT,  
  *Respiratory Therapist*
- Sallie Bauer, RRT, RPSGT,  
  *Respiratory Therapist*
- Marsha Blount, CNP,  
  *Certified Nurse Practitioner*
- Walter Blower, RRT,  
  *Respiratory Therapist*
- Carla Broadus, RN,  
  *Nurse Coordinator*
- Ginger Browning, RRT, BS,  
  *Airway Clearance Specialist*
Johnny Bryant, RRT, RPSGT,  
Respiratory Therapist

Monica Chapman, RN,  
Nurse Coordinator

Jessica Co, CNP,  
Certified Nurse Practitioner

Amy Cole, RRT, RPSGT,  
Lead Technologist

Adrienne Conrad,  
PSG Tech Asst

Shannon Deidesheimer, RN,  
Nurse Coordinator

Geri Dinkins, RN,  
Nurse Coordinator

Melodie Dixon, RRT, RPSGT,  
Respiratory Therapist

Amanda Dressman, CNP,  
Certified Nurse Practitioner

Julie Feldstein, RRT, CPFT,  
Respiratory Therapist

Karla Foster, MS,  
Exercise Physiologist

Giblin Megan, RRT,  
Respiratory Therapist

Robin Hamilton, RN,  
Clinical Manager

Brenda Harkelroad, RN,  
Nurse Coordinator

Joann Harmeyer, RRT, RPSGT,  
Respiratory Therapist

Stephanie Harris, RRT,  
Respiratory Therapist

Amanda Hatfield, RRT,  
Respiratory Therapist

Moira Hecker, RN,  
Nurse Coordinator

Marion Johnson, RRT,  
Respiratory Therapist

Sharon Kadon, RN,  
Nurse Coordinator

Amanda Kelly, RRT,  
Respiratory Therapist

Michelle Kleinhenz, RRT,  
Respiratory Therapist

Beth Koch, RRT, RPFT,  
Clinical Supervisor Pulmonary Function Lab

Margaret Landers, RRT, RPSGT,  
Respiratory Therapist

Denise Leonard, RN,  
Nurse Coordinator

Jean Luchini, RN,
Nurse Coordinator  
- Julie Malkin, CNP,  
  Certified Nurse Practitioner  
- Janice MacBrair, CNP,  
  Certified Nurse Practitioner  
- Susan McCarthy, RRT, RPSGT,  
  Respiratory Therapist  
- Keith McConnell,  
  Senior Biomedical Engineer  
- Kathy McGee, CNP,  
  Certified Nurse Practitioner  
- Rachel McGill, RD, LD,  
  Dietician  
- Connie Meeks, RN,  
  Nurse Coordinator  
- Steven Moore, RN,  
  Clinical Coordinator  
- Asia Moore-Munlin, RRT, CPFT,  
  Respiratory Therapist  
- Karen Murphy, MSW, LSW-S,  
  Social Worker  
- Teresa O'Hara, RN,  
  Nurse Coordinator  
- Laura Ogilby, RRT,  
  Respiratory Therapist  
- John Pack, RRT,  
  Respiratory Therapist  
- Melissa Rice, CNP,  
  Certified Nurse Practitioner  
- Valerie Sackenheim, RN,  
  Nurse Coordinator  
- Kathy Santoro, RD, LD,  
  Dietician  
- Dianne Stratton, RRT,  
  Respiratory Therapist  
- Jackie Taylor, RD, LD,  
  Dietician  
- Sarah Thomas, CNP,  
  Certified Nurse Practitioner  
- Debbie Webster, BA, RRT, RPSGT,  
  Clinical Supervisor  
- Tonya Weddle, RRT,  
  Respiratory Therapist  
- Jeanne Weiland, CNP,  
  Certified Nurse Practitioner  
- Allison Whisenhunt, MSW, LSW-S,  
  Social Worker  
- Kathy Witschger, RRT,  
  Respiratory Therapist  
- Brenda Young, RRT,
Trainees

- Dan Benscoter, DO, PL-6, Geisinger Medical Center
- Justin Brockbank, MD, PL-4, Virginia Commonwealth University Medical Center
- Hina Chaudry, MD, PL-7, University of South Carolina, School of Medicine
- Neepa Gurbani, DO, PL-6, University of Nevada School of Medicine
- Kavitha Kotha, MD, PL-6, Children’s Hospital Medical Center Akron
- Chee Tan, MD, PL-6, Winthrop University Hospital
- Cherie Torres-Silva, MD, PL-9, University of Texas Health Science Center-Houston
- Colby Wyatt, MD, PhD, PL-4, Cincinnati Children’s Hospital Medical Center
- Daniela Zgherea, MD, PL-5, Maimonides Infants and Children’s Hospital

