## Division Data Summary

**Research and Training Details**

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<td>Direct Annual Industry Support</td>
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<td>Peer Reviewed Publications</td>
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**Clinical Activities and Training**

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### Significant Publications


This clinical trial demonstrated the efficacy of problem-solving skills in improving health-related quality of life in vulnerable families of children with persistent asthma. It won the Diane J. Willis Award for outstanding article in the *Journal of Pediatric Psychology* for 2010.


Lymphangioleiomyomatosis (LAM) is a progressive, frequently fatal lung disease, which typically requires surgical lung biopsy for diagnostic confirmation. This study demonstrates that serum VEGF-D can be used to non-invasively diagnosis LAM in the majority of cases, and establishes serum VEGF-D as one of the very few diagnostic blood tests for lung disease.


Neuroendocrine cell Hyperplasia of Infancy (NEHI) is a recently described lung disorder which causes significant morbidity in young children. This manuscript provides histologic diagnostic criteria, reports novel
clinical disease features including infant pulmonary function test data, and provides insight into disease pathophysiology and mechanisms.


Dr. Clancy played an integral role in a recent high profile publication related to restoring CFTR function (Accurso, FJ, Rowe SM, Clancy JP, et al. Effect of VX-770 in persons with cystic fibrosis and the G551D-CFTR mutation. N Engl J Med. 363(21):1991-2003. Nov 18, 2010.). VX-770 is an oral agent designed to activate mutant CFTR and potentially help many CF-causing mutations. In this study, VX-770-treated CF patients demonstrated unprecedented improvements in CFTR activity and lung function, with improvements seen in some markers after only three days of treatment. The results have recently been confirmed in a Phase III trial of VX-770 in CF, and FDA approval may be as soon as early 2012. Dr. Clancy was a critical member of the study development team, and centrally reviewed and scored all of the patient data measuring airway CFTR activity. He continues to be active in the development of new CFTR-directed therapies.

Division Highlights

Raouf Amin, M.D.

A collaborative in research which includes the division of Pulmonary Medicine, Otolaryngology, Radiology and Aerospace Engineering was funded by the NIH (Contact PI: Raouf Amin). The research aims at understanding the mechanisms of obstructive sleep apnea in children with Down Syndrome. Simulation models will be developed to predict the outcomes of surgical intervention aiming at treating upper airway obstruction. It is anticipated that the knowledge gained will translate into novel treatment of sleep apnea.

Michael Seid, Ph.D.

Dr. Seid’s research focuses on using behavioral and social science to improve care and outcomes for children with chronic health conditions. He has been Principal Investigator of numerous federally-funded grants, including grants to measure quality of care for vulnerable children (R01 HS10317), to reduce barriers to care for vulnerable children with asthma (R40 MC 001214/08044), to determine predictors of health-related quality of life for children with juvenile idiopathic arthritis (R01 subcomponent of P60 AR047784-06A2, Glass PI) and to develop and test a cell-phone based adherence intervention for adolescents with asthma (R21HL089524) and Type 1 diabetes (R21DK085483). Dr. Seid is the Research Center Director of CCHMC’s AHRQ-funded Center for Education and Research in Therapeutics (CERT; U18HS016957, Lannon PI), focusing on using learning networks for comparative effectiveness and safety research. He is also Co-PI for a Transformative R01 (R01DK085719), “Open Source Science: Transforming Chronic Illness Care,” which aims to design, develop, and test a new system for chronic illness care based on collaboration among patients, providers, and researchers.

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 Putnan, M.D.; Michael Rutter, M.D.; Sally Shott, M.D.; 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 Schonfeld, M.D.; Robert Spencer, M.D.; Jeffrey Towbin, M.D.; Martha Walker, M.S.; Norbert Weidner, M.D.; 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 Rothenberg, M.D.; Jeffrey Simmons, M.D.

