Pediatric General and Thoracic Surgery

Division Photo

First Row: F.Lim, F.Ryckman, R. Azizkhan, V. Garcia, R. Brown, J. Nathan, R. Falcone; Second Row: A. Dasgupta, G. Tiao, M. Levitt, T. Jenkins, T. Inge, S. Barnett, M. Alonso, J. Frischer, M. Habli, A. Peña, S. Keswani.

Division Data Summary

Research and Training Details	
Number of Faculty	18
Number of Joint Appointment Faculty	1
Number of Research Fellows	8
Number of Support Personnel	22
Direct Annual Grant Support	$2,360,473
Direct Annual Industry Support	$116,950
Peer Reviewed Publications	46
Clinical Activities and Training	
Number of Clinical Staff	16
Number of Clinical Fellows	5
Inpatient Encounters	2255
Outpatient Encounters	8577

Significant Publications

Azizkhan, R. G. and T. M. Crombleholme (2008). "Congenital cystic lung disease: contemporary antenatal and postnatal management." Pediatr Surg Int 24(6): 643-57.

Bensard, D.D., R. J. Hendrickson, et al. (2008). "Early Discharge Following Laparoscopic Appendectomy in Children Utilizing an Evidence-Based Clinical Pathway." J Laparoendosc Adv Surg Tech A.

Dickie, B., R. Dasgupta, et al. (2009). "Spectrum of hepatic hemangiomas: management and outcome." J Pediatr Surg 44(1): 125-33.

Falcone, R. A., Jr., M. Daugherty, et al. (2008). "Multidisciplinary pediatric trauma team training using high-

fidelity trauma simulation." J Pediatr Surg 43(6): 1065-71.

Gordon, A., E. D. Kozin, et al. (2008). "Permissive environment in postnatal wounds induced by adenoviral-mediated overexpression of the anti-inflammatory cytokine interleukin-10 prevents scar formation." Wound Repair Regen 16(1): 70-9.

Kokoska, E. R. and M. K. Chen (2009). "Position paper on video-assisted thoracoscopic surgery as treatment of pediatric empyema." J Pediatr Surg 44(1): 289-93.

Levitt, M. A., C. A. Martin, et al. (2009). "Hirschsprung disease and fecal incontinence: diagnostic and management strategies." J Pediatr Surg 44(1): 271-7; discussion 277.

Ryckman, F. C., P. J. Schoettker, et al. (2009). "Reducing surgical site infections at a pediatric academic medical center." Jt Comm J Qual Patient Saf 35(4): 192-8.

Division Highlights

Molecular Fetal Lab - Dr. Timothy Crombleholme

Dr. Crombleholme has expertise in wound healing and fetal cellular and molecular therapeutics research. His basic science wound healing research is funded by the NIH and Shriner's Hospital. He is the primary investigator of an NIH funded clinical trial focusing on the care management of twin-twin transfusion syndrome. Dr. Crombleholme was named Director, Surgical Research and Associate Chair of the Children's Hospital Research Foundation.

Bariatric Surgery - Dr. Thomas Inge

The Center for Bariatric Research and Innovation directed by Dr. Inge continues to partner with NIDDK and lead the national effort to prospectively gather data and publish evidence-based recommendations for use of weight loss surgery in adolescents. The Center welcomed the addition of an Associate Director, Todd Jenkins, MPH, PhD who quickly transitioned into the Interim Director, ObesityDataCoordinatingCenter at CCHMC. The team is in the 4th of 6 years of the NIH U01 funded Teen LABS Study, the largest multicenter study to document outcomes of adolescents undergoing weight loss surgery. In addition to this parent grant, the study group has added numerous other R01-funded ancillary studies to the consortium. The study group has submitted the first 2 abstracts from this long term follow-up study.

Biliary Atresia - Dr. Gregory Tiao

Dr. Tiao continues to develop his research in biliary atresia. He completed his fourth of five years on his NIH Career Development Award. Dr. Tiao was appointed Surgical Director for Liver and Intestinal Transplantation.

Solid Organ Cancers - Dr. Jason Frischer

Dr. Frischer is setting up a basic science laboratory to study solid organ cancers by identifying, and then overcoming, the mechanisms by which they become resistant to current therapies. He has recently been awarded a grant from CancerFree Kids to study Neuroblastomas.