Division Collaboration

Pediatric Otolaryngology/Head and Neck Surgery; Pediatric Surgery; Gastroenterology, Hepatology and Nutrition; Interdisciplinary Feeding Clinic » Richard Azizkhan, M.D., Robin Cotton, M.D., Alessandro de Alarcon, M.D., Thomas Inge, M.D., Ajay Kaul, M.D., Charles Myer, M.D., Philip Putnam, M.D., Michael Rutter, M.D., Sally Shott, M.D., and Paul Willging, M.D.

- Aerodigestive and Sleep Center - Treatment of chronically ill children with complex airway, pulmonary, upper digestive tract, sleep and feeding disorders

Anesthesia; Cardiology; Endocrinology; Developmental and Behavioral Pediatrics; Gastroenterology, Hepatology and Nutrition; Genetic Counseling; International Health; Neurology; Nutrition Therapy; Orthopaedics; Palliative Care; Pediatric Surgery; Physical Therapy; Rehabilitative Medicine; Social Work » Rebecca Brown, M.D., Jim Collins, M.D., Linda Cripe, M.D., Thomas Inge, M.D., Viral Jain, M.D., Ajay Kaul, M.D., Mary McMahon, M.D., Mark Meyer, M.D., Susan Rose, M.D., Meilan Rutter, M.D., Irena Rybalsky, M.D., David Schonfield, M.D., Robert Spicer, M.D., Jeffrey Towbin, M.D., Martha Walker, M.D., Norbert Weidner, M.D., and Brenda Wong, M.D.

- Comprehensive Neuromuscular Center - Treatment of children with neuromuscular disorders

Allergy and Immunology; General Pediatrics » Amal Assa’ad, M.D., Gurjit Hershey, M.D., Maria Britto, M.D., Thomas DeWitt, M.D., Keith Mandel, M.D., Mona Mansour, M.D., Marc Rothernberg, M.D., and Jeffrey Simmons, M.D.

- Asthma Center - Treatment of children and adolescents with asthma; development of an asthma repository

Molecular Immunology; Pulmonary Biology » Jeff Whitsett, M.D. and Bruce Trapnell, M.D.

- Cystic Fibrosis Research

Pulmonary Biology » Thomas Korfhagen, M.D. and Jeffrey Whitsett, M.D.

- Pulmonary Fibrosis Research

Pulmonary Biology; Radiology; Orthopaedics; University of Cincinnati; » Alan Brody, M.D., Alvin Crawford, M.D., Gail Deutsch, M.D., Thomas Inge, M.D., and Bruce Trapnell, M.D.

- Rare Lung Disease Center - Diagnosis and management of children with rare lung diseases, including interstitial lung disease, surfactant mutations, lung development disorders, lymphatic disorders and chronic lung diseases associated with immunodeficiency/immune dysfunction, rheumatologic disorders and other systemic disorders.

Cardiology; Endocrinology; Neurology; Otolaryngology; Pediatric Surgery; Psychology; Radiology » Dean
Beebe, Ph.D., Alan Brody, M.D., Robin Cotton, M.D., Larry Dolan, M.D., Chuck Dumoulin, M.D., Robert Fleck, M.D., Thomas Inge, M.D., Thomas Kimball, M.D., Timothy Knilans, M.D., Sally Shott, M.D., Wanaka Wasapura, M.D., and J. Paul Willging, M.D.

Sleep Research- Cardiovascular morbidity secondary to obstructive sleep apnea in children and the neurocognitive outcome of the disease

Audiology; Human Genetics; Neurosurgery; Otolaryngology; Pediatric Dentistry; Orthodontics; Plastic Surgery; Psychology; Speech Pathology

David Billmire, M.D., Richard Campbell, M.D., Kerry Crone, M.D., Christopher Gordan, M.D., William Greenhill, DMD, Ann Kummer, Ph.D., Francesco Mangano, DO, Jane Middendorf, MA, Cynthia Prows, MSN, Gayle Riemer, M.D., Howard Saal, M.D., Iris Sageser, RDH, and J Paul Willging, M.D.

Orthopaedics » Alvin Crawford, M.D., Viral Jain, M.D., and Eric Wall, M.D

Spine Center

Grants, Contracts, and Industry Agreements

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<td>Bronchoalveolar Lavage Fluid (BALF) Specimen Bank and Lower Airway Microbiome in Children and Adults With and Without CF</td>
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