

General and Thoracic Surgery



First Row: F. Ryckman, A. Peña, R. Azizkhan, T. Crombleholme;
Second Row: B. Dickie, A. Mortell, S. Barnett, T. Lee, R. Dasgupta;
Third Row: R. Falcone, J. Nathan, M. Alonso, M. Levitt, G. Tiao; **Fourth Row:** T. Inge, J. Frischer, K. Chatoorgoon

Division Data Summary

Research and Training Details

Number of Faculty	15
Number of Joint Appointment Faculty	1
Number of Research Fellows	8
Number of Support Personnel	31
Direct Annual Grant Support	\$1,986,614
Direct Annual Industry Support	\$33,376
Peer Reviewed Publications	33

Clinical Activities and Training

Number of Clinical Staff	15
Number of Clinical Fellows	6
Outpatient Encounters	6,500

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*

Rebecca 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 ; *ECMO Director, Associate Director, Trauma Services*

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, Assistant Professor ; *Associate Program Director, Fellowship*

Joint Appointment Faculty Members

Jeffrey Livingston, MD, Associate Professor
Maternal Fetal Medicine

Trainees

- **Shawn Rangel, MD**, PL-10, Stanford University
- **Sean Barnett, MD**, PL-8, University of Minnesota

Significant Accomplishments in FY08

Molecular Fetal Lab

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 announced the Director of Surgical Research.

Dr. Lim is setting up a basic science laboratory to study congenital diaphragmatic hernias with plans to obtain external funding in the next 3 years.

Bariatric Surgery

The Bariatric Surgery Research Program led by Dr. Inge is setting the national clinical/research agenda for overweight adolescents. The team has used industry funding to establish a database and clinical research consortium among pediatric hospitals to track surgical patients post operatively. Dr. Inge has a U-01 Program Grant titled, Adolescent Bariatrics: Assessing Health Benefits & Risks, which began enrolling patients in 2007. CCHMC is the only hospital in the US with 3 grants awarded by the NIH to study pediatric weight loss surgery.

Biliary Atresia

Dr. Tiao continues to develop his research in biliary atresia. He completed his third of five years on his NIH Career Development Award.

Significant Publications in FY08

Crombleholme TM, Shera D, Lee H, Johnson M, D'Alton M, Porter F, Chyu J, Silver R, Abuhamad A, Saade G, Shields L, Kauffman D, Stone J, Albanese CT, Bahado-Singh R, Ball RH, Bilaniuk L, Coleman B, Farmer D, Feldstein V, Harrison MR, Hedrick H, Livingston J, Lorenz RP, Miller DA, Norton ME, Polzin WJ, Robinson JN, Rychik J, Sandberg PL, Seri I, Simon E, Simpson LL, Yedigiarova L, Wilson RD, Young B. A prospective, randomized, multicenter trial of amnioreduction vs. selective fetoscopic laser photocoagulation for the treatment of severe twin-twin transfusion syndrome. *Am J Obstet Gynecol* 2007; 197:396.

Levitt MA, Mak GZ, Falcone Jr. RA, Peña A. Cloacal exstrophy - pull-through or permanent stoma? A review of 53 patients. *J Pediatr Surg* 2008; 43:164.

Inge TH, Zeller M, Harmon C, Helmrath M, Bean J, Modi A, Horlock M, Kalra M, Xanthakos S, Miller R, Akers R, Courcoulas A. Teen -Longitudinal Assessment of Bariatric Surgery: Methodological features of the first prospective multicenter study of adolescent bariatric surgery. *J Pediatr Surg* 2007; 42:1969.

Jafri M, Donnelly B, McNeal M, Ward, R, Tiao G, MAPK signaling contributes to rotaviral-induced cholangiocyte injury and viral replication. *Surgery* 142(2) 192-201, 2007.

Rangel SJ, Martin CA, Brown RL, Garcia VF, Falcone RA. Alarming trends in the improper use of motor-vehicle restraints in children: Implications for public policy and the development of race-based strategies for improving compliance. *J Pediatr Surg* 2008; 43:200.