Trauma - Dr. Richard Falcone

Received funding from the State of Ohio and Cincinnati Children's HospitalMedicalCenter as well as Kohl's for his work in trauma epidemiology, education and prevention. Also, he has received funding for a clinical trial evaluating the safest dose of Tigecycline for pediatric patients. In June, Dr. Falcone was named the Director of the Trauma and Injury Prevention Program for the Division.

Faculty Members

Richard G. Azizkhan, MD, Professor ; *Surgeon-in-Chief, Division Director*

Maria H. Alonso, MD, Associate Professor ; *Surgical Associate Director, Liver Transplant; Surgical Director, Kidney Transplant*

Denis D. Bensard, MD, Professor ; *Director, Pediatric Surgery, St. Vincent Children's Hospital*

Rebeccah L. Brown, MD, Associate Professor ; *Associate Director, Trauma Services*

Timothy M. Crombleholme, MD, Professor ; *Obstetrics/Gynecology, and Pediatrics, Director, Fetal Care Center of*

Cincinnati

A. Roshni Dasgupta, MD, Assistant Professor

Richard A. Falcone, MD, MPh, Assistant Professor ; *Director, Trauma Services, ECMO Director, Associate Program Director-Fellowship*

Victor F. Garcia, MD, Professor ; *Director, Trauma Services; Associate Surgical Director, Comprehensive Weight Management Center*

Richard J. Hendrickson, MD, Assistant Professor ; *Associate Director, Pediatric Surgery, St. Vincent Children's Hospital*

Thomas H. Inge, MD, PhD, Associate Professor ; *Surgical Director, Comprehensive Weight Management Center*

Marc A. Levitt, MD, Associate Professor ; *Associate Director, Colorectal Center for Children*

Foong-Yen Lim, MD, Assistant Professor

Alberto Peña, MD, Professor ; *Director, Colorectal Center for Children*

Frederick C. Ryckman, MD, Professor ; *Surgical Director, Liver Transplant; Clinical Director*

Gregory M. Tiao, MD, Associate Professor ; *Associate Program Director, Fellowship*

Jason S. Frischer, MD, Assistant Professor

Evan R. Kokoska, MD, Associate Professor

Todd M. Jenkins, PhD, Instructor

Joint Appointment Faculty Members

Jeffrey Livingston, MD, Associate Professor
Maternal Fetal Medicine

Trainees

- **Sean Barnett, MD,** PL-9, University of Minnesota
- **Timothy Lee, MD,** PL-8, Baylor College of Medicine

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Division Publications

1. Ballard HO, Shook L, Lain KY, Burns L, Crombleholme TM. **An embolic complication in a donor twin with severe twin-twin transfusion syndrome after fetoscopic intervention**. *J Perinatol.* 2009; 29: 250-251.
2. Bensard DD, Hendrickson RJ, Fyffe CJ, Careskey JM, Azizkhan RG. **Early discharge following laparoscopic appendectomy in children utilizing an evidence-based clinical pathway**. *J Laparoendosc Adv Surg Tech.* 2009; 19: S81-S86.
3. Bombrys AE, Barton JR, Habli M, Sibai BM. **Expectant management of severe preeclampsia at 270/7 to 336/7 weeks' gestation: Maternal and perinatal outcomes according to gestational age by weeks at onset of expectant management**. *Am J Perinatol.* 2009; 26: 441-446.
4. Dickie B, Dasgupta R, Nair R, Alonso MH, Ryckman FC, Tiao GM, Adams DM, Azizkhan RG. **Spectrum of hepatic hemangiomas: management and outcome**. *J Pediatr Surg.* 2009; 44: 125-133.
5. Guimaraes CVA, Linam LE, Kline-Fath BM, Donnelly LF, Calvo-Garcia MA, Rubio EI, Livingston JC, Hopkin RJ, Peach E, Lim FY, Crombleholme TM. **Prenatal MRI findings of fetuses with congenital high airway obstruction sequence**. *Korean J Radiol.* 2009; 10: 129-134.
6. Habli M, Lim FY, Crombleholme T. **Twin-to-Twin Transfusion Syndrome: A Comprehensive Update**. *Clin Perinatol.* 2009; 36: 391-416.
7. Inge TH, Miyano G, Bean J, Helmrath M, Courcoulas A, Harmon CM, Chen MK, Wilson K, Daniels SR, Garcia VF, Brandt ML, Dolan LM. **Reversal of type 2 diabetes mellitus and improvements in cardiovascular risk factors after surgical weight loss in adolescents**. *Pediatrics.* 2009; 123: 214-222.
8. Jafri M, Donnelly B, Bondoc A, Allen S, Tiao G. **Cholangiocyte secretion of chemokines in experimental biliary atresia**. *J Pediatr Surg.* 2009; 44: 500-507.
9. Lomenick JP, Reifschneider KL, Lucky AW, Adams D, Azizkhan RG, Woo JG, Backeljauw PF. **Prevalence of adrenal insufficiency following systemic glucocorticoid therapy in infants with hemangiomas**. *Arch Dermatol.* 2009; 145: 262-266.

10. Lubow JM, How HY, Habli M, Maxwell R, Sibai BM. Indications for delivery and short-term neonatal outcomes in late preterm as compared with term births. *Am J Obstet Gynecol.* 2009; 200: e30-e33.
11. McManus M, Fox H, Limb S, Arango P, Armstrong P, Azizkhan R, Behrman R, Chesney R, Grover A, Gupta VB, Jewett E, Jones Jr MD, Kim WJ, Lewy J, Lighter D, Mulvey H, Pan R, Schwartz R, Sia C, Stille C, Stockman J, Tait V, Tonniges T, Willson P. **New workforce, practice, and payment reforms essential for improving access to pediatric subspecialty care within the medical home.** *Arch Pediatr Adolesc Med.* 2009; 163: 200-202.
12. Miyano G, Kalra M, Inge TH. Adolescent paraplegia, morbid obesity, and pickwickian syndrome: outcome of gastric bypass surgery. *J Pediatr Surg.* 2009; 44: e41-e44.
13. Morris LM, Lim FY, Crombleholme TM. **Ex Utero Intrapartum Treatment Procedure: A Peripartum Management Strategy in Particularly Challenging Cases.** *J Pediatr.* 2009; 154: 126-131.e3.
14. Mortell AE, Azizkhan RG. Esophageal atresia repair with thoracotomy: the Cincinnati contemporary experience. *Semin Pediatr Surg.* 2009; 18: 12-19.
15. Perman MJ, Lucky AW, Heubi JE, Azizkhan RG. **Severe symptomatic hypocalcemia in a patient with RDEB treated with intravenous zoledronic acid.** *Arch Dermatol.* 2009; 145: 95-96.
16. Rangel EL, Cook BS, Bennett BL, Shebesta K, Ying J, Falcone RA. Eliminating disparity in evaluation for abuse in infants with head injury: use of a screening guideline. *J Pediatr Surg.* 2009; 44: 1229-1235.
17. Ryckman FC, Schoettker PJ, Hays KR, Connelly BL, Blacklidge RL, Bedinghaus CA, Sorter ML, Friend LC, Kotagal UR. Reducing surgical site infections at a pediatric academic medical center. *Jt Comm J Qual Patient Safety.* 2009; 35: 192-198.
18. Woo JG, Zeller MH, Wilson K, Inge T. Obesity Identified by Discharge ICD-9 Codes Underestimates the True Prevalence of Obesity in Hospitalized Children. *J Pediatr.* 2009; 154: 327-331.
19. Zeller MH, Modi AC, Noll JG, Long JD, Inge TH. Psychosocial functioning improves following adolescent bariatric surgery. *Obesity.* 2009; 17: 985-990.
20. Levitt M, Pena A. Update on pediatric faecal incontinence. *Eur J Pediatr Surg.* 2009; 19: 1-9.
21. Vachharajani AJ, Rao R, Keswani S, Mathur AM. Outcomes of exomphalos: an institutional experience. *Pediatr Surg Int.* 2009; 25: 139-44.
22. Khan AR, Morris LM, Keswani SG, Khan IR, Le L, Lee WC, Hunt JP. Tuberculous peritonitis: a surgical dilemma. *South Med J.* 2009; 102: 94-5.
23. Levitt MA, Martin CA, Olesevich M, Bauer CL, Jackson LE, Pena A. Hirschsprung disease and fecal incontinence: diagnostic and management strategies. *J Pediatr Surg.* 2009; 44: 271-7; discussion 277.
24. Morris LM, Lim FY, Livingston JC, Polzin WJ, Crombleholme TM. High-risk fetal congenital pulmonary airway malformations have a variable response to steroids. *J Pediatr Surg.* 2009; 44: 60-5.
25. Bischoff A, Levitt MA, Bauer C, Jackson L, Holder M, Pena A. Treatment of fecal incontinence with a comprehensive bowel management program. *J Pediatr Surg.* 2009; 44: 1278-83; discussion 1283-4.
26. Levitt MA, Bischoff A, Breech L, Pena A. Rectovestibular fistula--rarely recognized associated gynecologic anomalies. *J Pediatr Surg.* 2009; 44: 1261-7; discussion 1267.
27. Levitt MA, Martin CA, Falcone RA, Jr., Pena A. Transanal rectosigmoid resection for severe intractable idiopathic constipation. *J Pediatr Surg.* 2009; 44: 1285-90; discussion 1290-1.
28. Guimaraes CV, Linam LE, Kline-Fath BM, Donnelly LF, Calvo-Garcia MA, Rubio EI, Livingston JC, Hopkin RJ, Peach E, Lim FY, Crombleholme TM. Prenatal MRI findings of fetuses with congenital high airway obstruction sequence. *Korean J Radiol.* 2009; 10: 129-34.
29. Pratt JS, Lenders CM, Dionne EA, Hoppin AG, Hsu GL, Inge TH, Lawlor DF, Marino MF, Meyers AF, Rosenblum JL, Sanchez VM. Best practice updates for pediatric/adolescent weight loss surgery. *Obesity.* 2009; 17: 901-10.
30. Bombrys AE, Barton JR, Nowacki EA, Habli M, Pinder L, How H, Sibai BM. Expectant management of severe preeclampsia at less than 27 weeks' gestation: maternal and perinatal outcomes according to gestational age by weeks at onset of expectant management. *Am J Obstet Gynecol.* 2008; 199: 247.e1-247.e6.
31. Bombrys AE, Neiger R, Hawkins S, Sonek J, Croom C, McKenna D, Ventolini G, Habli M, How H, Sibai B. Pregnancy outcome in isolated single umbilical artery. *Am J Perinatol.* 2008; 25: 239-242.
32. Ednick M, Wong B, Inge T, Knue M, Kalra M. Post-operative respiratory outcomes using a standard extubation protocol after elective gastrostomy tube placement in pediatric patients with spinal muscular atrophy type 1. *J Pediatr Neurol.* 2008; 6: 249-252.
33. Falcone Jr RA, Martin C, Brown RL, Garcia VF. Despite overall low pediatric head injury mortality, disparities exist between races. *J Pediatr Surg.* 2008; 43: 1858-1864.
34. Garcia V. **Silvia Tlaseca and the Kaolin mushroom workers union: Women's leadership in the Mexican Diaspora.** *Signs.* 2008; 34: 42-47.

35. Habli M, Livingston J, Harmon J, Lim FY, Plozin W, Crombleholme T. The outcome of twin-twin transfusion syndrome complicated with placental insufficiency. *Am J Obstet Gynecol.* 2008; 199: 424.e1-424.e6.
36. Habli M, Michelfelder E, Livingston J, Harmon J, Lim FY, Polzin W, Crombleholme T. Acute effects of selective fetoscopic laser photocoagulation on recipient cardiac function in twin-twin transfusion syndrome. *Am J Obstet Gynecol.* 2008; 199: 412.e1-412.e6.
37. Habli M, O'Brien T, Nowack E, Khoury S, Barton JR, Sibai B. Peripartum cardiomyopathy: prognostic factors for long-term maternal outcome. *Am J Obstet Gynecol.* 2008; 199: 415.e1-415.e5.
38. Levitt MA, Pena A. "Laparoscopy in the management of fecal incontinence and constipation." *Atlas of pediatric laparoscopy and thoracoscopy.* Philadelphia, PA: Saunders/Elsevier; 2008: 81-90.
39. Miyano G, Inge TH, Daniels SR, Ippisch HM. Bariatric surgery for treatment of morbid obesity in an adolescent with Marfan syndrome. *Prog Pediatr Cardiol.* 2008; 25: 183-189.
40. Modi AC, Loux TJ, Bell SK, Harmon CM, Inge TH, Zeller MH. Weight-specific health-related quality of life in adolescents with extreme obesity. *Obesity.* 2008; 16: 2266-2271.
41. Kelly RE, Jr., Cash TF, Shamberger RC, Mitchell KK, Mellins RB, Lawson ML, Oldham K, Azizkhan RG, Hebra AV, Nuss D, Goretsky MJ, Sharp RJ, Holcomb GW, 3rd, Shim WK, Megison SM, Moss RL, Fecteau AH, Colombani PM, Bagley T, Quinn A, Moskowitz AB. Surgical repair of pectus excavatum markedly improves body image and perceived ability for physical activity: multicenter study. *Pediatrics.* 2008; 122: 1218-22.
42. Robinson MB, Crombleholme TM, Kurth CD. Maternal pulmonary edema during fetoscopic surgery. *Anesth Analg.* 2008; 107: 1978-80.
43. Jafri M, Donnelly B, Allen S, Bondoc A, McNeal M, Rennert PD, Weinreb PH, Ward R, Tiao G. Cholangiocyte expression of alpha2beta1-integrin confers susceptibility to rotavirus-induced experimental biliary atresia. *Am J Physiol Gastrointest Liver Physiol.* 2008; 295: G16-G26.
44. Leslie DB, Kellogg TA, Boutelle KN, Barnett SJ, Schwarzenberg SJ, Harrison AR, Ikramuddin S. Preserved vision without growth retardation after laparoscopic Roux-en-Y gastric bypass in a morbidly obese child with pseudotumor cerebri: 36-month follow-up. *J Pediatr Surg.* 2008; 43: e27-30.
45. Eltomey MA, Donnelly LF, Emery KH, Levitt MA, Pena A. Postoperative pelvic MRI of anorectal malformations. *AJR Am J Roentgenol.* 2008; 191: 1469-76.
46. Shah AD, Border WL, Crombleholme TM, Michelfelder EC. Initial fetal cardiovascular profile score predicts recipient twin outcome in twin-twin transfusion syndrome. *J Am Soc Echocardiogr.* 2008; 21: 1105-8.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards		Annual Direct / Project Period Direct
CROMBLEHOLME, T		
Endothelial Progenitor Cell Biology in Type I Diabetes National Institutes of Health RO1 DK 074055	09/30/05 - 07/31/09	$208,046 / $821,046
Endothelial Progenitor Cells and Vasculogenesis in Engineered Human Skin Shriners Hospitals for Children	01/01/07 - 12/31/09	$162,824 / $480,009
Endothelial Progenitor Cell Recruitment In Diabetic Mice National Institutes of Health R01 DK 072446	08/01/05 - 07/31/09	$190,489 / $796,937
Identification of Novel Genes for Congenital Diaphragmatic Hernia National Institutes of Health (Columbia University) R01 HD 057036	09/28/08 - 06/30/12	$2,308 / $16,153
Angiogenic Peptide Scaffolds to Enhance Diabetic Wound National Institutes of Health (University of Cincinnati) R21 DK 078814	07/01/08 - 06/30/10	$30,769 / $52,369
EFIRD, J		
Infection, Persistence and Clearance of Oral HPV in Women National Institutes of Health R03 DE 016876	08/11/08 - 02/28/09	$73,099 / $73,099

FALCONE, R

Increasing Motor Vehicle Restraint in the Hispanic Community
Ohio Department of Public Safety
07/01/08 - 06/30/09 $24,728 / $24,728

FRISCHER, J

Treatment of a Neuroblastoma Model with an EGFR Inhibitor
Cancer Free Kids
05/01/09 - 04/30/10 $36,000 / $36,000

INGE, T

Adolescent Bariatric: Assessing Health Benefits and Risks
National Institutes of Health
U01 DK 072493 07/01/06 - 03/31/11 $1,357,935 / $6,650,550

JENKINS, T

Dietary Intake and Eating Behavior in Adolescents who Undergo Bariatric Surgery
National Institutes of Health (University of Pennsylvania)
RO1 DK 080783 07/01/08 - 06/30/13 $50,640 / $253,200

LAURENCE, S

Occupant Protection Coordinator Grant Region 8
Ohio Department of Public Safety
OPC-2208-31-00-00-00489 10/01/08 - 09/30/09 $56,202 / $56,202

LEVITT, M

Surgery Missions for Pediatric Surgery Division
The Smile Train
07/01/08 - 06/30/09 $18,000 / $18,000

MALDONADO, A

Targeting Oncolytic HSV to Neuroblastoma and Malignant Peripheral Nerve Sheath Tumors
National Institutes of Health
F31 CA 132613 12/01/07 - 11/30/10 $32,933 / $98,690

TIAO, G

Pathogenic Mechanisms of Virus Induced Biliary Atresia
National Institutes of Health
K08 DK 072858 09/15/05 - 06/30/10 $116,500 / $582,500

Current Year Direct **$2,360,473**

Industry Contracts

Falcone
Wyeth Pharmaceuticals $ 52,833

Inge
Ethicon Endo-Surgery, Inc $ 127,017

Current Year Direct Receipts **$116,950**

Total **$ 2,477,423**