

Division Details

Division Data Summary

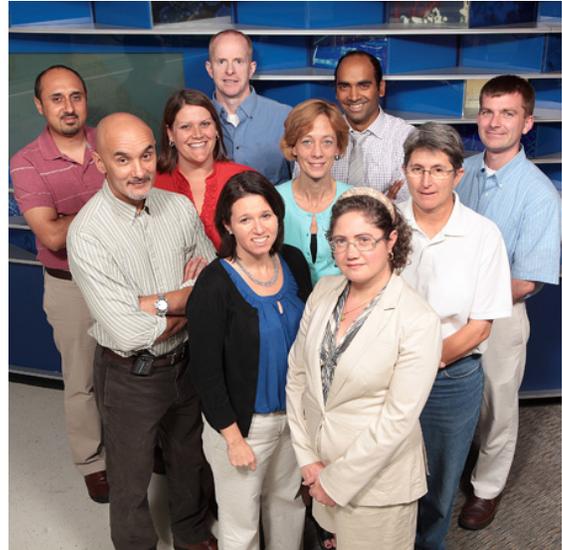
Research and Training Details

Number of Faculty	12
Number of Joint Appointment Faculty	1
Number of Support Personnel	20
Direct Annual Grant Support	\$777,367
Direct Annual Industry Support	\$5,820
Peer Reviewed Publications	26

Clinical Activities and Training

Number of Clinical Staff	10
Number of Clinical Fellows	14
Number of Other Students	2
Inpatient Encounters	8,675

Division Photo



Row 1: J Kaplan, B Zingarelli
Row 2: H Wong, E Stalets, S Poynter Wong, L Doughty
Row 3: R Chima, K Tegtmeyer, R Basu, B Varisco

Significant Accomplishments

RACE for Results

Cincinnati Children's won the 2012 Children's Hospital Association RACE for Results Award for mortality reductions in the pediatric intensive care unit (PICU) and hospital. In one decade Cincinnati Children's decreased PICU mortality by 43 percent and hospital mortality rates by 34 percent. The RACE for Results Award recognizes exceptional clinical business improvements in children's hospitals. This is the fourth time that Cincinnati Children's has won this prestigious award and the second time for the PICU. Our success reflects aggressive efforts to reduce hospital acquired infections, implement electronic health records, improve recognition of clinical deterioration, prevent codes outside of the PICU and mandate hospital wide safety training.

Licensing Heart Catheterization Animations

Ken Tegtmeyer, MD, and medical animator Jeff Cimprich licensed heart catheterization animations of LungRx this year. This represents the first external marketing of 3D animations from the Critical Care Media Lab. The lab has been producing 3D animations and clinical research videos for three and a half years, and plans to expand its external activities.

Faculty Recognition

Ken Tegtmeier, MD, was elected chair of the Society of Critical Care Medicine Pediatric Section. Basilia Zinarelli, MD, PhD was elected president of the North American/United States Shock Society. And Jennifer Kaplan, MD, was appointed to be a permanent study section member for the Eunice Kennedy Shriver National Institute of Child Health and Human Development Pediatrics Subcommittee.