Division Highlights

Dr. Timothy Crombleholme

Principal investigator on two National Institutes of Health R-01 and one Shriners Hospitals for Children grants regarding mechanisms of wound healing and repair.

Dr. Richard Falcone

Received funding from the State of Ohio and Cincinnati Children's Hospital Medical Center for his work in trauma epidemiology and education. Also, he has received funding for a clinical trial evaluating the safest dose of Tigecycline for pediatric patients.

Dr. Thomas Inge

U-01 grant from the National Institutes of Health for clinical studies of bariatric surgery in adolescents. He also received funding from Ethicon which will provide long term follow-up information on patients who have undergone bariatric surgery at Cincinnati Children's Hospital.

Dr. Gregory Tiao

K-08 award from the National Institutes of Health for studies of biliary atresia.

Division Collaboration

Collaboration with Pediatric Surgery; Hematology-Oncology

Collaborating Faculty: Dr. Timothy Crombleholme; Dr. Timothy Cripe

Oncolytic HSV Therapy in Immunocompetent Models Sarcoma Models

Division Publications

1. Alam S, Levitt MA, Sheldon CA, Pena A. [The posterior sagittal approach for recurrent genitourinary pathology](#). *J Urol*. 2007; 178: 1668-71; discussion 1671.
2. Azizkhan RG. "Perinatal tumors." In: R Carachi, JL Grosfeld, AF Azmy, eds. *The surgery of childhood tumors*. Berlin: Springer-Verlag; 2008: 145-170.
3. Azizkhan RG, Crombleholme TM. [Congenital cystic lung disease: contemporary antenatal and postnatal management](#). *Pediatr Surg Int*. 2008; 24: 643-57.
4. Bartosh SM, Ryckman FC, Shaddy R, Michaels MG, Platt JL, Sweet SC. [A national conference to determine research priorities in pediatric solid organ transplantation](#). *Pediatr Transplant*. 2008; 12: 153-66.
5. Crombleholme TM, Shera D, Lee H, Johnson M, D'Alton M, Porter F, Chyu J, Silver R, Abuhamad A, Saade G, Shields L, Kauffman D, Stone J, Albanese CT, Bahado-Singh R, Ball RH, Bilaniuk L, Coleman B, Farmer D, Feldstein V, Harrison MR, Hedrick H, Livingston J, Lorenz RP, Miller DA, Norton ME, Polzin WJ, Robinson JN, Rychik J, Sandberg PL, Seri I, Simon E, Simpson LL, Yedigiarova L, Wilson RD, Young B. [A prospective, randomized, multicenter trial of amnioreduction vs selective fetoscopic laser photocoagulation for the treatment of severe twin-twin transfusion syndrome](#). *Am J Obstet Gynecol*. 2007; 197: 396 e1-9.
6. Dasgupta R, Adams D, Elluru R, Wentzel MS, Azizkhan RG. [Noninterventional treatment of selected head and neck lymphatic malformations](#). *J Pediatr Surg*. 2008; 43: 869-73.

7. Dasgupta R, Langer JC. [Evaluation and management of persistent problems after surgery for Hirschsprung disease in a child](#). *J Pediatr Gastroenterol Nutr*. 2008; 46: 13-9.
8. Dasgupta R, Wales PW, Zuker RM, Fisher DM, Langer JC. [The use of Surgisis for abdominal wall reconstruction in the separation of omphalopagus conjoined twins](#). *Pediatr Surg Int*. 2007; 23: 923-6.
9. Falcone RA, Jr., Daugherty M, Schweer L, Patterson M, Brown RL, Garcia VF. [Multidisciplinary pediatric trauma team training using high-fidelity trauma simulation](#). *J Pediatr Surg*. 2008; 43: 1065-71.
10. Gordon A, Kozin ED, Keswani SG, Vaikunth SS, Katz AB, Zoltick PW, Favata M, Radu AP, Soslowsky LJ, Herlyn M, Crombleholme TM. [Permissive environment in postnatal wounds induced by adenoviral-mediated overexpression of the anti-inflammatory cytokine interleukin-10 prevents scar formation](#). *Wound Repair Regen*. 2008; 16: 70-9.
11. Heineke J, Auger-Messier M, Xu J, Oka T, Sargent MA, York A, Klevitsky R, Vaikunth S, Duncan SA, Aronow BJ, Robbins J, Crombleholme TM, Molkentin JD. [Cardiomyocyte GATA4 functions as a stress-responsive regulator of angiogenesis in the murine heart](#). *J Clin Invest*. 2007; 117: 3198-210.
12. Inge T, Helmuth M, Vierra M, Ikramuddin S. [Challenges of adolescent bariatric surgery: tips for managing the extremely obese teen](#). *J Laparoendosc Adv Surg Tech A*. 2008; 18: 157-69.
13. Inge TH. [Childhood obesity--a problem of surgical proportions?](#). *Nat Clin Pract Gastroenterol Hepatol*. 2008; 5: 180-1.
14. Inge TH, Zeller M, Harmon C, Helmuth M, Bean J, Modi A, Horlick M, Kalra M, Xanthakos S, Miller R, Akers R, Courcoulas A. [Teen-Longitudinal Assessment of Bariatric Surgery: methodological features of the first prospective multicenter study of adolescent bariatric surgery](#). *J Pediatr Surg*. 2007; 42: 1969-71.
15. Ippisch HM, Inge TH, Daniels SR, Wang B, Khoury PR, Witt SA, Glascock BJ, Garcia VF, Kimball TR. [Reversibility of cardiac abnormalities in morbidly obese adolescents](#). *J Am Coll Cardiol*. 2008; 51: 1342-8.
16. Jafri M, Alonso M, Kaul A, Dierig J, Racadio J, Inge T, Brown R, Ryckman F, Tiao G. [Intraoperative manometry during laparoscopic Heller myotomy improves outcome in pediatric achalasia](#). *J Pediatr Surg*. 2008; 43: 66-70; discussion 70.
17. Jafri M, Donnelly B, McNeal M, Ward R, Tiao G. [MAPK signaling contributes to rotaviral-induced cholangiocyte injury and viral replication](#). *Surgery*. 2007; 142: 192-201.
18. Kalra M, Mannaa M, Fitz K, Kumar S, Chakraborty R, Sheng X, Inge T. [Effect of surgical weight loss on sleep architecture in adolescents with severe obesity](#). *Obes Surg*. 2008; 18: 675-9.
19. Levitt MA, Mak GZ, Falcone RA, Jr., Pena A. [Cloacal exstrophy--pull-through or permanent stoma? A review of 53 patients](#). *J Pediatr Surg*. 2008; 43: 164-8; discussion 168-70.
20. Livingston JC, Lim FY, Polzin W, Mason J, Crombleholme TM. [Intrafetal radiofrequency ablation for twin reversed arterial perfusion \(TRAP\): a single-center experience](#). *Am J Obstet Gynecol*. 2007; 197: 399 e1-3.
21. Livingston JC, Malik KM, Crombleholme TM, Lim FY, Sibai BM. [Mirror syndrome: a novel approach to therapy with fetal peritoneal-amniotic shunt](#). *Obstet Gynecol*. 2007; 110: 540-3.
22. Mahller YY, Vaikunth SS, Ripberger MC, Baird WH, Saeki Y, Cancelas JA, Crombleholme TM, Cripe TP. [Tissue inhibitor of metalloproteinase-3 via oncolytic herpesvirus inhibits tumor growth and vascular progenitors](#). *Cancer Res*. 2008; 68: 1170-9.
23. Martin C, Falcone RA, Jr.. [Pediatric traumatic brain injury: an update of research to understand and improve outcomes](#). *Curr Opin Pediatr*. 2008; 20: 294-9.
24. Michelfelder E, Gottliebson W, Border W, Kinsel M, Polzin W, Livingston J, Khoury P, Crombleholme T. [Early manifestations and spectrum of recipient twin cardiomyopathy in twin-twin transfusion syndrome: relation to Quintero stage](#). *Ultrasound Obstet Gynecol*. 2007; 30: 965-71.
25. Miller RJ, Xanthakos SA, Hillard PJ, Inge TH. [Bariatric surgery and adolescent gynecology](#). *Curr Opin Obstet Gynecol*. 2007; 19: 427-33.
26. Oliveira C, Zamakhshary M, Abdallah MR, Miller SF, Langer JC, Wales PW, Dasgupta R. [Lung torsion after tracheoesophageal fistula repair: a case report and review of literature](#). *J Pediatr Surg*. 2007; 42: E5-9.
27. Parvadia JK, Keswani SG, Vaikunth S, Maldonado AR, Marwan A, Stehr W, Erwin C, Uzvolgyi E, Warner BW, Yamano S, Taichman N, Crombleholme TM. [Role of VEGF in small bowel adaptation after resection: the adaptive response is angiogenesis dependent](#). *Am J Physiol Gastrointest Liver Physiol*. 2007; 293: G591-8.
28. Rangel SJ, Martin CA, Brown RL, Garcia VF, Falcone RA, Jr.. [Alarming trends in the improper use of motor vehicle restraints in children: implications for public policy and the development of race-based strategies for improving compliance](#). *J Pediatr Surg*. 2008; 43: 200-7.
29. Richter GT, Ryckman F, Brown RL, Rutter MJ. [Endoscopic management of recurrent tracheoesophageal fistula](#). *J Pediatr Surg*. 2008; 43: 238-45.

30. Roehrig HR, Xanthakos SA, Sweeney J, Zeller MH, Inge TH. [Pregnancy after gastric bypass surgery in adolescents](#). *Obes Surg*. 2007; 17: 873-7.
31. Ryckman FC, Bucuvalas JC, Nathan J, Alonso M, Tiao G, Balistreri WF. [Outcomes following liver transplantation](#). *Semin Pediatr Surg*. 2008; 17: 123-30.
32. Sparling KW, Ryckman FC, Schoettker PJ, Byczkowski TL, Helpling A, Mandel K, Panchanathan A, Kotagal UR. [Financial impact of failing to prevent surgical site infections](#). *Qual Manag Health Care*. 2007; 16: 219-25.
33. Stehr W, Farrell MK, Lucky AW, Johnson ND, Racadio JM, Azizkhan RG. [Non-endoscopic percutaneous gastrostomy placement in children with recessive dystrophic epidermolysis bullosa](#). *Pediatr Surg Int*. 2008; 24: 349-54.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Annual Direct / Project Period Direct

Crombleholme, T

Endothelial Progenitor Cell Recruitment In Diabetic Mice

National Institutes of Health

R01 DK 072446

08/01/05 - 07/31/09

\$194,377 / \$820,000

Endothelial Progenitor Cell Biology in Type I Diabetes

National Institutes of Health

R01 DK 074055

09/30/05 - 07/31/09

\$201,014 / \$848,000

Endothelial Progenitor Cells and Vasculogenesis in Engineered Human Skin

Shriners Hospitals for Children

01/01/07 - 12/31/09

\$144,310 / \$480,009

Falcone, R

An Evaluation of the Impact on Outcome and the Etiology of Delayed Transport Times for Injured Pediatric Patients

Ohio Department of Public Safety

07/01/07 - 06/30/08

\$29,685 / \$29,685

Garcia, V

Cincinnati Initiative to Reduce Violence

City of Cincinnati (University of Cincinnati)

75X1164

04/01/07 - 03/31/09

\$45,455 / \$95,455

Inge, T

Adolescent Bariatrics: Assessing Health Benefits & Risks

National Institutes of Health

U01 DK 072493

07/01/06 - 03/31/11

\$1,165,940 / \$4,245,290

Laurence, S

Occupant Protection Coordinator Grant

Ohio Department of Public Safety

OPC-2208-31-00-00-00489

10/01/07 - 09/30/08

\$57,285 / \$57,285

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

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

\$32,048 / \$97,227

Current Year Direct

\$1,986,614

Industry Contracts

Falcone, R

Wyeth Pharmaceuticals

\$ 7,966

Inge, T

Ethicon Endo-Surgery, Inc

\$ 25,410

Current Year Direct Receipts

\$33,376

Total

\$2,019,990