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

Molecular Immunology; Pulmonary Biology » Julio Aliberti, Ph.D.; John P. Clancy, M.D.; Christopher Karp, M.D.; Bruce Trapnell, M.D.; Jeff Whitsett, M.D.

   Cystic Fibrosis Research

Pulmonary Biology » Thomas Korfhagen, M.D.; 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.; 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.; Lane Donnelly, 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.; 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 Gordon, M.D.; William Greenhill, DMD; Ann Kummer, Ph.D.; Francesco Mangano, D.O.; Jane Middendorf, M.A.; Cynthia Prows, MSN; Gayle Riemer, M.D.; Howard Sall, M.D.; Iris Sageser, RDH; J Paul Willging, M.D.

   Craniofacial Team

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

   Spine Center

Faculty Members

Raouf Amin, MD, Professor

   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  
*Executive Associate Dean, University of Cincinnati College of Medicine*

**Research Interests**

R. Paul Boesch, DO, Assistant Professor  
*Director, Transitional Care Center*

**Research Interests** Chronic pulmonary aspiration; mucus hypersecretion

Ronald Bokulic, DO, Associate Professor  

**Research Interests**

Barbara Chini, MD, Associate Professor  
*Director, Pulmonary Fellowship Program*

**Research Interests** Sleep Disordered Breathing, Outcomes Research, Self-Management of Chronic diseases

John P. Clancy, MD, Professor  
*Thomas Boat Endowed Chair*
*Director, Clinical and Translational Research*

**Research Interests** Airway and epithelial biology, examining novel targets to treat cystic fibrosis;

Mathew Ednick, DO, Assistant Professor  

**Research Interests** Pediatric Sleep, Sickle Cell Disease

William Hardie, MD, Professor  
*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  
*Director, Asthma Center; C-Director Pulmonary Medicine*

**Research Interests** Asthma, inner city asthma, clinical outcomes and clinical trials, airway inflammation

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  
*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  
*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  
*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  
*Director, Pulmonary Bronchology Program*

**Research Interests** Airway abnormalities; pulmonary alveolar proteinosis

Jamie Wooldridge, MD, Assistant Professor  

**Research Interests** Metabolic and nutritional outcomes in patients with Cystic Fibrosis

Lisa Young, MD, Assistant Professor  
*Director, Pediatric Rare Lung Diseases Clinical Program*

**Research Interests** Interstitial lung diseases, rare lung diseases, lymphangioleiomyomatosis

**Joint Appointment Faculty Members**

Julio Aliberti, PhD, Assistant Professor  
Molecular Immunology

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

Christopher Karp, MD, Professor  
Molecular Immunology

**Research Interests** Molecular mechanisms, underlying regulation and dysregulation of inflammatory responses in infectious, allergic, autoimmune, metabolic and genetic diseases

Bruce Trapnell, MD, Professor  
Neonatology and Pulmonary Biology

Rhonda VanDyke, 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
- Diana Betancur, RRT, 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
Amanda Coffey, RRT, RPSGT, Respiratory Therapist
Amy Cole, RRT, RPSGT, Lead Technologist
Joseph Crisalli, MD, Staff Physician
Shannon Deidesheimer, RN, Nurse Coordinator
Melanie 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
Matthew Fritsch, PSG Technician Asst.
Connie Guyor, RRT, RPSGT, Respiratory Therapist
Robin Hamilton, RN, Clinical Manager
Brenda Harkelroad, RN, Nurse Coordinator
Joann Harmeyer, RRT, RPSGT, Respiratory Therapist
Moira Hecker, RN, Nurse Coordinator
Marion Johnson, RRT, Respiratory Therapist
Robin Johnson, RRT, Respiratory Therapist
Sharon Kadon, RN, Nurse Coordinator
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
Luchini Jean, 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
Meeks Connie, RN, Nurse Coordinator
Karen Montag-Leifling, MSW, LISW, Social Worker
Steven Moore, RN, Clinical Coordinator
Asia Munlin, RRT, CPFT, Respiratory Therapist
Laura Ogilby, RRT, Respiratory Therapist
John Pack, RRT, Respiratory Therapist
Melissa Rice, CNP, Certified Nurse Practitioner
Valerie Sackenheim, RN, Nurse Coordinator
Jackie Taylor, RD, LD, Dietician
Debbie Webster, BA, RRT, RPSGT, Clinical Manager
Tonya Weddle, RRT, Respiratory Therapist
Jeanne Weiland, CNP, Certified Nurse Practitioner
Significant Accomplishments

Pulmonary Outcomes and Quality of Care Research
An active program of pulmonary outcomes research unites clinical and research faculty as well as clinical staff in advancing the science of improving outcomes for children with pulmonary disease. Research is supported by divisional funding, Cincinnati Children’s Place Outcomes Research Awards and the National Institutes of Health. Members of the Pulmonary Outcomes Research Lab presented at national and international meetings this year and have published peer-reviewed articles. Highlights from this research group include: demonstrating the effectiveness of a common cystic fibrosis treatment using the national CF Foundation database; determining the relationship between physician behaviors and patient adherence using video recordings; understanding how parents cope with the diagnosis of their child and the role that spirituality and religion play in family adherence to the medical regimen; documenting the impact of scoliosis surgery on lung function; and testing interventions using text messaging to improve adherence for adolescents with asthma. This research aims to increase the division’s capability for improvement and develop knowledge and interventions to improve outcomes.

Cystic Fibrosis Clinical and Translational Research
John “JP” Clancy, MD, joined the Pediatric Pulmonary Division in January 2011. He served as the division chief of pediatric pulmonology at the University of Alabama at Birmingham prior to joining the Cincinnati Children’s faculty, and upon his arrival he has been appointed the Thomas Boat endowed chair and director of CF clinical and translational research. He oversees the CFF-Therapeutic Development Network Translational Research Center at Cincinnati Children’s, and his laboratory and clinical research program focuses on airway and epithelial biology, examining novel targets to treat cystic fibrosis. His area of expertise includes developing agents to restore function to disease-causing mutations in the cystic fibrosis transmembrane conductance regulator (CFTR), which is the root cause of CF. He also focuses on developing preclinical model systems and patient biomarkers to bridge these findings from the lab to the bedside. Clancy has played international leadership roles in drug development, study design and execution and data analysis for new cystic fibrosis therapeutics, and recently served as the international lead investigator of two phase 2 studies of new CF treatments. His translational research laboratory brings basic research laboratory personnel and clinical research coordinators together, and provides an environment for
the training of students, medical professionals and research scientists in translational research.

Division Publications


4. Beebe DW, Ris MD, Kramer ME, Long E, Amin R. The association between sleep disordered breathing, academic grades, and cognitive and behavioral functioning among overweight subjects during middle to late childhood. *Sleep.* 2010; 33:1447-56.


Grants, Contracts, and Industry Agreements

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<td><strong>Vascular Functions in Children with Sleep Disorder Breathing</strong></td>
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<td>GROSSOEHME, D. Parental Adherence to CF Homecare: Research Chaplaincy Career Commitment</td>
<td>National Institutes of Health</td>
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<td>HARDIE, W. Inspiratory Muscle Strength Training in Patients with Upper Airway Obstruction</td>
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<td>Epidermal Growth Factor Receptor Activation in Pulm Fibrosis</td>
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<td>MCDOWELL, K. Infant Study of Inhaled Saline 001</td>
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<td>SEID, M. Cell Phone Adherence Trial for Underserved T1DM Youth</td>
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<td>Multidisciplinary Clinical Research Center (Project 4)</td>
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<td>YOUNG, L. Alveolar Cell Dysfunction and Pulmonary Fibrosis</td>
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### Current Year Direct Receipts

- **Current Year Direct**
  
- **Total**

### Total Income

- **Current Year Direct Receipts** $177,095
- **Total** $2,448,745