Division Publications

1. Basu RK, Standage SW, Cvijanovich NZ, Allen GL, Thomas NJ, Freishtat RJ, Anas N, Meyer K, Checchia PA, Lin R, Shanley TP, Bigham MT, Wheeler DS, Devarajan P, Goldstein SL, Wong HR. **Identification of candidate serum biomarkers for severe septic shock-associated kidney injury via microarray.** *Crit Care.* 2011; 15:R273.
2. Chima RS, Schoettker PJ, Varadarajan KR, Kloppenborg E, Hutson TK, Brilli RJ, Repaske DR, Seid M. **Reduction in hypoglycemic events in critically ill patients on continuous insulin following implementation of a treatment guideline.** *Qual Manag Health Care.* 2012; 21:20-8.
3. Day SB, Ledford JR, Zhou P, Lewkowich IP, Page K. **German cockroach proteases and protease-activated receptor-2 regulate chemokine production and dendritic cell recruitment.** *J Innate Immun.* 2011; 4:100-10.
4. Hobson MJ, Wong HR. **Finding new therapies for sepsis: the need for patient stratification and the use of genetic biomarkers.** *Crit Care.* 2011; 15:1009.
5. Kaplan JM, Zingarelli B. **Novel Therapeutic Agents in Pediatric Sepsis: Peroxisome Proliferator Receptor gamma (PPAR gamma) Agonists.** *Open Inflamm J.* 2011; 4:120-124.
6. Kline-Krammes S, Wheeler DS, Schwartz HP, Forbes M, Bigham MT. **Missed opportunities during pediatric residency training: report of a 10-year follow-up survey in critical care transport medicine.** *Pediatr Emerg Care.* 2012; 28:1-5.
7. Lewkowich IP, Day SB, Ledford JR, Zhou P, Dienger K, Wills-Karp M, Page K. **Protease-activated receptor 2 activation of myeloid dendritic cells regulates allergic airway inflammation.** *Respir Res.* 2011; 12:122.
8. Lutfi R, Huang J, Wong HR. **Plasmapheresis to treat hypertriglyceridemia in a child with diabetic ketoacidosis and pancreatitis.** *Pediatrics.* 2012; 129:e195-8.
9. Morgan CI, Hobson MJ, Seger B, Rice MA, Staat MA, Wheeler DS. **2009 pandemic influenza A (H1N1) in critically ill children in Cincinnati, Ohio.** *Pediatr Crit Care Med.* 2012; 13:e140-4.
10. Morgan CI, Ledford JR, Zhou P, Page K. **Zinc supplementation alters airway inflammation and airway hyperresponsiveness to a common allergen.** *J Inflamm (Lond).* 2011; 8:36.
11. Page K, Zhou P, Ledford JR, Day SB, Lutfi R, Dienger K, Lewkowich IP. **Early immunological response to German cockroach frass exposure induces a Th2/Th17 environment.** *J Innate Immun.* 2011; 3:167-79.
12. Riley C, Wheeler DS. **Prevention of sepsis in children: a new paradigm for public policy.** *Crit Care Res Pract.* 2011; :437139.
13. Solan PD, Dunsmore KE, Denenberg AG, Odoms K, Zingarelli B, Wong HR. **A novel role for matrix metalloproteinase-8 in sepsis.** *Crit Care Med.* 2012; 40:379-87.
14. Standage SW, Caldwell CC, Zingarelli B, Wong HR. **Reduced peroxisome proliferator-activated receptor alpha expression is associated with decreased survival and increased tissue bacterial load in sepsis.** *Shock.* 2012; 37:164-9.
15. Tegtmeier K, Conway EE, Jr., Upperman JS, Kissoon N. **Education in a pediatric emergency mass critical care setting.** *Pediatr Crit Care Med.* 2011; 12:S135-40.
16. Varisco BM, Ambalavanan N, Whitsett JA, Hagood JS. **Thy-1 Signals through PPARgamma to Promote Lipofibroblast Differentiation in the Developing Lung.** *Am J Respir Cell Mol Biol.* 2012; 46:765-72.

17. Wheeler DS. **Another potential therapeutic agent for the management of critically ill patients with sepsis syndrome: same old story, same old result?***. *Crit Care Med.* 2012; 40:1012-3.
18. Wheeler DS. **Book Review - "Too Expensive to Treat? Flinitude, Tragedy, and the Neonatal ICU"**. *JAMA.* 2011; 306:2510.
19. Wheeler DS. **Book Review - "Pediatric Critical Care - 4th Edition"**. *JAMA.* 2011; 306:2269.
20. Wheeler DS. **Book Review - "Medicine, Science, and Dreams: The Making of Physician-Scientists"**. *JAMA.* 2011; 306:1002.
21. Wheeler DS, Giaccone M, Hutchinson N, Haygood M, Demmel K, Britto MT, Margolis PA, Provost LP. **An unexpected increase in catheter-associated bloodstream infections at a children's hospital following introduction of the Spiros closed male connector**. *Am J Infect Control.* 2012; 40:48-50.
22. Wheeler DS, Jeffries HE, Zimmerman JJ, Wong HR, Carcillo JA. **Sepsis in the Pediatric Cardiac Intensive Care Unit**. *World J Pediatr Congenit Heart Surg.* 2011; 2:393-399.
23. Wong HR. **Clinical review: Sepsis and septic shock - the potential of gene arrays**. *Crit Care.* 2012; 16:204.
24. Wong HR. **Genetics and genomics in pediatric septic shock**. *Crit Care Med.* 2012; 40:1618-26.
25. Wong HR, Dalton HJ. **The PICU perspective on monitoring hemodynamics and oxygen transport**. *Pediatr Crit Care Med.* 2011; 12:S66-8.
26. Wynn JL, Cvijanovich NZ, Allen GL, Thomas NJ, Freishtat RJ, Anas N, Meyer K, Checchia PA, Lin R, Shanley TP, Bigham MT, Banschbach S, Beckman E, Wong HR. **The influence of developmental age on the early transcriptomic response of children with septic shock**. *Mol Med.* 2011; 17:1146-56.

Faculty, Staff, and Trainees

Faculty Members

Hector Wong, MD, Professor

Leadership Director

Research Interests Septic shock, Genomics, Biomarkers

Ranjit Chima, MD, Assistant Professor

Research Interests Bone Marrow Transplantation-Associated Critical Illness ECMO Glucose Homeostasis

Lesley Doughty, MD, Associate Professor

Leadership Fellowship Director

Research Interests Sepsis

Jennifer Kaplan, MD, MS, Assistant Professor

Research Interests Sepsis and obesity

Kristen Page, PhD, Associate Professor

Research Interests Asthma, airway inflammation, inflammatory mediators, innate and adaptive immune response

Sue E. Poynter, MD, Assistant Professor

Leadership Medical Director Division of Respiratory Care; Associate Director Pediatric Residency Training Program

Research Interests Resident Education

Erika Stalets, MD, Instructor

Research Interests Quality Improvement and Patient Safety

Ken Tegtmeier, MD, Associate Professor

Research Interests Multimedia Medical Education

Rajit Basu, MD, Instructor

Research Interests The role of kidney injury in distal organ function

Derek S. Wheeler, MD, Associate Professor

Leadership Clinical Director PICU

Research Interests Sepsis, Stress preconditioning, Quality Improvement

Basilia Zingarelli, MD, Ph.D., Associate Professor

Research Interests Sepsis, hemorrhage and ischemia and reperfusion injury

Brian Varisco, MD, Instructor

Research Interests Lung Development and Injury

Joint Appointment Faculty Members

Bradley Marino, MD, Associate Professor (Cardiology)

Research Interests Long-term outcomes in children and adolescents with CHD, Resuscitation of children with CHD

Trainees

- **Kamal Abulebda, MD**, PL-4, University of Aleppo, Syrian Republic
- **Gabriela Botez, MD**, PI-5, Universitatea deMedicine
- **Ma-Bernardita Gamallo, MD**, PL-5, Jersey Shore Medical Center
- **Aaron Gardner, MD**, PL-5, St. George's University
- **William Hanna, MD**, PL-5, University of Kentucky College of Medicine
- **Michael Hobson, MD**, PL-6, Indiana University School of Medicine
- **Riad Lutfi, MD**, PL-7, University of Damascus
- **Carrie Morgan, MD**, PL-6, University of Kentucky College of Medicine
- **Carley Riley, MD**, PL-6, Children's Hospital of Los Angeles
- **Ravi Samraj, MD**, PL-5, Driscoll Children's Hospital
- **Shilpa Shah, MD**, PL-5, The University of Texas Medical Branch
- **Siarhei Slinko, MD**, PL-6, University of Buffalo
- **Danielle Webster, MD**, PL-4, University of Missouri - Kansas City
- **John Whitt, MD**, PL-5, University of Alabama School of Medicine

Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Annual Direct

KAPLAN, J

PPAR gamma in Pediatric Sepsis and the Inflammatory Response in Obesity

National Institutes of Health

K08 GM 093135

06/01/10-05/31/14

\$115,250

WHEELER, D

Therapeutic Hypothermia after Pediatric Cardiac Arrest

National Institutes of Health(University of Michigan)

WONG, H**MMP-8 as a Novel Therapeutic Target in Sepsis**

National Institutes of Health

R01 GM 096994

04/01/11-03/31/15

\$190,000

Point of Care Center for Emerging Neurotechnologies (POC-CENT)

National Institutes of Health(University of Cincinnati)

U54 EB 007954

07/01/09-06/30/12

\$10,650

ZINGARELLI, B**Mechanisms of Age-Related Inflammatory Response in Hemorrhagic Shock**

National Institutes of Health

R01 AG 027990

09/01/07-08/31/12

\$191,174

PPARgamma and PPARgamma Agonists in Septic Shock

National Institutes of Health

R01 GM 067202

07/01/08-06/30/12

\$242,163

Role of Eicosanoids in Shock

National Institutes of Health(Medical University of South Carolina)

R01 GM 027673

07/03/08-06/30/13

\$22,128

Current Year Direct**\$777,367**

Industry Contracts

BARR, R

Asklepion Pharmaceuticals, LLC

\$5,820

Current Year Direct Receipts**\$5,820****Total****\$783,187**