# Research Catalog

Baylor College of Medicine

MICHAEL E. DEBAKEY
DEPARTMENT OF
SURGERY

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# ABDOMINAL TRANSPLANTATION

The division is committed to clinical and basic research, in part funded through NIH grants, in areas such as adult and pediatric solid organ transplantation, liver disease, kidney disease, immunogenetics, bone marrow transplant and chronic hepatitis C. Led by Dr. John M. Vierling, professor and chief of hepatology, the Baylor St. Luke's Advanced Liver Therapies Research Center gives patients access to clinical trials offering the latest therapies. Co-directed by Drs. Peter Jindra and Matt Cusick, the division-run Immune Evaluation Laboratory continues to expand its research activities while remaining the largest program of its kind in the Texas Medical Center.


# Ronald T. Cotton, M.D.

**Assistant Professor**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**



## Keywords

- Hepatocellular carcinoma (HCC)
- Genomic differences of Hepatitis B and Hepatitis C


## Research Interests

Dr. Cotton completed a 2-year research fellowship at the Liver, Kidney and Pancreas Center and the Human Genome Sequencing Center at Baylor. There, his research interest centered on developing a high-quality tissue repository, and using these samples to detect genomic differences between Hepatitis B-, Hepatitis C-, and non-viral associated hepatocellular carcinoma.

His research has resulted in numerous peer-reviewed publication as well as local, national and international presentations. Dr. Cotton has received numerous clinical accolades during his residency, including being named a 2012 Raleigh Ross Scholar by the Texas Surgical Society.

## Contact Information


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## Selected Publications


1. Nguyen NT, Cotton RT, Harring TR, Guiteau JJ, Gingras MC, Wheeler DA, O'mahony CA, Gibbs RA, Brunicardi FC, Goss JA. "A Primer On A Hepatocellular Carcinoma Bioresource Bank Using The Cancer Genome Atlas Guidelines: Practical Issues And Pitfalls." World J Surg. 2011 Aug;35(8):1732-7.
2. Guiteau JJ, Cotton RT, Washburn WK, Harper A, O'mahony CA, Sebastian A, Cheng S, Klintmalm G, Ghobrial M, Halff G, Mieles L, Goss J. "An Early Regional Experience With Expansion Of Milan Criteria For Liver Transplant Recipients. Am J Transplant." Am J Transplant. 2010 Sep;10(9):2092-8. Doi:. Pubmed PMID: 20883543

3. Harring TR, Guiteau JJ, Nguyen NT, Cotton RT, Gingras MC, Wheeler DA, O'mahony CA, Gibbs RA, Brunicardi FC, Goss JA. "Building A Comprehensive Genomic Program For Hepatocellular Carcinoma." World J Surg. 2011 Aug;35(8):1746-50.
4. Cotton RT, Nguyen NT, Guiteau JJ, Goss JA. "Current techniques for pediatric liver transplantation.Curr Opin Organ Transplant." Curr Opin Organ Transplant. 2014 Oct;19(5):46.
5. Harring TR, Nguyen NT, Cotton RT, Guiteau JJ, Salas De Armas IA, Liu H, Goss JA, O'mahony CA. "Liver Transplantation With Donation After Cardiac Death Donors: A Comprehensive Update." J Surg Res. 2012 May 10.
6. Khaderi S, Guiteau J, Cotton RT, O'Mahony C, Rana A, Goss JA. "Role of liver transplantation in the management of hepatoblastoma in the pediatric population." World J Transplant. 2014 Dec 24;4(4):294-8.
7. Rana A, Pallister ZS, Guiteau JJ, Cotton RT, Halazun K, Nalty CC, Khaderi SA, O'Mahony CA, Goss JA. "Survival Outcomes Following Pediatric Liver Transplantation (Pedi-SOFT) Score: A Novel Predictive Index." Am J Transplant. 2015 Feb 17.


# Matthew Cusick, Ph.D., D(ABHI)

**Assistant Professor of Surgery**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**



## Keywords

- Immune response - allogeneic stem cells
- Cellular and antibody immune responsiveness
- HLA antibodies


## Research interests

Dr. Matthew Cusick specializes in Transplant Diagnostic Testing and is a Laboratory Director in the Immune Evaluation Laboratory at Baylor College of Medicine. He is certified by the American Board of Histocompatibility and Immunogenetics. His research interests are directed towards studying immunological aspects of the human immune system in transplantation and research of infectious diseases.

## Contact information


Immune Evaluation (Lab)
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## Selected publications


1. Libbey JE, Doty DJ, Sim JT, Cusick MF, Round JL, Fujinami RS. "The effects of diet on the severity of central nervous system disease: one part of lab-to-lab variability." Nutrition.
2. Tambur AR, Haarberg KM, Friedewald JJ, Leventhal JR, Cusick MF, Jaramillo A, Abecassis MM, Kaplan B. "Unintended Consequences of the New National Kidney Allocation Policy in the United States." Am J Trans.
3. Tambur AR, Herrera ND, Haarberg KM, Cusick MF, Gordon RA, Leventhal JR, Friedewald JJ, Glotz D. "Assessing Antibody Strength: Comparison of MFI, C1q, and Titer Information." Am J Trans.
4. Cusick MF, Libbey JE, Oh L, Jordan S, Fujinami RS. "Acthar gel treatment suppresses acute exacerbations in a murine model of relapsing-remitting multiple sclerosis." Autoimmunity.
5. Cusick MF, Libbey JE, Doty DJ, Fujinami RS. "DA virus mutant H101 has altered CNS pathogenesis and causes immunosuppression." Journal of Neuroimmunology.

6. Chen L, Reyes-Vargas E, Dai H, Escobar H, Rudd B, Fairbanks J, Ho A, Cusick MF, Kumanovics A, Delgado J, He X, Jensen PE. "Expression of the mouse MHC class Ib H2-T11 gene product, a paralog of H2-T23 (Qa-1) with shared peptide-binding specificity." Journal of Immunology.
7. Cusick MF, Libbey JE, Trede NS, Fujinami RS. "Targeting insulin-like growth factor 1 leads to amelioration of inflammatory demyelinating disease." PloS One.
8. Cusick MF, Libbey JE, Fujinami RS. "Picornavirus infection leading to immunosuppression." Future Virology.
9. Wang X, Cusick MF, Wang Y, Sun P, Libbey JE, Trinkaus K, Fujinami RS, Song SK. "Diffusion basis spectrum imaging detects and distinguishes coexisting subclinical inflammation, demyelination and axonal injury in experimental autoimmune encephalomyelitis mice." NMR in Biomedicine.
10. Cusick MF, Libbey JE, Cox Gill J, Fujinami RS, Eckels DD. "CD4 T-cell engagement by both wild-type and variant HCV peptides modulates the conversion of viral clearing helper T cells to Tregs." Future Virology.


# N. Thao N. Galvan, M.D., M.P.H.

**Instructor in Surgery**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**



## Keywords

- Surgical Technique of Transplantation
- Additive Bioengineering in Transplantation
- Hepatobiliary Surgery


## Research interests

Dr. Galván is the author of numerous articles in the areas of solid organ transplantation outcomes and surgical technique in transplantation. Her current interests include the economics of solid organ transplantation, and her research project on additive biomanufacturing and collaborative translational research was recently funded.

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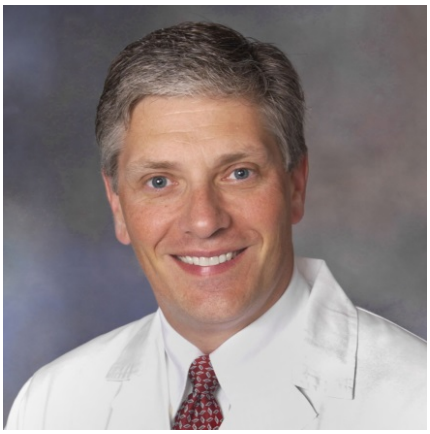
## Selected publications


1. A Primer on a Hepatocellular Carcinoma Bioresource Bank using the Cancer Genome Atlas Guidelines: Practical Issues and Pitfalls. Nguyen NT, Cotton RT, Harring TR, Guiteau JJ, Gingras MC, Wheeler DA, O'Mahony CA, Gibbs RA, Brunicardi FC, Goss JA. World J Surg. 2011 Aug; 35(8): 1732-7.
2. Building a Comprehensive Genomic Program for Hepatocellular Carcinoma. Harring TR, Guiteau JJ, Nguyen NT, Cotton RT, Gingras MC, Wheeler DA, O'Mahony CA, Gibbs RA, Brunicardi FC, Goss JA. World J Surg. 2011 Aug; 35(8): 1746-50.
3. Neuroendocrine Liver Metastases and Orthotopic Liver Transplantation: The US Experience. Nguyen NT, Harring TR, Goss JA, O'Mahony CA. Int J Hepatol. 2011; 2011: 742890. Epub 2011 Dec 29.
4. Acute liver failure. Nguyen NT, Vierling JM. Curr Opin Organ Transplant. 2011 Jun;16(3):289-96.
5. Comparing Outcomes for Rare Primary Hepatic Tumors after Liver Transplantion.Nguyen NTT, Harring TR, Guiteau JJ, Cotton RT, Salas de Armas IA, Liu H, Goss JA, O'Mahony CA. J Transplant Technol Res. 2011; 1:106
6. Transplanting Whole Livers from Donors Less than 6 Kilograms—is it prudent?Nguyen NTT Harring TR, Liu H, Goss JA, O'Mahony CA. J Surg Res. 2012 Oct; 177(2):348-58.
7. Viral Subtypes in Hepatocellular Carcinoma are Associated with Different Mechanisms of WNT/CTNNB1 Alteration. Covington K, Donehower LA, Creighton C, Slagle BL, Goss JA, Nguyen NTT, Gibbs RA, Wheeler D et al. Cancer Research. Oct 2014.
8. Biliary Reconstruction in Pediatric Liver Transplantation: A Case Report of Biliary Complications and Review of the Literature.Nguyen NTT, Harring TR, Liu H, Goss JA, O'Mahony CA. J Liver 2015, 4:179



# John A Goss, M.D., F.A.C.S.

**Professor of Surgery and Chief, Division of Abdominal Transplantation**
**Baylor College of Medicine**

**JLH Foundation Chair in Transplant Surgery - Texas Children's Hospital**

**Director of Liver Transplantation - Baylor St. Luke's Medical Center**

**Director of Liver Transplantation - Texas Children's Hospital**

**Director of Liver Transplantation - Michael E. DeBakey Veterans Affairs Medical Center**

## Keywords

- Adult and pediatric liver transplantation
- Biliary resection/reconstruction
- Bile duct tumor
- Bile duct injury
- Cirrhosis
- Hepatobiliary surgery
- Liver disease
- Liver resection
- Liver tumors
- Portal hypertension
- Portosystemic shunts
- Radio frequency ablation
- Sugiura procedure
- Surgical management of liver tumors

## Research Interests

Dr. Goss' primary research interests revolve around the genomic alterations that occur with hepatocellular carcinoma.

## Contact Information

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## Selected Publications

1. Liang Y, Gao H, Lin SY, Goss J, Du C, Li K. Mcph1/Brit1 deficiency promotes genomic instability and tumor formation in a mouse model. Oncogene. 2015 Aug 13; 34:4368-78.
2. Rana A, Pallister, ZS, Guiteau J, Cotton R, Halazun K, Nalty C, Khaderi S, O'Mahony C, Goss JA. Survival Outcomes After Pediatric Liver Transplantation (Pedi-SOFT) Score: A Novel Predictive Index. Am J Transplant 2015 July; 15:1855-63.

3. Bissig-Choisat B, Wang L, Legras X, Saha Pr, Chen L, Bell P, Pankowicz F, Hill M, Barzi M, Leyton CK, Leung H-C, Kruse R, Himes R, Goss JA, Wilson J, Chan L, Lagor W, Bissig KD. Development and rescue of human familial hypercholesterolemia in a xenograft mouse model. Nat Commun 2015 Jun 17; 6:7339.
4. Rana A, Pallister Z, Halazun K, Cotton R, Guiteau J, Nalty CC, O'Mahony CA, Goss JA. Pediatric Liver Transplant Center Volume and the Likelihood of Transplantation. Pediatrics 2015 Jul; 136:e99-e107.
5. Rana A, Kueht ML, Nicholas SK, Jindra PT, Himes RW, Desai MS, Cotton RT, Galvan NT, O'Mahony CA, Goss JA. Pediatric Liver Transplantation Across the ABO Blood Group Barrier: Is It an Obstacle in the Modern Era? J Am Coll Surg 2016 Apr; 222(4):681-9.
6. Rana A, Cotton R, O'Mahony CA, Goss JA. Veterans Administration Liver Transplant Programs Perform as Well as Their Affiliated Academic Institutions. Ann Surg. 2016 Aug;264(2):239-40.
7. Bissig-Choisat B, Kettlun-Leyton C, Legras XD, Zorman B, Barzi M, Chen LL, Amin MD, Huang YH, Pautler RG, Hampton OA, Prakash MM, Yang D, Borowiak M, Muzny D, Doddapaneni H, Hu J, Shi Y, Gaber WM, Hicks MJ, Thompson PA, Lu Y, Mills GB, Finegold M, Goss JA, Parsons DW, Vasudevan SA, Sumazin P, Lopez-Terrada D, Bissig KD. Novel Patient-Derived Xenograft and Cell Line Models for Therapeutic Testing of Pediatric Liver Cancer. J Hepatol. 2016 Aug;65(2):325-33.
8. Leung DH, Narang A, Minard CG, Hiremath G, Goss JA, Shepherd R. A 10-year UNITED NETWORK FOR ORGAN sharing review of mortality and risk factors in young children awaiting liver transplantation. Liver Transpl. 2016 Nov;22(11):1584-1592.
9. Rana A, Fraser CD, Scully BB, Heinle JS, McKenzie DE, Dreyer WJ, Kueht M, Liu H, Brewer ED, Rosengart TK, O'Mahony CA, Goss JA. Inferior outcomes on the waiting list in low volume pediatric heart transplant centers. Am J Transplant. 2017 Jun;17(6):1515-1524.
10. Hassan MM, Botrus G, Abdel-Wahab R, Wolff RA, Li D, Tweardy D, Phan AT, Hawk E, Javle M, Lee JS, Torres HA, Rashid A, Lenzi R, Hassabo HM, Abaza Y, Shalaby AS, Lacin S, Morris J, Patt YZ, Amos CI, Khaderi SA, Goss JA, Jalal PK, Kaseb AO. Estrogen Replacement Reduces Risk and Increases Survival Times of Women With Hepatocellular Carcinoma. Clin Gastroenterol Hepatol. 2017 Jun 1. [Epub ahead of print].

# Prasun K. Jalal, M.D., AGAF

**Assistant Professor of Surgery and Medicine**
**Division of Abdominal Transplantation**
**Stan and Sue Partee Endowed Professorship in Surgery**
**Baylor College of Medicine**

## Keywords


- Autoimmune hepatitis
- Fatty Liver Disease
- Gastroenterology
- Hepatology
- Liver cancer
- Liver transplantation
- Viral hepatitis


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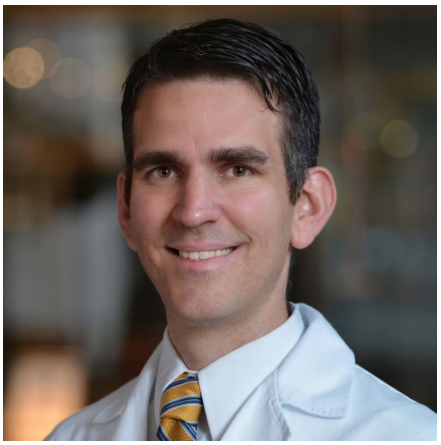
## Selected Publications


1. Orlent H, Selleslag D, Vandecasteele S, Jalal PK, Bank S, Hines J. Clinical challenges and images in GI. Fasciola hepatica infection and Von Hippel-Lindau disease type 1 with pancreatic and renal involvement. Gastroenterology. 2007;132(1):15-6, 467-8.
2. Jalal PK, Bank S. Predicting severe acute pancreatitis: how have we done so far? J Gastroenterol Hepatol. 2007;22(3):291-2.
3. Reddy DN, Gupta R, Lakhtakia S, Jalal PK, Rao GV. Use of a novel transluminal balloon accessotome in transmural drainage of pancreatic pseudocyst. Gastrointest Endosc. 2008;68(2):362-5.
4. Li N, Tieng A, Novak S, Fernandes A, Jalal PK, Akerman M, Sideridis K, Bank S. Effects of medications on post-endoscopic retrograde cholangiopancreatography pancreatitis. Pancreatology. 2010;10(2-3):238-42.
5. Kaseb AO, Xiao L, Hassan MM, Chae YK, Lee JS, Vauthey JN, Krishnan S, Cheung S, Hassabo HM, Aloia T, Conrad C, Curley SA, Vierling JM, Jalal P, Raghav K, Wallace M, Rashid A, Abbruzzese JL, Wolff RA, Morris JS. Development and validation of an insulin-like growth factor score to assess hepatic reserve in hepatocellular carcinoma. J Natl Cancer Inst. 2014;106.



# Peter Jindra, Ph.D.

**Assistant Professor of Surgery**
**Director, Immune Evaluation Laboratory**
**Baylor College of Medicine**

## Keywords


- Anti-HLA antibodies
- Hematopoietic stem cell transplantation
- microRNA in the immune system
- Transplant Diagnostics


## Research Interests

The role of anti-HLA antibodies in transplant rejection, the effect of single nucleotide polymorphisms on bone marrow transplant outcomes, the expression and function of microRNA in lymphocytes and murine models of transplantation.

## Contact Information

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## Selected Publications

1. Heinemann FM, **Jindra PT**, Bockmeyer CL, Zeuschner P, Wittig J, Höflich H, Eßer M, Abbas M, Dieplinger G, Stolle K, Vester U, Hoyer PF, Immenschuh S, Heinold A, Horn PA, Li W, Eisenberger U, Becker JU. Glomerulocapillary miRNA response to HLA-class I antibody in vitro and in vivo. Sci Rep. 2017 Nov 6;7(1):14554

2. **Jindra PT**, Conway SE, Ricklefs SM, Porcella SF, Anzick SL, Haagenson M, Wang T, Spellman S, Milford E, Kraft P, McDermott DH, Abdi R. Analysis of a Genetic Polymorphism in the Costimulatory Molecule TNFSF4 with Hematopoietic Stem Cell Transplant Outcomes. BBMT 2016 Jan; 22(1):27-36

3. **Jindra PT**, Tripathi S, Tian C, Iacomini J, Bagley. Tolerance to MHC class II disparate allografts through genetic modification of bone marrow. Gene Ther. 2012 Jul 26:1-9.

4. **Jindra PT**, Bagley J, Godwin JG, Iacomini J. Costimulation-dependent expression of microRNA-214 increases the ability of T cells to proliferate by targeting Pten. J Immunol. 2010; 185(2):990-7.

# Saira A. Khaderi, M.D., M.P.H.

**Assistant Professor of Surgery**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**

## Keywords

- Hepatitis C
- Hepatocellular Carcinoma
- Liver transplant outcomes
- Portopulmonary HTN
- Project ECHO

## Research Interests

Dr. Khaderi has research interest in liver transplant outcomes - specifically in patients transplanted with hepatitis C and hepatocellular carcinoma. She is also involved in Project ECHO ((Extension for Community Healthcare Outcomes) - a telementoring program whose aim is to improve medical resources in rural and underserved communities in Texas.

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## Selected Publications

1. Khaderi S, Guiteau J, Cotton RT, O'Mahony C, Rana A, Goss JA. The role of liver transplanttion in the management of hepatoblastoma in the pediatric population. World Journal of Transplantation 2014, 4(4): 294-298.
2. Khaderi S, Shepherd R, Goss J, Leung D. Hepatitis C in the pediatric population: transmission, natural history, treatment and liver. World Journal of Gastroenterology, 2014; 20(32): 11281-11286.
3. Khaderi S, Khan R, Safdar Z, Stribling R, Vierling JM, Goss JA, Sussman NL. Long-term follow-up of portopulmonary hypertension patients after liver transplantation. Liver Transplantation 2014, 20(6):724-727.
4. Khaderi S, Barnes D. Preventing a first episode of esophageal variceal hemorrhage. Cleveland Clinic Journal of Medicine. March 2008. Vol 75. No. 3, pp 235-244.


# Ayse Leyla Mindikoglu, M.D., M.P.H.

**Associate Professor of Medicine and Surgery**

**Division of Abdominal Transplantation**

**Michael E. DeBakey Department of Surgery**

**Section of Gastroenterology and Hepatology**

**Margaret M. and Albert B. Alkek Department of Medicine**

**Baylor College of Medicine**


## RESEARCH INTERESTS

Dr. Ayse Leyla Mindikoglu is board certified in Internal Medicine, Gastroenterology and Transplant Hepatology with over 12 years of experience in academic clinical practice. In 2010, she received National Institutes of Health Mentored Patient-Oriented Research Career Development Award (NIH/NIDDK K23). Dr. Mindikoglu's research has been focused on renal dysfunction in cirrhosis and development of new biomarkers of glomerular filtration rate and altered renal hemodynamics in cirrhosis. Between 2010 and 2015, supported by NIH/NIDDK K23 award, Dr. Mindikoglu conducted several clinical studies to understand key concepts of altered renal hemodynamics in patients with cirrhosis.
Dr. Mindikoglu's recent study published in *Translational Research* identified a unique metabolomic signature associated with hepatorenal dysfunction and mortality in patients with cirrhosis. Supported by 2017 Roderick D. MacDonald Research Award, her current research involves validation of several blood metabolomic biomarkers in patients with cirrhosis to detect hepatorenal dysfunction and predict mortality.

Dr. Mindikoglu's most recent study investigates the impact of 4 weeks of dawn-to-sunset fasting on gut microbiota, and metabolism on healthy volunteers.

## CONTACT INFORMATION


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## SELECTED PUBLICATIONS


1. **Mindikoglu AL**, Opekun AR, Putluri N, Devaraj S, Sheikh-Hamad D, Vierling JM, Goss J, Rana A, Sood G, Jalal P, Inker LA, Mohney RP, Tighiouart H, Christenson RH, Dowling TC, Weir MR, Seliger SL, Hutson WR, Howell C, Raufman JP, Magder LS, Coarfa C. A Unique Metabolomic Signature Associated with Hepatorenal Dysfunction and Mortality in Cirrhosis. Transl Res 2018; 195:25-47.
2. **Mindikoglu AL**, Opekun AR, Mitch WE, Magder LS, Christenson RH, Dowling TC, Weir MR, Seliger SL, Howell CD, Raufman JP, Rana A, Goss JA, Khaderi SA, Vierling JM. Cystatin C Is a Gender-Neutral Glomerular Filtration Rate Biomarker in Patients with Cirrhosis. Dig Dis Sci. 2018 Mar;63(3):665-675.
3. **Mindikoglu AL**, Opekun AR, Sood G, Devaraj S. Impact of Time- Restricted Feeding and Dawn to Sunset Fasting on Circadian Rhythm, Obesity, Metabolic Syndrome and Non-Alcoholic Fatty Liver Disease. Gastroenterol Res Pract. 2017; 2017:3932491.
4. **Mindikoglu AL**, Pappas SC. New developments in hepatorenal syndrome. Clin Gastroenterol Hepatol. 2018; 16:162-177.
5. **Mindikoglu AL**, Dowling TC, Magder LS, Christenson RH, Weir MR, Seliger SL, Hutson WR, Howell CD. Estimation of glomerular filtration rate in patients with cirrhosis by use of new and conventional filtration markers and dimethylarginines. Clin Gastroenterol Hepatol 2016; 14:624-32.
6. **Mindikoglu AL**, Dowling TC, Schaub DJ, Hutson WR, Potosky DR, Christenson RH, Barth RN, LaMattina JC, Hanish SI, Weir MR, Raufman JP. Pharmacokinetics and tolerability of intravenous sildenafil in two subjects with Child-Turcotte-Pugh class C cirrhosis and renal dysfunction. Dig Dis and Sci 2015; 60:3491-4. PMCID: PMC4623880.
7. **Mindikoglu AL**, Dowling TC, Wong-You-Cheong JJ, Christenson RH, Magder LS, Hutson WR, Seliger SL, Weir MR. A Pilot Study to Evaluate Renal Hemodynamics in Cirrhosis by Simultaneous Glomerular Filtration Rate, Renal Plasma Flow, Renal Resistive Indices and Biomarkers Measurements. Am J Nephrol 2014; 39:543-552. PMCID: PMC4287415.
8. **Mindikoglu AL**, Dowling TC, Weir MR, Seliger SL, Christenson RH, Magder LS. Performance of Chronic Kidney Disease Epidemiology Collaboration creatinine-cystatin C equation for estimating kidney function in cirrhosis. Hepatology 2014; 59:1532-42. PMCID: PMC3883887.
9. **Mindikoglu AL**, Emre SH, Magder LS. Impact of estimated liver volume and liver weight on gender disparity in liver transplantation. Liver Transpl 2013; 19:89-95. PMCID: PMC3535518.
10. **Mindikoglu AL**, Raufman JP, Seliger SL, Howell CD, Magder LS. Simultaneous liver-kidney versus liver transplantation alone in patients with end-stage liver disease and kidney dysfunction not on dialysis. Transplant Proc 2011; 43:2669-77. PMCID: PMC3212397.

# Christine A. O'Mahony, M.D.

**Associate Professor of Surgery**
**Division of Abdominal Transplantation**
**Section Chief of Renal Transplantation**
**Baylor College of Medicine**

**Surgical Co-Director of Kidney Transplantation - Texas Children's Hospital**

**Surgical Director of Kidney Transplantation - Baylor St. Luke's Medical Center**

**Surgical Director of Kidney Transplantation - Michael E. DeBakey VA Medical Center**

## Keywords

- Adult and pediatric liver transplantation
- Bile duct resections
- Hepatobiliary surgery
- Intraoperative RFA
- Kidney transplantation
- Liver resection
- Portosystemic shunts
- Surgical management of liver tumors

## Research Interests

Dr. O'Mahony has research interest in clinical outcomes - specifically in kidney and liver transplant patients.

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## Selected Publications

1. Kueht M, Mazziotti M, Slater B, O'Mahony C, Goss J. Thoracoscopic repair of right-sided diaphragmatic hernia after liver transplantation for hepatoblastoma. J Ped Surg Case Reports 2 2014: 219-221.
2. Khaderi S, Guiteau J, Cotton RT, O'Mahony C, Rana A, Goss JA. The role of liver transplanttion in the management of hepatoblastoma in the pediatric population. World Journal of Transplantation 2014, 4: 294-298..
3. Harring TR, Nguyen NT, Liu H, Goss JA, O'Mahony CA. Liver transplant fellowship and resident training is not a part of the "July effect". J Surg Res 2013;182(1):1-5.

4. Harring TR, Nguyen NT, Liu H, Karpen SJ, Goss JA, O'Mahony CA. Liver transplantation in cystic fibrosis: A report from Baylor College of Medicine and the Texas Children's Hospital. Pediatr Transplant 2013;17(3):271-7.
5. O'Mahony CA, Goss JA. The future of liver transplantation. Tex Heart I J 2012;39(6):874-75.
6. Harring TR, Nguyen NT, Cotton RT, Guiteau JJ, Salas de Armas IA, Liu H, Goss JA, O'Mahony CA. Liver transplantation with donation after cardiac death donors: a comprehensive update. J Surg Res 2012;178(1):502-11.
7. Nguyen NTT, Harring TR, Liu H, Goss JA, O'Mahony CA. Transplanting whole livers from donors less than 6 kilograms—is it prudent? J Surg Res 2012;177(2):348-58.
8. Harring TR, Nguyen NT, Liu H, Goss JA, O'Mahony CA. Caroli disease patients have excellent survival after liver transplant. J Surg Res 2012;177(2):365-72.
9. Ilyas JA, O'Mahony CA, Vierling JM. Liver transplantation in autoimmune liver diseases. Best Pract Res Clin Gastroenterol 2011;25(6):765-82.
10. Harring TR, O'Mahony CA, Goss JA. Extended donors in liver transplantation. Clin Liver Dis 2011;15(4):879-900.

# Abbas Rana, M.D.

**Assistant Professor of Surgery**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**

## Keywords


- Adult and pediatric liver transplantation
- Bile duct resections
- Hepatobiliary surgery
- Intraoperative RFA
- Kidney transplantation
- Liver resection
- Portosystemic shunts
- Surgical management of liver tumors


## Research Interests

Dr. Rana is an accomplished outcomes researcher with numerous published articles in esteemed journals. He has an expertise in liver and kidney transplantation as well as surgeries for malignant and non-malignant conditions that affect the liver, gallbladder, and bile ducts.

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## Selected Publications

1. Rana A, Gruessner AC, Agopian V, Khalpey Z, Riaz IB, Kaplan B, Halazun KJ, Busuttil R, Gruessner RW. Survival benefit of solid-organ transplantation in the United States. JAMA Surgery. 2015 [Epub ahead of print].
2. Halazun KJ, Patzer RE, Rana A, Verna EC, Griesemer AD, Parsons RF, Samstein B, Guarrera JV, Kato T, Brown RS Jr, Emond JC. Standing the test of time: outcomes of a decade of prioritizing patients with hepatocellular carcinoma, results of the UNOS natural geographic experiment. Hepatology. 2014 Dec; 60(6):1957-62.

3. Petrowsky H, Rana A, Agopian V, Kaldas F, Farmer D, Yersiz H, Goldstein L, Hiatt J, Busuttil R. Liver transplantation in highest-acuity recipients: identifying factors to avoid futility. Annals of Surgery. 2014 Jun; 259(6):1186-94.

4. Rana A, Petrowsky H, Hong JC, Agopian VG, Kaldas FM, Farmer D, Yersiz H, Hiatt JR, Busuttil RW. Blood transfusion requirement during liver transplantation is an important risk factor for mortality. Journal of the American College Surgeons. 2013 May; 216(5):902-7.

5. Rana A, Hardy MA, Halazun KJ, Woodland DC, Ratner LE, Samstein B, Guarrera JV, Brown Jr RS, Emond JC. Survival outcomes following liver transplantation (SOFT) score: a novel method to predict patient survival following liver transplantation. American Journal of Transplantation. 2008 Dec; 8(12): 2537-46.

6. Rana A, Robles S, Russo MJ, Woodland DC, Witkowski P, Ratner LE, Hardy MA. The combined organ effect: protection against rejection? Annals of Surgery. 2008 Nov; 248(5):871-9.

7. D'Alessio MJ, Rana A, Martin JA, Moser AJ. Surgical management of intraluminal duodenal diverticulum and coexisting anomalies. Journal of the American College of Surgeons. 2005 Jul; 201(1):143-8.

# Gagan K. Sood, M.D.

**Associate Professor of Surgery and Medicine**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**

## Keywords


- Ascites
- Cirrhosis
- Colonoscopy
- Endoscopy
- Esophagogastroduodenoscopy (EGD)
- Gastroenterology
- Hepatic encephalopathy
- Hepatitis B and C
- Hepatitis Hemochromatosis
- Hepatocellular carcinoma
- Non-alcoholic fatty liver disease (NAFLD)
- Portal hypertension
- Varices
- Wilson's disease


## Research Interests

Dr. Sood's primary research focuses on clinical aspects of liver disease, viral hepatitis, portal hypertension and outcome based research in cirrhosis and liver transplantation. His area of main interest is non-alcoholic fatty liver disease (NAFLD/ NASH). He is particularly interested in studying spectrum of NAFLD in different ethnic groups, with focus on genetic and metabolic differences in Hispanic population. Dr. Sood is also interested in iron overload in patient with liver disease including patients with NAFLD. Studies are currently being conducted on non-HFE related genetic markers in patients with primary and secondary iron overload. He is also involved in clinical trials of new anti viral therapies in patients with hepatitis C.

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## Selected Publications


1. Raza A, Sood GK. Hepatocellular carcinoma review: Current treatment, and evidence-based medicine. World J Gastroenterol 2014;20(15):4115-27.
2. Raza A, Mittal S, Sood GK. Interferon-associated retinopathy during the treatment of chronic hepatitis C: a systematic review. J Viral Hepat 2013;20(9):593-9.
3. Bhopale KK, Nauduri D, Soman KV, Sood GK, Okorodudu A, Ansari GS, Kaphalia BS. Differential expression of plasma proteins in patients with alcoholic liver disease and non alcoholic liver disease. Euroasian J Hepato Gastroenterology 2011;1:89-99.
4. Guturu P, Sagi SV, Ahn D, Jaganmohan S, Kuo YF, Sood GK. Capsule endoscopy with PILLCAM ESO for detecting esophageal varices: a meta-analysis. Minerva Gastroenterol Dietol 2011;57(1):1-11.
5. Tarcin O, Basaranoglu M, Tahan V, Tahan G, Sucullu I, Yilmaz N, Sood G, Snyder N, Hilman G, Celikel C, Tozun N. Time course of collagen peak in bile duct-ligated rats. BMC Gastroenterol 2011;11:45.
6. Wickliffe JK, Abdel-Rahman SZ, Lee C, Kormos-Hallberg C, Sood G, Rondelli CM, Grady JJ, Desnick RJ, Anderson KE. CYP1A2*1F and GSTM1 alleles are associated with susceptibility to porphyria cutanea tarda. Mol Med 2011;17(3-4):241-7.
7. Parikh M, Singh A, Sood G. Extended treatment duration for treatment naïve chronic hepatitis C genotype 1 late viral responders: a meta-analysis comparing 48 weeks vs 72 weeks of pegylated interferon and ribavirin. J Viral Hepat 2011;18(4):e99-103.

# Risë J. Stribling, M.D.

**Associate Professor of Surgery**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**

**Medical Director, Liver Transplantation - Michael E. DeBakey VA Medical Center**

**Medical Director, Liver Transplantation - Baylor St. Luke's Medical Center**

## Keywords

- Abdominal paracentesis
- Acute and chronic liver diseases
- Cirrhosis
- Gastroenterology
- Hepatitis
- Hepatocellular carcinoma
- Liver transplant

## Research Interests

Dr. Stribling's primary research interests are in treatment of acute and chronic hepatitisC, hepatitis B, and liver failure.

## Contact Information

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## Selected Publications

1. Khaderi S, Khan R, Safdar Z, Vierling J, Stribling R, Goss J, Sussman N. Long-term follow-up of portopulmonary hypertension patients after liver transplantation. Liver Transpl 20(6):724-7, 2014.
2. Stribling R, Sussman N, Vierling JM. Treatment of hepatitis C infection. Gastroenterol Clin North Am 35(2):463-486, 2006.
3. Sussman NL, Kaza K, Barshes NR, Stribling RJ, Goss JA, O'Mahony CA, Zhang QE, Vierling, JM, Frost AE. Successful liver transplantation following medical management of portopulmonary hypertension: a single center series. Am J Transplant 6(9):2177-2182, 2006.

4. Sussman NL, Vaidehi K, Stribling RJ, Goss JA,. O'Mahony CA, Barshes NR, Vierling JM, Frost A: Successful liver transplantation following medical management of portopulmonary hypertension. Am J Transplantation 6:2177-82, 2006.

# Norman L. Sussman, M.D., FAASLD

**Associate Professor of Surgery**
**Division of Abdominal Transplantation**
**Baylor College of Medicine**

**Medical Director, Project ECHO**
**CHI- St. Luke's Medical Center**

## Keywords

- Assessment and management of acute liver failure
- Artificial liver support
- Complications of advanced cirrhosis
- New agents to treat viral hepatitis

## Research Interests

Dr. Sussman is leading an effort to improve medical resources in rural and underserved communities in Texas using a videoconference outreach model. He is also continuing to refine methods of assessing risk in patient with acute liver failure.

## Contact Information

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## Selected Publications


1. Khaderi S, Khan R, Safdar Z, Stribling R, Vierling JM, Goss JA, Sussman NL. Long-term follow-up of portopulmonary hypertension patients after liver transplantation. Liver Transpl 2014 Jun; 20:724-7.
2. Remien CH, Sussman NL, Adler FR. Mathematical modelling of chronic acetaminophen metabolism and liver injury. Math Med Biol 2014 Sep; 31(3):302-17.
3. Sussman NL, Kelly JH. Artificial liver. Clin Gastroenterol Hepatol 2014 Sep;12(9):1439-42.
4. Sussman NL. Treatment of Overt Hepatic Encephalopathy. Clin Liver Dis 2015 Aug;19(3):551-63.
5. Carrion AF, Khaderi SA, Sussman NL. Model for end-stage liver disease limbo, model for end-stage liver disease purgatory, and the dilemma of treating hepatitis C in patients awaiting liver transplantation. Liver Transpl. 2016 Mar;22(3):279-80.
6. Thornton K, Deming P, Manch RA, Moore A, Kohli A, Gish R, Sussman NL, Khaderi S, Scott J, Mera J, Box T, Qualls C, Sedillo M, Arora S. Is response guided therapy dead? Low cure rates in patients with detectable hepatitis C virus at week 4 of treatment. Hepatol Int. 2016 Jul;10(4):624-31.
7. Sussman NL, Remien CH. The Headache of Acetaminophen Overdose: Getting the NAC. Clin Gastroenterol Hepatol. 2017 Apr;(15(4):563-564.
8. DuBrock HM, Goldberg DS, Sussman NL, Bartolome SD, Kadry Z, Salgia RJ, Mulligan DC, Kremers WK, Kawut SM, Krowka MJ, Channick RN. Predictors of Waitlist Mortality in Portopulmonary Hypertension. Transplantation. 2017 Jul;101(7):1609-1615.
9. Goss M, Reese J, Kueht M, Vierling J, Mindikoglu A, Sussman N, Kaplan B, Wood RP, Rana A. A Surge in Cadaveric Liver Donors and a National Narcotic "Epidemic: Is There an Association? Liver Transplantation, 2017 May;23(5):698-700.
10. Rana A, Witte ED, Halazun KJ, Sood GK, Mindikoglu AL, Sussman NL, Vierling JM, Galvan NTN, Cotton RT, O'Mahony CA, Goss JA. Liver transplant length of stay (LOS) index: a novel predictive score for hospital length of stay following liver transplantation. Clin Transpl. 2017 Oct 17. [Epub ahead of print].

# John M. Vierling, M.D., F.A.C.P., FAASLD

**Professor of Medicine and Surgery**
**Division of Abdominal Transplantation**
**Director of Baylor Liver Health**
**Chief of Hepatology**
**Director of Advanced Liver Therapies**
**Baylor College of Medicine**

## Keywords

- Acute liver failure
- Alcoholic and non-alcoholic fatty liver diseases
- Alpha-1-antitrypsin deficiency
- Autoimmune hepatitis
- Cholangocarcinoma
- Cirrhosis
- Clinical therapeutic trials
- Drug-induced liver injury
- Gastroesophageal varices
- Genetic and metabolic diseases
- Hemochromatosis
- Hepatic encephalopathy pre and post liver transplantation care
- Hepatocellular carcinoma
- Primary biliary cirrhosis
- Primary sclerosing cholangitis
- Viral hepatitis
- Wilson's disease

## Research Interests

Dr. Vierling's primary research interests are the immunopathogenic mechanisms involved in hepatobiliary injury caused by viral infection, autoimmunity, alloimmunity, and non-alcoholic fatty liver disease. Dr. Vierling's basic science laboratory investigations have used murine models to study the immunopathogenesis of non-suppurative destructive cholangitis, which destroys bile ducts in primary biliary cirrhosis, an autoimmune liver disease, as well as in two alloimmune diseases, hepatic allograft rejection and chronic graft-versus-host disease.

By emphasizing a "laboratory bench to bedside" philosophy, Dr. Vierling has also been active in the design and execution of clinical therapeutic trials of antiviral agents for treatment of hepatitis B and C infections in patients before and after liver transplantation, trials of immunosuppressive drugs in liver transplaRntation and autoimmune liver diseases, trials of new therapies for hepatic encephalopathy and antifibrotic agents to prevent or reverse cirrhosis. Dr. Vierling is the author of numerous research publications, reviews and chapters on these topics.

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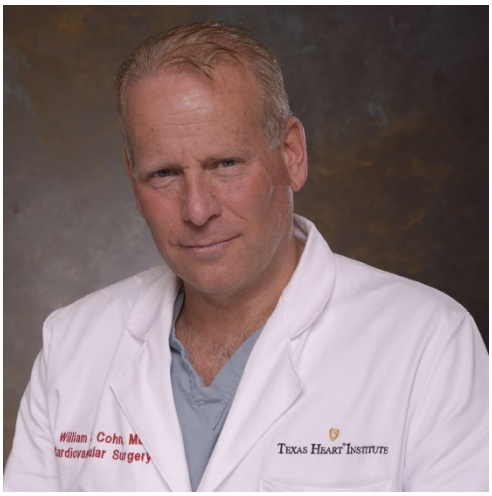
## Selected Publications

1. Vierling JM, Hreha G, Wang H, Braun M. The role of biliary epithelial cells in the immunopathogenesis of non-suppurative destructive cholangitis in murine hepatic graft-versus-host disease. Trans Am Clin Climatol Assoc 2011;122:326-35.
2. Vierling, JM. Diagnosis and treatment of autoimmune hepatitis. Curr Gastroenterol Rep 2012;14:25-36.
3. Cobb B, Pockros PJ, Vilchez' RA, Vierling JM. HCV RNA viral load assessments in the era of direct acting antivirals. Am J Gastro, 2013;108:471-5.
4. Rockey DC, Vierling JM, Mantry P, Ghabril M, Brown RS Jr, Alexeeva O, Zupanets IA, Grinevich V, Baranosky A, Dudar L, Fadieienko G, Kharchenko N, Klaryts'ka I, Morozov V, Grewal P, McCashland T, Reddy KG, Reddy KR, Syplyviy V, Bass NM, Dickinson K, Norris C, Coakley D, Mokhtarani M, Scharschmidt BF; HALT-HE Study Group. Randomized, double-blind, controlled study of glycerol phenylbutyrate in hepatic encephalopathy. Hepatology. 2014;59:1973-83.
5. Vierling JM, Davis M, Flamm S, Gordon SC, Lawitz E, Yoshida EM, Galati J, Luketic V, McCone J, Jacobson I, Marcellin P, Muir AJ, Poordad F, Pedicone LD, Albrecht J, Brass C, Howe AY, Colvard LY, Helmond FA, Deng W, Treitel M, Wahl J, Bronowicki JP. Boceprevir for chronic HCV genotype 1 infection in patients with prior treatment failure to peginterferon/ribavirin, including prior null response. J Hepatol. 2014;60:748-56.
6. Vierling JM, Zeuzem S, Poordad F, Bronowicki JP, Manns MP, Bacon BR, Esteban R, Flamm SL, Kwo PY, Pedicone LD, Deng W, Dutko FJ, Dinubile MJ, Koury KJ, Helmond FA, Wahl, J, Bruno S. Safety & Efficacy of Boceprevir/Peginterferon/Ribavirin for HCV G1 Compensated Cirrhotics: Meta-Analysis of 5 Trials. J Hepatol. 2014;61:200-9.

# CARDIOTHORACIC TRANSPLANTATION & CIRCULATORY SUPPORT

A key area of Texas Heart Institute research involves using ventricular assist devices for patients with advanced heart failure. These devices can be implanted as a bridge to transplant, destination therapy, or bridge to recovery.

Texas Heart Institute/CHI Baylor St. Luke's Medical Center has one of the largest experiences in the country with LVADs. Devices include the HeartMate II, HeartMate III, HeartWare HVAD, Jarvik, and the Syncardia Total Artificial Heart.




# William E Cohn, M.D.

**Professor of Surgery**
**Cardiothoracic Transplantation & Circulatory Support**
**Baylor College of Medicine**

**Director, Center for Device Innovation**
**TMC / Johnson & Johnson Innovation**

## Keywords

- Ventricular assist devices

## Research interests

Dr. Cohn is one of the leaders of the team of experts developing a total artificial heart that will deliver blood by means of continuous flow rather than pulsation. This research has grant support from the National Heart, Lung, and Blood Institute; the John S. Dunn Research Foundation; the Alexander Family Trust; and the McIngvale family Trust. This new artificial heart is smaller, less expensive, and predicted to be more reliable than previous generations of artificial hearts.

William E. Cohn currently has 80 active or pending patents for his inventions and is the founder or co-founder of five venture-backed life science startups. In addition, Dr. Cohn is a venture partner at Santé Health Ventures, a venture capital firm focused on capitalizing early-stage life science technology.

## Contact information

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## Selected publications

1. Tuzun E, Winkler JA, Contreras AL, Sacristan E, Cohn WE. In vivo performance evaluation of the innovamedica pneumatic ventricular assist device. ASAIO J. 2012 March;58(2):98-102. PMID: 22236625

2. Rankin JS, Beavan LA, Cohn WE. Technique for aortic valve annuloplasty using an intra-annular hemispherical frame. J. Thorac. Cardiovasc. Surg.. 2011 October;142(4):933-6. PMID: 21377696
3. Cohn WE, Frazier OH. The sandwich plug technique: Simple, effective, and rapid closure of a mechanical aortic valve prosthesis at left ventricular assist device implantation. J. Thorac. Cardiovasc. Surg.. 2011 August;142(2):455-7. PMID: 21277593
4. Gregoric ID, Cohn WE, Frazier OH. Diaphragmatic implantation of the HeartWare ventricular assist device. J. Heart Lung Transplant. 2011 April;30(4):467-70. PMID: 21211994
5. Sacristan E, Tuzun E, Winkler JA, Contreras AL, Cohn WE. In vivo performance evaluation of the innovamedica pneumatic ventricular assist device. Conf Proc IEEE Eng Med Biol Soc. 2011 August;2011:1217-20. PMID: 22254535
6. Frazier OH, Cohn WE. Continuous-flow total heart replacement device implanted in a 55-year-old man with end-stage heart failure and severe amyloidosis. Tex Heart Inst J. 2012;39(4):542-6. PMID: 22949774
7. Gonzalez-Stawinski GV, Mountis MM, Cohn WE, Frazier OH. Inflow graft interruption as a simple method for left ventricular assist device removal after successful bridge to recovery. J Card Surg. 2012 May;27(3):397-9. PMID: 22507259
8. Tuzun E, Narin C, Gregoric ID, Cohn WE, Frazier OH. Ventricular assist device outflow-graft site: effect on myocardial blood flow. J. Surg. Res. 2011 November;171(1):71-5. PMID: 20605602
9. Frazier OH, Tuzun E, Cohn W, Tamez D, Kadipasaoglu KA. Total heart replacement with dual centrifugal ventricular assist devices. ASAIO J. 51(3):224-9. PMID: 15968951
10. Gregoric ID, Jacob LP, La Francesca S, Bruckner BA, Cohn WE, Loyalka P, Kar B, Frazier OH. The TandemHeart as a bridge to a long-term axial-flow left ventricular assist device (bridge to bridge). Tex Heart Inst J. 2008;35(2):125-9. PMID: 18612448

# O. Howard Frazier, M.D.

**Professor of Surgery**
**Division of Cardiothoracic Transplantation & Circulatory Support**
**Baylor College of Medicine**

**Chief, Transplant Services**
**Baylor St. Luke's Medical Center**

**Chief, Cardiopulmonary Transplantation**
**Program Director and Chief, Center for Cardiac Support**
**Director, Surgical Research, Cullen Cardiovascular Research Laboratories**
**Texas Heart Institute**

## Research interests

Dr. Frazier's interest in mechanical circulatory support began in 1969, when, as a student at Baylor College of Medicine, he wrote a research paper about the experimental total artificial heart, which was first implanted in 1969 by Dr. Denton Cooley. Throughout the 1970s and 1980s, Dr. Frazier continued experimental work toward developing an implantable left ventricular assist device (LVAD) to aid the failing heart. He implanted the first LVAD in 1986 with the HeartMate I, followed in 2003 with the first HeartMate II. Since then, this device has become the most widely used implantable LVAD in the world. In 2011, Dr. Frazier implanted the first successful continuous-flow total artificial heart using two second generation HeartMate II LVADs to replace a patient's failing heart.

## Contact information

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## Selected publications


1. Dowling RD, Gray LA, Etoch SW, Laks H, Marelli D, Samuels L, Entwistle J, Couper G, Vlahakes GJ, Frazier OH: The Abiocor Implantable Replacement Heart. Ann Thorac Surg 2003;75:S93-9.
2. Frazier OH, Tuzun E, Cohn W, Tamez D, Kadipasaoglu KA: Total heart replacement with dual centrifugal ventricular assist devices. ASAIO J. 2005 May-Jun;51(3):224-9.
3. Frazier OH, Tuzun E, Cohn WE, Conger JL, Kadipasaoglu KA: Total Heart Replacement Using Dual Intracorporeal Continuous-Flow Pumps in a Chronic Bovine Model: A Feasibility Study. ASAIO J. 2006 March/April;52(2):145-149.
4. Frazier OH: Current status of cardiac transplantation and left ventricular assist devices. Tex Heart Inst J. 2010 37(3):319-21.
5. Frazier OH: Unforseen consequences of therapy with continuous –flow pumps. Circ Heart Fail. 2010 Nov 1;3(6):647-9.
6. Gregoric ID, Cohn WE, Frazier OH: Diphragmatic implantation of the HeartWare ventricular assist device. J Heart Lung Transplant. 2010 Apr;30(4):467-70.
7. Loebe M, Bruckner B, Reardon MJ, van Doorn E, Estep J, Gregoric I, Masud F, Cohon W, Motomura T, Torre-Amione G, Frazier OH: Initial clinical experience of total cardiac replacement with dual heartmate-II axial flow pumps for severe biventricular heart failure. Methodist Debakey Cardiovasc J. 2011 Jan-Mar;7(1):40-4.
8. Aaronson KD, Slaughter MS, Miller LW, McGee EC, Cotts WG, Acker MA, Jessup ML, Gregoric ID, Loyalka P, Frazier OH, Jeevanandam V, Anderson AS, Kormos RL, Teuteberg JJ, Levy WC, Naftel DC, Bittman RM, Pagani FD, Hathaway DR, Boyce SW; HeartWare Ventricular Assist Device (HVAD) Bridge to Transplant ADVANCE Trial Investigators. Use of an intrapericardial, continuous-flow, centrifugal pump in patients awaiting heart transplantation. Circulation. 2012 Jun 26;125(25):3191-200.
9. Frazier OH, Cohn WE. Continuous-flow total heart replacement device implanted in a 55-year-old man with end-stage heart failure and severe amyloidosis. Tex Heart Inst J. 2012;39(4):542-6.
10. Cohn WE, Timms DL, Frazier OH: Total artificial hearts: past, present, and future. Nat Rev Cardiol. 2015 Oct;12(10):609-17. June 2


# Pawel Jan Kolodziejski, M.D.

**Instructor in Surgery**

**Division of Cardiothoracic Transplantation & Circulatory Support**

**Baylor College of Medicine**



## Keywords

- Pulmonary hypertension
- Proteasomes
- Nitric oxide


## Research interests

Dr. Kolodziejski's research interests center on the role of proteasomes in physiology and pathological conditions. Proteasomes are small organelles responsible for a very precisely regulated degradation of many proteins. He is broadly interested in their involvement in lung diseases, and especially in pulmonary hypertension. He is participating in a multi-center study – “Pulmonary Hypertension Breakthrough Initiative” since 2006. Previously Kolodziejski and colleagues were able to demonstrate the role of proteasomes in regulation of nitric oxide synthase, which has been implicated in the pathogenesis of several lung diseases. A potential therapeutic strategy for these diseases could be based upon devising methods to regulate the level of nitric oxide by proteasomal modulation.

## Contact information


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## Selected publications


1. Kolodziejski PJ, Rashid MB, Eissa NT. "Intracellular formation of “undisruptable” dimmers of inducible nitric oxide synthase." Natl Acad Sci USA.
2. Glabinski A, Bielecki B, Kolodziejski P, Selmaj K, Ransohoff RM. "TNF-alpha microinjection upregulates chemokines and chemokine receptors in the central nervous system without inducing leukocyte infiltration." Interferon Cytokine Res.
3. Kolodziejski PJ; Musial A; Koo Ja Seok P; Eissa NT. "Ubiquitination of inducible nitric oxide synthase is required for its degradation." Proc Natl Acad Sci USA.
4. Kolodziejski PJ, Koo J-S, Eissa NT. "Regulation of inducible nitric oxide synthase by rapid cellular turnover and co-translational downregulation by dimerization inhibitors." Proc Natl Acad Sci USA.
5. Arbiser JL, Govindarajan B, Battle T, Lynch R, Frank DA, Ushio-Fukai M, Perry BN, Stern DF, Bowden GT, Liu A, Kolodziejski PJ, Eissa NT, Hossain CF, Nagle DG. "Carbazole is a naturally occurring inhibitor of angiogenesis and inflammation isolated from anti-psoriatic coal tar." Journal of Investigative Dermatology.
6. Kolodziejski PJ, Williams TM, Eissa NT. "Interferon gamma augments nitric oxide (NO) production in macrophages by prolonging inducible nitric oxide synthase (iNOS) half-life; an effect mediated by induction of proteasomal regulatory unit PA28alpha." American J of Respiratory and Critical Care M.
7. Kolodziejski PJ, Kesavan R, Parulekar A, Noon G, Loebe M, LaFrancesca S, Bruckner B, Scheinin S, Nguyen J, Seethamraju H. "Retrospective analysis of lung transplant patients with pulmonary hypertension: comparison of patients with double-lung vs. heart-lung transplant." American J of Respiratory and Critical Care M.
8. Akkanti B, Kolodziejski PJ, Rizvi Z, Kesavan R, Parulekar A, Loebe M, LaFrancesca S, Scheinin S, Nguyen J, Bruckner B, Noon G, Seethamraju H. "H1N1 influenza in lung transplant patients: a follow up after one year." J Heart Lung Transplant.
9. Ramlawi B, Garcia-Morales LJ, Estep JD, Seethamraju H, Kesavan RB, Bruckner BA, Parulekar AD, Kolodziejski PJ, Nguyen J, Chmielowiec KN, Noon GP, Gaber O,Loebe M. "Combined thoracic organ and liver transplantation in multi-organ end-stage patients as a successful therapeutic strategy." J Heart Lung Transplant.

# Kenneth K Liao, M.D., Ph.D.

**Chief, Division of Cardiothoracic Transplantation and Circulatory Support**
**Baylor College of Medicine**

**Chief, Section of Cardiothoracic Transplantation and Mechanical Circulatory Support**
**Baylor St. Luke's Medical Center**

## Research interests

Dr. Liao has given numerous presentations both nationally and internationally. He has participated in over 20 clinical trials as a Principal Investigator or Co-Investigator. His work in the field of valve surgery, heart transplantation and ventricular assist device has been extensively published.

## Contact information

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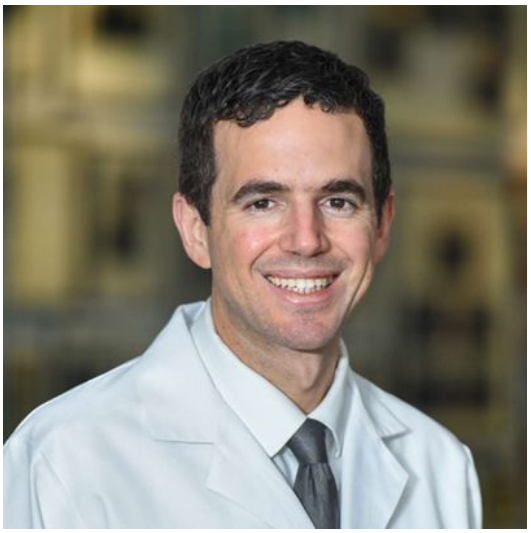
## Selected publications


1. John, R., Holley, C. T., Eckman, P., Roy, S. S., Cogswell, R., Harvey, L., Shumway, S., Liao, K. "A Decade of Experience with Continuous-Flow Left Ventricular Assist Devices." Seminars in Thoracic and Cardiovascular Surgery.
2. Kamdar, F., John, R., Eckman, P., Colvin-Adams, M., Shumway, S. J., Liao, K. "Postcardiac transplant survival in the current era in patients receiving continuous-flow left ventricular assist devices." Journal of Thoracic and Cardiovascular Surgery.
3. Odell, D. D., Liao, K. "Superior Vena Cava and Innominate Vein Reconstruction in Thoracic Malignancies: Double-Vein Reconstruction." Seminars in Thoracic and Cardiovascular Surgery.
4. John, R., Kamdar, F., Eckman, P., Colvin-Adams, M., Boyle, A., Shumway, S., Joyce, L., Liao, K. "Lessons learned from experience with over 100 consecutive HeartMate II left ventricular assist devices." Annals of Thoracic Surgery.
5. Liao, K. K. "Robotic Coronary Artery Bypass Grafting." Operative Techniques in Thoracic and Cardiovascular Surgery.
6. John, R., Liao, K. "Orthotopic heart transplantation." Operative Techniques in Thoracic and Cardiovascular Surgery.
7. John, R., Liao, K., Kamdar, F., Eckman, P., Boyle, A., Colvin-Adams, M. "Effects on pre- and posttransplant pulmonary hemodynamics in patients with continuous-flow left ventricular assist devices." Journal of Thoracic and Cardiovascular Surgery.
8. Liao, K. K., Li, X., John, R., Amatya, D. M., Joyce, L. D., Park, S. J., Bianco, R., Bolman, R. M. "Mechanical Stress: An Independent Determinant of Early Bioprosthetic Calcification in Humans." Annals of Thoracic Surgery.
9. John, R., Liao, K., Lietz, K., Kamdar, F., Colvin-Adams, M., Boyle, A., Miller, L., Joyce, L. "Experience with the Levitronix CentriMag circulatory support system as a bridge to decision in patients with refractory acute cardiogenic shock and multisystem organ failure." Journal of Thoracic and Cardiovascular Surgery.
10. Liao, K. K., Miller, L., Toher, C., Ormaza, S., Herrington, C. S., Bittner, H. B., Park, S. J.. "Timing of transesophageal echocardiography in diagnosing patent foramen ovale in patients supported with left ventricular assist device." Annals of Thoracic Surgery.



# Gabriel Loor, M.D.

**Division of Cardiothoracic Transplantation & Circulatory Support**
**Baylor College of Medicine**

**Surgical Director, Lung Transplant Program**
**Baylor St. Luke's Medical Center**

**Keywords**

- EVLP
- Lung injury
- Clinical outcomes

**Research interests**

Dr. Loor's research interests include improved donor utilization and maximizing recipient outcomes. He is the national principal investigator on several trials using ex vivo lung perfusion platforms to increase donor yield and quality. He is credited with the first "breathing lung transplantation" in the Midwest performed in 2014. His translational lab focuses on the use of this technology to improve the quality and quantity of potential lung transplants. Dr. Loor has published several key papers on prolonged preservation of donor organs with an emphasis on reducing ischemic injury and the inflammatory response. He has also published several articles on blood conservation, safety checklists and surgical outcomes after adult cardiac surgery.

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**Selected publications**

1. Perlman D, Loor G, Kim H, Romic R. Considerations for lung transplantation in patients with idiopathic pulmonary fibrosis. Clin Pulm Med 2015; 22(2), 68-73

2. Bahr N, Janssen K, Billings J, Loor G, Green J. Respiratory failure due to possible donor derived Sporothrix schenckii infection in a lung transplant recipient. Case Reports in

Infectious Diseases. Vol. 2015, Article ID 925718, 5 pages, 2015. doi:10.1155/2015/925718.

3. Loor G, Schuster A, Cruz V, Rafael A, Stewart W, Diaz J, McCurry K. The Carpentier-Edwards perimount magna mitral valve bioprosthesis: intermediate-term efficacy and durability. J Cardiothorac Surg 2016; 11(1):20-28.

4. Mattison L, Spratt J, Howard B, Augustine S, Musleh S, Loor G, Iaizzo P. A Simplified Model for the Assessment of Ex Vivo Lung Perfusion Methodologies and Treatments. ASME. J. Med. Devices. 2016;10(2):020960-020960-2. doi:10.1115/1.4033276.

5. Loor G, Rodosevich DM, Kelly RF, et al. The University of Minnesota Donor Lung Quality Index (UMN-DLQI): A Consensus-Based Scoring App Improves Donor Lung Utilization. Annals Thor Surg 2016; 102(4):1156-1165.

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# George P. Noon, M.D.

**Professor of Surgery**
**Division of Cardiothoracic Transplantation & Circulatory Support**
**Meyer-DeBakey Chair in Investigative Surgery**
**Baylor College of Medicine**

## Research interests

Dr. George P. Noon has focused his surgical career in organ transplantation and cardiac assist devices. In 1968, Dr. Noon, Dr. Michael E. DeBakey, and their surgical team performed their first heart and later lung transplant.

In 1988, Drs. Noon and DeBakey met with engineers from NASA to develop a miniature axial flow blood pump. Ten years later, Dr. Noon participated in the care of President Boris Yeltsin, who needed a coronary bypass operation. In the same year, the first MicroMed DeBakey-Noon human implants were performed in Berlin, Germany. In 1999, Dr. Noon was inducted into the Space Technology Hall of Fame.

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## Selected publications


1. Orime Y, Takatani S, Shiono M, Sasaki T, Minato N, Ohara Y, Swenson CA, Noon GP, Nosé Y, DeBakey ME. Versatile one-piece total artificial heart for bridge to transplantation or permanent heart replacement. Artif Organs. 1992 December;16(6):607-13. PMID: 1482331
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9. Joyce DL, Southard RE, Torre-Amione G, Noon GP, Land GA, Loebe M. Impact of left ventricular assist device (LVAD)-mediated humoral sensitization on post-transplant outcomes. J. Heart Lung Transplant. 2005 December;24(12):2054-9. PMID: 16364849
10. Sasaki T, Takatani S, Shiono M, Sakuma I, Glueck J, Noon GP, Nosé Y, DeBakey ME. Development of totally implantable electromechanical artificial heart systems: Baylor ventricular assist system. Artif Organs. 1992 August;16(4):407-13. PMID: 10078283


# Alexis Edward Shafii, M.D.

**Director, Heart Transplantation**
**Baylor St. Luke's Medical Center**


## Research interests

Dr. Shafii treats adult acquired cardiac diseases, including coronary artery disease, heart valve disease, and aortic pathologies. His research efforts focus on heart and lung transplantation, ventricular assist devices, and extracorporeal membrane oxygenation (ECMO).

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## Selected publications


1. Shafii AE, Harris DD, Baz M. "Clearance of Hepatitis C Virus Prior to Lung Transplantation: A Case Report." Tranplant Proc.
2. Ahmad O, Shafii AE, Mannino DM, Choate R, Baz MA. "Impact of Donor Lung Pathogenic Bacteria on Patient Outcomes in the Immediate Post-Transplant Period." Transplant Infectious Disease.
3. Harris D, Shafii A, Baz M, Tribble T, Ferraris V. "Increased Blood Transfusion and Its Impact in Patients Having Tracheostomy While on Extracorporeal Membrane Oxygenation." Perfusion.
4. Touchan J, Shafii A, Guglin M. "Ligation of the Outflow Graft of the Left Ventricular Assist Device for Management of Hemolysis Due to Pump Thrombosis." The VAD Journal.
5. Roberts W, Shafii A, Grayburn P, Mi Ko J, Weissenbron M, Rosenblatt R, Guileyards J. "Clinical and Morphologic Features of Acute, Subacute, and Chronic Cor Pulmonale (Pulmonary Heart Disease)." Am J Cardiol.
6. Shafii A, Mason D, Brown C, Thuita L, Murthy S, Budev M, Pettersson G, Blackstone E. "Too High for Transplantation? Single-Center Analysis of the Lung Allocation Score." Ann Thorac Surg.
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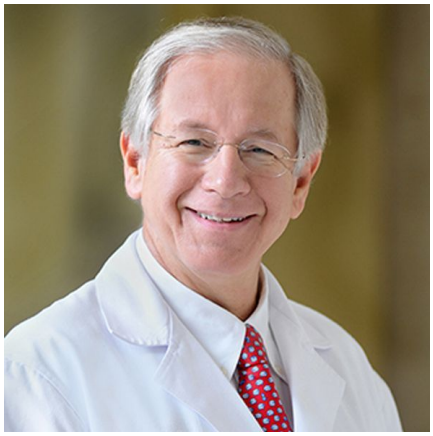
10. Shafii A, Su J, Smedira N, Navia J, Taylor D, Starling R, Gonzalez-Stawinski G. "The effect of recipient hepatitis C virus infection on outcomes following heart transplantation." Tranplant Proc.
11. Shafii A, Gillinov M, Mihaljevic T, Stewart W, Batizy L, Blackstone E. "Changes in Left Ventricular Morphology and Function after Mitral Valve Surgery." Am J Cardiol.

# Cardiothoracic Surgery

Under the supervision of Scott A. LeMaire, M.D., director of research for the Division and Vice Chair for Research in the Department, the cardiac surgery research team pursues several research projects and maintains one of the world's most extensive and well-cataloged aortic tissue banks. This core resource facilitates investigations into the causes and progression of aortic disease pursued by our researchers, as well as researchers from other academic institutions.




## Joseph S. Coselli, M.D.

**Professor and Vice-Chair, Department of Surgery**
**Chief, Division of Cardiothoracic Surgery**
**Cullen Foundation Endowed Chair**
**Baylor College of Medicine**



## Keywords

- Aortic Valve Disease
- Heritable Aortic Disease (eg, Marfan Syndrome)
- Aortic Aneurysm
- Aortic Dissection


## Research interests

Mentored by the legendary aortic surgeon, Dr. E. Stanley Crawford, Dr. Coselli is today one of the world's most experienced aortic surgeons and best known as the foremost expert in thoracoabdominal aortic aneurysm repair, having published the milestone paper describing results after 3309 such repairs. He has an extensive clinical database and encourages participation in clinical research by designing research projects based on specific interests within aortic surgery. With approval, access to de-identified data from the Aortic Surgery clinical database may be granted. Dr. Coselli routinely publishes on a wide variety of aortic topics, and several outstanding papers and presentations have been prepared by residents, fellows, and students. Key publications have influenced clinical practice trends by determining the best approaches towards preventing complications during aortic repair. Regarding thoracoabdominal aortic aneurysm repair, randomized clinical trials were conducted to establish the benefits of using cerebrospinal fluid drainage to protect the spinal cord (a technique now in widespread use in aortic repair) and renal perfusion as a protective measure against renal ischemia as well as performing retrospective analysis of left heart bypass as a protective measure against distal ischemia. Additionally, by routinely presenting informative academic lectures throughout the world, Dr. Coselli has disseminated the latest approach to surgical repairs of the aortic root (valve-sparing approaches, including those is patients with Marfan syndrome), aortic arch (Y-graft approaches, hybrid procedures), and thoracoabdominal aortic aneurysm repair (redo operations, modified repair in patients with Marfan syndrome). Dr. Coselli continuously seeks out new treatment paradigms and participates in numerous investigator-initiated and industry-sponsored research projects conducted at Baylor College of Medicine and the Texas Heart Institute; studies include the use of second-generation transcatheter aortic valves, hybrid frozen elephant trunk repairs, as well as holsingle-side branch and ascending aortic stent grafts.

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## Selected publications

1. Svensson LG, Crawford ES, Hess KR, Coselli JS, Safi HJ. Experience with 1509 patients undergoing thoracoabdominal aortic operations. J Vasc Surg 1993;17(2):357-70.
2. Coselli JS, LeMaire SA, Conklin LD*, Köksoy C*, Schmittling ZC*. Morbidity and mortality after extent II thoracoabdominal aortic aneurysm repair. Ann Thorac Surg 2002; 73: 1107-16. ** The Society of Thoracic Surgeons J. Maxwell Chamberlain Memorial Paper **
3. Coselli JS, LeMaire SA, Köksoy C*, Schmittling ZC*, Curling PE. Cerebrospinal fluid drainage reduces paraplegia after thoracoabdominal aortic aneurysm repair: results of a randomized clinical trial. J Vasc Surg 2002; 35: 635-9.
4. Coselli JS, LeMaire SA, Conklin LD*, Adams GJ. Left heart bypass during descending thoracic aortic aneurysm repair does not reduce the incidence of paraplegia. Ann Thorac Surg 2004; 77: 1298-303. ** The Southern Thoracic Surgical Association President's Award for Best Scientific Paper **
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6. Coselli JS, Bozinovski J*, LeMaire SA. Open surgical repair of 2286 thoracoabdominal aortic aneurysms. Ann Thorac Surg 2007; 83: S862-4.
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8. LeMaire SA, Price MD, Parenti JL, Johnson ML, Lay AD*, Preventza O, Huh J, Coselli JS. Early outcomes after aortic arch replacement by using the y-graft technique. Ann Thorac Surg 2011; 91: 700-8.
9. Ouzounian M*, LeMaire SA, Coselli JS. Open arch repair: state-of-the-art and future perspectives. Semin Thorac Cardiovasc Surg 2013; 25:107-15.
10. Adams DH, Popma JJ, Reardon MJ, Yakubov SK, Coselli JS, Deeb GM, Gleason TG, Buchbinder M, Hermiller J Jr, Kleiman NS, Chetcuti S, Heiser J, Merhi W, Zorn G, Tadros P, Robinson N, Pertossian G, Hughes GC, Harrison JK, Conte J, Maini B, Mumtaz M, Cheonweth S, Oh JK. Transcather aortic-valve replacement with a self-expanding prosthesis. N Engl J Med 2014: 370: 1790-8.

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# Lorraine D. Cornwell, M.D.

**Assistant Professor of Surgery**
**Division of Cardiothoracic Surgery**
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**Section Head of General Thoracic Surgery**
**Michael E. DeBakey VA Medical Center**


## Research interests

Dr. Cornwell's research focuses on optimization of clinical outcomes of cardiothoracic surgery, especially minimally invasive procedures, off-pump CABG, valve repair, and VATS lobectomy.

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# Ravi Kiran Ghanta, M.D.

**Associate Professor of Surgery**
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**Baylor College of Medicine**

**Chief, Cardiac Surgery**
**Ben Taub Hospital**

## Keywords

- Heart Failure
- Ventricular Remodeling
- Clinical Outcomes

## Research interests

Dr. Ghanta's laboratory focuses on ventricular remodeling in heart failure including restraint therapy, stem cell therapy, and tissue engineering. Dr. Ghanta is a member of the Southern Thoracic Surgery Association, Society of Thoracic Surgeons, American College of Surgeons, and the American Heart Association.

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**Selected publications**

1. S. Schubert, L.T. Yarboro, S. Madala, K. Ayinapudi, I.L. Kron, J.A. Kern, G. Ailawadi, G. Stuckenborg, R.K. Ghanta, "Natural History of Coexistent Mitral Regurgitation Following Aortic Valve Replacement." Journal of Thoracic and Cardiovascular Surgery. 2016;151(4):1032-1042.
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4. R.K. Ghanta and J.A. Kern, “Staged Hybrid Repair for Extent II Thoracabdominal Aortic Aneurysms and Dissections.” Operative Techniques in Thoracic and Cardiovascular Surgery. 2014;19(2):238-51.
5. R.K. Ghanta, T. Kaneko, J.S. Gammie, S. Sheng, S.F. Aranki. “Evolving Trends of Reoperative CABG: An Analysis of the STS Adult Cardiac Surgery Database.” Journal of Thoracic and Cardiovascular Surgery. 2013;145(2):364-72.
6. R.K. Ghanta, P.S. Shekar, S. McGurk, D.M Rosborough, S.F. Aranki, “Long-Term Survival and Quality of Life Justify Cardiac Surgery in the Very Elderly Patient.” Annals of Thoracic Surgery. 2011;92(3):851-7.
7. R. K. Ghanta, L. Lee, A. Rangraj, R. Umakanthan, R. Laurence, R. D. Howe, J. A. Fox, R.M. Bolman, L.H. Cohn, F.Y Chen, “Real-time Post-Implantation Percutaneous Adjustment of Ventricular Restraint Therapy Using a Novel Fluid-Filled Epicardial Balloon.” European Journal of Cardiothoracic Surgery. 2008:34(6):1136-40.
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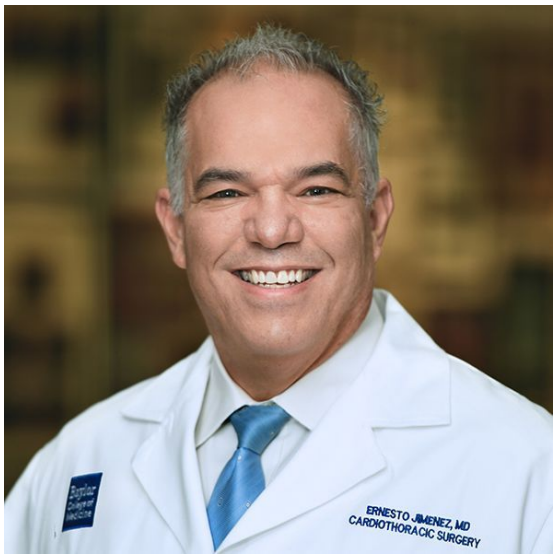
9. R.K. Ghanta, R. Chen, N. Narayanaswamy, S. McGurk, S. Lipsitz, L.H. Cohn, “Suture Bicuspidization of the Tricuspid Valve Versus Ring Annuloplasty for Repair of Functional Tricuspid Regurgitation: Mid-Term Results of 237 Consecutive Patients.” Journal of Thoracic and Cardiovascular Surgery. 2007;133(1):117-26.
10. W. Drexler, U. Morgner, R.K. Ghanta, J.S. Schuman, F.X. Kaertner, J.G. Fujimoto, “Ultrahigh-Resolution Ophthalmic Optical Coherence Tomography.” Nature Medicine 2001;7(4):502-507.




# Ernesto Jimenez, M.D.

**Associate Professor of Surgery**
**v**
**Baylor College of Medicine**

**Chief, Cardiothoracic Surgery**
**Michael E DeBakey VA Medical Center**

## Research interests

Dr. Jimenez's research on the effects of ischemia on myocardial intracellular calcium accumulation has helped to significantly improve the make-up of cardioplegia solutions in order to best ameliorate the effects of ischemia on the heart during cardiac arrest. Most recently, he has investigated the effects of both human umbilical stem cells and chitogen hydrogels on the ischemic myocardium. His clinical research has primarily focused on improving cardiac surgical outcomes within the veteran population.

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## Scott A. LeMaire, M.D.

**Professor, Departments of Surgery and of Molecular Physiology and Biophysics**

**Vice Chair for Research**
**Department of Surgery**

**Director of Research**
**Division of Cardiothoracic Surgery**
**Baylor College of Medicine**



## Keywords

- Aortic aneurysm
- Thoracic aortic surgery
- Aortic dissection


## Research interests

The focus of Dr. LeMaire's research program, which derives directly from his clinical interest in the surgical treatment of patients with thoracic aortic aneurysms and dissections, encompasses outcomes after thoracic aortic repair, strategies for preventing perioperative complications, genetic factors related to aortic disease, and the pathobiology of aortic wall degeneration. Dr. LeMaire's clinical research team has had a long-standing interest in the analysis of outcomes following aortic surgery, and has conducted randomized clinical trials comparing the effectiveness of various techniques for preventing associated ischemic complications. Further, his research team has conducted several studies to evaluate the safety profile of surgical adhesives, which are an important adjunct for limiting bleeding complications during aortic repairs. In 2002, his research group initiated the Thoracic Aortic Disease Tissue Bank, which currently houses samples and corresponding phenotypic data from over 3,000 patients with thoracic aortic disease and has served as a core for the NHLBI supported Specialized Center of Clinical Oriented Research in Thoracic Aortic Aneurysms and Dissection, as well as a resource for numerous collaborative studies evaluating the genetic factors and molecular mechanisms involved in the development of thoracic aortic disease. Dr. LeMaire's basic science laboratory is currently focusing on the role of various aspects of extracellular matrix metabolism in the development of aortic aneurysms and dissections. In particular, his group is studying the roles of destructive factors, such as inflammatory cells and proteases, as well as reparative mechanisms, such as stem cell recruitment and transformation, during the development of aortic aneurysms and dissections.

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## Selected publications

1. LeMaire SA, McDonald MLN, Guo DC, Russell L, Miller CC III, Johnson RJ, Bekheirnia MR, Franco LM, Nguyen M, Pyeritz RE, Bavaria JE, Devereux R, Maslen C, Holmes KW, Eagle K, Body SC, Seidman C, Seidman JG, Isselbacher EM, Bray M, Coselli JS, Estrera AL, Safi HJ, Belmont JW, Leal SM, Milewicz DM. Genome-wide association study identifies a susceptibility locus for thoracic aortic aneurysms and aortic dissections spanning FBN1 at 15q21.1. Nat Genet 2011;43:996-1000.
2. Zou S*, Ren P*, Nguyen M, Coselli JS, Shen YH, LeMaire SA. Notch signaling in descending thoracic aortic aneurysm and dissection. PLOS ONE 2012;7:e52833.
3. Shen YH, Zhang L, Ren P*, Nguyen MT, Zou S*, Wu D*, Wang XL, Coselli JS, LeMaire SA. AKT2 confers protection against aortic aneurysms and dissections. Circ Res 2013;112:618-32. ** Editor's pick featured with cover image **
4. Ren P*, Zhang L, Xu G*, Palmero LC, Albini PT*, Coselli JS, Shen YH, LeMaire SA. ADAMTS-1 and ADAMTS-4 levels are elevated in thoracic aortic aneurysms and dissections. Ann Thorac Surg 2013;95:570-7.
5. Marshall LM, Carlson EJ, O'Malley J, Snyder CK, Charbonneau NL, Hayflick SJ, Coselli JS, LeMaire SA, Sakai LY. Thoracic aortic aneurysm frequency and dissection are associated with fibrillin-1 fragment concentrations in circulation. Circ Res 2013;113:1159-68. ** Editor's pick featured on cover **
6. Wu D*, Choi JC*, Sameri A, Minard CG, Coselli JS, Shen YH, LeMaire SA. Inflammatory cell infiltrates in acute and chronic thoracic aortic dissection. Aorta 2014;1:259–67.
7. Albini PT*, Segura AM, Liu G, Minard CG, Coselli JS, Milewicz DM, Shen YH, LeMaire SA. Advanced atherosclerosis is associated with increased medial degeneration in sporadic ascending aortic aneurysms. Atherosclerosis 2014;232:361-8.
8. Wu D*, Ren P*, Zheng Y*, Zhang L, Xu G*, Xie W*, Lloyd EE, Zhang S, Zhang Q, Curci JA, Coselli JS, Milewicz DM, Shen YH, LeMaire SA. NLRP3 (nucleotide oligomerization domain-like receptor family, pyrin domain containing 3)–caspase-1 inflammasome degrades contractile proteins: implications for aortic biomechanical dysfunction and aneurysm and dissection formation. Arterioscler Thromb Vasc Biol 2017;37:694-706. ** Featured article highlighted on cover **
9. Wu D*, Price MD, Amarasekara HS, Susan Y. Green SY, Woodside SJ, Tullos A, Zhang Q, Coselli JS, LeMaire SA. Unplanned readmissions after open thoracoabdominal aortic aneurysm repair. Ann Thorac Surg 2018:105:228-34.
10. Ren P*, Hughes M*, Krishnamoorthy S, Zou S*, Zhang L, Wu D*, Zhang C, Curci JA, Coselli JS, Milewicz DM, LeMaire SA, Shen YH. Critical role of ADAMTS-4 in the development of sporadic aortic aneurysm and dissection in mice. Sci Rep 2017;7:12351.

* Resident, fellow or student co-author

# George V. Letsou, M.D.

**Professor of Surgery**
**Division of Cardiothoracic Surgery**
**Baylor College of Medicine**

**Research interests**

Dr. Letsou maintains active investigational programs in both clinical and basic science research. He was previously on the medical school faculties at Yale and the University of Texas, where he was tenured Professor of Cardiac and Vascular Surgery, before rejoining the Baylor College of Medicine as Professor of Surgery. He has published more than 100 articles concerning cardiothoracic surgery and speaks nationally and internationally on these topics.

Current projects include reviews of cardiac transplantation, mechanical cardiac assist, and the relative advantages and disadvantages of off-pump coronary artery bypass surgery. Interested students are encouraged to find their own areas of interest within these broader topics.

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## Selected publications


1. Letsou GV, Pate TD, Gohean JR, Kurusz BA, Longoria RG, Kaiser L, Smalling RW. Improved Left Ventricular Unloading and Circulatory Support with Synchronized Pulsatile Left Ventricular Assistance Compared with Continuous-Flow Left Ventricular Assistance in an Acute Porcine Left Ventricular Failure Model. *J Thorac Cardiovasc Surg,* 140:1181-8, 2010.
2. Letsou GV, Grunkemeier GL, Salaskar AL, Bavare C, Wu Y, Rampurwala MM. Selective Left Anterior Descending Shunting Provides Effective Off-Pump Myocardial Protection. *Ann Thorac Surg* 89:24-9, 2010
3. Letsou GV, Grunkemeier G, Rampurwala M, Wu Y, Kaiser L, Salaskar AL. Off-Pump Coronary Artery Bypass and Avoidance of Hypothermic Cardiac Arrest Improves Early Left Ventricular Function in Patients with Systolic Dysfunction. *Eur J Cardiothorac Surg*, 40(1):227-32, 2011.
4. Feldman T, Foster E, Glower D, Kar S, Rinaldi MJ, Fail PS, Smalling RW, Siegel R, Rose GA, Engeron E, Loghin C, Trento A, Skipper ER, Fudge T, Letsou GV, Massaro JM, Mauri L; for the EVEREST II Investigators. Percutaneous Repair or Surgery for Mitral Regurgitation. *New England J of Medicine,* 364(15):1395-406, 2011.
5. Letsou GV, Jacob L, Bruckner B, Frazier OH. Thyrotoxicosis-Facilitated Bridge to Recovery with a Continuous Flow Left Ventricular Assist Device. *Eur J Cardiothorac Surg,* 44(3):573-4, 2013
6. Demirozu ZT, Radovancevic R, Hochman LF, Gregoric ID, Letsou GV, Kar B, Bogaev RC, Frazier OH. Arteriovenous Malformation and Gastrointestinal Bleeding in Patients with the Heartmate II Left Ventricular Assist Device. *J Heart Lung Transplant*, 30(8):849-53, 2011.
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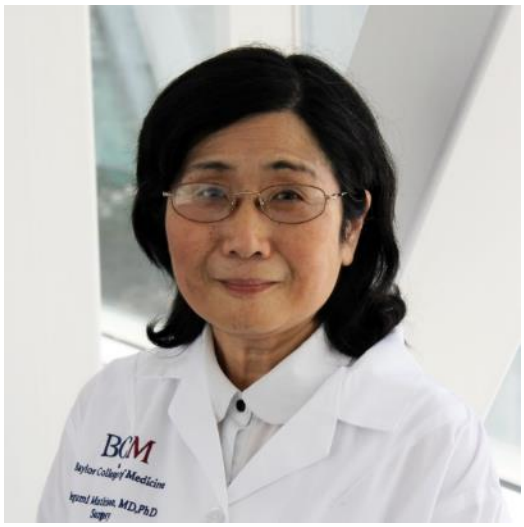
8. Lamba H, Cheema F, Loor G, Morgan J, Rosengart T, Frazier OH, Letsou GV. Is Renal Failure a Contra-indication to Continuous-flow LVAD implantation? *Annual Meeting of the International Society of Heart and Lung Transplantation*, April 2018





# Megumi Mathison, M.D., Ph.D.

**Associate Professor of Surgery**
**Division of Cardiothoracic Surgery**
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## Keywords

- Cardiovascular disease
- Cardiac regeneration


## Research interests

Heart failure is a leading cause of death in developed countries. Recent advances in interventional cardiology and cardiac surgery have made it possible to save numerous patient lives after myocardial infarction. However, those patients eventually develop end-stage heart failure since the loss of cardiac muscle is never replaced with new muscle. Our study focus is on regenerating cardiac muscle by transdifferentiating cardiac fibroblasts into cardiomyocytes. We reported that Gata4, Mef2c, and Tbx5 overexpression transdifferentiated cardiac fibroblasts into cardiomyocyte-like cells in vitro, and improved cardiac function in vivo. Our goal is to translate this in-situ cardiomyocyte regeneration into clinical therapy.

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## Selected publications


1. Mathison M, Singh VP, Sanagasetti D, Yang L, Pinnamaneni JP, Yang J, Rosengart TK. (2017) Cardiac reprogramming factor Gata4 reduces postinfarct cardiac fibrosis through direct repression of the profibrotic mediator snail. *J Thorac Cardiovasc Surg*, 154(5):1601-1610.
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10. Mathison M, Edgerton JR, Horswell JL, Akin JJ, Mack MJ. (2000) Analysis of hemodynamic changes during beating heart surgical procedures. *Ann Thorac Surg*, 70(4):1355-1361.

# Kenneth L. Mattox, M.D.

**Distinguished Service Professor**
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## Research interests

His reputation as an innovator in trauma care is known worldwide. Dr. Mattox is past President of the American Association for the Surgery of Trauma and Secretary-Treasurer of the Michael E. DeBakey International Surgical Society. He previously chaired the Mayor's Red Ribbon Committee to address Houston Fire Department Emergency Medical Services, and sat on the Hospital Subcommittee of the Mayor's Special Task Force on the Medical Aspects of Disaster.

Currently, Dr. Mattox serves as consultant to the Center for Biologic Evaluation and Research of the FDA. Dr. Mattox has served on the Board of Directors of the Rotary Club of Houston, Doctors' Club of Houston, Wayland Baptist University, the American Association for the Surgery of Trauma, the Southeast Texas Trauma Regional Advisory Council, the American College of Surgeons Board of Governors, and serves as Chairman of the Board of the John P. McGovern Museum for Health & Medical Science.

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## Selected publications


1. Carrick MM, Morrison CA, Pham HQ, Norman MA, Marvin B, Lee J, Wall MJ, Mattox KL. "Modern management of traumatic subclavian artery injuries: a single institution's experience in the evolution of endovascular repair.." Am. J. Surg.. 2010 January;199(1):28-34. Pubmed PMID: 19520356
2. Graham JM, Mattox KL, Feliciano DV, DeBakey ME. "Vascular injuries of the axilla.." Ann. Surg.. 1982 February;195(2):232-8. Pubmed PMID: 7055402
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10. Defore WW, Mattox KL, Jordan GL, Beall AC. "Management of 1,590 consecutive cases of liver trauma." Arch Surg. 1976 April;111(4):493-7. Pubmed PMID: 1259588


# Vicente Orozco-Sevilla, M.D.

**Assistant Professor of Surgery**

**Division of Cardiothoracic Surgery**

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## Keywords

- Aortic aneurysms
- Valve disease
- Coronary disease

## Contact information

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# Ourania Preventza, M.D., FACS, M.B.A.

**Professor of Surgery**
**Division of Cardiothoracic Surgery**
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## Keywords

- Aortic Surgery
- Endovascular Technology
- Surgical Outcomes Research


## Research interests

Dr. Preventza's research focuses on the development of percutaneous techniques for valvular and thoracic aortic diseases, aortic root surgery and surgical outcomes. During the last few years, Dr Preventza has been very prolific in publishing clinical research which has been presented in national and international meetings.

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## Selected publications


1. Saccular Aneurysms of the Transverse Aortic Arch: Treatment Options Available in the Endovascular Era Based on a Presentation at the 2013 VEITH Symposium, November 19-23, 2013 (New York, NY, USA). Preventza O, Coselli JS. Aorta (Stamford). 2015 Apr 1;3(2):61-6. PMID:26798759
2. Total aortic arch replacement: A comparative study of zone 0 hybrid arch exclusion versus traditional open repair. Preventza O, Garcia A, Cooley DA, Haywood-Watson RJ, Simpson K, Bakaeen FG, Cornwell LD, Omer S, de la Cruz KI, Price MD, Rosengart TK, LeMaire SA, Coselli JS.
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4. Hemiarch and Total Arch Surgery in Patients With Previous Repair of Acute Type I Aortic Dissection. Preventza O, Price MD, Simpson KH, Cooley DA, Pocock E, de la Cruz KI, Green SY, LeMaire SA, Rosengart TK, Coselli JS. Ann Thorac Surg. 2015 Sep;100(3):833-8.. Epub 2015 Jun 23. PMID:26116478
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6. Combined transcatheter aortic valve replacement and endovascular ascending aortic repair: Fiction or reality? Preventza O, Coselli JS. J Thorac Cardiovasc Surg. 2015 Apr;149(4):e61. doi: 10.1016/j.jtcvs.2015.02.013. Epub 2015 Feb 14. PMID: 2590673
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## Todd K. Rosengart, M.D., F.A.C.S.

**Professor**

**DeBakey–Bard Chair of Surgery**

**Professor of Heart and Vascular Disease**

**Texas Heart Institute**



## Keywords

- Gene therapy
- Cellular reprogramming
- Angiogenesis


## Research interests

Basic and translational research have occupied a predominant position in his academic career beginning with his serving as a Clinical Fellow at the NIH, and continuing with appointments as an independent investigator with American Heart Association sponsored research support and NIH extramural funding. This effort has been highlighted by his role in the bench-to-bedside development of angiogenic therapy as a potential treatment for atherosclerotic coronary artery and vascular occlusive disease, and in our lab's current, multi-year focus to study cardiac cellular reprogramming. This NIH-funded work includes the translation of early in vivo examinations of angiogenic growth factors in the mid-1980s and early 1990s into the (first in the US) adenovirus-mediated delivery of angiogenic vascular endothelial growth factor (VEGF) to the human heart, as part of a Phase I/II clinical trial in 1997-1999. Together with this experience, our current investigations of cellular reprogramming offer the exciting possibility of "bio-interventions" for the treatment of hundreds of thousands with advanced heart disease still not treatable by conventional therapies.

Congestive heart failure typically occurring as a result of myocardial infarction remains the leading cause of mortality from heart disease. Cardiac stem cell therapy has offered promise in animal and clinical studies, but remains inherently constrained by the logistical challenges of delivering and integrating exogenous cells into a host myocardium. The recent discovery that induced cardiomyocytes (iCMs) could be generated directly from somatic cells offers the exciting possibility of bypassing stem cell staging and, perhaps more importantly, converting scar fibroblasts in situ into iCMs, obviating entirely the challenges of cell implantation into a host myocardium. Rosengart and others have recently demonstrated that the administration of a cardiac transcription factor cocktail (e.g., GATA4, MEF2c and TBX5 [GMT]) results in as much as a 50% increase in ventricular function, reduced fibrosis, and increased iCM populations in small animal myocardial infarction models. Intriguingly, also demonstrating that reductions in infarct size appear to far exceed the extent of scar re-population with iCMs, and that GMT also appears to reduce the population of (scar-producing) myofibroblasts as well as the expression of

key scar remodeling cytokines. These data, and our observation that GMT efficacy is enhanced by the angiogenic pre-treatment of myocardial scar with vascular endothelial growth factor (VEGF), suggest the existence of unexplored and non-optimized underlying mechanisms. Given his long-term goal to develop a potentially important new treatment for CHF, he is studying whether cellular reprogramming can be applied to improve cardiac infarct remodeling and function by testing the serial hypotheses that: a) inadequate up-regulation of requisite reprogramming genes limits cell transdifferentiation efficiency, which can be optimized beyond current thresholds via the comprehensive application of genomic activation strategies, b) that the density of (contractile) iCMs in infarct zones as well as indirect or paracrine (i.e., anti-fibrotic) mechanisms play critical roles in GMT/VEGF mediated infarct remodeling, and c) that cardiac fibroblasts can be made susceptible to reprogramming in a clinically relevant fashion. His team will use cutting edge molecular strategies and pre-clinical animal models to execute these aims.

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## Selected publications


1. Mathison, M, Gersch R, Nasser A, Lilo S, Korman M, Fourman M, Hackett N, Shroyer K, Yang J, Ma Y, Crystal RG, Rosengart TK. In vivo cardiac cellular reprogramming efficacy is enhanced by angiogenic preconditioning of the infarcted myocardium with vascular endothelial growth factor. J Am Heart Assoc. 2012; 1:e005652
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3. Mathison M, Singh VP, Chiuchiolo MJ, Sanagasetti D, Mao Y, Patel VB, Yang J, Crystal RG Rosengart TK. In situ cardiac cellular reprogramming using adenoviral vectors: implications for clinical myocardial regeneration. J Thorac Cardiovasc Surg. 2016 2016 Sep 23. pii: S0022-5223(16)31159-X. doi: 10.1016/j.jtcvs.2016.09.041. [Epub ahead of print]. PMID: 27773576
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10. Rosengart TK, Romeiser JL, White LJ, Fratello A, Fallon E, Senzel L, Shroyer AL. Platelet activity measured by a rapid turnaround assay identifies CABG patients at increased risk for bleeding and transfusion complications after clopidogrel administration. J Thorac Cardiovasc Surg. 2013; 146: 1259–1266.


# Ying H. Shen, M.D., Ph.D.

**Professor of Surgery**
**Division of Cardiothoracic Surgery**
**Director, Aortic Diseases Research Laboratory**
**Baylor College of Medicine**



## Keywords

- Aortic aneurysms and dissections
- Diabetic vascular diseases
- Vascular biology and diseases


## Research interests

My broad research interest is on vascular diseases. One of my main focuses is the molecular mechanisms of aortic aneurysms and dissections, highly lethal but poorly understood conditions. We have ongoing projects to investigate the signaling pathways that control aortic destruction, inflammation, healing and remodeling. The ultimate goal of my research is to use pharmacological treatment to prevent progressive aortic destruction and disease deterioration.

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## Selected publications


1. Shen YH, Zhang L, Ren P, Nguyen MT, Zou S, Wu D, Wang XL, Coselli J, LeMaire SA. (2013), AKT2 confers protection against aortic aneurysms and dissections. *Circ Res*, 112(4): 618-632.
2. Ren P, Zhang L, Xu G, Palmero LC, Albini PT, Coselli JS, Shen YH, LeMaire SA. (2013), ADAMTS-1 and ADAMTS-4 levels are elevated in thoracic aortic aneurysms and dissections. *Ann Thorac Surg*,95(2): 570-577.
3. Zou S, Ren P, Nguyen MT, Coselli JS, Shen YH, LeMaire SA. (2012), Notch signaling in descending thoracic aortic aneurysm and dissection. *PLoS One*, 7(12):e52833.
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5. Li XN, Song J, Zhang L, LeMaire SA, Hou X, Zhang C, Coselli JS, Chen L, Wang XL, Zhang Y, Shen YH. (2009), Activation of the AMPK-FOXO3 pathway reduces fatty acid-induced increase in intracellular reactive oxygen species by upregulating thioredoxin. *Diabetes*, 58(10):2246-2257.
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9. Shen YH, Utama B, Wang J, Raveendran M, Senthil D, Waldman WJ, Belcher JD, Vercellotti G, Martin D, Mitchelle BM, Wang XL. (2004), Human cytomegalovirus causes endothelial injury through the ataxia telangiectasia mutant and p53 DNA damage signaling pathways. *Circ Res*, 94(10):1310-1317.
10. Shen YH, Godlewski J, Zhu J, Sathyanarayana P, Leaner V, Birrer MJ, Rana A, Tzivion G. (2003), Cross-talk between JNK/SAPK and ERK/MAPK pathways: sustained activation of JNK blocks ERK activation by mitogenic factors. *J Biol Chem*, 278(29): 26715-26721.


# Vivek Singh, Ph.D.

**Assistant Professor of Surgery**
**Division of Cardiothoracic Surgery**
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## Keywords

- Heart Regeneration
- Cellular Reprogramming
- Transcription Factors
- Gene Therapy


## Research interests

Dr. Vivek Singh's research focuses on molecular and genetic mechanisms that mediate myocardial remodeling and heart failure, and the development of new drug and gene-based therapies for heart disease. The research Dr. Singh accomplished during his doctoral and post-doctoral tenures has significantly contributed to a better understanding of the biochemical, molecular, and genetic mechanisms that regulate cardiac function.

A significant amount of Dr. Singh work has focused on the renin-angiotensin system and its direct involvement in mediating cell growth in the heart. Dr. Singh has characterized an intracardiac intracellular renin-angiotensin system and has shown that the precursor genes of the system significantly modulate a number of pathological conditions such as diabetic cardiomyopathy. Recently, he identified the genetic biomarkers predisposing to sudden death in heart failure patients and studied the underlying mechanism of ventricular arrhythmias and increased risk of sudden cardiac death in dilated cardiomyopathy. More recently, Dr. Singh examined key developmental cardiac regulators, known as transcription factors GMT (GATA4, MEF2C and TBX5), that reprogram cardiac fibroblasts into functional, beating cardiomyocytes, a novel, promising gene therapy strategy to treat heart failure. Dr. Vivek has a vast experience working on cardiac myocytes and fibroblast both in vitro and in vivo, especially in cardiac electrophysiology. The overall summary of his work is to better understand the molecular signaling pathways, to identify genetic biomarkers and gene regulatory events that modulate cardiac function, and to better understand how these mechanisms may contribute to the development of interventions to modulate heart failure.

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## Selected publications


1. Patel V, Singh VP, Pinnamaneni JP, Sanagasetti D, Olive J, Mathison M, Cooney A, Flores ER, Crystal RG, Yang J, Rosengart TK. "p63 Silencing induces reprogramming of cardiac fibroblasts into cardiomyocyte-like cells.." *J Thorac Cardiovasc Surg.* 2018 April13:S0022-5223(18)30986-3. Pubmed PMID: 29716728
2. Chiu HS, Somvanshi S, Patel E, Chen TW, Singh VP, Zorman B, Patil SL, Pan Y, Chatterjee SS; Cancer Genome Atlas Research Network, Sood AK, Gunaratne PH, Sumazin P.. "Pan-Cancer Analysis of lncRNA Regulation Supports Their Targeting of Cancer Genes in Each Tumor Context." *Cell Report*. 2018 April 3;23(1):297-312.e12. Pubmed PMID: 29617668
3. Yang L, Liu L, Gao H, Pinnamaneni JP, Sanagasetti D, Singh VP, Wang K, Mathison M, Zhang Q, Chen F, Rosengart T, Yang J. "The stem cell factor SALL4 is an essential transcriptional regulator in mixed lineage leukemia-rearranged leukemogenesis.." *J Hematol Oncol.*. 2017 October 3;10(1) Pubmed PMID: 28974232
4. Pollak AJ, Haghighi K, Kunduri S, Arvanitis DA, Bidwell PA, Liu GS, Singh VP, Gonzalez DJ, Sanoudou D, Wiley SE, Dixon JE, Kranias EG.. "Phosphorylation of serine96 of histidine-rich calcium-binding protein by the Fam20C kinase functions to prevent cardiac arrhythmia.." *Proc Natl Acad Sci U S A*. 2017 August 7 Pubmed PMID: 28784772
5. Mathison M, Singh VP, Sanagasetti D, Yang L, Pinnamaneni JP, Yang J, Rosengart TK.. "Cardiac reprogramming factor Gata4 reduces postinfarct cardiac fibrosis through direct repression of the profibrotic mediator snail.." *J Thorac Cardiovasc Surg*. 2017 June 21;17:31354-5. Pubmed PMID: 28711329
6. Singh VP, Mathison M, Patel V, Sanagasetti D, Gibson BW, Yang J, Rosengart TK.. "MiR-590 Promotes Transdifferentiation of Porcine and Human Fibroblasts Toward a Cardiomyocyte-Like Fate by Directly Repressing Specificity Protein 1.." *J Am Heart Assoc.*. 2016 November 10;5(11) Pubmed PMID: 27930352
7. Singh VP*, Mathison M*, Chiuchiolo MJ, Sanagasetti D, Mao Y, Patel VB, Yang J, Kaminsky SM, Crystal RG, Rosengart TK. "In situ reprogramming to transdifferentiate fibroblasts into cardiomyocytes using adenoviral vectors: Implications for clinical myocardial regeneration.." *J Thorac Cardiovasc Surg.*. 2016 September 23;16(1. [*equal contribution, cited first]) Pubmed PMID: 27773576
8. Haghighi K, Pritchard TJ, Liu GS, Singh VP, Bidwell P, Lam CK, Vafiadaki E, Das P, Ma J, Kunduri S, Sanoudou D, Florea S, Vanderbilt E, Wang HS, Rubinstein J, Hajjar RJ, Kranias EG. "Human G109E-inhibitor-1 impairs cardiac function and promotes arrhythmias.." *J Mol Cell Cardio*. 2015 December:349-359. Pubmed PMID: 26455482
9. Mathison M, Singh VP, Gersch RP, Ramirez MO, Cooney A, Kaminsky SA, Chiuchiolo MJ, Nasser A, Yang J, Crystal RG, Rosengart TK. "Triplet polycistronic vectors encoding Gata4, Mef2c and Tbx5 enhance postinfarct ventricular functional improvement compared with singlet vectors." *The Journal of thoracic and cardiovascular su*. 2014;14: S0022-5223. Pubmed PMID: 24755332
10. Singh VP, Rubinstein J, Arvanitis DA, Ren X, Gao X, Haghighi K, Gilbert M, Iyer VR, Kim DH, Cho C, Jones K, Lorenz JN, Armstrong CF, Wang HS, Gyorke S, Kranias EG.. "Abnormal calcium cycling and cardiac arrhythmias associated with the human Ser96Ala genetic variant of histidine-rich calcium-binding protein.." *J Am Heart Assoc.*. 2013 October 14;2(5):e000460. Pubmed PMID: 24125847


## Matthew J. Wall Jr, M.D.

**Professor of Surgery**
**Division of Cardiothoracic Surgery**
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**Deputy Chief of Surgery**
**Ben Taub Hospital**



## Keywords

- Trauma
- Cardiac, Thoracic, Pulmonary, Vascular Trauma
- Resuscitation
- Trauma Systems


## Research interests

His research interests include the management of the injured patient, novel resuscitation strategies, and injuries to the chest and the vascular system.

## Contact information


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## Selected publications


1. Wall MJ Jr, Pepe PE, Mattox KL Successful Roadside Resuscitative Thoracotomy; J Trauma 36(1):131-134, 1994.
2. Wall MJ Jr, Hirshberg A, Mattox KL. Pulmonary Tractotomy with Selective Vascular Ligation for Penetrating Injuries to the Lung; Amer J Surg 168(6):665-669, 1994.
3. Bickell WH, Wall MJ Jr, Pepe PE, Martin RR, Ginger VF, Allen MK, Mattox KL. Immediate Versus Delayed Fluid Resuscitation for Hypotensive Patients with Penetrating Torso Injuries; N Engl J Med 331:1105-1109, 1994.
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6. Wall MJ, Jr, Soltero E. Damage Control for Thoracic Injuries; Surg Clin N Amer 77(4):863-878, 1997.
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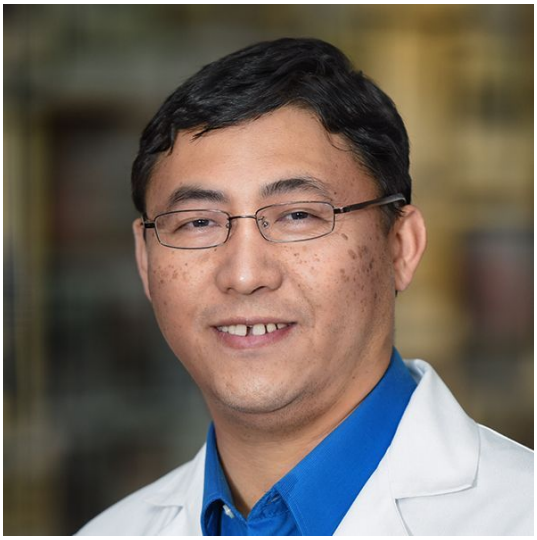
9. Wall MJ Jr., Mattox KL, Wolf DA. The Cardiac Pendulum: Blunt Rupture of the Pericardium with Strangulation of the Heart. J Trauma 59(1):136-142, 2005.
10. Wall MJ Jr, Mattox KL, DeBakey ME. Injuries to the Azygous Venous System; J Trauma 60(2):357-362, 2006.



# Kai Wang, Ph.D.

**Assistant Professor of Surgery**
**Division of Cardiothoracic Surgery**
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## Keywords

- Cardiac Regeneration

## Research interests

Dr. Wang's research interests center on understanding how cardiac cells can be reprogrammed to repair themselves, at the molecular level. Dr. Wang specializes in the generation of stem cells using the somatic nuclear transfer technique (SCNT). He has had success in reprogramming human skin cells using SCNT to generate embryonic stem cells. Dr. Wang has written and published extensively on reproductive topics, specifically triggers of pre-eclampsia and embryonic implantation. He has used stem cells to investigate DNA methylation, histone modification, and “stemness” gene regulation mechanism. Dr. Wang is bringing his considerable understanding and experience in stem cell production to Dr. Rosengart’s lab to further the understanding of how reprogramming cardiac cells might heal muscle and tissue damaged by cardiac events such as infarctions.

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## Selected publications


1. Ying Chen, Sok Kean Khoo, Richard Leach, Kai Wang. "MTA3 regulates extravillous trophoblast invasion through NuRD complex." Aims Medical Science.
2. Anthony Parenti, Michael A. Halbisen, Kai Wang, Keith Latham, Amy Ralston. "OSKM induce extraembryonic endoderm stem (iXEN) cells in parallel to iPS cells." Stem Cell Reports.
3. Claudia Baumann, Mark Olson, Kai Wang, Asgi Fazleabas, Rabindranath De La Fuente. "Arginine Methyltransferases Mediate an Epigenetic Ovarian Response to Endometriosis in the Baboon (Papio Anubis) Model." Reproduction.
4. Kai Wang, Chen Y., Ferguson S., Leach R. "MTA1 and MTA3 regulate HIF1a expression in trophoblasts." Medical Journal of Obstetrics and Gynecology.
5. Chen Y, Kai Wang, Leach R. "GATA transcription factors in Pregnancy." Journal of Obstetrics and Gynecology.
6. Chen Y., Miyazaki J, Nishizawa H, Kurahashi H, Leach R, Kai Wang. "MTA3 regulates Snail and CGB5 genes in trophoblast." Biochemical and Biophysical Research Comm.
7. Chen Y., Kai Wang, Leach R. "5-aza-dC treatment induces mesenchymal-to-epithelial transition in 1st trimester trophoblast cell line HTR8/SVneo." Biochemical and Biophysical Research Comm.
8. Chen Y., Kai Wang, Gong YG., Khoo SK., Leach R. "Role of CDX2 and EOMES in induced human trophoblast progenitor cells." Biochemical and Biophysical Research Comm.
9. Chen Y., Kai Wang, Qian CN, Leach R. "DNA methylation is associated with transcription of Snail and Slug genes." iochemical and Biophysical Research Comm.
10. Kai Wang, Otu HH., Chen Y., Lee Y., Latham KE., Cibelli JB. "Reprogrammed transcriptome in rhesusbovine interspecies somatic cell nuclear transfer embryos." PLoS One.


# Jianchang Yang, M.D., Ph.D.

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**Baylor College of Medicine**


## Keywords


- Cardiac progenitor regulation and direct cellular reprogramming
- epigenetic mechanisms of gene expression
- Normal and leukemic hematopoietic stem cell regulation
- Embryonic stem cells (ESCs)
- Generation of patient-specific pluripotent progenitor cells (iPS) for clinical therapies


## Research interests

Jianchang Yang received his MD from XinJiang University of Medical Sciences, MS of Medical Biochemistry from Sun Yat-sen University in China, and his degree in Molecular Cardiology from Charite University Campus Benjamin Franklin (Berlin)-magna cum laude. His research interests include cardiac progenitor cell and cellular reprogramming, normal and leukemic hematopoietic stem cell regulation, epigenetic control of gene expression, ES cells, generation of patient-specific pluripotent progenitor cells for clinical therapies.

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## Selected publications


1. Yang L, Liu L, Gao H, Pinnamaneni JP, Sanagasetti D, Singh VP, Wang K, Mathison M, Zhang Q, Chen F, Mo Q, Rosengart T, and Yang J. The stem cell factor SALL4 is an essential transcriptional regulator in mixed lineage leukemia-rearranged leukemogenesis. J Hematol Oncol.
2. Mathison M, Singh VP, Sanagasetti D, Yang L, Pinnamaneni P, Yang J, and Rosengart TK. Cardiac reprogramming factor Gata4 reduces postinfarct cardiac fibrosis through direct repression of the profibrotic mediator snail. J Thorac Cardiovasc Surg.
3. Singh VP, Mathison M, Patel V, Sanagasetti D, Gibson BW, Yang J, and Rosengart TK. MiR-590 promotes transdifferentiation of porcine and human fibroblasts towards a cardiomyocyte-like fate by directly repressing specificity protein 1. J Am Heart Assoc.
4. Liu L, Liu L, Leung L, Cooney A, Chen C, Rosengart T, Ma Y, Yang J. "Knockdown of SALL4 enhances all-trans retinoic acid-induced cellular differentiation in acute myeloid leukemia cells." J Biol Chem.
5. Mathison M, Singh VP, Gersch RP, Ramirez MO, Cooney A, Kaminsky SM, Chiuchiolo MJ, Nasser A, Yang J, Crystal RG, Rosengart TK. ""Triplet" polycistronic vectors encoding Gata4, Mef2c, and Tbx5 enhances postinfarct ventricular functional improvement compared with singlet vectors." J Thorac Cardiovasc Surg.
6. Liu L, Souto J, Liao W, Jiang Y, Li Y, Nishinakamura R, Huang S, Rosengart T, Yang VW, Schuster M, Ma Y, Yang J. "Histone Demethylase LSD1 is Involved in SALL4 Mediated Transcriptional Repression in Hematopoietic Stem Cells." J Biol Chem.
7. Yang J, Chai L, Fowles CT, Alipio Z, Xu D, Fink LM, Ward DC and Ma Y. "Genome-wide analysis reveals Sall4 to be a keMa Yster regulator of pluripotency in murine embryonic stem cells." Proc Natl Acad Sci USA.
8. Yang J, Chai L, Gao C, Fowles CT, Alipio Z, Dang H, Xu D, Fink LM, Ward DC, and Ma Y. "SALL4 is a Key Regulator of Survival and Apoptosis in Human Leukemic Cells." Blood.
9. Yang J, Chai L, Liu F, Fink LM, Lin P, Siberstain L, Amin HM, Ward DC, and Ma Y. "Bmi-1 is a SALL4 Target Gene for SALL4 in Hematopoietic and Leukemic Cells." Proc Natl Acad Sci USA.
10. J Zhang, Tam W, Tong G, Wu Q, Chan H, Soh B, Lou Y, Yang J, Ma Y, Chai L, Ng HH, Lufkin T, Robson P, Lim B. "SALL4 modulates embryonic stem cell pluripotency and early embryonic development by the transcriptional regulation of Pou5f1." Nature Cell Biol.

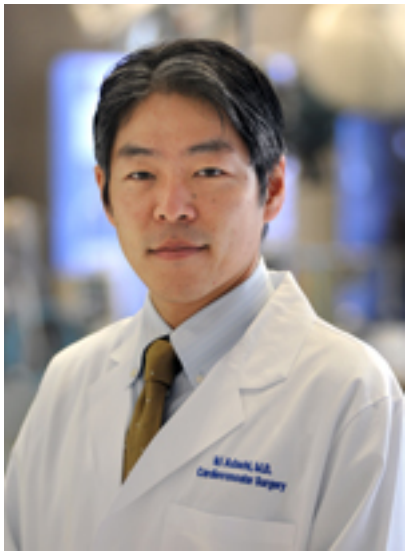
# Congenital Heart Surgery

The Division of Congenital Heart Surgery maintains an active research program across a broad spectrum. The division focuses specifically on congenital heart surgical outcomes and quality, pediatric heart and lung transplantation, mechanical circulatory support, neurodevelopmental protection, minimally invasive repair of congenital heart defects, aortic reconstruction, surgical repair of congenital coronary anomalies, and, in collaboration with Rice University, pediatric bioengineering.

The Pediatric Cardiac Bioengineering Laboratory within the Division of Congenital Heart Surgery is a joint effort between Baylor College of Medicine, Texas Children's Hospital, and Rice University. Dr. Jane Grande-Allen of Rice University's Department of Bioengineering and Dr. Sundeep Keswani, director of surgical research at Texas Children's and associate professor of Surgery at Baylor, are the investigating the influences of biophysical cues such as stress, strain, shear, substrate stiffness, and electrical stimulation on the development and maturation of heart cells and tissues.

Dr. Iki Adachi conducts research in myocardial recovery and understanding what factors from both the child and the mechanical assist devices impact bridge to transplant or bridge to recovery. Dr. Adachi has the most US experience with implanting the HeartWare VAD in the pediatric population.

Texas Children's Hospital has a long history of leading the way in finding new approaches to treating patients with congenital heart disease. Texas Children's was the lead institution for the 17-center Berlin Heart study and implanted more Berlin Heart EXCOR® devices than any other center during the study. This team was instrumental in gaining FDA approval for the Berlin Heart to become the first and only long-term VAD solution approved for children in the United States.



# Iki Adachi, M.D.

Assistant Professor of Surgery

## Keywords

- Pediatric heart failure
- Mechanical circulatory support
- Myocardial recovery in children

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## Selected publications

1. Naito Y, Adachi I. [The multi-disciplinary medicine in pediatric cardiac surgery at Texas Children's Hospital]. Nihon Geka Gakkai Zasshi. 2013 Mar; 114(2):117-9.
2. Adachi I, Ho SY, McCarthy KP, Uemura H. Coronary blood supply of the inferior wall of the right ventricle in hearts with Ebstein malformation: relevance to vertical plication. J Thorac Cardiovasc Surg. 2008 Dec; 136(6):1437-41.
3. Annich G, Adachi I. Anticoagulation for Pediatric Mechanical Circulatory Support.Joint Statement: Pediatrics Cardiac Intensive Case Society and Extracorporeal Life Support Organization. 2013
4. Morales DL, Khan MS, Gottlieb EA, Krishnamurthy R, Dreyer WJ, Adachi I.Semin Thorac Cardiovasc Surg. 2012 Summer;24(2):142-3.
5. Heinle, JS, Adachi I, Jeewa A, Ezon D, Khan MS, Morris SA, Morales DLS., Nagy CZ.VAD QOL Study. Amer Coll of Card 2013. J Thorac Cardiovasc Surg. 2014 Apr;147(4):1334-43
6. Adachi I, Fraser CD. Berlin Heart EXCOR Food and Drug Administration Investigational Device Exemption Trial. 2013. Semin Thorac Cardiovasc Surg. 2013 Summer;25(2):100-6.
7. Akiko, Ueda, Adachi I, McCarthy, Karen P., Wei, Li, Ho, Siew Yen, Uemura, Hideki. Substrates of artrial arrhythmias: Histological insights from patients with congenital heart disease. Int J Cardiol. 2013 Oct 3;168(3):2481-6.
8. Shiina Y, Matsuyama TA, Adachi I, Li W, Gatzoulis MA, Uemura H. Surgery in a contemporary adult of patients with Ebstein malformation of tricuspid valve and relation with ECG markers, atrial fibrosis and arrhythmic load. Int J Cardiol. 2013 Sep 30;168(2):1551-2.
9. Mery CM, Guzmán-Pruneda FA, Carberry KE, Watrin CH, McChesney GR, Chan JG, Adachi I, Heinle JS,McKenzie ED, Fraser CD Jr. Aortic arch advancement for aortic coarctation and hypoplastic aortic arch in neonates and infants. Ann Thorac Surg. 2014 Aug;98(2):625-33.
10. Adachi, I., Morales, D. S. L. Implantation of Total Artificial Heart in Congenital Heart Disease. J. Vis. Exp. (89), e51569

# Ziyad Binsalamah, M.D., M.Sc., F.R.C.S(C)

## Instructor in Surgery

## Keywords

- Congenital Cardiac Surgery
- Nanotechnology in Cardiovascular diseases
- Aortic Surgery

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## Selected publications

1. Binsalamah ZM, Chen P, McKenzie ED. Aortic arch advancement for type A interrupted aortic arch with persistent fifth aortic arch type B. Cardiol Young. 2017 Mar 6:1-4. doi: 10.1017/S1047951117000051.

2. Binsalamah ZM, De León LE, Heinle JS. Cor triatriatum sinister with an intact interatrial septum and a decompressing vein in a toddler. Cardiol Young. 2017 Mar 6:1-4. doi: 10.1017/S1047951117000130.

3. Binsalamah ZM, Diego A.Lara, E. Dean McKenzie. Anomalous Origin of the Left Coronary Artery from the Right Pulmonary Artery in a Univentricular Heart. Cardiol Young. 2017 Jun 27:1-4. doi: 10.1017/S1047951117001317.

4. Paul, A., Binsalamah, Z. M., Khan, A. A., Abbasia, S., Elias, C. B., Shum-Tim, D., & Prakash, S. (2011). A nanobiohybrid complex of recombinant baculovirus and Tat/DNA nanoparticles for delivery of Ang-1 transgene in myocardial infarction therapy. *Biomaterials*, *32*(32), 8304-8318.

5. Binsalamah, Z. M., Paul, A., Khan, A. A., Prakash, S., & Shum-Tim, D. (2011). Intramyocardial sustained delivery of placental growth factor using nanoparticles as a vehicle for delivery in the rat infarct model. *International journal of nanomedicine*, *6*, 2667.

6. Binsalamah, Z. M., Al-Sarraf, N., Chaturvedi, R. K., Alam, A., Thalib, L., Belley, G., & Shum-Tim, D. (2014). Mid-Term Outcome and Angiographic Follow-Up of Endarterectomy of the Left Anterior Descending Artery in Patients Undergoing Coronary Artery Bypass Surgery. *Journal of cardiac surgery*, *29*(1), 1-7.

7. Binsalamah, Z. M., Paul, A., Prakash, S., & Shum-Tim, D. (2012). Nanomedicine in cardiovascular therapy: recent advancements.


# Christopher Caldarone, M.D.

**Professor and Chief**
**Division of Congenital Heart Surgery**
**Baylor College of Medicine**
**Chief, Congenital Heart Surgery**
**Texas Children's Hospital**


## Research interests

Dr. Caldarone’s research interests include the role of apoptosis related mitochondrial dysfunction and remote ischemic preconditioning as mediators of reperfusion injury. Most recently, Dr. Caldarone has focused on pulmonary vein stenosis and tissue engineering of pulmonary valves.

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## Selected publications


1. Tremblay C, Yoo SJ, Mertens L, Seed M, Jacques F, Slorach C, Vanderlaan R, Greenway S, Caldarone C, Coles J, Grosse-Wortmann L.. "Sutureless Versus Conventional Pulmonary Vein Repair: A Magnetic Resonance Pilot Study." Annals of Thoracic Surgery.
2. Vanderlaan RD, Caldarone CA. "Sutureless repair and postoperative residual stenosis: "Never leave with a lesion"." The Journal of Thoracic and Cardiovascular Surgery.
3. Vanderlaan RD, Caldarone CA. "Surgical Approaches to Total Anomalous Pulmonary Venous Connection." Seminars in Thoracic and Cardiovascular Surgery: Pediatric Cardiac Surgery Annual.
4. Vanderlaan RD, Caldarone CA. "Decompressing extrinsic pulmonary vein obstruction." JACS.
5. Mahgoub L, Kaddoura T, Kameny AR, Lopez Ortego P, Vanderlaan RD, Kakadekar A, Dicke F, Rebeyka I, Caldarone CA, Redington A, Del Cerro MJ, Fineman J, Adatia I. "Pulmonary vein stenosis of ex-premature infants with pulmonary hypertension and bronchopulmonary dysplasia, epidemiology, and survival from a multicenter cohort." Pediatric Pulmonology.
6. Zhu J, Meza J, Kato A, Saedi A, Chetan D, Parker R, Caldarone CA, McCrindle BW, Van Arsdell GS, Honjo O. "Pulmonary flow study predicts survival in pulmonary atresia with ventricular septal defect and major aortopulmonary collateral arteries." JACS.
7. Lo Rito M, Gazzaz T, Wilder TJ, Vanderlaan RD, Van Arsdell GS, Honjo O, Yoo SJ, Caldarone CA. "ulmonary vein stenosis: Severity and location predict survival after surgical repair." JACS.
8. Vanderlaan RD, Caldarone CA. "The Ongoing Evolution of Sutureless Repairs for Pulmonary Vein Anomalies." Seminars in Thoracic and Cardiovascular Surgery: Pediatric Cardiac Surgery Annual.
9. Lo Rito M, Gazzaz T, Wilder T, Saedi A, Chetan D, Van Arsdell GS, Caldarone CA, Yoo SJ, Honjo O. "epair Type Influences Mode of Pulmonary Vein Stenosis in Total Anomalous Pulmonary Venous Drainage." The Annals of Thoracic Surgery.
10. Kotani Y, Zhu J, Grosse-Wortmann L, Honjo O, Coles JG, Van Arsdell GS, Caldarone CA. "Anatomical risk factors, surgical treatment, and clinical outcomes of left-sided pulmonary vein obstruction in single-ventricle patients." JACS.


# Jeffrey S. Heinle, M.D.

**Associate Professor of Surgery and Pediatrics**
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**Associate Chief, Congenital Heart Surgery**
**Surgical Director, Heart and Lung Transplant**
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## Selected publications:


1. Morales DL, Adachi I, **Heinle JS,** Fraser CD Jr. A new era: Use of an intracorporeal systemic ventricular assist device to support a patient with a failing Fontan circulation. J Thorac Cardiovasc Surg. 2011 Jul 13.
2. Carlo WF, Carberry KE, **Heinle JS,** Morales DL, McKenzie ED, Fraser CD Jr, Nelson DP. Interstage attrition between bidirectional Glenn and Fontan palliation in children with hypoplastic left heart syndrome. J Thorac Cardiovasc Surg. 2011 Jun 23.
3. McKenzie ED, Klysik M, Morales DL, **Heinle JS,** Fraser CD Jr, Kovalchin J. Ascending sliding arch aortoplasty: a novel technique for repair of arch hypoplasia. Ann Thorac Surg. 2011 Mar; 91(3):805-10.
4. Scully BB, Zafar F, Schecter MG, Rossano JW, Mallory GB Jr, **Heinle JS,** Morales DL. Lung retransplantation in children: appropriate when selectively applied. Ann Thorac Surg. 2011 Feb;91(2):574-9.
5. Zafar F, **Heinle JS,** Schecter MG, Rossano JW, Mallory GB Jr, Elidemir O, Morales DL. Two decades of pediatric lung transplant in the United States: Have we improved? J Thorac Cardiovasc Surg. 2011 Mar;141(3):828-832.e1. Epub 2011 Jan 20. PMID: 21255797.
6. Morales DL, Zafar F, Rossano JW, Salazar JD, Jefferies JL, Graves DE, **Heinle JS,** Fraser CD Jr. Use of ventricular assist devices in children across the United States: analysis of 7.5 million pediatric hospitalizations. Ann Thorac Surg 2010. Oct;90(4): 1313-8.
7. Rosen JB, Schecter MG, **Heinle JS,** McKenzie ED, Morales DL, Dishop MK, Danziger-Isakov L, Mallory GB, Elidemir O. Clostridium difficile colitis in children following lung transplantation. Pediatr Transplant. 2010 Aug;14(5):651-6.


## Edward John Hickey, M.D.

**Associate Professor of Surgery**

**Division of Congenital Heart Surgery**

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**Surgical Director, Adult Congenital Heart Disease Program**

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## Selected publications


1. Hickey EJ, Halvorsen F, Laussen PC, Hirst G, Schwartz S, Van Arsdell GS.. "Chasing the 6-sigma: drawing lessons from the cockpit culture." Journal of Thoracic and Cardiovascular Surgery.
2. Hickey EJ, Nosikova Y, Pham-Hung E, Gritti M, Schwartz S, Caldarone CA, Redington A, Van Arsdell GS. "National Aeronautics and Space Administration "threat and error" model applied to pediatric cardiac surgery: error cycles precede ~85% of patient deaths." Journal of Thoracic and Cardiovascular Surgery.
3. Meza, Hickey, Blackstone, Jaquiss, Anderson, Williams, Cai, Van Arsdell, Karamlou, McCrindle. "The optimal timing of stage-2 palliation for hypoplastic left heart syndrome: an analysis of the Pediatric Heart Network Single Ventricle Reconstruction Trial Public Dataset." Circulation.
4. Hickey EJ, Pham-Hung E, Nosikova Y, Halvorsen F, Gritti M, Schwartz S, Caldarone CA, Van Arsdell GS. "National Aeronautics and Space Administration model of "threat and error" in pediatric cardiac surgery: patterns of error chains." Annals of Thoracic Surgery.
5. Wilder, Van Arsdell, Benson, Pham-Hung, Gritti, Page, Caldarone, Hickey. "Young infants with severe tetralogy of Fallot: early primary surgery versus transcatheter palliation." Journal of Thoracic and Cardiovascular Surgery.

6. Wilder, McCrindle, Hickey, Ziemer, Tchervenkov, Jacobs, Gruber, Blackstone, Williams, DeCampli, Caldarone, Pizarro. "Is a hybrid a lower-risk alternative to stage-1 Norwood operation?." Journal of Thoracic and Cardiovascular Surgery.
7. Wilder, McCrindle, Phillips, Blackstone, Rajeswaran, Williams, DeCampli, Jacobs, Jacobs, Karamlou, Kirshbolm, Lofland, Ziemer, Hickey. "Survival and right ventricular performance for matched children after stage-1 Norwood with Blalock-Taussig shunt versus Norwood with right ventricle to pulmonary artery conduit." Journal of Thoracic and Cardiovascular Surgery.


## Michiaki Imamura, M.D., Ph.D.

**Professor of Surgery**
**Division of Congenital Heart Surgery**
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### Research interests

Dr. Imamura's academic interests include clinical outcomes research and physiology/anatomy of congenital heart defects. Other academic interests include complex heart failure management, ventricular assist device implantation, and cardiothoracic and congenital surgical education.

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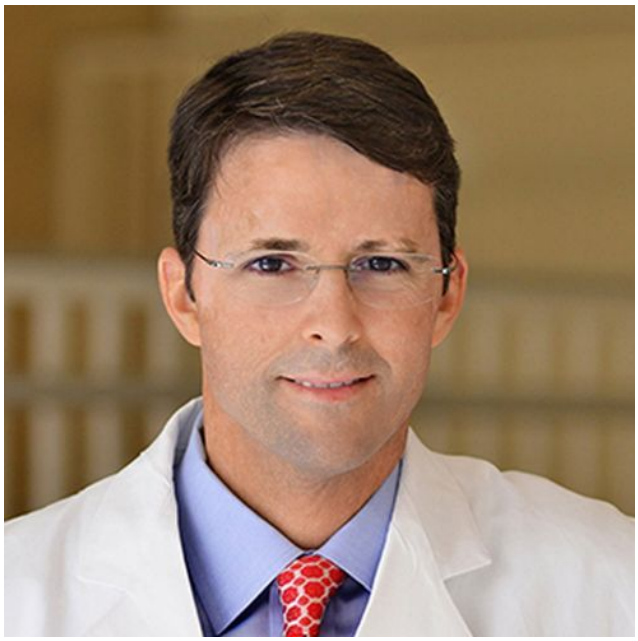
## Selected publications


1. Shinkawa T, Lu CK, Chipman C, Tang X, Gossett JM, Imamura M. "The midterm outcomes of bioprosthetic pulmonary valve replacement in children." Seminars in Thoracic & Cardiovascular Surgery.
2. Shinkawa T, Tang X, Gossett JM, Mustafa T, Hategekimana F, Watanabe F, Miyazaki T, Yamagishi M, Imamura M. "Valved polytetrafluoroethylene conduits for right ventricular outflow tract reconstruction." Annals of Thoracic Surgery.
3. Imamura M, Abraham B, Garcia X, Knecht KR, Frazier E, Shinkawa T. "New transplant technique with hemiazygos continuation and interrupted inferior vena cava." Annals of Thoracic Surgery.
4. Byrnes JW, Prodhan P, Williams BA, Schmitz ML, Moss MM, Dyamenahalli U, McKamie W, Morrow WR, Imamura M, Bhutta AT. "Incremental reduction in the incidence of stroke in children supported with the Berlin EXCOR ventricular assist device." Annals of Thoracic Surgery.
5. Eghtesady P, Almond CS, Tjossem C, Epstein D, Imamura M, Turrentine M, Tweddell J, Jaquiss RD, Canter C; Berlin Heart Investigators. "Post-transplant outcomes of children bridged to transplant with the Berlin Heart EXCOR Pediatric ventricular assist device." Circulation.

6. Almond CS, Morales DL, Blackstone EH, Turrentine MW, Imamura M, Massicotte MP, Jordan LC, Devaney EJ, et al. "Berlin Heart EXCOR pediatric ventricular assist device for bridge to heart transplantation in US children." Circulation.
7. Imamura M, Dossey AM, Garcia X, Shinkawa T, Jaquiss RD. "Prophylactic amiodarone reduces junctional ectopic tachycardia after tetralogy of Fallot repair." Journal of Thoracic & Cardiovascular Surgery.
8. Imamura M, Dossey AM, Jaquiss RD. "Reoperation and mechanical circulatory support after repair of anomalous origin of the left coronary artery from the pulmonary artery: a twenty-year experience." Annals of Thoracic Surgery.
9. Morales DL, Almond CS, Jaquiss RD, Rosenthal DN, Naftel DC, Massicotte MP, Humpl T, Turrentine MW, Tweddell JS, Cohen GA, Kroslowitz R, Devaney EJ, Canter EC, Fynn-Thompson F, Reinhartz O, Imamura M, et al. "Bridging children of all sizes to cardiac transplantation: the initial multicenter North American experience with the Berlin Heart EXCOR ventricular assist device." Journal of Heart & Lung Transplantation.
10. Imamura M, Prodhan P, Dossey AM, Jaquiss RD. "Reoperation after supravalvular aortic stenosis repair." Annals of Thoracic Surgery.
11. mamura M, Dossey AM, Prodhan P, Schmitz M, Frazier E, Dyamenahalli U, Bhutta A, Morrow WR, Jaquiss RDB. "Bridge to cardiac transplant in children: Berlin Heart versus extracorporeal membrane oxygenation." Annals of Thoracic Surgery.



# Emmett Dean McKenzie, M.D.

**Professor of Surgery**

**Division of Congenital Heart Surgery**

**Associate Director, Congenital Heart Surgery Fellowship Program**

**Baylor College of Medicine**

**Associate Surgeon of Congenital Heart Surgery**

**Texas Children's Hospital**

## Research interests

Dr. McKenzie’s research centers on neurologic protection during cardiopulmonary bypass and the advancement of surgical and perfusion techniques to eliminate the use of deep hypothermic circulatory arrest (DHCA) during aortic reconstruction. He has extensive experience with and has developed innovative surgical techniques for repair of the aortic arch, including the ascending sliding arch aortoplasty.

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## Selected publications


1. Morales DL, Dibardino DJ, Braud BE, Fenrich AL, Heinle JS, Vaughn WK, McKenzie ED, Fraser CD. "Salvaging the failing Fontan: lateral tunnel versus extracardiac conduit.." Ann. Thorac. Surg.. 2005 October;80(4):1445-51; discus. Pubmed PMID: 16181885
2. Morales DL, Carberry KE, Balentine C, Heinle JS, McKenzie ED, Fraser CD. "Selective application of the pediatric Ross procedure minimizes autograft failure.." 3(6):404-10. Pubmed PMID: 19037980
3. Morales DL, Dibardino DJ, Vick W, Fraser CD, McKenzie ED. "Tetralogy of Fallot and hypoplastic aortic arch: a novel perspective.." J. Thorac. Cardiovasc. Surg.. 2005 June;129(6):1448-50. Pubmed PMID: 15942598
4. McKenzie ED, Khan MS, Samayoa AX, Vener DS, Ishak YM, Santos AB, Heinle JS, Fraser CD. "The Blalock-Taussig shunt revisited: a contemporary experience.." J. Am. Coll. Surg.. 2013 April;216(4):699-704. Pubmed PMID: 23415555
5. DiBardino DJ, McKenzie ED, Heinle JS, Su JT, Fraser CD. "The Warden procedure for partially anomalous pulmonary venous connection to the superior caval vein.." Cardiol Young. 2004 February;14(1):64-7. Pubmed PMID: 15237673
6. Booth JH, Bryant R, Powers SC, Ge S, McKenzie ED, Heinle JS, Fraser CD, Morales DL. "Transthoracic echocardiography does not reliably predict involvement of the aortic valve in patients with a discrete subaortic shelf.." Cardiol Young. 2010 June;20(3):284-9. Pubmed PMID: 20420742
7. Andropoulos DB, Hunter JV, Nelson DP, Stayer SA, Stark AR, McKenzie ED, Heinle JS, Graves DE, Fraser CD. "Brain immaturity is associated with brain injury before and after neonatal cardiac surgery with high-flow bypass and cerebral oxygenation monitoring.." J. Thorac. Cardiovasc. Surg.. 2010 March;139(3):543-56. Pubmed PMID: 19909994
8. McKenzie ED, Klysik M, Morales DL, Heinle JS, Fraser CD, Kovalchin J. "Ascending sliding arch aortoplasty: a novel technique for repair of arch hypoplasia.." Ann. Thorac. Surg.. 2011 March;91(3):805-10. Pubmed PMID: 21353003
9. Carlo WF, McKenzie ED, Slesnick TC. "Root dilation in patients with truncus arteriosus.." Congenit Heart Dis. 2011 May;6(3):228-33. Pubmed PMID: 21545468
10. Carlo WF, Carberry KE, Heinle JS, Morales DL, McKenzie ED, Fraser CD, Nelson DP. "Interstage attrition between bidirectional Glenn and Fontan palliation in children with hypoplastic left heart syndrome.." J. Thorac. Cardiovasc. Surg.. 2011 September;142(3):511-6. Pubmed PMID: 21704339


# Lalita Wadhwa, Ph.D.

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## Keywords

- Tissue banking
- Congenital heart defect genomics
- Pediatric developmental disorders



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## Selected publications


1. Betsou F, Bulla A, Cho SY, Clements J, Chuaqui R, Coppola D, De Souza Y, De Wilde A, Grizzle W, Guadagni F, Gunter E, Heil S, Hodgkinson V, Kessler J, Kiehntopf M, Kim HS, Koppandi I, Shea K, Singh R, Sobel M, Somiari S, Spyropoulos D, Stone M, Tybring G, Valyi-Nagy K, Van den Eynden G, Wadhwa L. Assays for Qualification and Quality Stratification of Clinical Biospecimens Used in Research: A Technical Report from the ISBER Biospecimen Science Working Group. Biopreserv Biobank. 2016 Oct; 14(5):398-409.

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# GENERAL SURGERY and SURGICAL ONCOLOGY

The success of the individual programs is recognizable through research funding, publications, presentations, training and academic services, which significantly enhance the national and international reputations of the department.

In the areas of clinical and basic science research, individual programs have been recognized through research funding, publications, presentations, training, and academic services.

One five-year long study published in the prestigious journal *Nature* was the first to report 16 significantly mutated genes in actual human pancreatic cancer primary tumors, including genes not previously known to be associated with the disease.

As a result of the division's clinical expertise and research programs patients receive a highly specialized assessment, the newest treatment modalities, including clinical trials for new medications and emerging surgical techniques, and coordinated follow up of their care.

Developing novel approaches for cancer gene therapy, immunotherapy, non-invasive radiofrequency field therapy to enhance tumor blood flow and produce modulated tumor-specific hyperthermia, use of nanotechnology to improve cancer detection, and robotic surgery are among the division's several basic science research pursuits. Areas of recent translational research focus have included the compilation of tissue-based databases that help track and understand patient outcomes in pancreatic, hepatobiliary, and colorectal cancers. Additionally, our clinical research initiatives include detecting genetic profiles and differences in circulating tumor cells in patients with primary and metastatic colorectal cancer, developing hyperthermic treatment programs for patients with peritoneal-based malignancies, and expanding neoadjuvant treatments in patients with pancreatic, hepatobiliary, colorectal, and breast malignancies.

# Ghanashyam S. Acharya, Ph.D.

**Associate Professor of Surgery and Ophthalmology**
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## Keywords


- Translational Nanomedicine
- Nanofabricated Drug Delivery Systems
- Ocular Drug Delivery
- Ocular Nanomedicine


## Research interests

Dr. Acharya's research program focuses on the development of translational nanomedicine by integrating nanofabrication, 3D-nanolithography, and controlled drug delivery strategies. He works at the interface of medicine, bioengineering, chemistry and pharmaceutics. He is currently working on developing controlled release nanowafer therapeutics, nanodrug delivery systems for wound healing and pain management, and theranostics for image-guided drug delivery. Dr. Acharya's research program is funded by NIH, CPRIT, and Alkek award for the Development of Experimental Therapeutics.

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## Selected publications


1. Marcano DC, Shin CS, Lee B, Isenhart LC, Liu X, Li F, Jester JV, Pflugfelder SC, Simpson J, Acharya G.. "Synergistic Cysteamine Delivery Nanowafer as an Efficacious Treatment Modality for Corneal Cystinosis." Mol Pharmaceutics. 2016 August 29 Pubmed PMID: 27571217

2. Yuan X, Marcano DC, Shin CS, Hua X, Isenhart LC, Pflugfelder SC, Acharya G. "Ocular Drug Delivery Nanowafer with Enhanced Therapeutic Efficacy." ACS Nano. 2015;9(2):1749-1758. Pubmed PMID: 25585134

3. Coursey TG, Henriksson JT, Marcano DC, Shin CS, Isenhart LC, Ahmed F, De Paiva CS, Pflugfelder SC, Acharya G,. "Dexamethasone Nanowafer as an Effective Therapy for Dry Eye Disease." J. Control Release. 2015;213:168-174. Pubmed PMID: 26184051

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5. Bian F, Shin CS, Wang C, Pflugfelder SC, Acharya G, De Paiva CS.. "Dexamethasone Drug Eluting Nanowafers Control Inflammation in Alkali-Burned Corneas Associated With Dry Eye.." Invest Ophthalmol Vis Sci. 2016 June;57:3222-3300. Pubmed PMID: 27327581

6. Fernandez-Moure JS, Van Eps JL, Rhudy JR, Cabrera FJ, Acharya GS, Tasciotti E, Sakamoto J, Nichols JE. "Porcine acellular lung matrix for wound healing and abdominal wall reconstruction: A pilot study.." J Tissue Eng.. 2016 February:1;7:20417314156. Pubmed PMID: 26977287

7. G. Acharya, C.S. Shin, M. McDermott, H. Mishra, H. Park, I.C. Kwon, K. Park.. "The hydrogel template method for fabrication of homogeneous nano/microparticles." J. Control Release. 2010;144(3):314-319. Pubmed PMID: 19822178

8. G. Acharya, C.S. Shin, K. Vedantham, M. McDermott, T. Rish, K. Hansen, Y. Fu, K. Park.. "A study of drug release from homogeneous PLGA microstructures." J. Control Release. 2010;146(2):201-206. Pubmed PMID: 20381555

# Samir S. Awad, M.D., M.P.H.

**Professor and Chief, Section of Surgical Critical Care**
**Director, Surgical Critical Care Residency**
**Baylor College of Medicine**

**Operative Care Line Executive & Chief of Surgery**
**Medical Director Surgical Intensive Care Unit**
**Michael E. DeBakey VA Medical Center**

## Research interests

Dr. Awad has authored more than 100 peer-reviewed and invited publications, and is the recipient of numerous awards for surgical and research achievements. Dr. Awad is certified by the American Board of Surgery and Surgical Critical Care.

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## Selected publications

1. Artinyan A, Marshall CL, Balentine CJ, Albo D, Orcutt ST, Awad SS, Berger DH, Anaya DA. "Clinical outcomes of oncologic gastrointestinal resections in patients with cirrhosis.." Cancer. 2012 July 15;118(14):3494-500. Pubmed PMID: 22170573
2. Marshall CL, Balentine CJ, Robinson CN, Wilks JA, Anaya D, Artinyan A, Awad SS, Berger DH, Albo D. A multidisciplinary cancer center maximizes surgeons' impact. J. Surg. Res.. 2011 November;171(1):15-22. Pubmed PMID: 21696763
3. Awad SS. "Adherence to surgical care improvement project measures and post-operative surgical site infections.." Surg Infect (Larchmt). 2012 August;13(4):234-7. Pubmed PMID: 22913334
4. Brown RH, Subramanian A, Hwang CS, Chang S, Awad SS. Comparison of infectious complications with synthetic mesh in ventral hernia repair. Am. J. Surg.. 2013 February;205(2):182-7. Pubmed PMID: 23331984
5. Marshall CL, Chen GJ, Robinson CN, Balentine CJ, Anaya DA, Artinyan A, Awad SS, Berger DH, Albo D. "Establishment of a minimally invasive surgery program leads to decreased inpatient cost of care in veterans with colon cancer. Am. J. Surg.. 2010 November;200(5):632-5. Pubmed PMID: 21056143
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8. Rich PB, Reickert CA, Sawada S, Awad SS, Lynch WR, Johnson KJ, Hirschl RB. Effect of rate and inspiratory flow on ventilator-induced lung injury. J Trauma. 2000 November;49(5):903-11. Pubmed PMID: 11086784
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10. Kolla S, Awad SS, Rich PB, Schreiner RJ, Hirschl RB, Bartlett RH. Extracorporeal life support for 100 adult patients with severe respiratory failure. Ann. Surg.. 1997 October;226(4):544-64; discuss. Pubmed PMID: 9351722


## Omar Barakat, M.D.

**Associate Professor of Surgery**
**Division of Surgical Oncology**
**Baylor College of Medicine**

**Medical Director, Neuroendocrine Tumor Program**
**Baylor St. Luke's Medical Center**



## Keywords

- Neuroendocrine tumors
- Artificial liver


## Research interests

Dr. Barakat has developed new surgical techniques to minimize the complication rate and blood loss following pancreatic and liver surgeries. He utilizes image-guided therapies, such as radiofrequency ablation, microwave ablation, irreversible electroporation (Nanoknife system), trans-arterial chemotherapy, and selective internal radiotherapy (SIRT) with Yttrium-90 microspheres, to treat liver tumors while minimizing trauma to the patients.

Dr. Barakat's clinical and basic science research interests also include the study of neuroendocrine tumors and the development of off-the-shelf bio-artificial liver organs that can be suitable for liver transplantation in patients with end-stage liver disease.

## Contact information


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## Selected publications


1. George Van Buren, MD, Omar Barakat, MD, Sally E. Hodges, and William E. Fisher, MD. et al.. "Randomized Prospective Multicenter Trial of Pancreaticoduodenectomy with and without Routine Intraperitoneal Drainage."
2. Delpassand ES, Samarghandi A, Mourtada JS, Zamanina S, Espenan GD, Sharif R, Barakat O, Mackenzie S, Kosaria K, Seng JE, Antony L.. "Long-Term Survival, Toxicity Profile, and role of F-18 FDG PET/CT scan in Patients with Progressive Neuroendocrine Tumors Following Peptide Receptor Radionuclide Therapy with High Activity In-111 Pentetreotide." Theranostics.
3. Barakat O, Ozaki CF, Wood RP. "Topically applied 2-octyl cyanoacrylate (Dermabond) for prevention of postoperative pancreatic fistula after pancreaticoduodenectomy."
4. Omar Barakat, Shahrazad Abbasi, M.S. Gabriela Rodriguez, M.D., Jessie Rios, R.Patrick Wood, Claire Ozaki, Laurie S. Holley, Polly K. Guthier. "Use of Decellularized Porcine Liver for Engineering Humanized Liver Organ." Journal of Surgical Research.
5. Omar Barakat, MD, FRCS, Gabriela C. Rodriguez, MD, Isaac Raijman, MD, Paul M. Allison, MD, Javier Nieto, MD, Claire F. Ozaki, MD, FACS, Robert P. Wood, MD, FACS, and David A. Engler, PhD. "Clinical Value of Plasma Hepatocyte Growth Factor Measurement for the Diagnosis of Periampullary Cancer and Prognosis after Pancreaticoduodenectomy."
6. Omar Barakat, R. Patrick Wood, Claire F. Ozaki, Victor Ankoma-Sey, Joseph Galati, Mark Skolkin, Barry Toombs, Mary Round, Warren Moore, and Luis Mieles. "Morphological Features of Advanced Hepatocellular Carcinoma as a Predictor of Downstaging and Liver Transplantation: An Intention-to-Treat Analysis."
7. Thomas A. Aloia, Omar Barakat, John Connely, Nadine Haykal, David Michel, A. Osama Gaber, R. Mark Ghobrial. "Gastric Radiation Enteritis after Intra-arterial Yttrium-90 Microsphere Therapy for Early Stage Hepatocellular Carcinoma."
8. Barakat O, Skolkin M, Toombs B, Fischer J, Ozaki C, Wood RP. "Major liver resection for hepatocellular carcinoma in the morbidly obese: A proposed strategy to improve outcome."
9. O. Barakat, J. Hoef, C. Ozaki, R.P. Wood. "Extended right trisegmentectomy using in situ hypothermic perfusion with modified HTK solution for a large intrahepatic cholangiocarcinoma." Journal of Surgical Oncology.
10. O.Barakat, J. Cooper Jr, Shirley Riggs, John Hoef, Claire F. Ozaki, and R. Patrick Wood. "Complex Liver Resection for a Large Intrahepatic Cholangiocarcinoma in a Jehovah's Witness: A Strategy to avoid Transfusion." Journal of Surgical Oncology.

# Elizabeth Bonefas, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
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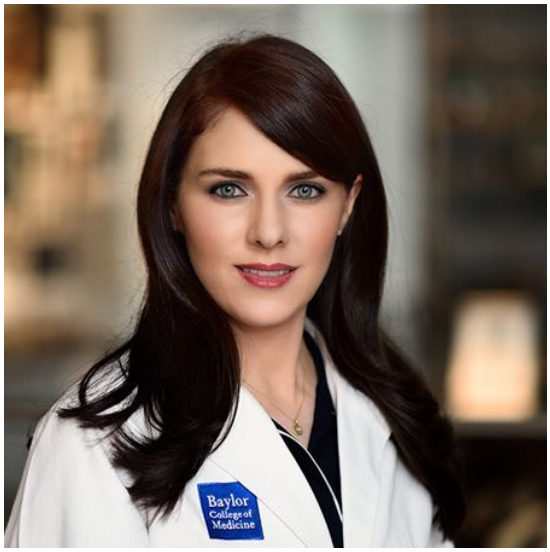
## Selected publications

1. Leiva JI, Etter EL, Gathe J, Bonefas ET, Melartin R, Gathe JC. Surgical therapy for 101 patients with acquired immunodeficiency syndrome and symptomatic cholecystitis. Am. J. Surg. 1997 October;174(4):414-6. Pubmed PMID: 9337165
2. Gould DJ, Salmans JA, Lassinger BK, Contreras A, Gutierrez C, Bonefas E, Liscum KR, Silberfein EJ. Factors associated with phyllodes tumor of the breast after core needle biopsy identifies fibroepithelial neoplasm. J. Surg. Res. 2012 November;178(1):299-303. Pubmed PMID: 22524977
3. Sevick-Muraca EM, Sharma R, Rasmussen JC, Marshall MV, Wendt JA, Pham HQ, Bonefas E, Houston JP, Sampath L, Adams KE, Blanchard DK, Fisher RE, Chiang SB, Elledge R, Mawad ME. Imaging of lymph flow in breast cancer patients after microdose administration of a near-infrared fluorophore: feasibility study. Radiology. 2008 March;246(3):734-41. Pubmed PMID: 18223125




# Stacey Ann Carter, M.D.

**Assistant Professor of Surgery**
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## Keywords

- Clinical outcomes in breast cancer
- Oncoplastic surgery
- Pre-menopausal breast cancer
- Geriatric breast cancer

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## Selected publications

1. Chen L, Wang X, Carter SA, Shen YH, Bartsch HR, Thompson RW, Coselli JS, Wilcken DL, Wang XL, LeMaire SA. "A single nucleotide polymorphism in the matrix metalloproteinase-9 gene (-8202A/G) is associated with thoracic aortic aneurysms and thoracic aortic dissection." J Thorac Cardiovasc Surg.
2. LeMaire SA, Jones MM, Conklin LD, Carter SA, Criddell MD, Wang XL, Raskin SA, Coselli JS. "Cold blood and cold crystalloid renal perfusion afford similar protection against acute renal injury during thoracoabdominal aortic aneurysm repair: results of a randomized trial." J Vasc Surg.
3. Brahmbhatt R, Carter SA, Hicks SC, Berger DH, Liang MK. "Identifying Risk Factors for Surgical Site Complications after Laparoscopic Ventral Hernia Repair: Evaluation of the Ventral Hernia Working Group Grading System." Surg Infect.
4. Carter SA, Hicks SC, Brahmbhatt R, Liang MK. "Recurrence and pseudorecurrence after laparoscopic ventral hernia repair: predictors and patient-focused outcomes." Am Surg.
5. LeMaire SA, Pannu H, Tran-Fadulu V, Carter SA, Coselli JS, Milewicz DM. "Severe aortic and arterial aneurysms associated with a TGFBR2 Mutation." Nat Clin Pract Cardiovasc Med.

6. LeMaire SA, Carter SA, Volguina IV, Laux AT, Milewicz DM, Borsato GW, Cheung CK, Bozinovski J, Markesino JM, Vaughn WK, Coselli JS. "Spectrum of aortic operations in 300 patients with confirmed or suspected Marfan syndrome." Ann Thorac Surg.
7. LeMaire SA, Carter SA, Coselli JS. "The elephant trunk technique for staged repair of complex aneurysms of the entire thoracic aorta." Ann Thorac Surg.
8. LeMaire SA, Carter SA, Won T, Wang X, Conklin LD, Coselli JS. "The threat of adhesive embolization: BioGlue leaks through needle holes in aortic tissue and prosthetic grafts." Ann Thorac Surg.
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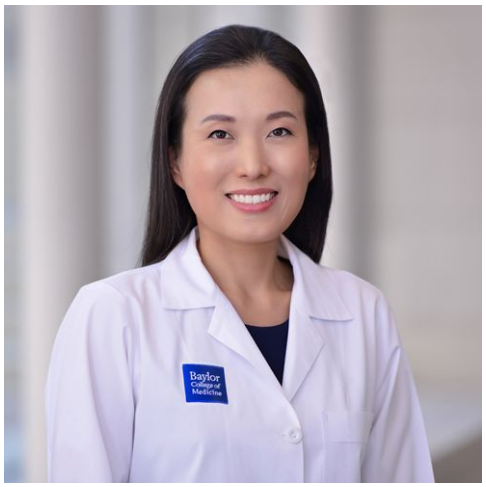

# Christy Chai, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Division of Surgical Oncology**
**Baylor College of Medicine**

## Keywords

- Quality improvement
- Clinical outcomes
- Psychoneuroimmunology

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## Selected publications

1. Yi M, Cormier JN, Xing Y et al. "Other primary malignancies in breast cancer patients treated with breast conserving surgery and radiation therapy.." Annals of Surgical Oncology 2013; 20(5):1514-.
2. Chai CY, Szabunio MM, Cook C et al.. "Pre-SN Ultrasound-FNAC for Lymph Node Metastases in Melanoma Patients: Reply.." Annals of Surgical Oncology Online-Only 2012..
3. Chai CY, Zager JS, Szabunio MM et al.. "Preoperative ultrasound is not useful for identifying nodal metastasis in melanoma patients undergoing sentinel node biopsy.." Annals of Surgical Oncology 2012; 19(4): 1100.
4. Vohra NA, Tejiram S, Chai CY et al.. "Multimodality therapy for pulmonary metastasis in sarcoma patients: Results of a single institution.." Journal of Clinical Oncology 30, 2012 (suppl;.
5. Chai CY, Deneve JL, Beasley GM et al.. "A Multi-institutional experience of repeat regional chemotherapy for recurrent melanoma of extremities.." Annals of Surgical Oncology 2012;19(5): 1637-.
6. Chai CY, Lin PH, Bush RL et al. "Aortic endograft thrombosis after colorectal surgery in lithotomy position.." Journal of Vascular Surgery 2004; 39: 1112-11.
7. Chai YH, Wolff MK et al.. "Comparison of suture and non-penetrating vascular clip.." Journal of Investigative Medicine 47 (2): 92..
8. Fisher WE, Chai CY, Hodges SE et al.. "Effect of BioGlue on the incidence of pancreatic fistula following pancreas resection.." Journal of Gastrointestinal Surgery 2008; 12:.
9. Wilding TJ, Chai YH, Huettner JE.. "Inhibition of rat neuronal kainate receptors by cis-unsaturated fatty acids.." Journal of Physiology 1998; 513 (Pt 2): 331-3.

# Subhasis Chatterjee, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
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**Keywords**

- ICU scoring systems
- LVAD
- ECMO

## Research interests

His basic science areas of investigation included an NIH-sponsored grant for gene therapy in ischemia-reperfusion injury after myocardial infarction. He has participated and served as an investigator in a number of clinical trials. His clinical focus in research is in mechanical circulatory support, resource utilization, and critical care scoring systems for the care of cardiothoracic surgical patients.

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## Selected publications

1. S Chatterjee, AS Stewart, LT Bish, V Jayasankar, EM Kim, T Pirolli, J Burdick, YJ Woo, TJ Gardner, HL Sweeney. "Viral Gene Transfer of the Anti-apoptotic Factor Bcl-2 Protects against Chronic Postischemic Heart Failure." CIRCULATION. 2002;106[Suppl I]:I-212-I-217.
2. S Chatterjee, LT. Bish, V Jayasankar, AS Stewart, YJ Woo, MT Crow, TJ Gardner, HL Sweeney. "Blocking the Development of Post-Ischemic Cardiomyopathy with Viral Gene Transfer of the Apoptosis Repressor with Caspase Recruitment Domain (ARC) " JOURNAL of THORACIC and CARDIOVASCULAR SURGERY 2003 125: 1461-1469.
3. S Chatterjee, V Jayasankar, TJ Gardner. " The Case for Bioprosthetic Mitral Valve Replacement in Patients Aged 60-70 " In Bower JS, Isom OW (Eds) : Pathophysiology, Evaluation, and Management of Valvular Heart Diseases, Volume II. ADVANCES IN CARDIOLOGY. Basel, Kerger, 2004;41:132-137.
4. S Chatterjee, NN Williams, ML O'Hara, C Twomey, JB Morris, MA Acker. "Diaphragmatic Hernias associated with Ventricular Assist Devices and Heart Transplantation. ANNALS OF THORACIC SURGERY. 2004;77:2111-4
5. JC Alexander, S Chatterjee. Transapical Transcatheter Aortic Valve Replacement. CARDIAC INTERVENTIONS TODAY. Aug/Sept 2009., p. 1-5.

6. S Chatterjee, SS Eagle, DH Adler, JG Byrne. Incidental Discovery of an Ascending Aortic Thrombus – Should this patient undergo to surgical intervention? JOURNAL of THORACIC and CARDIOVASCULAR SURGERY 2010;140:e14-e16.
7. S Chatterjee S, JC Alexander, PJ Pearson, T Feldman. Left Atrial Appendage Occlusion: Lessons Learned from Surgical & Transcatheter Experiences. ANNALS OF THORACIC SURGERY 2011;92:2283-2292.
8. S Chatterjee, WJ Hoff, PJ Pearson. "Advantages to Miniaturized Cardiopulmonary Bypass for Adult Cardiac Surgery." JOURNAL CLINICAL & EXPERIMENTAL CARDIOLOGY 2011. doi: 10.4172/2155-9880.S7-001.
9. S Chatterjee, JC Alexander, PJ Pearson. "CABG for Multivessel CAD: Recent studies show that CABG is still preferred over PCI for most patients." CARDIAC INTERVENTIONS TODAY. 2012;6(1):38-42.
10. S Chatterjee, JS Rankin, JS Gammie, S Sheng, SM O'Brien, JM Brennan, JC Alexander, VH Thourani, PJ Pearson, RM Suri. "Isolated Mitral Valve Surgery Risk in 77,836 patients from the Society of Thoracic Surgeons Database." ANNALS of THORACIC SURGERY 2013;96(5):1587-1595.


# Louisa Chiu, M.D.

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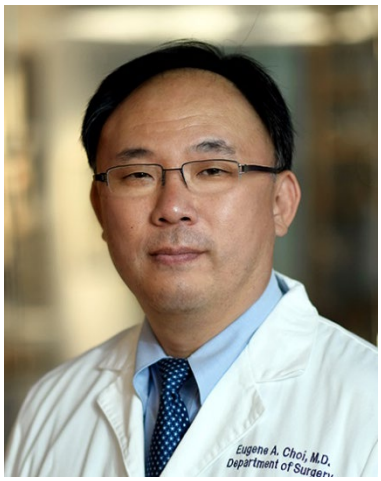
## Selected publications


1. Chiu LW, Dellinger P, Anaya D. "Antimicrobial Prophylaxis in Surgery." Principles and Practice of Hospital Medicine. Ed. McKean, Ross, Dressler, Scheurer. 2nd ed. McGraw-Hill, 2017.
2. Lee DS, Marsh L, Garcia-Altieri MA, Chiu LW, Awad, SS. Active Mental Illnesses Adversely Affect Surgical Outcomes. The American Surgeon. 2016 Dec;82(12):1238-1243.
3. Chiu LW, Desai J, Shanti C, Rane, Agarwal P, Thomas RL, Klein MD, Chouthai N. SNAPPE II Score As a Predictor of Survival in Infants with Congenital Diaphragmatic Hernia: A Single Center Experience." European Journal of Pediatric Surgery, 26(4):316-21, 2016. [PMID 26267235]
4. Guye ML, Schoellhammer HF, Chiu LW, Kim J, Lai LL, Singh G. Designing liver resections and pushing the envelope with resections for hepatic colorectal metastases. Indian Journal of Surgical Oncology, 4(4):349-355, 2013. [PMID 24426756]
5. Lee D, Chiu L, Kim JY. The emerging role of salvage esophagectomy. Minerva Chirurgica, 68(4):353-65, 2013. [PMID 24019043]

6. Chiu LW, Soldes OS. Congenital Anomalies & Surgical Disorders of the Stomach. Pediatric Gastrointestinal and Liver Disease. Ed. Wylie & Hyams. 4th ed. Elsevier, 2011.
7. Alexander F, Chiu L, Kroh M, Hammel J, Moore J. Analysis of outcome in 298 extremely low-birth-weight infants with patent ductus arteriosus. Journal of Pediatric Surgery, 44:112-117, 2009. [PMID 19159727]
8. Chiu L, Dudgeon D, Stallion A. "Gastrointestinal Obstruction. Primary Pediatric Care. Ed. Hoekelman. 5th ed. Mosby, 2008.





# Eugene Choi, MD

**Associate Professor of Surgery**
**Division of Surgical Oncology**
**Michael E. DeBakey Department of Surgery**



## Keywords

- Metastasis
- Cell Signaling
- Pancreatic Cancer


## Research Interests

Dr. Choi's research interests include the signaling mechanisms of colorectal and pancreatic cancer metastasis and development of novel drug therapies.

## Contact information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## Selected publications


1. Choi EA and Song DA: Skin Lesions In: Schwartz's Principle of Surgery, 10th Edition, McGraw-Hill Professional, 2014
2. Dudeja V, Choi EA, Al-Refaie Waddah: Total Gastrectomy for Cancer In: Operative Techniques in Surgery, Wolters Kluwer Health/Lippincott Williams & Williams, 2014
3. Thomas RM, Aloia TA, Truty MJ, Choi EA, Curley SA, Vauthey JN, Abdalla EK. *Treatment Sequencing Strategy for Hepatic Epithelioid Hemangioendothelioma.* HPB, 2013 doi: 10.1111/hpb.12202
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5. Choi EA, Matthews J: Chronic Pancreatitis In: Shackelford's Surgery of the Alimentary Tract, 7th Edition, Elsevier, 2010.
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## M. Andrew Davis, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Baylor College of Medicine**

## Keywords

- Patient through-put in the ER

## Research interests

M. Andrew Davis, M.D. is an assistant professor of surgery in the Division of General Surgery. Born and raised in Richmond, Virginia, he attended the University of Virginia where he graduated with a B.A. in Mathematics. After spending a postgraduate year abroad in London teaching math, he then went on to attend medical school at the Virginia Commonwealth University School of Medicine/Medical College of Virginia. Upon graduation he pursued his general surgery residency at Emory University in Atlanta, Georgia with a significant amount of time spent at Grady Memorial Hospital, one of the city's main trauma and indigent care facilities. After working in private practice at the completion of his residency, Dr. Davis then came back to Emory to complete a two-year fellowship in Trauma Surgery/Surgical Critical Care at Grady.

Prior research projects have included analysis and implementation of more efficient models of patient through-put in the emergency room setting. He enjoys the teaching and mentoring of residents and medical students, helping them gain an understanding of the complexities in treating surgical patients and fostering their growth within the discipline of surgery itself.

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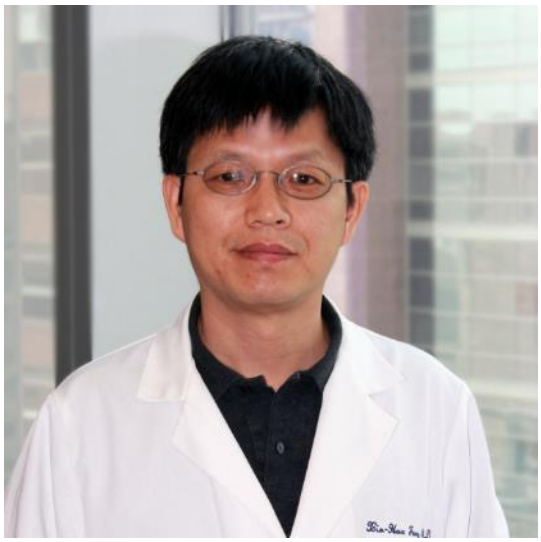


# Xin-Hua Feng, Ph.D.

**Professor of Surgery**
**Division of Surgical Oncology**
**Baylor College of Medicine**



## Keywords

- Embryonic stem cells
- Tumor progression/metastasis
- Serine/threonine phosphatases
- SMADs
- Ubiquitination/SUMOylation
- TGF-ß/BMP


## Research interests

Dr. Feng's research aims to elucidate the underlying mechanisms and interplays among protein modifications, signaling pathways, and gene transcription as well as understanding their roles in cell proliferation, tissue differentiation, and pathogenesis of human diseases.

**His current research projects include:**

*Phosphatome: genome-wide investigation of protein dephosphorylation*

Signal transduction pathways are often regulated by the dynamic interplay between protein kinases and phosphatases. Using all the human protein serine/threonine phosphatases available, we systematically investigate the effect of dephosphorylation on key proteins involved in cell signaling and cell functions. We are currently genetically disrupting individual phosphatases to elucidate their in vivo functions during development.

*SUMO, ubiquitin, and control of protein turnover and functions*

We examine the effect of post-translational modifications, particularly ubiquitination and SUMOylation of transcription factors, in normal and cancer cells. We attempt to understand the molecular mechanisms by which environmental and developmental cues regulate the ubiquitination/proteasome and SUMOylation systems. Our studies will provide insights into the relationships between protein deregulation and human cancers or abnormal development.

*TGF-ß/BMP signal transduction*

SMADs are evolutionarily conserved signal transducers and transcription factors controlling TGF-ß/BMP functions. A large number of mutations that inactivate SMADs have been linked to human cancers and genetic diseases. We address the molecular interactions, requirements, and functionality of SMADs in TGF-ß/BMP responses using cellular, genomic, and proteomic approaches. We investigate how SMADs mediate transcription and how their actions are terminated. We also use in vitro and in vivo model systems to study how SMADs as tumor suppressors interplay with oncogenic pathways, in particular with those involved in lymphoma and in pancreatic and breast cancer.

*Genetic screens, BMP/TGF-ß signaling, and ES cells*

We are conducting genome-wide studies (e.g. genetic screens using lentiviral RNAi library) to identify novel TGF-ß signal modifiers or regulators involved in stem cell differentiation. Novel molecules that control TGF-ß/BMP signaling or participate in human ES cell self-renewal and differentiation will be further studied and in model organisms to define the molecules' physiological roles in tissue differentiation and organ development.

*Immune suppression by TGF-ß*

TGF-ß is a major inflammatory and immune-regulatory cytokine, but the mechanisms by which TGF-ß exerts its actions are unclear. We are interested in investigating the signaling interactions between the TGF-ß pathway and other cytokine pathways (such as TNF-alpha, IL-1, and IL-6 pathways) in immune responses. This area of research may lead to the discovery of drugs to treat cancer and inflammatory diseases.

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## Selected publications

1. Cao J, Yu Y, Zhang Y, Chen X, Hu Z, Tong Q*, Chang J*, Feng XH*, Lin X* (2017). SCP4 promotes gluconeogenesis through FoxO1/3a dephosphorylation. Diabetes, 2017 Aug 29. pii: db170546. [Epub ahead of print]

2. Yu Y, Gu S, Li W, Sun C, Chen F, Xiao M, Wang L, Xu D, Li Y, Ding C, Xia Z, Ye S, Xu P, Zhao B, Qin J, Chen YG, Lin X, and Feng XH. (2017), Smad7 enables STAT3 activation and promotes pluripotency independent of TGF-β signaling. Proc Natl Acad Sci USA, 114: 10113-10118.

3. Jia S, Dai F, Wu D, Lin X, Xing C, Xue Y, Wang Y, Xiao M, Wu W, Feng XH*, and Meng AM* (2012), Protein phosphatase 4 cooperates with Smads to promote BMP signaling in dorsoventral patterning of zebrafish embryos. Dev Cell, 22:1065-1078.

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# William E. Fisher, M.D.

**Professor and Chief of the Division of General Surgery**
**George L. Jordan, M.D. Chair in General Surgery**
**Michael E. DeBakey Department of Surgery**
**Director, Elkins Pancreas Center**
**Baylor College of Medicine**



**Keywords**

- Pancreatic cancer
- Gene sequencing
- Clinical trials/outcomes/quality


## Research interests

Dr. Fisher was awarded two NIH grants in 2015. One is focused on creating a consortium among 3 high-volume pancreas centers to study outcomes of pancreatic surgery. The other is composed of 10 centers studying the relationship between new onset diabetes, chronic pancreatitis, and pancreatic cancer.

Dr. Fisher has focused his entire career on pancreatic cancer and is internationally known for his clinical work as a pancreatic surgeon, basic science research and clinical research in pancreatic cancer. As Director of the Elkins Pancreas Center at Baylor College of Medicine (BCM) he has developed and coordinates clinical care for a large pancreatic cancer patient population as well as basic science and clinical research related to pancreatic cancer being performed at BCM. Dr. Fisher established a pancreatic cancer tissue resource and extensive clinical database which serve as a vital resource for research. Dr. Fisher's lab has studied the influence of gastrointestinal hormones, particularly somatostatin and its receptors, on pancreatic cancer growth, and the relationship between diabetes and pancreatic cancer. Dr. Fisher has also collaborated on projects examining the role PDX-1 as an oncogene, gene therapy, oncolytic virotherapy, vaccination with virus-like particles, and adoptive T-cell immunotherapy for pancreatic cancer. Dr. Fisher is also actively collaborating with investigators in the Human Genome Sequencing Center at BCM on studies sequencing the genome of pancreatic cancer and the detection of circulating DNA in pancreatic cancer patients. Dr. Fisher leads a team of research clinicians dedicated to translating discoveries from the bench to the bedside and has served as principal investigator on more than 15 clinical trials for patients with pancreatic cancer.

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## Selected publications

1. Scarpa A, Chang DK, Nones K, Corbo V, Patch AM, Bailey P, Lawlor RT, Johns AL, Miller DK, Mafficini A, Rusev B, Scardoni M, Antonello D, Barbi S, Sikora KO, Cingarlini S, Vicentini C, McKay S, Quinn MCJ, Bruxner .. Fisher WE and et al. Corrigendum: Whole-genome landscape of pancreatic neuroendocrine tumors. Nature. 2017 Sep 27. Doi:10.1038/nature24026. PMID: 28953865.
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7. Barkun J, Fisher WE, Davidson G, Wakabayashi G, Besselink M, Pitt H, Holt J, Strasberg S, Vollmer C, Kooby D. Minimally Invasive Pancreatic Resection Organizing Committee. Research considerations in the evaluation of minimally invasive pancreatic resection (MIPR). HPB (Oxford). 2017 Mar;19(3):246-253. Doi:10.1016/j.hpb.2017.01.005. Epub 2017 Mar 6. PMID: 28274661.
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# Stephanie Ireland-Gordy, M.D., F.A.C.S.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Director, Surgery Core Clerkship**
**Sub-Internship Director**
**Baylor College of Medicine**
**UME Clerkship Site Director**
**Ben Taub Hospital**
**Surgery Residency Site Director**
**Ben Taub Hospital**

## Keywords

- Surgical Sepsis
- Critical Care Nutrition
- Hemostatic Dressings
- Spinal Cord Trauma and Timing of Tracheostomy
- Advance Directives in the ICU
- Post Rib Fracture Disability

## Research interests

Dr. Stephanie D. Gordy specializes in acute care surgery and surgical critical care. After completing her fellowship she was hired at Oregon Health and Science University as an assistant professor of surgery in the Department of Trauma, Emergency General Surgery and Surgical Critical Care. She now practices Acute Care Surgery and Surgical Critical Care at Ben Taub Hospital

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## Selected publications

1. Zarzaur B, Gordy S…, Kozar RA, et al. The Natural History of Splenic Vascular Abnormalities after Blunt Injury: A Western Trauma Association Multicenter Trial. J Trauma. J Trauma Acute Care Surg. 2017 May 30
2. The contribution of rib fractures to chronic pain and disability. Gordy S, Fabricant L, Ham B, Mullins R, Mayberry J. Am J Surg. 2014 May;207(5):659-62; discussion 662-3. 2. Complete cervical spinal cord injury above C6 predicts the need for tracheostomy. McCully BH, Fabricant L, Geraci T, Greenbaum A, Schreiber MA, Gordy SD. Am J Surg. 2014 May;207(5):664-8; discussion 668-9.
3. Mechanical ventilation weaning and extubation after spinal cord injury: a Western Trauma Association multicenter study. Kornblith LZ, Kutcher ME, Callcut RA, Redick BJ, Hu CK, Cogbill TH, Baker CC, Shapiro ML, Burlew CC, Kaups KL, DeMoya MA, Haan JM,

Koontz CH, Zolin SJ, Gordy SD, Shatz DV, Paul DB, Cohen MJ; Western Trauma Association Study Group. J Trauma Acute Care Surg. 2013 Dec;75(6):1060-9; discussion 1069-70.
4. Wind disasters: A comprehensive review of current management strategies. Marchigiani R, Gordy S, Cipolla J, Adams RC, Evans DC, Stehly C, Galwankar S, Russell S, Marco AP, Kman N, Bhoi S, Stawicki SP, Papadimos TJ. Int J Crit Illn Inj Sci. 2013 Apr;3(2):130-42.
5. Vascular air embolism. Gordy S, Rowell S. Int J Crit Illn Inj Sci. 2013 Jan;3(1):73-6.
6. Penetrating neck injury to the superior thoracic artery managed by video-assisted thoracoscopic surgery. Wong VW, Gordy SD, Schreiber M, Tieu BH. Case Rep Surg. 2013;2013:413462.
7. Advance directives in the trauma intensive care unit: Do they really matter? Gordy S, Klein E. Int J Crit Illn Inj Sci. 2011 Jul;1(2):132-7.
8. Military applications of novel hemostatic devices. Gordy SD, Rhee P, Schreiber MA. Expert Rev Med Devices. 2011 Jan;8(1):41-7.


# Marcus Hoffman, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Assistant Director, UME Simulation Programs**
**Department of Surgery Baylor**
**College of Medicine**

## Research interests

Dr. Hoffman's research interests include frailty and debility of trauma and critical illness. Dr. Hoffman has a strong interest in medical student and resident education.

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## Selected publications

1. Leeper CM, Lin E, Hoffman M, Fombona A, Zhou T, Kutcher M, Rosengart M. "Computed Tomography Abbreviated Assessment of Sarcopenia Following Trauma: The CAAST measurement predicts 6-month Mortality in Older Adult Trauma Patients." J Trauma Acute Care Surg. Pubmed PMID: 26885997
2. Watson GA, Hoffman MK, Peitzman AB. "Nonoperative Management of Blunt Splenic Injury: What is New?." Eur J TraumaEmerg Surg. Pubmed PMID: 26038038
3. Hoffman RA, Scott MJ, Pape HC, Billiar TR. "Selective Roles for Toll-Like Receptors 2, 4 and 9 in Systemic Inflammation and Immune Dysfunction Following Peripheral Tissue Injury." J Trauma Acute Care Surg. Pubmed PMID: 23694872
4. PMID: 23694872 Darwiche SS, Pfeifer R, Menzel C, Ruan X, Hoffman M, Cai C, Chanthaphavong RS, Loughran P, Pitt BR, Hoffman R, Pape HC, Billiar TR. "Inducible Nitric Oxide Synthase Contributes to Immune Dysfunction Following Trauma." Shock. Pubmed PMID: 23042189

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# Juliet Holder-Haynes, M.D.

**Assistant Professor of Surgery**
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## Keywords

- Adult and adolescent obesity

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## Selected publications

1. Tharakan B, Holder-Haynes JG, Hunter FA, Smythe WR, Childs EW. Cyclosporine A prevents vascular hyperpermeability after hemorrhagic shock by inhibiting apoptotic signaling. J Trauma. 2009 April;66(4):1033-9. Pubmed PMID: 19359911
2. Tharakan B, Holder-Haynes JG, Hunter FA, Childs EW. Alpha lipoic acid attenuates microvascular endothelial cell hyperpermeability by inhibiting the intrinsic apoptotic signaling. Am. J. Surg. 2008 February;195(2):174-8. Pubmed PMID: 18096126


# Cary Hsu, M.D.

**Assistant Professor of Surgery**
**Division of Surgical Oncology**
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## Keywords

- Cancer biology
- Cancer immunotherapy
- Clinical outcomes


## Research interests

Dr. Hsu earned a degree in Cellular and Molecular Biology at the University of Michigan and completed medical school at Temple University School of Medicine. He completed his residency at UCLA and a clinical fellowship at the National Cancer Institute. Dr. Hsu received fellowship training in surgical oncology at MD Anderson Cancer Center.

Dr. Hsu's clinical interest is in the multidisciplinary management of solid tumors. The multidisciplinary team at Ben Taub is committed to providing evidence-based, state of the art care for all cancer patients. Dr. Hsu is also engaged in the training of students and residents at the Baylor College of Medicine. Dr. Hsu's research interests include clinical outcomes in surgical oncology and cancer immunotherapy.

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## Selected publications


1. Aviram M, Billecke S, Sorenson R, Bisgaier C, Newton R, Rosenblat M, Erogul J, Hsu C, Dunlop C, La Du BN. "Paraoxonase active site required for protection against LDL oxidation involves its free sulfhydryl group and is different from that required for its arylesterase/paraoxonase activities: selective action of human paraoxonase allozymes Q and R." Pubmed PMID: 9763535
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8. Abad JD, Wrzensinski C, Overwijk W, De Witte MA, Jorritsma, A, Hsu C, Gattinoni L, Cohen CJ, Paulos CM, Palmer DC, Haanen JB, Schumacher TN, Rosenberg SA, Restifo, NP, and Morgan RA. "T-cell receptor gene therapy of established tumors in a murine melanoma model." Pubmed PMID: 18157006
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10. Peng PD, Cohen CJ, Yang S, Hsu C, Jones S, Zhao Y, Zheng, Z, Rosenberg SA, and Morgan RA. "Efficient nonviral Sleeping Beauty transposon-based TCR gene transfer to peripheral blood lymphocytes confers antigen-specific antitumor reactivity." Pubmed PMID: 19494842


# Atif Iqbal, M.D.

**Associate Professor of Surgery**
**Division of General Surgery**
**Chief, Section of Colorectal Surgery**
**Division of Surgical Oncology**
**Baylor College of Medicine**



## Keywords

- Health-science
- Outcomes
- Colorectal cancer


## Research interests

His research interests focus on health services & outcome-based translational research in colorectal pathology with a focus on rectal cancer outcomes and institution of enhanced recovery programs after surgery. He has >130 research publications, presentations and posters.

Dr. Iqbal is a member of Alpha Omega Alpha medical honor society. He is recognized nationally as a colorectal cancer expert and is currently serving as an elected surgical expert on the NCI Rectal-Anal Task Force and the Colon task force of the GI steering committee. He is actively involved with the American College of Surgeons, American Society of Colon and Rectal Surgeons, and NRG Oncology. He has earned honors for his research presentations to the ACS, SAGES and the Commission on Cancer, as well as a medal of achievement in physiology by the Pakistan Physiological Research Organization.

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## Selected publications


1. Kolarich A, George T, Hughes SJ, Delitto D, Allegra C, Hall W, Tan S, Shaw C, Iqbal A. Rectal cancer patients under 50 years of age lack a survival benefit from NCCN guideline-directed treatment for stage II and III disease. Cancer. 2018 1;124(17):3510-3519.
2. Delitto D, George TJ Jr, Loftus TJ, Qiu P, Chang GJ, Allegra CJ, Hall WA, Hughes SJ, Tan SA, Shaw CM, Iqbal A. Prognostic Value of Clinical vs Pathologic Stage in Rectal Cancer Patients Receiving Neoadjuvant Therapy. J Natl Cancer Inst. 2018 May 1;110(5):460-466.
3. Delitto D, Loftus TJ, Iqbal A. Pathologic stage dictates survival after neoadjuvant radiation for rectal cancer. Oncotarget. 2018 Oct 26;9(84):35474-35475.
4. Iqbal A, Khan A, George TJ, Tan S, Qiu P, Yang K, Trevino J, Hughes S. Objective Preoperative Parameters Predict Difficult Pelvic Dissections and Clinical Outcomes. J Surg Res. 2018 Dec; 232:15-25.
5. Iqbal A, Sakharuk I, Goldstein L, Tan SA, Qiu P, Li Z, Hughes SJ. Readmission After Elective Ileostomy in Colorectal Surgery Is Predictable. JSLS. 2018 Jul-Sep;22(3). pii: e2018.00008.
6. Iqbal A, George T. Randomized Controlled Trials in Colon and Rectal Cancer. Surgical Oncology Clinic of North America. 2017;26(4):689-704.
7. Franke, AJ, Iqbal, A, Nair, RM, Starr, J, Parekh H, George, TJ. Total Neoadjuvant Therapy: A Shifting Paradigm in Locally Advanced Rectal Cancer Management. Clin Colorectal Cancer. 2018 Mar;17(1):1-12.
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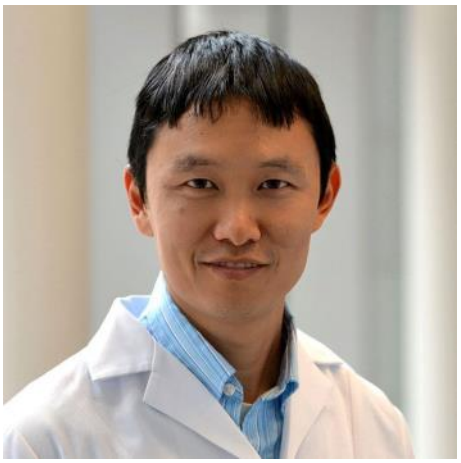

# David S. Lee, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
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## Selected publications

1. Lee D, Chiu L, Kim JY. The emerging role of salvage esophagectomy. Minerva Chirurgica. 2013
2. Svatek RS, Lee D, Lotan Y. Correlation of office-based cystoscopy and cytology with histologic diagnosis: how good is the reference standard? Urology. 2005


# Kaiyi (Kelly) Li, Ph.D.

**Associate Professor**
**Division of Surgical Oncology**
**Michael E. DeBakey Department of Surgery**
**Department of Pathology and Immunology**
**Baylor College of Medicine**



## Keywords

- Breast cancer
- DNA damage response pathways
- DNA repair
- Knockout mouse model
- Liver cancer
- Pancreatic cancer
- Synthetic lethality
- Targeted cancer therapy
- Tumor Suppressor


## Research interests

My research goal is to develop novel cancer therapies by identifying new key pathways for cancer development and progression.

There are three major areas of investigation in my laboratory:

Characterization of the function of DNA-repair proteins in tumor suppression using both knockout mouse models and clinical specimens
BRIT1/MCPH1 knockout mice have been generated in the lab and BRIT1's role in the suppression of breast, liver, and pancreatic cancer is studied extensively using the unique knockout mouse model, as well as clinical specimens.

Development of cancer cell-specific therapies by targeting DNA repair deficiency in cancer
We use a synthetic lethality approach and combination therapy to develop more effective treatments for breast and liver cancer.

Identification of novel key oncogenes that drive breast and liver cancer development
Using a bio-informatics approach, we select candidate genes by analyzing The Cancer Genome Atlas (TCGA) data and we characterize the genuine functions of these candidate genes *in vitro* and in animal models.

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## Selected publications


1. Liang Y, Gao H, Lin SY, Goss J, Du C, **Li Kaiyi**. Mcph1/Brit1 deficiency promotes genomic instability and tumor formation in a mouse model. ***Oncogene*** 2014, Nov 3. (doi:10.1038/onc.2014.367)

2. Pan MR, Hsieh HJ, Dai H, Hung WC, Li K, Peng G, Lin SY. (2012), Chromodomain helicase DNA-binding protein 4 (CHD4) regulates homologous recombination DNA repair, and its deficiency sensitizes cells to poly(ADP-ribose) polymerase (PARP) inhibitor treatment. *J Biol Chem*, 287(9): 6764-6772.

3. Liang Y, Gao H, Lin SY, Goss JA, Brunicardi FC, Li K. (2010), siRNA-based targeting of cyclin E overexpression inhibits breast cancer cell growth and suppresses tumor development in breast cancer mouse model. *PLoS One,* 5(9):e12860.
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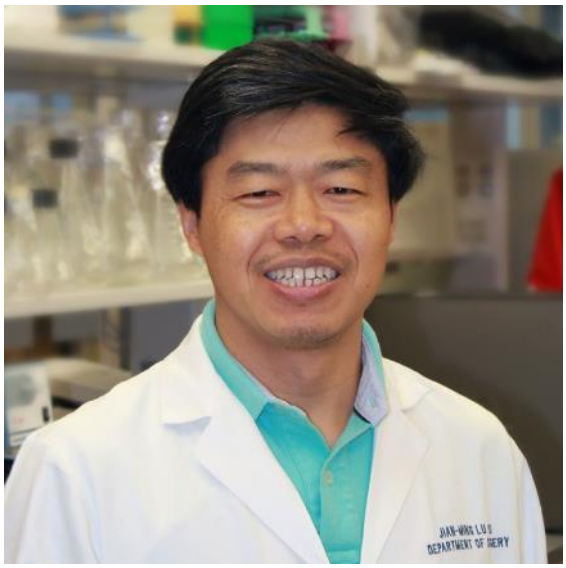
5. Peng G, Yim EK, Dai H, Jackson AP, van der Burgt I, Pan MR, Hu R, Li K, Lin SY. (2009), BRIT1/MCPH1 links chromatin remodeling to DNA damage response. *Nat Cell Biol*,11(7):865-872.
6. Wood JL, Liang Y, Li* K, Chen* J. (2008), Microcephalin/MCPH1 associates with the Condensin II complex to function in homologous recombination repair. *J Biol Chem*, 283(43): 29586-29592. (*share corresponding authors).
7. Rai R, Dai H, Multani AS, Li K, Chin K, Gray J, Lahad JP, Liang J, Mills GB, Meric- Bernstam F, Lin SY. (2006), BRIT1 regulates early DNA damage response, chromosomal integrity, and cancer. *Cancer Cell*, 10(2):145-157.
8. Lin SY, Li K, Stewart GS, Elledge SJ. (2004), Human Claspin works with BRCA1 to both positively and negatively regulate cell proliferation. *Proc Natl Acad Sci USA,* 101(17):6484-6489.
9. Li K, Lin, SY, Brunicardi FC, Seu P. (2003), Use of RNA interference to target cyclin E-overexpressing hepatocellular carcinoma. *Cancer Res*, 63(13):3593-3597.
10. Li K, Ramírez M, Rose E, and Beaudet AL. (2002), A gene fusion method to screen for regulatory effects on gene expression: application to the LDL receptor*. Hum. Mol. Genet*, 11(26): 3257-3265.



# Jian-Ming Lü, Ph.D.

**Assistant Professor of Surgery**
**Division of Surgical Oncology**
**Baylor College of Medicine**

## Keywords


- Cardiovascular disease
- Drug discovery and development
- Enzyme inhibitors, mechanisms
- Gout and hyperuricemia
- Natural substances and structure modification
- Organic synthesis, characterization
- Oxidative stress, free radicals, and antioxidants
- Pancreatic cancer
- Polymer nanoparticle drug/gene delivery
- Xanthine oxidase, HIV protease, cyclooxygenase, arginase


## Research interests

My research is focused on several basic science and translational research projects that are highly relevant to clinical diseases and pancreatic cancer. I have a strong background and research experience in organic chemistry, medicinal and synthetic chemistry, and biochemistry, including enzyme activities and mechanisms.

In recent years, I have been studying the fields of translational medicine and medicinal chemistry, working with cell-free, well-established *in vitro* as well as *in vivo* models. The primary goal of my projects is to develop new, safe, and effective therapies using natural or naturally-derived substances. For example, I have been developing medicines for hyperuricemia- related diseases, such as gout, using natural substances and by modifying their structure to enhance their effects. Currently, I am also screening naturally-derived substances for inhibitors of enzymes such as myeloperoxidase, HIV protease, and arginase, key enzymes in the development of diseases.

Another focus of my research is the delivery of nanoparticle gene/drug complexes targeted to cancer cells as well as to vascular cells by using antibodies or other specific proteins conjugated to PLGA (poly(lactic-co-glycolic acid)-based nanoparticles. I am developing a new PLGA-based material for molecular imaging and specific drug and gene delivery, which has great potential clinical applications such as molecular diagnostics and targeted therapies.

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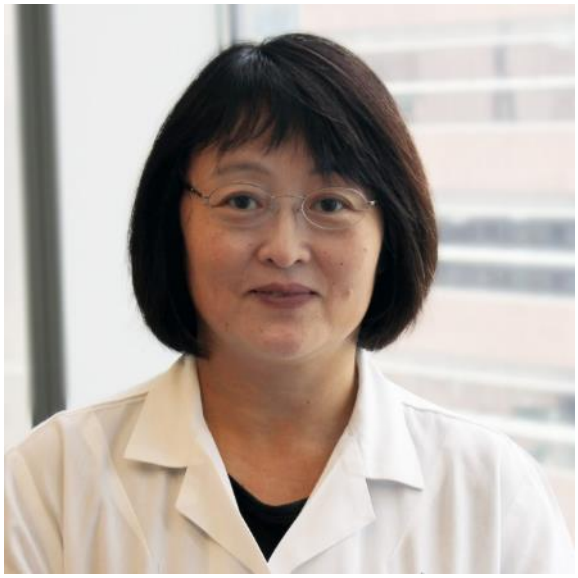
## Selected publications


1. Jian-Ming Lü, Qizhi Yao, Changyi Chen. 3,4-Dihydroxy-5-nitrobenzaldehyde (DHNB) is a Potent Inhibitor of Xanthine Oxidase: A potential therapeutic agent for treatment of hyperuricemia and gout. *Biochem Pharmacol*. 2013, 86(9):1328-37
2. Lü JM, Weakley SM, Yang Z, Hu M, Yao Q, Chen C. (2012), Ginsenoside Rb1 directly scavenges hydroxyl radical and hypochlorous acid, *Curr Pharm Des*, 18(38):6339-6347.
2. Lü JM, Yan S, Jamaluddin S, Weakley SM, Liang Z, Siwak EB, Yao Q, Chen C. (2012), Ginkgolic acid inhibits HIV protease activity and HIV infection in vitro. *Med Sci Monit*, 18(8):BR293-298.
3. Lü JM, Rogge CE, Wu G, Kulmacz RJ, van der Donk WA, Tsai AL. (2011), Cyclooxygenase reaction mechanism of PGHS — evidence for a reversible transition between a pentadienyl radical and a new tyrosyl radical by nitric oxide trapping, *J Inorg Biochem*, 2011, 105 (3), 356-365.
4. Lü JM, Nurko J, Jiang J, Weakley SM, Lin PH, Yao Q, Chen C. (2011), Nordihydroguaiaretic acid (NDGA) inhibits ritonavir-induced endothelial dysfunction in porcine pulmonary arteries. *Med Sci Monit*, 17(11):BR312-318.
6. Lü JM, Lin PH, Yao Q, Chen, C. (2010), Chemical and molecular mechanisms of antioxidants: experimental approaches and model systems. *J Cell Mol Med*, 14(4):840-60.
7. Lü JM, Nurko J, Weakley SM, Jiang J, Kougias P, Lin PH, Yao Q, Chen C. (2010), Molecular mechanisms and clinical applications of nordihydroguaiaretic acid (NDGA) and its derivatives: an update. *Med Sci Monit*, 16(5):RA93-100.
8. Lü JM, Wang X, Marin-Muller C, Wang, H, Lin PH, Yao Q, Chen C. (2009), Current advances in research and clinical applications of PLGA-based nanotechnology. *Expert Rev Mol Diagn*, 9(4):325-41.
9. Lü JM, Yao Q, Chen C. (2009), Ginseng compounds: an update on their molecular mechanisms and medical applications. *Curr Vasc Pharmacol*, 7(3):293-302.
10. Lü JM, Rosokha SV, Neretin IS, Kochi JK. (2006), Quinones as electron acceptors. X-ray structures, spectral (EPR, UV-vis) characteristics and electron-transfer reactivities of their reduced anion radicals as separated vs contact ion pairs. *J Am Chem Soc*, 128(51), 16708-16719




## Xia Lin, Ph.D.

**Associate Professor of Surgery**

**Division of Surgical Oncology**

**Baylor College of Medicine**



## Keywords

- Cancer
- TGF-beta
- Diabetes


## Research interests

Dr. Lin's research interest is on cell functions under physiological and pathological conditions. Currently, we are investigating several cell functions such as cell proliferation, differentiation, and metabolism by focusing on protein phosphatase. Specifically, we are trying to identify protein phosphatases that regulate critical signal transduction pathways such as BMP, TGF-β, insulin pathways, and gluconeogenesis. By doing this, we hope to understand better the signaling pathways that regulate normal cellular functions, and the deregulation of them leads to human diseases such as cancer, which is our main focus, bone disease, and diabetes. Eventually, we hope to provide the rationale for protein phosphatases as potential therapeutic targets.

Another major focus of her research is on the functions and regulation of TGF-β signal transduction pathway. We also investigate the crosstalk of TGF-β signal with other signaling pathways such as oncogenic pathway and hormone receptor pathway, and the role of protein posttranslational modifications (e.g. phosphorylation, ubiquitination and sumoylation) in TGF-β functions. By using cell-based assays and animal models, we seek to determine the role of TGF- β in normal cellular functions, cancer initiation, and cancer progression. Ultimately, our studies will advance our knowledge on understanding the molecular mechanisms of cancer initiation and progression, and on the identification of potential targets for cancer therapy.

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## Selected publications


1. Lin X, Liang M, Feng XH. "Smurf2 is a ubiquitin E3 ligase mediating proteasome-dependent degradation of Smad2 in transforming growth factor-beta signaling." J. Biol. Chem. 2000 November 24;275(47):36818-22. PMID: 11016919
2. Feng, X.-H., Y.-Y. Liang, M. Liang, W. Zhai, and X. Lin (2002). Direct interaction of oncogenic c-Myc with tumor suppressors Smad2 and Smad3 to inhibit TGF-□-mediated induction of the CDK inhibitor p15Ink4B. Molecular Cell 9: 133-143. PMID: 11804592
3. Lin X, Sun B, Liang M, Liang YY, Gast A, Hildebrand J, Brunicardi FC, Melchior F, Feng XH. "Opposed regulation of corepressor CtBP by SUMOylation and PDZ bindin." Mol. Cell. 2003 May;11(5):1389-96. PMID: 12769861
4. Wang D, Long J, Dai F, Liang M, Feng XH, Lin X. "BCL6 represses Smad signaling in transforming growth factor-beta resistance." Cancer Res. 2008 February 1;68(3):783-9. PMID: 18245479
5. Lin, X.*, X. Duan, Y.-Y. Liang, Y. Su, K. Wrighton, J. Long, M. Hu, C. Davis, J. Wang, F.C. Brunicardi, Y. Shi, Y.-G. Chen, A. Meng, and X.-H. Feng. (2006). PPM1A functions as a Smad phosphatase to terminate TGF-□ signaling. Cell, 125:915-928. (*co-corresponding author) PMID: 16751101
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8. Zhao Y, Xiao M, Sun B, Zhang Z, Shen T, Duan X, Yu PB, Feng X-H*, Lin X*. (2014). C-terminal domain (CTD) small phosphatase-like 2 modulates the canonical bone morphogenetic protein (BMP) signaling and mesenchymal differentiation via Smad dephosphorylation. J Biol Chem. 289:26441-26450. PMC4176200 (*co-corresponding author)
9. Yu Y, Gu S, Li W, Sun C, Chen F, Xiao M, Wang L, Xu D, Li Y, Ding C, Xia Z, Li Y, Ye S, Xu P, Zhao B, Qin J, Chen YG, Lin X, Feng X-H. (2017). Smad7 enables STAT3 activation and promotes pluripotency independent of TGF-β signaling. Proc Natl Acad Sci U S A. 114(38):10113-10118. 1705755114. Epub 2017 Sep 5. PMID: 28874583
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# S. Julie-Ann Lloyd, M.D., Ph.D.

**Assistant Professor of Surgery**

**Division of General Surgery**

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## Research interests

Dr. Lloyd is a dedicated researcher and educator. Her research interests include understanding the pathophysiology of obesity and improving patient outcomes through optimization of perioperative care.

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### Selected publications

1. Ardila-Gatas J, Sharma G, Lloyd SJ, Khorgami Z, Tu C, Schauer PR, Brethauer SA, Aminian A. "A Nationwide Safety Analysis of Discharge on the First Postoperative Day After Bariatric Surgery in Selected Patients." *Obes Surg*.
2. Liu MH, Lloyd SJ, Gause CD, Seifarth FG, DeRoss AL. "Abdominal compartment syndrome associated with Norovirus infection." *J Pediatr Surg Case Rep*.
3. Lloyd SJ, Raychaudhuri S, Espenshade PJ. "Subunit architecture of the Golgi Dsc E3 ligase required for sterol regulatory element binding protein (SREBP) cleavage in fission yeast." *J Biol Chem*.
4. Stewart EV, Lloyd SJ, Burg JS, Nwosu CC, Lintner RE, Daza R, Russ C, Ponchner K, Nusbaum C, Espenshade PJ. "Yeast sterol regulatory element binding protein (SREBP)

cleavage requires Cdc48 and Dsc5, a ubiquitin regulatory X domain-containing subunit of the Golgi Dsc E3 ligase." *J Biol Chem*.

5. Lloyd SJ, Weiss ES, Vricella LA. "Left anterior descending coronary artery aneurysm: A case report and review of the literature." *Asian Cardiovasc Thorac Ann*.

# Michele Loor, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Baylor College of Medicine**

**Medical Director, Surgical Intensive Care Unit**
**Baylor St. Luke's Medical Center**

## Research interests

Dr. Loor's research interests include surgical critical care, surgical infections, preoperative optimization, and enterocutaneous fistulas.

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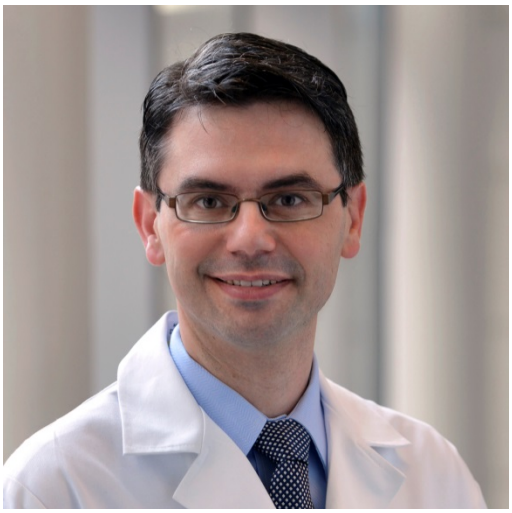
## Selected publications

1. Loor MM, Morancy JD, Glover JJ, Statz CL, Beilman G. "Does the Addition of Endoscopic Retrograde Cholangiopancreatography (ERCP) to Cholecystectomy Affect the Rate of Surgical Site Infection?" Submitted to Surg Endosc 12/2016.
2. Marek AP, Morancy JD, Chipman JC, Roach RM, Loor MM. "Long-term functional outcomes after traumatic thoracic and lumbar spine fractures." Am Surg. Submitted Aug 2016, Accepted for publication 1/20/2017.
3. Mallick R, Ronstrom C, Loor MM. "Emphysematous splenic infection in the setting of disseminated Klebsiella pneumoniae." Surgical Infections Case Reports. 2016 Mar;1(1): 29-31, DOI: 10.1089/crsi.2016.0004.
4. Thai H, Guerron AD, Bencsath KP, Liu X, Loor MM. "Fulminant Clostridium difficile enteritis causing abdominal compartment syndrome." Surg Infect (Larchmt). 2014 Dec;15(6):821-5. doi: 10.1089/sur.2013.026. Review.
5. Obeng-Gyasi S, Loor MM, Samotowka MA, Moorman ML. "Management of dabigratan-induced anticoagulation in trauma and acute care surgery patients." J Trauma and Acute Care Surg. Nov 2012, 73 (5): 1064-1069.



# Konstantinos Makris, M.D., FACS

**Assistant Professor of Surgery**
**Division of General Surgery**
**Baylor College of Medicine**

## Keywords

- Benign foregut diseases
- Endocrine Surgery

## Research interests

Dr. Konstantinos (Kostas) Makris graduated cum laude from the University of Athens Medical School in Greece. He received his General Surgery training at the Mayo Clinic in Rochester, MN and Creighton University Medical Center in Omaha, NE and has been certified by the American Board of Surgery. He pursued fellowship training in Advanced Laparoscopy and Surgical Endoscopy at Legacy Health in Portland, OR, as well as further training in Endocrine Surgery at Johns Hopkins University in Baltimore, MD. He has received awards and acknowledgements by the American College of Surgeons for his participation in the contest of surgical knowledge and in the competition of surgical trainee essay, as well as a traveling fellowship award by the Society of American Gastrointestinal and Endoscopic Surgeons.

He joined Baylor College of Medicine and the Michael E. DeBakey VA Medical Center in November of 2013, where he proudly serves the veterans as a staff surgeon. His clinical practice includes all aspects of General Surgery with emphasis on Minimally Invasive Surgery, benign foregut diseases and endocrine surgery. He is the author of numerous articles, scientific abstracts and book chapters in the fields of his clinical and research interests.

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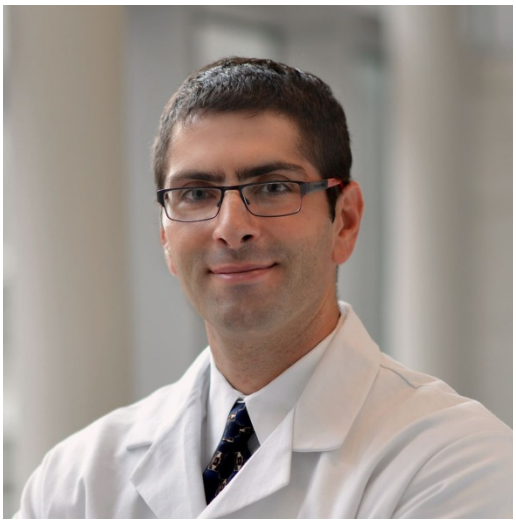
## Selected publications


1. Mazeh H, Kouniavsky G, Schneider DF, Makris KI, Sippel RS, Dackiw AP, Chen H, Zeiger MA. Intrathyroidal parathyroid glands: small, but mighty (a Napoleon phenomenon). Surgery. 2012
2. Makris KI, Cassera MA, Kastenmeier AS, Dunst CM, Swanström LL. Postoperative dysphagia does not predict higher long-term failure rates for laparoscopic antireflux surgery. Surg Endosc. 2012
3. Rieder E, Makris KI, Martinec DV, Swanström LL. The suture-pulley method for endolumenal triangulation in endoscopic submucosal dissection. Endoscopy. 2011
4. Makris KI, Panwar A, Willer BL, Lee T, Mittal SK. The role of short-limb Roux-en-Y reconstruction for failed antireflux surgery: a single center 5-year experience. Surg Endosc. 2012
5. Makris KI, Rieder E, Kastenmeier AS, Swanström LL. Transanal specimen retrieval using the TEM system in minimally invasive colon resection. Surg Endosc. 2012



# Nader Massarweh, M.D., M.P.H.

**Associate Professor of Surgery and Medicine**
**Division of Surgical Oncology**
**Baylor College of Medicine**

## Keywords

- Health services
- Health policy
- Surgical quality improvement
- Cancer outcomes

## Research interests

Dr. Massarweh's research interests include health services, health policy, and healthcare quality improvement work.

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## Selected publications


Massarweh NN, Legner VJ, Symons RG, McCormick WC, Flum DR. Impact of advancing age on abdominal surgical outcomes. Arch Surg. December 2009; 144(12): 1108-14. [PMID 20026827]

2. Massarweh NN, Flum DR, Symons RG, Varghese TK, Pellegrini CA. A critical evaluation of leapfrog's evidence-based hospital referral. J Am Coll Surg. February 2011; 212(2): 150-59. [PMID 21193332]

3. Massarweh NN, Chiang YJ, Xing Y, Chang GJ, Haynes AB, You YN, Feig BW, Cormier JN. Association between travel distance and metastatic disease at diagnosis among patients with colon cancer. J Clin Oncol. March 2014; 32(9): 942-48. [PMID 24516014]

4. Massarweh NN, Hu CY, You YN, Bednarski BK, Rodriguez-Bigas MA, Skibber JM, Cantor SB, Cormier JN, Feig BW, Chang GJ. Risk-adjusted pathologic margin positivity rate as a quality indicator in rectal cancer surgery. J Clin Oncol. September 2014; 32(27): 2967-74. [PMID 25092785]

5. Massarweh NN, Kougias P, Wilson MA. Complications and Failure to Rescue after Inpatient Non-Cardiac Surgery in the VA. JAMA Surg. 2016 Dec 1; 151(12): 1157-1165. [PMID 27653498]

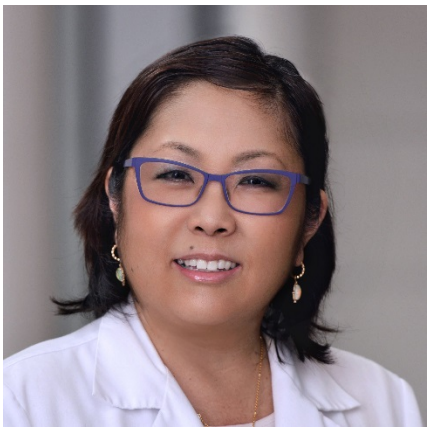
6. Massarweh NN, Anaya DA, Kougias P, Bakaeen FG, Awad SS, Berger DH. Variation and Impact of Multiple Complications on Failure to Rescue after Inpatient Surgery. Ann Surg. 2017 Jul; 266(1): 59-65. [PMID 27429030]

7. Mason MC, Chang GJ, Petersen LA, Sada YH, Tran Cao HS, Chai C, Berger DH, Massarweh NN. National Quality Forum Colon Cancer Quality Metric Performance—How are Hospitals Measuring Up? Ann Surg. In press. [PMID 27617852]

8. Mason M, Tran Cao HS, Awad SS, Farjah F, Chai C, Massarweh NN. Hospital Minimally Invasive Surgery Utilization for Gastrointestinal Cancer Resection. In press Ann Surg. . [PMID 28498235]

9. Tran Cao HS, Zhang Q, Sada YH, Silberfein E, Hsu C, van Buren G, Chai C, Fisher W, Massarweh NN. Value of Lymph Node Positivity in Treatment Planning for Early Stage Pancreatic Cancer. Surgery. 2017 Sept; 162(3): 557-567. [PMID 28666686]

10. Tran Cao HS, Zhang Q, Sada YH, Chai C, Curely S, Massarweh NN. The Role of Surgery and Adjuvant Therapy in Node Positive Cancers of the Gallbladder and Intrahepatic Bile Ducts. In press Cancer. [PMID 28841223]




## Claire F. Ozaki, M.D.

**Division of General Surgery**
**Baylor College of Medicine**



## Keywords

- Liver Disease


## Research interests

Claire F. Ozaki, M.D. was born in St. Louis, Missouri and grew up in Hawaii and Nebraska. In 1984, she received her M.D. degree from the University of Nebraska College of Medicine in Omaha. After completing a 6-year surgical residency which included one year of research, she stayed at the University of Nebraska and completed a two year transplant surgery fellowship, specializing in liver, kidney and pancreas transplantation.

Dr. Ozaki is board certified in general surgery and has been performing complex abdominal surgeries since 1990. She now specializes in acute care general surgery. Dr. Ozaki and the acute care surgery team apply the most innovative surgical techniques and evidence-based care delivery methods, work as a team to be readily available to our patients, and achieve the highest published standards of surgical outcomes.

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## Selected publications


1. Langnas AN, Marujo WC, Stratta RJ, Wood RP, Ranjan D, Ozaki C, Shaw BW. "A selective approach to preexisting portal vein thrombosis in patients undergoing liver transplantation.." Am. J. Surg.. 1992 January;163(1):132-6. Pubmed PMID: 1733361
2. Barakat O, Rodriguez GC, Raijman I, Allison PM, Nieto J, Ozaki CF, Wood RP, Engler DA. "Clinical value of plasma hepatocyte growth factor measurement for the diagnosis of periampullary cancer and prognosis after pancreaticoduodenectomy.." J Surg Oncol. 2010 December 1;102(7):816-20. Pubmed PMID: 20812348
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4. Stratta RJ, Taylor RJ, Ozaki CF, Bynon JS, Langnas AN, Shaw BW. "Combined pancreas-kidney transplantation versus kidney transplantation alone: analysis of benefit and risk.." Transplant. Proc.. 1993 February;25(1):1298-301. Pubmed PMID: 8442119
5. Stratta RJ, Taylor RJ, Zorn BH, Ozaki C, Larsen JL, Duckworth WC, Langnas AN, Wood RP, Wahl TO, Marujo WC. "Combined pancreas-kidney transplantation: preliminary results and metabolic effects.." Am. J. Gastroenterol.. 1991 June;86(6):697-703. Pubmed PMID: 2038991
6. Barakat O, Cooper JR, Riggs SA, Hoef JW, Ozaki CF, Wood RP. "Complex liver resection for a large intrahepatic cholangiocarcinoma in a Jehovah's witness: a strategy to avoid transfusion.." J Surg Oncol. 2007 September 1;96(3):249-53. Pubmed PMID: 17443725
7. Wood RP, Katz SM, Ozaki CF, Monsour HP, Clark J, Ferraresso M, Baumann L, Thomas M, Weldon M, Hoef J. "Development of the living-related donor liver transplant program at the Texas Medical Center: initial results and surgical complications.." Transplant. Proc.. 1993 August;25(4):50-2. Pubmed PMID: 8351719
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9. Wood RP, Katz SM, Ozaki CF, Monsour HP, Gislason GT, Kelly JH, Sussman NL. "Extracorporeal liver assist device (ELAD): a preliminary report.." Transplant. Proc.. 1993 August;25(4):53-4. Pubmed PMID:8351720


# Yesenia Rojas-Khalil, M.D.

**Assistant Professor of Surgery**

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## Research interests

Dr. Rojas-Khalil has authored and co-authored many original research publications, in addition to contributing to surgical textbook chapters in Current Surgical Therapy, Scientific American Surgery, and The SCORE Curriculum for resident education. She is also the Spanish Video Commentator and Contributing Abstract Translator for Diseases of the Colon and Rectum (DC&R), the official journal for the American Society of Colon and Rectum Surgeons (ASCRS). Dr. Rojas-Khalil is an active member of the American College of Surgeons (ACS) and American Society of Colon and Rectum Surgeons (ASCRS).

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United States

# Bradford Glenn Scott, M.D.

**Professor of Surgery**
**Division of General Surgery**
**Section Chief of Trauma Surgery**
**Vice-Chair for Education**
**Director, General Surgery Residency Program**
**Department of Surgery**
**Baylor College of Medicine**

**Director, Ginni and Richard Mithoff Trauma Center**
**Ben Taub Hospital**

## Research interests

Dr. Scott's clinical and research studies focus on resuscitation of the trauma patient, care for the open abdomen, and on methodologies for complex abdominal wall reconstruction, as well as surgery of the foregut.

## Contact information

Ben Taub Hospital

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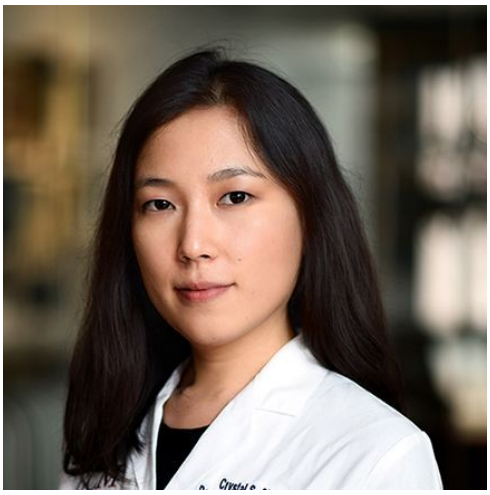
## Selected publications


1. Assessment of communication skills of surgical residents using the Social Skills Inventory. Horwitz IB, Horwitz SK, Brandt ML, Brunicardi FC, Scott BG, Awad SS Am J Surg. 2007 Sep;194(3):401-5.
2. Incidence and clinical characteristics of methicillin-resistant Staphylococcus aureus necrotizing fasciitis in a large urban hospital. Lee TC, Carrick MM, Scott BG, Hodges JC, Pham HQ. Am J Surg. 2007 Dec;194(6):809-813.
3. Impact of a Novel Education Curriculum On Surgical Training Within An Academic Training Program Lee E, Brunicardi FC, Scott BG, Berger DH, Bush RL, Awad SS, and Brandt ML. J Surg. Res. 2008 Feb
4. Thoracoabdominal Shotgun Wounds: an evaluation of factors associated with the need for surgical intervention MM Carrick, CA Morrision, DA Jacob, MA Feanny, HQ Pham, FJ Welsh, MA Norman, BG Scott. The American Journal of Surgery 2008
5. Hypotensive Resuscitation Strategy Reduces Transfusion Requirements and Severe Postoperative Coagulopathy in Trauma Patients with Hemorrhagic Shock: Preliminary Results of a Randomized Control Trial CA Morrison, MM Carrick, MA Norman, BG Scott, FJ Welsh, P Tsai, KR Liscum, MJ Wall, KL Mattox. The Journal of Trauma, 2011 70:652 – 663.
6. Anemia and Jejunal Intussusception: An unusual presentation for a metastatic phyllodes breast tumor. SA Schechet, EP Askenasy, S Dhamne, BG Scott. International Journal of Surgical Case Report. 2012;3(2):62-64.
7. Endovascular Therapy for Overcoming Challenges Presented with Blunt Abdominal Aortic Injury R Gilani, H Saucedo-Crespo, BG Scott, PI Tsai, MJ Wall jr, KL Mattox, Vascular Endovascular Surgery, 2012 May;46(4):329-31
8. Emergency Endovascular Management of Penetrating Gunshot Injuries to the Arteries in the Face and Neck: a case series and review of the literature. Yevich SM, Lee SR, Scott BG, Shaltoni HM, Mawad ME, Benndorf G. Journal Neurointerval Surgery. 2012 Dec 20
9. TEG-guided resuscitation is superior to standardized MTP resuscitation in massively transfused penetrating trauma patients. Tapia NM, Chang A, Norman M, Welsh F, Scott BG, Wall MJ jr, Mattox KL, Suliburk J. Journal of Trauma and Acute Care Surgery 2013 Feb;74(2):378-85; discussion 385-6.
10. Assessment and standardization of resident handoff practices: PACT projectTapia NM, Fallon SC, Brandt ML, Scott BG, Suliburk JW. Journal of Surgical Research 2013 September; 184(1):71-7




# Crystal S. Shin, Ph.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Baylor College of Medicine**



## Keywords

- Biomedical engineering
- Biopharmaceutics


## Research interests

Dr. Shin's research focuses on the development of in vitro 3D tumor models using biopolymer scaffolds as tools to evaluate the cytotoxicity of anticancer drugs. Crystal then joined the Department of Ophthalmology at Baylor College of Medicine as a postdoctoral associate. During this time, she developed a novel ocular drug delivery system, nanowafer. Her current research interests focus on developing broadly applicable drug delivery systems with enhanced therapeutic efficacy by integrating nanotechnology and 3D bioprinting technology.

## Contact information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## Selected publications


1. Shin CS, Marcano DC, Park K, Acharya G.. "Application of Hydrogel Template Strategy in Ocular Drug Delivery." Methods Mol Biol. Pubmed PMID: 28238144
2. Marcano DC, Shin CS, Lee B, Isenhart LC, Liu X, Li F, Jester JV, Pflugfelder SC, Simpson J, Acharya G. "Synergistic Cysteamine Delivery Nanowafer as an Efficacious Treatment Modality for Corneal Cystinosis." Mol Pharm. Pubmed PMID: 27571217
3. Bian F, Shin CS, Wang C, Pflugfelder SC, Acharya G, De Paiva CS. "Dexamethasone Drug Eluting Nanowafers Control Inflammation in Alkali-Burned Corneas Associated With Dry Eye." Invest Ophthalmol Vis Sci. Pubmed PMID: 27327581
4. Coursey TG, Henriksson JT, Marcano DC, Shin CS, Isenhart LC, Ahmed F, De Paiva CS, Pflugfelder SC, Acharya G. "Dexamethasone nanowafer as an effective therapy for dry eye disease." J Control Release. Pubmed PMID: 26184051
5. Yuan X, Marcano DC, Shin CS, Hua X, Isenhart LC, Pflugfelder SC, Acharya G. "Ocular drug delivery nanowafer with enhanced therapeutic efficacy." ACS Nano. Pubmed PMID: 25585134
6. Kwak B, Ozcelikkale A, Shin CS, Park K, Han B. "Simulation of complex transport of nanoparticles around a tumor using tumor-microenvironment-on-chip." J Control Release.
7. Shin CS, Kwak B, Han B, Park K. "Development of an in vitro 3D tumor model to study

therapeutic efficiency of an anticancer drug." Mol Pharm.
8. Acharya G, Shin CS, Vedantham K, McDermott M, Rish T, Hansen K, Fu Y, Park K. "A study of drug release from homogeneous PLGA microstructures." J Control Release. Pubmed PMID: 20381555
9. Acharya G, Shin CS, McDermott M, Mishra H, Park H, Kwon IC, Park K. "The hydrogel template method for fabrication of homogeneous nano/microparticles." J Control Release. Pubmed PMID: 19822178

# Robert Ellis Southard, MD

**Assistant Professor of Surgery**
**Division of General Surgery**
**Baylor College of Medicine**

**Director, Surgical Critical Care**
**Baylor St. Luke's Medical Center**

## Keywords

- Trauma
- Immune function
- Infection

## Research interests

Dr. Southard's research interests involve determining why critically ill and injured patients develop hospital-acquired infections.

## Contact information

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## Selected publications

1. Skrabal CA, Thompson LO, Southard RE, Joyce DL, Noon GP, Loebe M, Youker KA. "Interaction between isolated human myocardial mast cells and cultured fibroblasts." J Surg Res.
2. Skrabal CA, Thompson LO, Potapov EV, Southard RE, Joyce DL, Youker KA, Noon GP, Loebe M. "Organ-specific regulation of pro-inflammatory molecules in heart, lung, and kidney following brain death." J Sug Res.
3. Southard RE, Nelson JC, Joyce DL, Thompson LO, Skrabal CA, Toree-Amione G, Youker KA, Noon GP, Loebe M. "Placement of a left ventricular assist device in a patient with dextrocardia." J Heart Lung Transplant.

4. Joyce DL, Southard RE, Torre-Amione G, Noon GP, Land GA, Loebe M. "Impact of left Ventricular assist device (LVAD)-mediated humoral sensitization on post-transplant outcomes." J Heart Lung Transplant.
5. Perme CS, Southard RE, Joyce DL, Noon GP, Loebe M. "Early mobilization of LVAD recipients who require prolonged mechanical ventilation." Tex Heart Inst J.
6. Jahanyar J, Joyce DL, Southard RE, Loebe M, Noon GP, Koerner MM, Torre-Amione G, Youker KA. "Decorin-mediated transforming growth factor-beta inhibition ameliorates adverse cardiac remodeling." J Heart Lung Transplant.
7. Barshes NR, Udell IW, Joyce DL, Southard RE, O'Mahony CA, Goss JA. "A pooled analysis of posttransplant survival following combined heart-liver transplantation." Transplantation.
8. Torre-Amione G, Southard RE, Loebe M, Yourker KA, Bruckner B, Estep JD, Tierney M, Noon GP. "Reversal of secondary pulmonary hypertension by axial and pulsatile mechanical circulatory support." J Heart Lung Transplant.
9. Southard RE and Boyle WA. "Corticosteroids and the original vasopressin and septic shock trial subgroups." Crit Care Med.
10. Southard RE, Ghosh S, Hilliard J, Davis C, Mazuski C, Walton A, Hotchkiss R. "Pulmonary Contusion is associated with TLR4 upregulation and decreased susceptibility to Pseudomonas Pneumonia in a mouse model." Shock.


# Eric J. Silberfein, M.D., F.A.C.S.

**Associate Professor of Surgery**
**Division of Surgical Oncology**
**Associate Director, General Surgery Residency Program**
**Baylor College of Medicine**

**Chief of Surgical Oncology**
**Ben Taub Hospital**



## Keywords

- Solid organ malignancy
- Resident training


## Research interests

Research interests include the natural history of solid organ tumors as well as the multidisciplinary therapy of solid organ malignancy. Further interests include the education of residents and medical students by improving knowledge and skills through formal curriculum.

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## Selected publications


1. Van Buren G 2nd, Bloomston M, Schmidt CR, Behrman SW, Zyromski NJ, Ball CG, Morgan KA, Hughes SJ, Karanicolas PJ, Allendorf JD, Vollmer CM Jr, Ly Q, Brown KM, Velanovich V, Winter JM, McElhany AL, Muscarella P 2nd, Schmidt CM, House MG, Dixon E, Dillhoff ME, Trevino JG, Hallet J, Coburn NSG, Nakeeb A, Behrns KE, Sasson AR, Ceppa EP, Abdel-Misih SRZ, Riall TS, Silberfein EJ, Ellison EC, Adams DB, Hsu C, Tran Cao HS, Mohammed S, Villafañe-Ferriol N, Barakat O, Massarweh NN, Chai C, Mendez-Reyes JE, Fang A, Jo E, Mo Q, Fisher WE. A Prospective Randomized Multicenter Trial of Distal Pancreatectomy With and Without Routine Intraperitoneal Drainage. Ann Surg 2017. September;266(3): 421-431.
2. Tran Cao HS, Zhang Q, Sada YH, Silberfein EJ, Hsu C, Van Buren G 2nd, Chai C, Katz MHG, Fisher WE, Massarweh NN. Value of lymph node positivity in treatment planning for early pancreatic cancer. Surgery 2017. September;162(3): 557-567
3. Mohammed S, Van Buren Ii G, McElhany A, Silberfein EJ, Fisher WE. Delayed gastric emptying following pancreaticoduodenectomy: Incidence, risk factors, and healthcare utilization. World J Gastrointest Surg. 2017 Mar 27;9(3):73-81. doi: 10.4240/wjgs.v9.i3.73. PubMed PMID: 28396720; PubMed Central PMCID: PMC5366929.
4. Milas SG, Alawadi ZM, Wray CJ, Silberfein EJ, Escamilla RJ, Karanjawala BE, Ko TC, Kao LS. Treatment delays of colon cancer in a safety-net hospital system. J Surg Res 2015. Oct;198(2):311-6.
5. Van Buren G, Bloomston M, Hughes SJ, Winter J, Behrman SW, Zyromski NJ, Vollmer C, Velanovich V, Riall T, Muscarella P, Trevino J, Nakeeb A, Schmidt CM, Behrns K, Ellison EC, Barakat O, Perry KA, Drebin J, House M, Abdel-Misih S, Silberfein EJ, Goldin S, Brown K, Mohammed S, Hodges SE, McElhany A, Issazadeh M, Jo E, Mo Q, Fisher WE. A Randomized Prospective Multicenter Trial of Pancreaticoduodenectomy With and Without Routine Intraperitoneal Drainage. Ann Surg 2014. Apr 259(4): 605-612.
6. Silberfein EJ, Bao R, Lopez A, Grubbs EG, Lee JE, Evans DE, Perrier ND. Reoperative parathyroidectomy: Location of missed glands based on a contemporary nomenclature system. Archives of Surgery 2010; 145(11): 1065-1068.
7. Silberfein EJ, Kattepogu KM, Hu CY, Skibber J, Rodriguez-Bigas M, Feig B, Das P, Krishnan S, Crane C, Kopetz S, Eng C, Chang G. Long-term recurrence and survival following surgery for distal rectal cancer. Annals of Surgical Oncology 2010; 17(11): 2863-9.
8. Silberfein EJ, Hunt KK, Broglio K, Shen J, Sahin A, Le-Petross H, Oh J, Litton J, Hwang RF, Mittendorf EA. Clinicopathologic factors associated with involved margins following breast-conserving surgery for invasive lobular carcinoma. Clinical Breast Cancer 2010; 10: 52-58.
9. Khawja SN, Mohammed S, Silberfein EJ, Musher BL, Fisher WE, Van Buren G 2nd. Pancreatic cancer disparities in African Americans. Pancreas 2015. May;44(2):522-7.
10. Mohammed S, Statz AE, Salmans JA, Lassinger BK, Contreras A, Gutierrez C, Bonefas E, Liscum KR, Silberfein EJ. Granulomatous mastitis: A 10-year experience from a large inner city county hospital. J Surg Res 2013. Sep;184(1): 299-303.

# James W. Suliburk, M.D., F.A.C.S.

**Associate Professor of Surgery**
**Division of General Surgery**
**Chief, Endocrine Surgery**
**Michael E. DeBakey Department of Surgery**

**Keywords**

- Mobile Technology
- Patient Engagement
- Safety & Quality in Surgery

**Research interests**

Dr. Suliburk's research program offers opportunities in translational science, clinical outcomes and technology development/innovation. Research interests include clinical outcomes in endocrine surgery, outcomes in acute care and trauma surgery, surgical disparities and application of mobile technology to improve peri-operative surgical care, patient engagment and communication. The research comes from the establishment of a comprehensive and multidisciplinary treatment of endocrine surgical program at Ben Taub Hospital and Baylor St. Luke's Medical Center. Translational research opportunities include development of novel molecular markers to predict outcome in endocrine surgical disease (thyroid cancer, hyperthyroidism, hyperparathyroidism, and adrenal tumors) as well as metabolic markers of the endocrine response in severely injured major trauma patients. Clinical research includes outcomes analysis of access to care for underserved populations undergoing endocrine surgery along with developing novel percutaneous surgical approaches to treat thyroid, parathyroid and adrenal disease and ongoing refinement of hemorrhagic shock resuscitation strategies to improve survival in our trauma patients. Exciting work recently begun in technology and innovation. Mobile technology has become an ever-present part of daily life and we have now begun to study and apply methods of utilizing automated mobile technology to improve communication with patients for detection of impending complications and to supplement peri-operative care for surgical patients. Finally and perhaps most importantly we have launched a program to enhance safety in surgery through the a human factors engineering based approach to analyze surgical complications across the entire adult hospital system of Baylor College of Medicine.

**Contact information**

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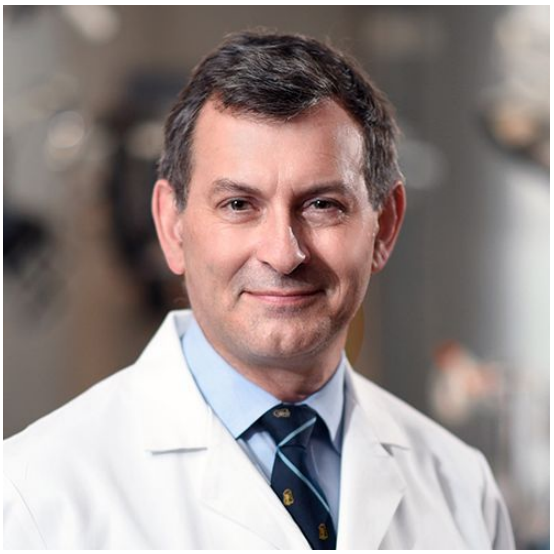
## Selected publications


1. O'Neill CJ, Spence A, Logan B, Suliburk JW, Soon PS, Learoyd DL, Sidhu SB, Sywak MS. "Adrenal Incidentalomas: risk of adrenocortical carcinoma and clinical outcomes." J Surg Oncol. 2010 Oct 1; 102(5):450-3.
2. Oucharek JJ, O'Neal CJ, Suliburk JW, Sywak MS, Delbridge LW, Sidhu SB. "Durability of focused minimally invasive parathyroidectomy in young patients with sporadic primary hyperthyroidism." Ann Surg Oncol. 2011 May; 18(5): 1290-2
3. Suliburk JW, Sywak MS, Sidhu SB, Delbridge LW. "1000 Minimally Invasive Parathyroidectomies without Intra-Operative Parathyroid Hormone Measurement: Lessions Learned." ANZ J Surg. 2011 May; 81(5): 362-5
4. Chang LY, O'Neill C, Suliburk J, Sidhu S, Delbridge L, Sywak M. "Sutureless total thyroidectomy: a safe and cost-effective alternative." ANZ J Surg. 2011 Jul-Aug;81(7-8):510-4.
5. O'Neill CJ, Chang LY, Suliburk JW, Sidhu SB, Delbridge LW, Sywak MS. "Sutureless thyroidectomy: surgical technique." ANZ J Surg. 2011 Jul-Aug;81(7-8):515-8.
6. Brown S, O'Neill C, Suliburk J, Sidhu S, Sywak M, Gill A, Robinson B, Delbridge L. "Parathyroid carcinoma: increasing incidence and changing presentation.." ANZ J Surg. 2011 Jul-Aug;81(7-8):528-32.
7. Ortiz J, Suliburk JW, Wu K, Bailard NS, Mason C, Minard CG, Palvadi RR. "Bilateral transversus abdominis plane block does not decrease postoperative pain after laparoscopic cholecystectomy when compared with local anesthetic infiltration of trocar insertion sites." Reg Anesth Pain Med. 2012 Mar;37(2):188-92.
8. Sierink JC, Saltzherr TP, Beenen LF, Luitse JS, Hollmann MW, Reitsma JB, Edwards MJ, Hohmann J, Beuker BJ, Patka P, Suliburk JW, Dijkgraaf MG, Goslings JC. "A multicenter, randomized controlled trial of immediate total-body CT scanning in trauma patients (REACT-2)." BMC Emerg Med. 2012 Mar 30;12(1):4.
9. Tapia NM, Chang A, Norman M, Welsh F, Scott B, Wall MJ Jr, Mattox KL, Suliburk JW. "TEG-guided Resuscitation is Superior to Standardized MTP Resuscitation in Massively Transfused penetrating trauma patients." J Trauma Acute Care Surg. 2013 Feb;74(2):378 – 85; discussion 385-6
10. Balentine, CJ, Domingo, RP, Patel R, Laucirica R, Suliburk JW. "Thyroid lobectomy for indeterminate FNA: not without consequences." J Surg Res. 2013 Sep;184(1); 189-92.doi:10.1016/j/jss.2013.05.076.Epub 2013 Jun 11.




## Alastair Thompson, BSc, MBChB, MD

**Professor and Chief, Breast Surgery**
**Division of Surgical Oncology**
**Olga Keith Wiess Chair of Surgery**

**Co-Director, Lester and Sue Smith Breast Center**
**Dan L Duncan Comprehensive Cancer Center**
**Baylor College of Medicine**



### Keywords

- DCIS
- Triple Negative Breast Cancer
- Clinical translational trials


### Research Interests

Dr. Thompson has served as principal investigator on landmark breast cancer clinical trials, including SOLE, MA 32, MINDACT and KRISTINE trials. He currently chairs the Translational Medicine Breast Group of the Southwest Oncology Group (SWOG); co-chairs the Loco-regional Steering Group of the Translational Breast Cancer Research Consortium (TBCRC), is a member of the NCI BOLD taskforce and of the Early Breast Cancer Trialists' Collaborative Group, is national co-investigator and correlative science lead for the Comparison of Operative to Monitoring and Endocrine Therapy (COMET) trial for low-risk DCIS, and co-chairs the NCI-Breast Cancer Steering Committee-proposed "no surgery" clinical trial planning committee. Dr. Thompson also continues to chair the Sloane Project (the NHS Breast Screening Programme non-invasive prospective cohort study of 13,000 women), which is the largest prospective study of screen detected DCIS in the world. He is co-author of over 350 publications.

## Contact information

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## Selected publications

1. Maetens M, Brown D, Irrthum A, Aftimos P, Viale G, Loibl S, Laes JF, Campbell PJ, Thompson A, Cortes J, Seiler S, Vinnicombe S, Oliveira M, Rothé F, Bareche Y, Fumagalli D, Zardavas D, Desmedt C, Piccart M, Loi S, Sotiriou C. "The AURORA pilot study for molecular screening of patients with advanced breast cancer-a study of the breast international group." NPJ Breast Cancer.
2. Maxwell AJ, Clements K, Hilton B, Dodwell DJ, Evans A, Kearins O, Pinder SE, Thomas J, Wallis MG, Thompson AM. "Risk Factors for The Development of Invasive Cancer in Unresected Ductal Carcinoma In Situ." European Journal of Surgical Oncology.
3. Rosso KJ, Weiss A, Thompson AM. "Are There Alternative Strategies for the Local Management of Ductal Carcinoma in Situ?." Surg Oncol Clin N Am.
4. Grimm LJ, Ryser MD, Partridge AH, Thompson AM, Thomas JS, Wesseling J, Hwang ES. "Surgical Upstaging Rates for Vacuum Assisted Biopsy Proven DCIS: Implications for Active Surveillance Trials." Ann Surg Oncol. Pubmed PMID: 28795370
5. Hurvitz SA, Martin M, Symmans WF, Jung KH, Huang CS, Thompson AM, Harbeck N, Valero V, Stroyakovskiy D, Wildiers H, Campone M, Boileau JF, Beckmann MW, Afenjar K, Fresco R, Helms HJ, Xu J, Lin YG, Sparano J, Slamon D. "Neoadjuvant trastuzumab, pertuzumab, and chemotherapy versus trastuzumab emtansine plus pertuzumab in patients with HER2-positive breast cancer (KRISTINE): a randomised, open-label, multicentre, phase 3 trial." Lancet Oncol. Pubmed PMID: 29175149
6. Henderson S, Purdie C, Michie C, Evans A, Lerski R, Johnston M, Vinnicombe S, Thompson AM. "Interim heterogeneity changes measured using entropy texture features on T2-weighted MRI at 3.0 T are associated with pathological response to neoadjuvant chemotherapy in primary breast cancer." Eur Radiol.
7. Colleoni M, Luo W, Karlsson P, Chirgwin J, Aebi S, Jerusalem G, Neven P, Hitre E, Graas MP, Simoncini E, Kamby C, Thompson A, et al, SOLE Investigators. "Extended adjuvant intermittent letrozole versus continuous letrozole in

postmenopausal women with breast cancer (SOLE): a multicentre, open-label, randomised, phase 3 trial." Lancet Oncol. Pubmed PMID: 29158011

8. Metcalfe LN, Zysk AM, Yemul KS, Jacobs LK, Oker EE, Underwood HR, Thompson AM. "Beyond the Margins-Economic Costs and Complications Associated With Repeated Breast-Conserving Surgeries." JAMA Surg. Pubmed PMID: 28768303
9. Glodzik D, Morganella S, Davies H, Simpson PT, Li Y, Zou X, Diez-Perez J, Staaf J, Alexandrov LB, Smid M, Brinkman AB, Rye IH, Russnes H, Raine K, Purdie CA, Lakhani SR, Thompson AM, et al. "Corrigendum: A somatic-mutational process recurrently duplicates germline susceptibility loci and tissue-specific super-enhancers in breast cancers." Nat Genet. Pubmed PMID: 29074948
10. Candelaria RP, Hansakul P, Thompson AM, Le-Petross H, Valero V, Bassett R, Huang ML, Santiago L, Adrada BE. "Analysis of Stereotactic Biopsies Performed on Suspicious Calcifications Identified within 24 months after Completion of Breast Conserving Surgery and Radiation Therapy for Early Breast Cancer: Can Biopsy Be Obviated?." Am J Surg. Pubmed PMID: 28712671


## Barbara Wells Trautner, M.D., Ph.D.

**Professor of Surgery**
**Director of Clinical Research**
**Department of Surgery**
**Associate Professor of Medicine**
**Baylor College of Medicine**



## Keywords

- Urinary tract infections
- Healthcare-associated infections
- Antimicrobial stewardship


## Research interests

Barbara W. Trautner, M.D., Ph.D., is an infectious diseases clinician-investigator at Baylor College of Medicine and the Michael E. DeBakey Veterans Affairs Medical Center, affiliated with the Center for Innovations in Quality, Effectiveness, and Safety (IQuESt). Her primary research interest is the development of new strategies for the prevention of catheter-associated urinary tract infection (CAUTI). She has worked in this area for the past 17 years, supported first by an NIH K23 award and then by a VA Career Development Award. While on career development award support, Dr. Trautner obtained her PhD in clinical investigation from Baylor College of Medicine Graduate School of Biomedical Sciences. Her interest in CAUTI prevention has led her to develop two productive branches of investigation, one in health services research and one in microbiology translational research.

Dr. Trautner's outcomes research has focused on reducing antimicrobial overuse, particularly for the extremely common condition of catheter-associated asymptomatic bacteriuria. Her team completed a successful VA Health Services Research and Development merit review project utilizing guidelines implementation to decrease inappropriate treatment of catheter-associated asymptomatic bacteriuria and is now disseminating this intervention, both inside and outside the VA.

The overall goal of Dr. Trautner's translational research has been to develop novel strategies for prevention of CAUTI in persons who have chronic bacteriuria, such as those with neurogenic bladders or chronic indwelling catheters. One area of investigation is bacterial interference, or using benign bacteria to prevent symptomatic infection with pathogens. In clinical trials Dr. Trautner's group utilized urinary catheters coated with a biofilm of benign *E. coli* to achieve bladder colonization and protection from CAUTI. This work has led to her current work with bacteriophages, or viruses specific for certain strains of bacteria, as a means to address the highly resistant pathogens often found in infections of indwelling medical devices.

## Contact information

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**Selected publications**

1. Krein SL, Greene MT, King B, Welsh D, Fowler KE, **Trautner BW**, Ratz D, Saint S, Roselle G, Clifton M, Kralovic S, Martin T, Mody L. Assessing a National Collaborative Program Focused on Catheter-Associated Urinary Tract Infection Prevention in a Veterans Health Administration (VHA) Nursing Home Cohort. Infect Control Hosp Epidemiol. 2018 May 10:1-6. PMID: 29745358
2. **Trautner, BW**. Fluoroquinolones for urinary tract infection and within-household spread of resistant Enterobacteriaeceae: The smoking gun. Clin Microbiol and Infect. 2018, Apr 9. PMID: 29649605
3. Horstman MJ, Spiegelman A, Naik AD, **Trautner BW**. Urine culture on admission impacts antibiotic use and length of stay: A retrospective cohort study. Infection Control and Hospital Epidemiology 2018 Mar 27:1-8. PMID: 29582719
4. **Trautner BW**, Prasad P, Grigoryan L, Hysong SJ, Kramer JR, Rajan S, Petersen NJ, Rosen T, Drekonja DM, Graber C, Patel P, Lichtenberger P, Gauthier TP, Wiseman S, Jones M, Sales A, Krein S, Naik AD; Less is More Study Group. Protocol to disseminate a hospital-site controlled intervention using audit and feedback to implement guidelines concerning inappropriate treatment of asymptomatic bacteriuria. Implement Sci. 2018 Jan 19;13(1):16. PMID: 29351769
5. Skelton F, Suda K, Evans C, **Trautner B.** Effective antibiotic stewardship in spinal cord injury: Challenges and a way forward. J Spinal Cord Med. 2018 Jan 11:1-4. PMID: 29324181
6. Horstman M, Spiegelman A, Naik A, **Trautner BW**. National patterns of urine testing during inpatient admission. Clinical Infectious Diseases. 2017 Oct1; 65(7): 1199–1205. PMID: 29370366
7. Naik AD, Horstman MJ, Li LT, Paasche-Orlow MK, Campbell B, Mills WL, Herman LI, Anaya DA, **Trautner BW**, Berger DH. User-centered design of discharge warnings tool for colorectal surgery patients. Journal of the American Medical Informatics Association. 2017 Sep 1;24(5):975-980. PMID: 28340218
8. Mody L, Greene MT, Meddings J, Krein SL, McNamara SE, **Trautner BW**, Ratz D, Stone N, Min L, Schweon SJ, Rolle AJ, Olmsted RN, Burwen DR, Battles J, Edson B, Saint S. A national implementation project to prevent catheter-associated urinary tract infection in nursing home residents. JAMA Intern Med. 2017 Aug 1;177(8):1154-1162. PMID: 28525923
9. Green S, Kaelber J, Ma L, **Trautner B**, Ramig F, Maresso A. Bacteriophages from ExPEC reservoirs kill pandemic multidrug-resistant strains of clonal group ST131 in animal models of bacteremia. Scientific Reports, 2017 Apr 12; 7:46151. PMID: 28415049
10. Barshes N, **Trautner BW**. Treatment failure and leg amputation among patients with foot osteomyelitis. The International Journal of Lower Extremity Wounds. 2016 Dec;15(4):303-312. PMID: 27581112

# George Van Buren, II, M.D.

**Associate Professor of Surgery**
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**Baylor College of Medicine**

## Keywords

- Pancreatic cancer
- Gastrointestinal malignancies
- Whipple procedure

## Research interests

Dr. Van Buren's primary area of interest is pancreatic cancer and gastrointestinal malignancies. I am interested in development of clinical trials, analysis of clinical outcomes in pancreatic cancer patients, and genomic analysis of pancreatic cancer patients. Currently he is involved in a Clinical Trial of a Phase III Study of FOLFIRINOX With or Without HyperAcute®-Pancreas (algenpantucel-L) Immunotherapy in Subjects with Borderline Resectable or Locally Advanced disease. He is also involved with collaborations to perform genomic analysis of pancreatic cystic fluid and analysis of serum in pancreatic adenocarcinoma patients for circulating tumor cells. He also has an interest in evaluation of patients with pancreatic cancer and comparisons between various races.

## Contact information

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## Selected publications


1. Van Buren G 2nd, Ramanathan R, Krasinskas A, Smith R, Abood G, Shaui Y, Potter D, Bahary N, Lembersky B, Zureikat AH, Bartlett DL, Zeh HJ, Moser AJ. Phase II trial of fixed-dose rate gemcitabine, bevacizumab, and concurrent 30 Gy radiotherapy as preoperative treatment for potentially resectable pancreatic adenocarcinoma. Ann Surg Oncol. 2013 Aug 1.
2. Harvin JA, Van Buren G, Tsao K, Cen P, Ko TC, Wray CJ. Hepatocellular carcinoma survival in un- and underinsured patients. J Surg Res. 2011 Apr;166(2):189-93.
3. Van Buren G 2nd, Gray MJ, Dallas NA, Xia L, Lim SJ, Fan F, Mazar A, Ellis LM. Targeting the urokinase plasminogen activator receptor with a monoclonal antibody impairs the growth of human colorectal cancer in the liver. Cancer. 2009 Jul 15;115(14):3360-8.
4. Van Buren G 2nd, Yang AD, Dallas NA, Gray MJ, Lim SJ, Xia L, Fan F, Somcio R, Wu Y, Hicklin DJ, Ellis LM. Effect of molecular therapeutics on liver regeneration in a murine model. J Clin Oncol. 2008 Apr 10;26(11):1836-42.
5. Van Buren G 2nd, Rashid A, Yang AD, Abdalla EK, Gray MJ, Liu W, Somcio R, Fan F, Camp ER, Yao JC, Ellis LM. The development and characterization of a human midgut carcinoid cell line. Clin Cancer Res. 2007 Aug 15;13(16):4704-12.

# R. Mario Vera, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Baylor College of Medicine**

## Keywords


- Trauma surgery
- General surgery
- Acute care surgery
- Critical care


## Research interests

Dr. Vera's interests are trauma, emergency general surgery, and critical care.

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## Selected publications

1. Heffernan D, Vera RM, Monaghan S, Thakkar R, Kozloff M, Connolly M, Gregg S, Machan J, Harrington D, Adams C, Cioffi W. "Impact of Socioethinic Factors on Outcomes Following Traumatic Brain Injury.


# Jeremy Ward, M.D.

**Assistant Professor of Surgery**
**Division of General Surgery**
**Program Director, Surgical Critical Care Fellowship**
**Baylor College of Medicine**

**Medical Director, Trauma Surgery ICU**
**Ben Taub Hospital**


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## Selected publications


2. Ward JL, Harting MT, Cox CS, Mercer DW. "Effects of Ketamine on Endotoxin and Traumatic Brain Injury Induced Cytokine Production in the Rat." J Trauma.
3. Laparotomy Attenuates Lipopolysaccharide Induced Gastric Bleeding. "Ward JL, Delano BA, Adams SD, Mercer EE, Mercer DW." Dig Dis Sci.
4. Ward JL, Adams SD, Delano BA, Clarke C, Radhakrishnan RS, Weisbrodt NW, Mercer DW. "Ketamine Suppresses LPS-induced Bile Reflux and Gastric Bleeding in the Rat." J Trauma.
5. Suliburk JW, Ward JL, Helmer KS, Zuckerbraun BS, Mercer DW. "Ketamine Induced Hepatoprotection: The Role of Heme Oxygenase-1." Am J Physiol Gastrointest Liver Physiol.
6. Ward JL, Prieto VG, Joseph A, Chevray P, Kronowitz S, Sturgis EM. "Neurothekeoma." Otolaryngol Head Neck Surg.


# Chad Wilson, M.D., MPH

**Associate Professor of Surgery**
**Division of General Surgery**
**Baylor College of Medicine**

**Trauma Director**
**Ben Taub Hospital**



## Keywords

- Trauma epidemiology
- Global surgery
- Healthcare disparities


## Research interests

During surgical residency, Dr. Wilson he took a two year hiatus from clinical work to concentrate on research and completed the VA Outcomes Fellowship at the White River Junction VA in Vermont while simultaneously earning a MPH in 2006 from the Dartmouth Medical School's Center for the Evaluative Clinical Sciences in Hanover, New Hampshire.

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## Selected publications


1. Wilson CT, Fisher ES, Welch HG, Siewers AE, Lucas FL. "U.S. Trends in CABG Hospital Volume: The Effect of Adding Cardiac Surgery Programs." Health Affairs. Pubmed PMID: 17211025
2. Wilson CT, Woloshin S, Schwartz LM. "Choosing Where to Have Major Surgery: Who make the Decision?." Arch Surg. Pubmed PMID: 17372048
3. Wilson CT, Fisher E, Welch HG. "Racial Disparities in Abdominal Aortic Aneurysm Repair Among Male Medicare Beneficiaries." Arch Surg. Pubmed PMID: 18490563

4. Sim V, Bernstein MP, Frangos SG, Wilson CT, Simon RJ, McStay CM, Huang PP, Pachter HL, Todd SR. "The (f)utility of flexion-extension C-spine films in the setting of trauma.." Am J Surg. Pubmed PMID: 24139671
5. Slaughter DR, Williams N, Wall SP, Glass NE, Simon R, Todd SR, Bholat OS, Jacko S, Roe M, Wilson CT. "A Community Traffic Safety Analysis of Pedestrian and Bicyclist Injuries Based on the Catchment Area of a Trauma Center." J Trauma Acute Care Surg. Pubmed PMID: 24662878
6. Glass NE, Frangos SG, Simon RJ, Bholat OS, Todd SR, Wilson C, Jacko S, Slaughter D, Foltin G, Levine DA. "Risky Behaviors Associated with Pediatric Pedestrians and Bicyclists Struck by Motor Vehicles." Pediatr Emerg Care. Pubmed PMID: 24849277
7. Sim V, Kao LS, Jacobson J, Frangos S, Brundage S, Wilson CT, Simon R, Glass NE, Pachter HL, Todd SR. "Can Old Dogs Learn New “Transfusion Requirements in Critical Care”: A Survey of Packed Red Blood Cell Transfusion Practices among Members of The American Association for the Surgery of Trauma." Am J Surg. Pubmed PMID: 26025750
8. Sethi M, Heidenberg J, Wall SP, Ayoung-Chee P, Slaughter D, Levine DA, Jacko S, Wilson C, Marshall G, Pachter HL, Frangos SG. "Bicycle Helmets are Highly Protective against Traumatic Brain Injury within a Dense Urban Setting." Injury. Pubmed PMID: 26254573
9. Butler KL, Chang Y, DeMoya M, Feinstein A, Ferrada P, Maduekwe U, Maung AA, Melo N, Odom S, Olasky J, Reinhorn M, Smink DS, Stassen N, Wilson CT. "Needs Assessment for a Focused Radiology Curriculum in Surgical Residency: A Multicenter Study." Am J Surg. Pubmed PMID: 26329901
10. DiMaggio C, Ayoung-Chee P, Shinseki M, Wilson C, Marshall G, Lee DC, Wall S, Maulana S, Pachter HL, Frangos S. "Traumatic Injury in the United States: In-Patient Epidemiology 2000-2011." Injury. Pubmed PMID: 27157986


## Qizhi Cathy Yao, M.D., Ph.D.

**Professor**
**Michael E. DeBakey Department of Surgery**
**Department of Molecular Virology and Microbiology**
**Department of Pathology and Immunology**
**Department of Pharmacology**



## Keywords

- **Pancreatic cancer**
- **HIV**
- **Immunotherapy**
- **Mesothelin**
- **MicroRNA**
- **Nanoparticle targeted delivery**
- **Vaccine**


## Research interests

**My research programs include HIV vaccine development, pancreatic cancer pathogenesis, and therapy. Specifically:**

**Developing chimeric virus-like particle HIV vaccines**

**Understanding the functional roles of mesothelin and Trop2 in pancreatic cancer pathogenesis**

**Understanding the functional roles of miR-198 in pancreatic cancer pathogenesis**

**Understanding the functional roles of axon guidance gene Semaphorin 3E in pancreatic cancer pathogenesis**

**Developing targeted nanoparticle therapy in pancreatic cancer**

**Developing immunotherapy for pancreatic cancer**

## HIV Vaccines

My lab is interested in developing non-infectious HIV virus-like particles (VLPs) as candidate HIV mucosal vaccines for both preventive and therapeutic purposes. In preclinical studies, VLPs formed by structural proteins are highly immunogenic and capable of inducing protective

immunity against various viral infections. We have modified vaccine immunogens into chimeric HIV VLPs which contain influenza viral surface glycoprotein HA or other immunologically functional molecules. We have shown that the chimeric HIV VLPs can induce enhanced humoral and cellular immune responses against HIV in a mouse model.

We have also studied the basic mechanisms of VLP-induced humoral and cellular immune responses, and other factors that affect these responses. For example, we found that VLP vaccines activate conventional B2 cells and promote B cell differentiation to IgG2a producing plasma cells; that VLP vaccines travel to the lymph nodes upon immunization and can be directly visualized by optical imaging techniques; and that intradermal immunization generates improved responses and might be a preferable delivery route for viral and cancer immunotherapeutic studies involving VLPs.

Since dendritic cells (DCs) have long been known to be pivotal in initiating immune responses, we are also interested in how VLPs modulate DC functions and will evaluate the efficacy of VLP-pulsed DC vaccines. In addition, we are testing the efficacy of modified chimeric VLP oral-mucosal immunization with novel vaccine adjuvants in non-human primates.

Pancreatic cancer pathogenesis and therapy

Pancreatic cancer has one of the highest mortality rates and ranks as the third leading cause of cancer death in North America. Survival is poor because there are no reliable tests for early diagnosis and no effective therapies to treat metastatic disease. There is a need to better understand the molecular mechanisms of pancreatic cancer tumorigenesis and to develop effective treatments. My lab currently focuses on the study of key molecules in pancreatic cancer, including mesothelin (MSLN), trop2, and semaphorin 3E, and in their mechanisms of regulation. I am also interested in the involvement of microRNAs (miR-198) in pancreatic cancer, and how their dysregulation leads to pathogenesis. We are also currently exploring tumor-associated molecule targeted therapies and RNA interference delivery by liposomes and nanoparticles in vivo. Our group has shown that vaccinating mice with chimeric virus- like particles containing MSLN significantly inhibited tumor progression, suggesting a new therapeutic vaccine strategy whereby MSLN is targeted to attempt to control pancreatic cancer progression. We are also employing a K-ras mutation spontaneous pancreatic cancer mouse model, humanized tumor-bearing mouse model, and patient-derived xenograft (PDX) model to study prevention and the potential of our therapeutic regimens in pancreatic cancer.

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## Selected publications

1. Lin-Kin Yong, Syeling Lai, Zhengdong Liang, Ethan Poteet, Qianxing Mo, George Van Buren, William E. Fisher, Changyi Chen, Qizhi Yao. (2016) Overexpression of Semaphorin-3E enhances pancreatic cancer cell growth and associates with poor patient survival. Oncotarget. 2016 Nov 29. doi: 10.18632/oncotarget.13704. [Epub ahead of print] PMID: 27911862.
2. Ethan Poteet, Phoebe Lewis, Changyi Chen, Sam On Ho, Thai Do, SuMing Chiang, Celia Labranche, David Montefiori, Gary Fujii, Qizhi Yao. (2016). Toll-like Receptor 3 Adjuvant in Combination with Virus-like Particles Elicit a Strong Humoral Response Against HIV Vaccine. Vaccine, 2016 Nov 21;34(48):5886-5894. doi: 10.1016/j.vaccine.2016.10.036.
3. Vanaja Konduri, Dali Li, Matthew M. Halpert, Dan Liang, Zhengdong Liang, Yunyu Chen, William E. Fisher, Silke Paust, Jonathan M. Levitt, Qizhi Cathy Yao*, William K. Decker*. (2016). Chemo-Immunotherapy Mediates Durable Cure of Orthotopic KrasG12D/p53-/- Pancreatic Ductal Adenocarcinoma. OncoImmunology. 2016 Jul 22;5(9):e1213933 *Co-corresponding authors. PMID: 27757308.
4. Ethan Poteet, Phoebe Lewis, Feng Li, Sheng Zhang, Jianhua Gu, Changyi Chen, Sam On Ho, Thai Do, SuMing Chiang, Gary Fujii, Qizhi Yao. (2015). A novel prime and boost regimen of HIV virus-like particles with TLR4 Adjuvant MPLA induces Th1 oriented immune responses against HIV. PlosOne. 10(8):e0136862. PMID: 26312747
5. Marin-Muller, C., Li, D., Bharadwaj, U., Li, M., Chen, C., Hodges, SH., Fisher, WE., Mo, Q., Hung, MC., Yao Q. (2013). A Tumorigenic Factor Interactome Connected through Tumor Suppressor MicroRNA-198 in Human Pancreatic Cancer. Clinical Cancer Research, 19(21):5901-13.
6. Zhang, S, Yong, L, Li D, Cubas, R, Chen, C, Yao, Q. (2013), Mesothelin virus-like particle immunization controls pancreatic cancer growth through CD8+ T cell induction and reduction in the frequency of CD4+foxp3+ICOS-regulatory T cells. PLoS One, 8(7):e68303.
7. Bharadwaj U, Marin-Muller C, Li M, Chen C, Yao Q. (2011), Mesothelin confers

pancreatic cancer cell resistance to TNF-α-induced apoptosis through Akt/PI3K/NF-κB activation and IL-6/Mcl-1 overexpression. Mol Cancer, 10:106.
8. Bharadwaj U, Marin-Muller C, Zhang Y, Li M, Chen C, Yao Q. (2011), Mesothelin overexpression promotes autocrine IL-6/sIL-6R trans-signaling to stimulate pancreatic cancer cell proliferation. Carcinogenesis, 32(7):1013-1024.
9. Cubas R, Zhang S, Li M, Chen C, Yao Q. (2011), Chimeric Trop2 virus-like particles: a potential immunotherapeutic approach against pancreatic cancer. J Immunother, 34(3):251-263.
10. 10.Zhang S, Cubas R, Li M, Chen C, Yao Q. (2009), Virus-like particle vaccine activates conventional B2 cells and promotes B cell differentiation to IgG2a producing plasma cells. Mol Immunol, 46(10):1988-2001.

# GENERAL THORACIC SURGERY

The division's surgeons and staff are committed to providing outstanding clinical care, and in developing new treatments for thoracic disease through research and innovation. The surgeons perform surgical techniques and new therapies that are on the cutting edge. New technology drives their innovative techniques that lead to less pain after surgery and a speedier postoperative recovery. These surgeons are well suited to provide the best possible care available for patients stricken with lung cancer, esophageal cancer, mesothelioma and a host of other chest diseases. Together, these surgeons are leading the field of thoracic surgery forward.


# Bryan Burt, M.D., FACS

**Associate Professor of Surgery**
**Division of General Thoracic Surgery Director,**
**General Thoracic Surgery Research**
**Interim Chief, General Thoracic Surgery**
**Baylor College of Medicine**



## Keywords

- Tumor immunology
- Non-small cell lung cancer
- Malignant pleural mesothelioma


## Research interests

Dr. Burt's research efforts concentrate on immunologic determinants of pleural mesothelioma and non-small cell lung cancer; he is currently focusing efforts on novel therapeutic intraoperative treatments of pleural mesothelioma.

## Contact information


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## Selected publications


1. Hamaji M, Ali OS, and Burt BM. "A meta-analysis of surgical versus non-surgical management of recurrent thymoma."*Ann Thorac Surg*.
2. Burt BM, Kosinski AS, Shrager JB, Onaitis MW, Weigel T. "Thoracoscopic lobectomy is associated with acceptable morbidity and mortality in patients with predicted postoperative forced expiratory volume in 1 second or diffusing capacity for carbon monoxide less than 40% of normal." *J Thorac Cardiovasc Surg*.
3. Burt BM, Cameron RB, Mollberg NM, Kosinski AS, Schipper PH, Shrager JB, Vigneswaran WT. "Malignant pleural mesothelioma and the Society of Thoracic Surgeons Database: An analysis of surgical morbidity and mortality." *J Thorac Cardiovasc Surg*.
4. Padda SK, Burt BM, Trakul N, Wakelee HA. "Early-stage non-small cell lung cancer: surgery, stereotactic radiosurgery, and individualized adjuvant therapy." *Semin Oncol*.
5. Burt BM, Ali SO, DaSilva MC, Yeap BY, Richards WG, Baldini EH, Sugarbaker DJ. "Clinical indications and results after chest wall resection for recurrent mesothelioma." *J Thorac Cardiovasc Surg*.
6. Burt BM, Bader A, Winter D, Rodig SJ, Bueno R, Sugarbaker DJ. "Expression of interleukin-4 receptor alpha in human pleural mesothelioma is associated with poor survival and promotion of tumor inflammation."
7. Burt BM, Ocejo S, Mery C, Dasilva M, Bueno R, Sugarbaker DJ, Jaklitsch M. "Aggressive and repeated metastasectomy for leiomyosarcoma pulmonary metastases extends survival."
8. Burt BM, Rodig SJ, Tilleman T, Elbardissi AW, Bueno R, Sugarbaker DJ. "Circulating and tumor-infiltrating myeloid cells predict survival in human pleural mesothelioma."*Cancer*.
9. Burt BM, Plitas G, Zheng Z, Bamboat Z, Nguyen HM, Dupont B, and DeMatteo RP. "The lytic potential of human liver natural killer cells is restricted by their expression of killer immunoglobulin-like receptors." *J Immunol*.
10. Mery CM, Pappas AN, Burt BM, Bueno R, Linden PA, Sugarbaker DJ, Jaklitsch MT. "Diameter of Non-small Cell Lung Cancer Correlates With Long-term Survival: Implications for T Stage." *Chest*.

# Philip Worthington Carrott, M.D.

**Assistant Professor of Surgery**
**Division of General Thoracic Surgery**
**Baylor College of Medicine**

## Research interests

Dr. Carrott's research interests include peri-operative nutrition support, enhanced recovery after surgery (ERAS), and ischemic pre-conditioning of the stomach prior to esophagectomy.

## Contact information

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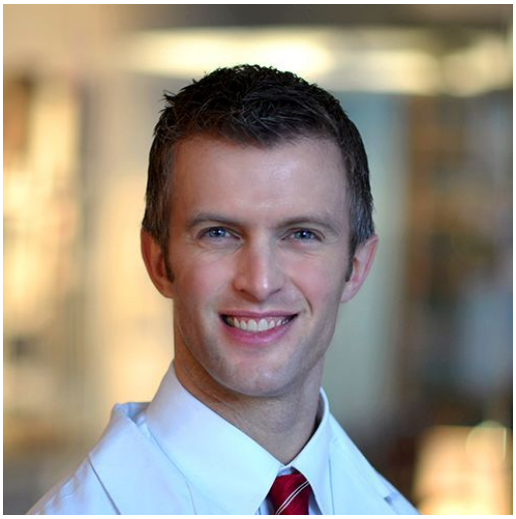
1. Kuppusamy MK, Hubka M, Felisky CD, Carrott P, Kline EM, Koehler RP, Low DE. "Evolving management strategies in esophageal perforation: Surgeons using nonoperative techniques to improve outcomes." J Am Coll Surg. Pubmed PMID: 21429768
2. Carrott Jr PW, Low DE. "Advances in the Management of Esophageal Perforation." Thorac Surg Clin. Pubmed PMID: 22040636
3. Carrott PW, Hong J, Kuppusamy M, Kirtland S, Koehler RP, Low DE. "Repair of giant paraesophageal hernias routinely produces improvement in respiratory function." J Thorac Cardiovasc Surg. Pubmed PMID: 22104674
4. Carrott PW, Hong J, Kuppusamy M, Koehler RP, Low DE. "Clinical ramifications of giant paraesophageal hernias are underappreciated: Making the case for routine surgical repair." Ann Thorac Surg. Pubmed PMID: 22742845
5. Carrott PW, Markar SR, Kuppusamy MK, Traverso LW, Low DE. "Accordion severity grading system: Assessment of relationship between costs, length of hospital stay, and survival in patients with complications after esophagectomy for cancer." J Am Coll Surg. Pubmed PMID: 22683069

6. Cleveland JD, Gazoni LM, Carrott PW, Norton PT, Ailawadi G. "Arrested bullet embolus to the aortic root." Ann Thorac Surg. Pubmed PMID: 23272864
7. Carrott PW, Markar SR, Hong J, Kuppusamy MK, Koehler RP, Low DE. "Iron-Deficiency Anemia Is a Common Presenting Issue with Giant Paraesophageal Hernia and Resolves Following Repair." J Gastrointest Surg. Pubmed PMID: 23515913
8. Carrott PW Jr, Jones DR. "Teaching video-assisted thoracic surgery (VATS) lobectomy." Journal of thoracic disease. Pubmed PMID: 24040525
9. He Y, Wang L, Liu W, Zhong J, Bai S, Wang Z, Thomas DG, Lin J, Reddy RM, Ramnath N, Carrott PW, Lynch WR, Orringer MB, Chang AC, Beer DG, Chen G. "MAP3K3 expression in tumor cells and tumorinfiltrating lymphocytes is correlated with favorable patient survival in lung cancer." Sci Rep. Pubmed PMID: 26088427
10. Philip Carrott, Jill R. Cherry-Bukowiec, Christopher M. Jones, Keith R. Miller, Laszlo Kiraly. "Nutrition Therapy in the Organ Donor: Theoretical Benefits and Barriers to Implementation." Curr Nutr Rep.



# Shawn Groth, M.D.

**Associate Professor of Surgery**
**Division of General Thoracic Surgery**
**Baylor College of Medicine**

**Director of Esophageal Surgical Services**
**Baylor St. Luke's Medical Center**

## Keywords

- Thoracic Surgery
- Outcome Assessment (Health Care)
- Translational Medical Research

## Research interests

Dr. Groth's clinical research focuses on thoracic oncology outcomes research, health care disparities research, and clinical trials. He has explored several topics directed towards improving the guideline treatment of cancer patients. His basic science and translational research efforts are directed towards advancing personalized oncology.

## Contact information

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## Selected publications

1. Jacobs RC, Groth S, Farjah F, Wilson MA, Petersen LA, Massarweh NN. Potential Impact of "Take the Volume Pledge" on Access and Outcomes for Gastrointestinal Cancer Surgery. Ann Surg. 2018 Apr 24. [Epub ahead of print] PMID:29697444
2. Wald O, Smaglo B, Mok H, Groth SS. Future directions in esophageal cancer therapy. Ann Cardiothorac Surg. 2017 Mar;6(2):159-166. PMID:28447005

3. Burt BM, Groth SS, Sada YH, Farjah F, Cornwell L, Sugarbaker DJ, Massarweh NN. Utility of Adjuvant Chemotherapy After Neoadjuvant Chemoradiation and Esophagectomy for Esophageal Cancer. Ann Surg. 2017 Aug;266(2):297-304. PMID:27501170
4. Martin LW, D'Cunha J, Wang X, Herzan D, Gu L, Abraham N, Demmy TL, Detterbeck FC, Groth SS, Harpole DH, Krasna MJ, Kernstine K, Kohman LJ, Patterson GA, Sugarbaker DJ, Vollmer RT, Maddaus MA, Kratzke RA. Detection of Occult Micrometastases in Patients With Clinical Stage I Non-Small-Cell Lung Cancer: A Prospective Analysis of Mature Results of CALGB 9761 (Alliance). J Clin Oncol. 2016 May 1;34(13):1484-91. PMID:26926677
5. Groth SS, Al-Refaie WB, Zhong W, Vickers SM, Maddaus MA, D'Cunha J, Habermann EB. Effect of insurance status on the surgical treatment of early-stage non-small cell lung cancer. Ann Thorac Surg. 2013 Apr;95(4):1221-6. PMID:23415239
6. Rueth NM, Parsons HM, Habermann EB, Groth SS, Virnig BA, Tuttle TM, Andrade RS, Maddaus MA, D'Cunha J. The long-term impact of surgical complications after resection of stage I nonsmall cell lung cancer: a population-based survival analysis. Ann Surg. 2011 Aug;254(2):368-74. PMID:21617585
7. Groth SS, Rueth NM, Hodges JS, Habermann EB, Andrade RS, D'Cunha J, Maddaus MA. Conditional cancer-specific versus cardiovascular-specific survival after lobectomy for stage I non-small cell lung cancer. Ann Thorac Surg. 2010 Aug;90(2):375-82. PMID:20667314
8. Groth SS, Rueth NM, Kast T, D'Cunha J, Kelly RF, Maddaus MA, Andrade RS. Laparoscopic diaphragmatic plication for diaphragmatic paralysis and eventration: an objective evaluation of short-term and midterm results. J Thorac Cardiovasc Surg. 2010 Jun;139(6):1452-6. PMID:20080267
9. Groth SS, Whitson BA, D'Cunha J, Andrade RS, Landis GH, Maddaus MA. Serratus anterior transposition muscle flaps for bronchial coverage: technique and functional outcomes. Ann Thorac Surg. 2009 Dec;88(6):2044-6. PMID:19932299
10. Groth SS, Virnig BA, Whitson BA, DeFor TE, Li ZZ, Tuttle TM, Maddaus MA. Determination of the minimum number of lymph nodes to examine to maximize survival in patients with esophageal carcinoma: data from the Surveillance Epidemiology and End Results database. J Thorac Cardiovasc Surg. 2010 Mar;139(3):612-20. PMID:19709685

# Hyun-Sung Lee, M.D., Ph.D.

**Assistant Professor of Surgery**
**Division of General Thoracic Surgery**
**Baylor College of Medicine**

## Keywords

- Systems Immunology
- CyTOF
- Imaging Mass Cytometry (IMC)
- Malignant pleural mesothelioma
- Lung cancer
- Esophageal cancer
- Thymic epithelial tumors

## Contact information

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## Selected publications

1. Jang HJ, Lee HS, Burt BM, Lee GK, Yoon KA, Park YY, Sohn BH, Kim SB, Kim MS, Lee JM, Joo J, Kim SC, Yun JS, Na KJ, Choi YL, Park JL, Kim SY, Lee YS, Han L, Liang H, Mak D, Burks JK, Zo JI, Sugarbaker DJ, Shim YM, Lee JS.. "Integrated genomic analysis of recurrence-associated small non-coding RNAs in oesophageal cancer." Gut. 2017 February;66(2):215-225. Pubmed PMID: 27507904
2. Wang DH, Lee HS, Yoon D, Berry G, Wheeler TM, Sugarbaker DJ, Kheradmand F, Engleman E, Burt BM. "Progression of EGFR-Mutant Lung Adenocarcinoma is Driven By Alveolar Macrophages.." Clin Cancer Res. 2017 February;23(3):778-788. Pubmed PMID: 27496865
3. Lee HS, Jang HJ, Shah R, Yoon D, Hamaji M, Wald O, Lee JS, Sugarbaker DJ, Burt BM. "Genomic Analysis of Thymic Epithelial Tumors Identifies Novel Subtypes Associated with Distinct Clinical Features." Clin Cancer Res. 2017 April 11 Pubmed PMID: 28400429
4. Hyun-Sung Lee, Hee-Jin Jang, Jong Min Choi, Jun Zhang, Veronica Lenge de Rosen, Thomas M. Wheeler, Ju-Seog Lee, Thuydung Tu, Peter T. Jindra, Ronald H. Kerman, Sung Yun Jung, Farrah Kheradmand, David J. Sugarbaker, and Bryan M. Burt. "Comprehensive immunoproteogenomic analyses of malignant pleural mesothelioma." Comprehensive

immunoproteogenomic analyses of malignant pleural mesothelioma JCI Insight. 2018 April 5

5. Ahn JH, Lee HS, Lee JS, Lee YS, Park JL, Kim SY, Hwang JA, Kunkeaw N, Jung SY, Kim TJ, Lee KS, Jeon SH, Lee I, Johnson BH, Choi JH, Lee YS. "nc886 is induced by TGF-β and suppresses the microRNA pathway in ovarian cancer." Nat Commun. 2018 March 21;9 Pubmed PMID: 29563500
6. Hee-Jin Jang, Hyun-Sung Lee, Daniela Ramos, In Kyu Park, Chang Hyun Kang, Bryan M Burt, Young Tae Kim. "Transcriptome-based Molecular Subtyping of Non-Small Cell Lung Cancer May Predict Response to Immune Checkpoint Inhibitors." J Thorac Cardiovasc Surg. 2020 Pubmed PMID: 31879171


## R. Taylor Ripley, M.D.

**Associate Professor of Surgery**
**Division of General Thoracic Surgery**
**Baylor College of Medicine**
**Director, Mesothelioma Treatment Center**
**Baylor St. Luke's Medical Center**



### Keywords

- BH3 profiling
- Metabolomics
- Thoracic oncology


### Research interests

Dr. Ripley was an associate professor of surgery in the Thoracic and Oncologic Surgery Branch of the National Cancer Institute (NCI). While at the NIH, Dr. Ripley was awarded the NCI Director's Innovation Award for targeting specific p53-mutations for the treatment of esophageal adenocarcinoma. He established the Foregut Team at the NIH Clinical Center for the management of patients with esophageal cancer. Additionally, he has been developing a novel assessment of thoracic cancers by profiling mitochondrial pathways, which he will continue with us. Dr. Ripley has lectured nationally and published extensively on his work in the field of thoracic oncology and tumor metabolism. Prior to his faculty appointment at the NCI, Dr. Ripley trained extensively in the care of patients with mesothelioma under world-renowned surgeons during his fellowship at Memorial Sloan-Kettering Cancer Center in New York.

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## Selected publications


1. Yuan Xu, Paul L. Feingold, Deborah R. Surman, Kate Brown, Vivek Shukla, Sichuan Xi, Jeremy L, Davis, Jonathan Hernandez, David S. Schrump, R. Taylor Ripley. "Bile Acid and Cigarette Smoke Enhance the Malignant Phenotype of Esophageal Adenocarcinoma by Downregulation of the Mitochondrial Membrane Protein, Uncoupling Protein-2." Oncotarget.
2. Zachary J. Brown, D.O. Jonathan M. Hernandez, M.D. R. Taylor Ripley, M.D. Jeremy Lee Davis, MD. "Heated Intraperitoneal Chemotherapy and Gastrectomy for Gastric Cancer in the U.S. The Time is Now." J Gastrointest Oncol.
3. Kaitlin C. McLoughlin, John W. Goldin, R. Taylor Ripley. "Biology is King and Continues to Rule." J Thorac Cardiovasc Surg.
4. Winifred M. Lo, M.D., R. Taylor Ripley, M.D.. "EGFR-Mutational Status in Lung Adenocarcinoma: Staging Implications or Continuous Evolution?." J Thorac Cardiovasc Surg.
5. Kaitlin C. McLoughlin, R. Taylor Ripley. "Looks Aren't Everything but Neither is miRNA Profiling." J Thorac Cardiovasc Surg.
6. Jeremy L. Davis and R. Taylor Ripley. "Post-gastrectomy Syndromes and Nutritional Considerations Following Gastric Surgery." Surgery Clinics of North America.
7. Kaitlin C. McLoughlin, R. Taylor Ripley. "Clinical Nomograms: Is a picture worth a thousand words?." J Thorac Cardiovasc Surg.
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# Pediatric Surgery

The Pediatric Surgery Division at Texas Children's Hospital has the depth of expertise and specialization to provide optimal care across the surgical spectrum – from the most routine cases to the most rare and complex. Each child receives personalized care from the physician most suited to the case, ensuring the best possible outcomes. The range of surgical procedures performed by the division include fetal surgery, abdominal and thoracic surgery, minimally invasive surgery including laparoscopic and thorascoscopic diagnosis and treatment, endocrine and biliary surgery, and adolescent bariatric surgery. Our research programs are supported by the National Institutes of Health (NIH), private foundations, Texas Children's Hospital and Baylor College of Medicine.

The Pediatric Surgery Clinical Research and Outcomes Program, in conjunction with the Texas Children's Evidence-Based Outcomes Center and Outcomes and Impact Services, has developed and evaluated evidence-based protocols for the management of children with appendicitis. The team standardized broad-spectrum antibiotic monotherapy, the use of clinical discharge criteria and guidelines for antibiotic treatment duration in cases of advanced appendicitis. These initiatives have led to decreased resource utilization and costs and, most importantly, improved patient outcomes. Additionally, the creation of a patient and family education pamphlet has helped set expectations and shorten length of hospital stay. Future research directions include the implementation of clinical decision support tools and comparative effectiveness clinical trials.

Partnering with Texas Children's Cancer Center, one of the largest pediatric cancer centers in the country, the Surgical Oncology Program within the Pediatric General Surgery Division performs more than 500 operations annually for children with solid tumors. Because of the volume of patients and the dedication of these surgeons to this particular population, we are able to achieve outcomes among the best in the nation.

Pediatric Surgical Oncology has an active research program. The team is studying neuroblastoma in their own basic science labs. They are also engaged in clinical research on neuroblastoma, Wilm's tumors and hepatoblastoma, as well as leading a multidisciplinary study with Oncology, Radiology and Pathology to determine how the number of cycles of chemotherapy prior to surgery affects patient outcomes.

# Swathi Balaji, Ph.D.

**Assistant Professor of Surgery**

**Division of Pediatric Surgery**

## Keywords

- Mechanical tension
- Murine models
- Skin and lung fibrosis
- Endothelial and endothelial progenitor cells

## Research interests

Dr. Balaji's research interests are to understand the underlying mechanisms of how the fetus heals cutaneous wounds without scar and translate the findings to achieve postnatal regenerative tissue repair in various organ systems. Dr. Balaji received her doctoral degree in bioengineering from University of Cincinnati and did her postdoctoral training in the Department of Pediatric Surgery at Cincinnati Children's Hospital Medical Center.

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## Selected publications


1. Keswani SG, Balaji S, Katz AB*, King A, Omar K, Habli M, Klanke C, Crombleholme TM: "Intra-placental Gene Therapy with Ad-IGF-1 Corrects Naturally Occurring Rabbit Model of Intrauterine Growth Restriction". Human Gene Therapy 2015 26(3):172-82. (* equal contribution)
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3. Balaji S, Han N, Ranjan R, Moles CM, Shaaban AF, Bollyky P, Crombleholme TM & Keswani SG: "Angiopoietin-1 Improves Endothelial Progenitor cell Dependent Neovascularization in Diabetic Wounds". Surgery 2015 158(3):846-56. (* equal contribution)
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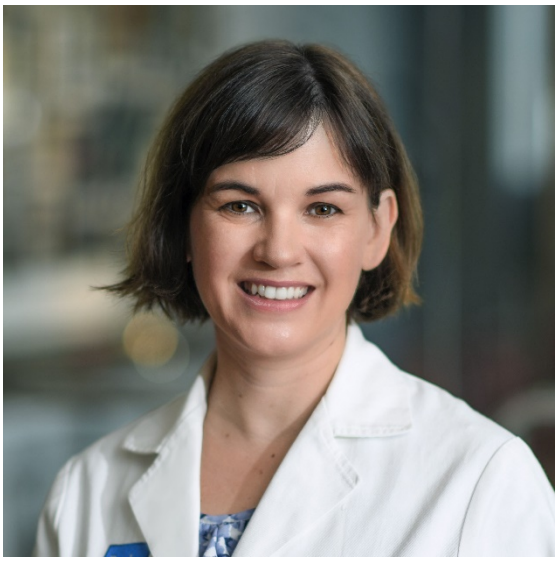


# Danielle Hsu, M.D.

**Assistant Professor of Surgery**
**Division of Pediatric Surgery**
**Baylor College of Medicine**


## Research interests

Dr. Hsu has a research background in defining cancer stem cell populations in neuroblastoma. Her current research interests include quality of care for cancer patients undergoing surgery. She is also part of a national consortium of centers caring for children with congenital colorectal disease.

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## Selected publications


1. Pugatch D, Strong LL, Ramratnam M, Levesque B, Lally M, Combs C, Patterson D, Brown L. "HIV risk behaviors in adolescent and young adult substance users undergoing treatment." *J of HIV/AIDS Prev & Educ for Adoles & Child*.
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# Sundeep Keswani, M.D.

**Associate Professor of Surgery Pediatrics, and Obstetrics/Gynecology**
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## Keywords

- Fetal Diagnosis and Therapy
- Wound Healing
- Regenerative Medicine

## Research interests

Dr. Keswani is a member of the pediatric surgery and fetal surgery team at Texas Children's Hospital and the principal investigator for the Texas Children's Laboratory for Regenerative Tissue Repair. Dr. Keswani completed his adult general surgery training at Louisiana State University in his hometown of New Orleans and completed his pediatric surgery fellowship at St. Louis Children's Hospital and the Washington University School of Medicine. He also completed a research fellowship and fetal surgery fellowship at the Children's Hospital of Philadelphia. Prior to coming to Texas Children's, Dr. Keswani was an attending surgeon at Cincinnati Children's Hospital. Dr. Keswani's clinical interests are in fetal diagnosis and therapy, neonatal surgery, congenital diaphragmatic hernia, ECMO and pediatric wound care. His NIH-funded laboratory studies the molecular mechanisms of regenerative fetal tissue repair and is actively developing novel therapeutics to achieve postnatal regenerative wound healing.

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## Selected publications


1. Balaji S, Han N, Moles C, Bhattacharya S, Bollyky P, Crombleholme T, **Keswani SG**: Fibroblast-specific Stat3 Signaling Of Il-10 Mediates Regenerative Wound Healing. Wound Repair and Regeneration. 2015 July 23(4):A2-A3.
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# Alice King, M.D.

**Assistant Professor of Surgery**

**Division of Pediatric Surgery**

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## Research interests

Prior to joining the fetal surgery team, Dr. King has done extensive research background in fetal regenerative wound healing. Her current research interests include fetal surgery to help treat life-threatening congenital abnormalities and to correct problems that would be too advance to correct after the baby is born.

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# Louis Le, M.D.

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## Keywords

- Pediatric Surgery
- Pediatric trauma

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## Selected publications

1. Balaji, S, Wang, X, King, A, Le, LD, Bhattacharya, SS, Moles, CM, Butte, MJ, de Jesus Perez, VA, Liechty, KW, Wight, TN, Crombleholme, TM, Bollyky, PL, Keswani, SG. "Interleukin-10-mediated regenerative postanatal tissue repair is dependent on regulation of hyaluronan metabolism via fibroblast-specific STAT3 signaling." FASEB. Pubmed PMID: 27903619
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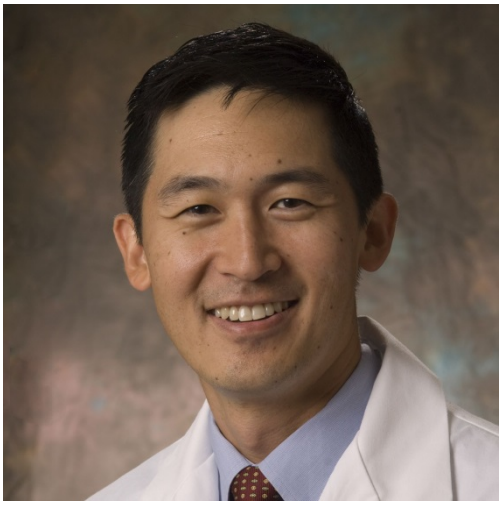

# Timothy C. Lee, MD

**Associate Professor of Surgery, Pediatrics, and Obstetrics/Gynecology**
**Division of Pediatric Surgery**

## Keywords

- ECMO
- Congenital diaphragmatic hernia
- Gastroschisis
- Colorectal surgery

## Research interests

Dr. Lee's primary focus is on improving clinical care and deriving protocol-driven patient care initiatives in the surgical neonatal ICU and within the Texas Children's Fetal Center and in the colorectal and pelvic health clinic at Texas Children's Hospital. Currently he is a collaborator in a randomized control trial on the benefit of early delivery of gastroschisis patients. Other areas of research interest include patients with congenital diaphragmatic hernia and the use of extracorporeal life support. Dr. Lee is pursuing a Masters in Clinical Research to develop expertise in management and initiation of clinical trials within the neonatal ICU and within the fetal center patient populations.

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## Selected publications


1. Ji J, Ling XB, Zhao Y, Hu Z, Zheng X, Xu Z, Wen Q, Kastenberg ZJ, Li P, Abdullah F, Brandt ML, Ehrenkranz RA, Harris MC, Lee TC, Simpson BJ, Bowers C, Moss RL, Sylvester KG. A data-driven algorithm integrating clinical and laboratory features for the diagnosis and prognosis of necrotizing enterocolitis. PLoS One. 2014 Feb 28;9(2):e89860.
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# Monica E. Lopez, MD, MS

**Associate Professor of Surgery**
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## Keywords
Surgical Outcomes
Value-based Surgical Care
Quality Improvement Science

## Research Interests
My research is focused on the design and implementation of surgical clinical trials, evidence-based practice guidelines, quality improvement science, and value-based surgical care delivery, with the overarching goal of improving outcomes for children's surgery. My training background in clinical research methodology includes participation in the American College of Surgeons Clinical Trials Methods Course, the Oregon Institute for Patient-Centered Comparative Effectiveness Annual Research Intensive, and a Master in Science degree in Clinical Research. I have attended the Strategy for Value Based Health Care Delivery workshop under Professors Porter and Kaplan. I have applied these skills in the development of institutional research protocols and clinical practice guidelines, which were aimed at standardizing the treatment of pediatric appendicitis. I have led a multidisciplinary team in building a population health analytics platform for tracking appendectomy outcomes and launching multiple hospital-wide quality initiatives that have generated value to appendicitis care. I am committed to expanding this approach to other common pediatric surgical conditions, utilizing clinical research and quality improvement as complementary strategies to achieve better outcomes.

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## Selected publications


1. Fallon SC, Hassan SF, Larimer EL, Rodriguez JR, Brandt ML, Wesson DE, Palazzi DL, **Lopez ME.** Modification of an evidence-based protocol for advanced appendicitis in children. *Journal of Surgical Research* 2013 Nov; 185(1):273-7.
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# Mark V. Mazziotti, MD, MEd

**Associate Professor of Surgery and Pediatrics**
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**Program Director, Pediatric Surgery Residency Program**
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## Keywords

- Minimally-invasive pectus excavatum repair
- Advanced minimally-invasive/robotic pediatric surgery
- Choledochal cyst laparoscopic excision


## Research Interests

Dr. Mazziotti's current focus is on the clinical practice of pediatric surgery in an educational setting. He has special interest and training in minimally invasive surgery, including thoracoscopic pectus excavatum repair. He has devised a novel technique for the minimally-invasive repair of pectus carinatum using conventional Nuss equipment with modifications. He has studied how various stabilization techniques have improved outcomes in pectus excavatum patients.

Dr. Mazziotti's research interests are in clinical outcomes. He has interest in clinical outcomes for patients with biliary dyskinesia treated with laparoscopic cholecystectomy compared to patients with gallstones treated in the same fashion. He also has ongoing projects evaluating clinical outcomes in patients with perforated appendicitis, spontaneous pneumothorax, and in patients with ITP undergoing laparoscopic splenectomy.

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## Selected publications

1. Complications Related to the Nuss Procedure: Minimizing Risk With Operative Technique. Fallon SC, Slater BJ, Nuchtern JG, Cass DL, Kim ES, Lopez ME, Mazziotti MV. Journal of Pediatric Surgery (2013) May 48(5): 1044-48. PMID: 23701780.
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5. Collaborations with Pediatric Hospitalists: National Surveys of Pediatric Surgeons and Orthopedic Surgeons.Rosenberg RE, Abzug JM, Rappaport DI, Mazziotti MV, Shrader MW, Zipes D, Nwomeh B, McLeod L.J Hosp Med. 2018 Feb 6. doi: 10.12788/jhm.2921. [Epub ahead of print] PMID:29408945
6. Are Foley catheters needed after minimally invasive repair of pectus excavatum? Friske TC, Sola R, Yu YR, Jamal AR, Rosenfeld E, Zhu H, Mazziotti MV, St Peter SD, Shah SR. Surgery. 2018 Apr;163(4):854-856. doi: 10.1016/j.surg.2017.10.049. Epub 2018 Feb 1. PMID: 29397201
7. Postoperative Feeding Regimens After Laparoscopic Gastrostomy Placement. Rosenfeld EH, Mazzolini K, DeMello A, Yu YR, Lee TC, Naik-Mathuria B, Mazziotti MV, Shah SR. J Laparoendosc Adv Surg Tech A. 2017 Nov;27(11):1203-1208. doi: 10.1089/lap.2017.0295. Epub 2017 Oct 2. PMID: 28969523
8. Endoscopic retrograde cholangiography for pediatric choledocholithiasis: Assessing the need for endoscopic intervention.Fishman DS, Chumpitazi BP, Raijman I, Tsai CM, Smith EO, Mazziotti MV, Gilger MA. World J Gastrointest Endosc. 2016 Jun 10;8(11):425-32. doi: 10.4253/wjge.v8.i11.425. PMID: 27298714
9. Spontaneous pneumomediastinum in the pediatric patient. Abbas PI, Akinkuotu AC, Peterson ML, Mazziotti MV. Am J Surg. 2015 Dec;210(6):1031-5; discussion 1035-6. doi: 10.1016/j.amjsurg.2015.08.002. Epub 2015 Sep 14. PMID: 26467078
10. Persistent cat scratch disease requiring surgical excision in a patient with MPGN. King KY, Hicks MJ, Mazziotti MV, Eldin KW, Starke JR, Michael M. Pediatrics. 2015 Jun;135(6):e1514-7. doi: 10.1542/peds.2014-2923. Epub 2015 May 11. PMID: 25963015


# Allen L. Milewicz, MD, MBA

**Associate Professor and Chief,**
**Division of Pediatric Surgery**
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**Chief of Community Surgery**
**Texas Children's Hospital**


## Research interests

Dr. Milewicz has extensive experience and expertise in the spectrum of pediatric surgery. He has specialized research training in liver transplant and cardiac surgery. Dr. Milewicz's current focus is on the clinical practice of pediatric surgery in an educational setting.

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## Selected publications


1. Identifying and Eliminating Deficiencies in the General Surgery Resident Core Competency Curriculum.Tapia NM, Milewicz A, Whitney SE, Liang MK, Braxton CC.
2. JAMA Surg. 2014 Jun;149(6):514-8. doi: 10.1001/jamasurg.2013.4406. PMID: 24696157
3. Reid AJ, Bhattacharjee MB, Regalado ES, Milewicz AL, El-Hakam LM, Dauser RC, Milewicz DM. Diffuse and uncontrolled vascular smooth muscle cell proliferation in rapidly progressing pediatric moyamoya disease. J Neurosurg Pediatr. 2010 Sep;6(3):244-9.
4. Cass DL, Hawkins E, Brandt ML, Chintagumpala M, Bloss RS, Milewicz AL, Minifee PK, Wesson DE, Nuchtern JG. Surgery for ovarian masses in infants, children, and adolescents: 102 consecutive patients treated in a 15-year period. J Pediatr Surg. 2001 May;36(5):693-9.
5. Noyola DE, Klish WJ, Milewicz AL, Kaplan SL Salmonella bacteremia after intestinal injury. Pediatr Infect Dis J. 1998 May;17(5):438-9.
6. Busuttil RW, Seu P, Millis JM, Olthoff KM, Hiatt JR, Milewicz AL, Nuesse BJ, El-Khoury G, Raybould D, Nyerges A, Vargas J, McDairmid S, Berquist W, Harrison R, Ament M: Liver transplantation in children. Ann Surg 213(1), 1991.
7. McDiarmid SV, Hall TR, Grant EG, Milewicz AL, Olthoff K, Lois J, Vargas J, Ament ME, Busuttil RW. Failure of duplex sonography to diagnose hepatic artery thrombosis in a high-risk group of pediatric liver transplant recipients. J Pediatr Surg. 1991 Jun;26(6):710-3.
8. Felton RJ, Tuggle DW, Milewicz AL, Shock CK, Taylor DV, Perkins TA, Tunell WP High mortality with an intraperitoneal antiadhesive in the rat. Curr Surg. 1990 Nov-Dec;47(6):444-6.
9. Olthoff KM, Millis JM, Imagawa DK, Nuesse BJ, Derus LJ, Rosenthal JT, Milewicz AL, Busuttil RW: Comparison of University of Wisconsin solution vs Euro-Collins solution for cold preservation of human liver grafts. Transplantation 49(2): 284-290, 1990.
10. McDiarmid SV, Hall TR, Grant EG, Milewicz AL, Lois J, Vargas J, Ament ME, Busuttil RW Failure of duplex sonography to diagnose hepatic artery thrombosis in a high-risk group of pediatric liver transplant recipients. Transplant Proc. 1990 Aug;22(4):1529-30.
11. Nimmer SD, Milewicz AL, Champlin RW, Busuttil RW: Successful treatment of hepatic venoclusive disease in a bone marrow transplant patient with othotic liver transplantation. Trasplantation 49(4): 1990.


# Paul K. Minifee, MD

**Associate Professor of Surgery and Pediatrics**
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## Research interests

Dr. Minifee, primarily a clinical pediatric surgeon, has a commitment to education. He routinely provides high school and medical school mentorship through programs such as the High School Mentorship Program at Texas Children's Hospital, the Honors Premedical Academy, and the Longitudinal Ambulatory Clinical Experience (LACE) course at Baylor College of Medicine. Dr. Minifee combines education and technology as he mentors Baylor residents and medical students on clinical rotations in pediatric surgery.

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## Selected publications


1. Carpenter JL, Fallon SC, Swartz SJ, Minifee PK, Cass DL, Nuchtern JG, Pimpalwar AP, Brandt ML. Outcomes after peritoneal dialysis catheter placement. J Pediatr Surg. 2016 May;51(5):730-3. doi: 10.1016/j.jpedsurg.2016.02.011. Epub 2016 Feb 11. PMID: 26936290
2. Fallon SC, Coker MT, Hernandez JA, Pimpalwar SA, Minifee PK, Fishman DS, Nuchtern JG, Naik-Mathuria BJ. Traumatic hepatic artery laceration managed by transarterial embolization in a pediatric patient. J Pediatr Surg. 2013 May;48(5):E9-12. doi: 10.1016/j.jpedsurg.2013.02.066. Review. PMID: 23701809
3. Lee TC, Kim ES, Ferrell LB, Brandt ML, Minifee PK, Midgen C, Domingo RP, Kearney DL Gastric duplication cysts of the pancreas: clinical presentation and surgical management. .Eur J Pediatr Surg. 2011 Dec;21(6):402-4. doi: 10.1055/s-0031-1279692. Epub 2011 Sep 7. PMID: 21901665
4. Kitagawa RS, Satyan KB, Relyea K, Dauser RC, Nuchtern JG, **Minifee PK**, Whitehead WE, Curry DJ, Luerssen TG, Jea A. Video-assisted thorascopic repair of a subarachnoid-pleural fistula in a child after thoracic tumor resection: technical note. Spine (Phila Pa 1976). 2010 Apr 20;35(9):E347-50.
5. Patel NC, **Minifee PK**, Dishop MK, Munoz FM.Mycobacterium simiae cervical lymphadenitis. Pediatr Infect Dis J. 2007 Apr;26(4):362-3.
6. Julapalli MR, **Minifee PK**, Popek EM, Metry DW. Painless mobile mass on the dorsum of the foot of a 3-month-old girl. Pediatr Dermatol. 2006 Sep-Oct;23(5):514-5.
7. Edwards MJ, