

Critical Care Medicine

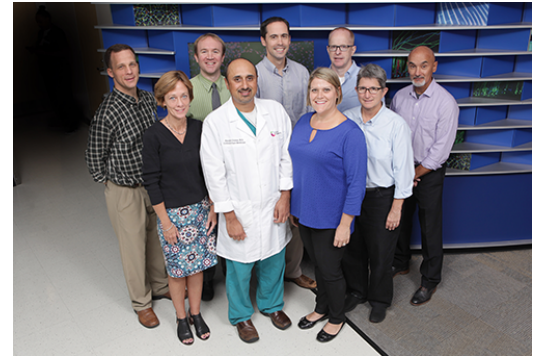
Division Details

RESEARCH AND TRAINING DETAILS

Faculty	1
Total Annual Grant Award Dollars	\$1,931,644
Total Annual Industry Award Dollars	\$15,750

CLINICAL ACTIVITIES AND TRAINING

Staff Physicians	14
Clinical Fellows	12
Inpatient Encounters	9,846



Row 1: S Poynter, R Chima, E Stalets, L Doughty

Row 2: S Standage, A Lutz, M Alder, K Tegtmeier, H Wong

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Division Publications

1. Kaddourah A; Basu RK; Bagshaw SM; Goldstein SL; Investigators AWARE. **Epidemiology of Acute Kidney Injury in Critically Ill Children and Young Adults.** *The New England journal of medicine.* 2017; 376:11-20.
2. Sweeney TE; Wong HR; Khatri P. **Robust classification of bacterial and viral infections via integrated host gene expression diagnostics.** *Science Translational Medicine.* 2016; 8:346ra91.
3. Wong HR; Sweeney TE; Lindsell CJ. **Simplification of a septic shock endotyping strategy for clinical application.** *American journal of respiratory and critical care medicine.* 2017; 195:263-265.
4. Alder MN; Opoka AM; Lahni P; Hildeman DA; Wong HR. **Olfactomedin-4 Is a Candidate Marker for a Pathogenic Neutrophil Subset in Septic Shock.** *Critical Care Medicine.* 2017; 45:e426-e432.
5. Fitzgerald JC; Basu RK; Akcan-Arikan A; Izquierdo LM; Piñeres Olave BE; Hassinger AB; Szczepanska M; Deep A; Williams D; Sapru A. **Acute Kidney Injury in Pediatric Severe Sepsis: An Independent Risk Factor for Death and New Disability.** *Critical Care Medicine.* 2016; 44:2241-2250.
6. Wong HR; Cvijanovich NZ; Anas N; Allen GL; Thomas NJ; Bigam MT; Weiss SL; Fitzgerald J; Checchia PA; Meyer K. **Pediatric Sepsis Biomarker Risk Model-II: Redefining the Pediatric Sepsis Biomarker Risk Model With Septic Shock Phenotype.** *Critical Care Medicine.* 2016; 44:2010-2017.

7. Wong HR; Atkinson SJ; Cvijanovich NZ; Anas N; Allen GL; Thomas NJ; Bigham MT; Weiss SL; Fitzgerald JC; Checchia PA. **Combining Prognostic and Predictive Enrichment Strategies to Identify Children with Septic Shock Responsive to Corticosteroids.** *Critical Care Medicine*. 2016; 44:e1000-e1003.
8. Standage SW; Waworuntu RL; Delaney MA; Maskal SM; Bennion BG; Duffield JS; Parks WC; Liles WC; Mcguire JK. **Nonhematopoietic Peroxisome Proliferator-Activated Receptor-alpha Protects Against Cardiac Injury and Enhances Survival in Experimental Polymicrobial Sepsis.** *Critical Care Medicine*. 2016; 44:e594-e603.
9. Bhowmick M; Tokmina-Roszyk D; Onwuha-Ekpete L; Harmon K; Robichaud T; Fuerst R; Stawikowska R; Steffensen B; Roush W; Wong HR. **Second Generation Triple-Helical Peptide Inhibitors of Matrix Metalloproteinases.** *Journal of Medicinal Chemistry*. 2017; 60:3814-3827.
10. Daly MC; Atkinson SJ; Varisco BM; Klingbeil L; Hake P; Lahni P; Piraino G; Wu D; Hogan SP; Zingarelli B. **Role of matrix metalloproteinase-8 as a mediator of injury in intestinal ischemia and reperfusion.** *The FASEB journal : official publication of the Federation of American Societies for Experimental Biology*. 2016; 30:3453-3460.
11. Klingbeil LR; Kim P; Piraino G; O'Connor M; Hake PW; Wolfe V; Zingarelli B. **Age-Dependent Changes in AMPK Metabolic Pathways in the Lung in a Mouse Model of Hemorrhagic Shock.** *American journal of respiratory cell and molecular biology*. 2017; 56:585-596.
12. Turner TL; Bhavaraju VL; Luciw-Dubas UA; Hicks PJ; Multerer S; Osta A; McDonnell J; Poynter S; Schumacher DJ; Tenney-Soeiro R. **Validity Evidence From Ratings of Pediatric Interns and Subinterns on a Subset of Pediatric Milestones.** *Academic Medicine*. 2017; 92:809-819.
13. Pfeiffer TM; Rotz SJ; Ryan TD; Hirsch R; Taylor M; Chima R; Pate A; Hlavaty J; Grimley M; Myers K. **Pericardial effusion requiring surgical intervention after stem cell transplantation: a case series.** *Bone Marrow Transplantation*. 2017; 52:630-633.
14. Kaplan JM; Nowell M; Lahni P; Shen H; Shanmukhappa SK; Zingarelli B. **Obesity Enhances Sepsis-Induced Liver Inflammation and Injury in Mice.** *Obesity*. 2016; 24:1480-1488.
15. Jacobs L; Wong HR. **Emerging infection and sepsis biomarkers: will they change current therapies?.** *Expert Review of Anti-infective Therapy*. 2016; 14:929-941.
16. Atkinson SJ; Varisco BM; Sandquist M; Daly MN; Klingbeil L; Kuethe JW; Midura EF; Harmon K; Opoka A; Lahni P. **Matrix Metalloproteinase-8 Augments Bacterial Clearance in a Juvenile Sepsis Model.** *Molecular medicine (Cambridge, Mass.)*. 2016; 22:455-463.
17. Varisco BM; Sbragia L; Chen J; Scorletti F; Joshi R; Wong HR; Lopes-Figueira R; Oria M; Peiro J. **Excessive Reversal of Epidermal Growth Factor Receptor and Ephrin Signaling Following Tracheal Occlusion in Rabbit Model of Congenital Diaphragmatic Hernia.** *Molecular medicine (Cambridge, Mass.)*. 2016; 22:398-411.
18. Cvijanovich NZ; King JC; Flori HR; Gildengorin G; Vinks AA; Wong HR. **Safety and Dose Escalation Study of Intravenous Zinc Supplementation in Pediatric Critical Illness.** *Journal of Parenteral and Enteral Nutrition*. 2016; 40:860-868.
19. Standage SW; Bennion BG; Knowles TO; Ledee DR; Portman MA; McGuire JK; Liles WC; Olson AK. **PPAR alpha augments heart function and cardiac fatty acid oxidation in early experimental polymicrobial sepsis.** *American journal of physiology. Heart and circulatory physiology*. 2017; 312:H239-H249.
20. Zingarelli B; Kaplan JM. **WHAT'S NEW IN SHOCK, MAY 2017?.** *Shock*. 2017; 47:533-536.
21. Matsiukevich D; Piraino G; Klingbeil LR; Hake PW; Wolfe V; O'Connor M; Zingarelli B. **The AMPK Activator Aicar Ameliorates Age-Dependent Myocardial Injury in Murine Hemorrhagic Shock.** *Shock*. 2017; 47:70-78.
22. Wong HR; Lindsell CJ. **An enrichment strategy for sepsis clinical trials.** *Shock*. 2016; 46:632-634.
23. Ganatra HA; Varisco BM; Harmon K; Lahni P; Opoka A; Wong HR. **Zinc supplementation leads to immune modulation and improved survival in a juvenile model of murine sepsis.** *Innate immunity*. 2017; 23:67-76.

24. Menon K; McNally D; O'Hearn K; Acharya A; Wong HR; Lawson M; Ramsay T; McIntyre L; Gilfoyle E; Tucci M. **A Randomized Controlled Trial of Corticosteroids in Pediatric Septic Shock: A Pilot Feasibility Study.** *Pediatric Critical Care Medicine.* 2017; 18:505-512.

25. Jacobs L; Wong HR. **Sepsis Subclasses: Be Careful of What You Wish for.** *Pediatric Critical Care Medicine.* 2017; 18:591-592.

Grants, Contracts, and Industry Agreements

Annual Grant Award Dollars

Investigator	Title	Sponsor	ID	Dates	Amount
Ranjit Chima, MD	Heart and Lung Failure – Pediatric Insulin Titration Trial	National Institutes of Health (Children's Hospital Boston)	U01 HL107681	07/01/2011 - 06/30/2017	\$22,499
Sue Poynter, MD	Multi-Center Trial of Limiting PGY 2&3 Resident Work Hours in ICU	National Institutes of Health (Brigham & Women's Hospital)	U01 HL111478	09/15/2012 - 01/31/2018	\$449,216
Hector R Wong, MD	Novel Diagnostic and Stratification Tools for Septic Shock	National Institutes of Health	R01 GM108025	05/01/2014 - 02/28/2018	\$489,450
Brian Varisco, MD	Chymotrypsin Like Elastase-1 Links Alveolar and Microvascular Growth	Francis Family Foundation	PBF - Varisco	07/01/2014 - 06/30/2017	\$54,000
Basilisa Zingarelli, MD, PhD	Duplex miR-223 and Exosomes in Sepsis	National Institutes of Health (University of Cincinnati)	R01 GM112930	01/01/2015 - 12/31/2018	\$16,797
Basilisa Zingarelli, MD, PhD	Age-dependent Mechanisms of Metabolic Recovery in Hemorrhagic Shock	National Institutes of Health	R01 GM115973	09/01/2015 - 08/31/2019	\$308,100
Brian Varisco, MD	Lung Regeneration Following Posterior Spinal Fusion	Scoliosis Research Society	Varisco_SRS	01/01/2015 - 12/31/2017	\$5,000
Brian Varisco, MD	Cela1 Mediates Stretch-regulated Elastin Remodeling During Alveolar Septation	National Institutes of Health	K08 HL131261	01/07/2016 - 12/31/2019	\$195,750
Lesley Doughty, MD	Early Rehabilitation Protocol in the Pediatric ICU for Children with Acute Brain Injury	Patient-Centered Outcome Research Inst. (Children's Hospital of Pittsburgh)	CER-1310-08343	09/01/2015 - 08/31/2017	\$77,770
Derek Wheeler, MD	Therapeutic Hypothermia After Pediatric Cardiac Arrest 'THAPCA' Trials	National Institute for Health Research (University of Michigan)	U01 HL094345	03/01/2013 - 02/28/2017	\$4,000
Erika L Stalets, MD	A Randomized Double Blind Phase 3 Study Comparing the	National Institutes of Health (Social & Scientific Systems,	CRB-SSS-S-16-004923	06/20/2016 -	\$19,600

	Efficacy and Safety of High Titer Versus Lot Titer Anti-Influenza Immune Plasma for the Treatment of Severe Influenza A	Inc.)			09/30/2017	
Carley L. Riley, MD	Building a Community Based Research Network Block by Block	Patient-Centered Outcome Research Inst.	4014-CHMC	01/01/2017	\$124,977	- 12/31/2018
Ranjit Chima, MD	Magnetic Resonance Imaging (MRI) Markers of Outcome After Severe Pediatric Traumatic Brain Injury	National Institutes of Health (University of Wisconsin-Madison)	17-8521	04/01/2016	\$14,000	- 03/31/2017
Brian Varisco, MD	Alveolar Recovery after Posterior Spinal Fusion	Scoliosis Research Society	SRS_Varisco	01/01/2017	\$50,000	- 12/31/2018
Peter Sturm, MD	Recovery of Alveolar Size and Number Following Spinal Fusion for Adolescent Idiopathic Scoliosis	Pediatric Orthopaedic Society of North America	Sturm_POSNA	06/01/2017	\$15,000	- 05/31/2019
Carley L. Riley, MD	Design and Evaluation of Cross-sector, Multi-pronged Community-Based Interventions	The Institute for Integrative Health	TIIH_Riley	01/01/2017	\$62,735	- 12/31/2019
Ranjit Chima, MD	Life After Pediatric Sepsis Evaluation	National Institutes of Health (Children's Hosp & Reg Med Ct-Seattle)	R01 HD073362	07/01/2016	\$22,750	- 06/30/2018

Total Annual Grant Award Dollars

\$1,931,644

Annual Industry Award Dollars

Investigator	Industry Sponsor	Amount
Maya L Dewan, MD, MPH	ZOLL Medical Corporation (Children's Hospital of Philadelphia)	\$5,000
Ranjit Chima, MD	The Gerber Foundation (Virginia Commonwealth University)	\$10,750
Total Annual Industry Award Dollars		\$15,750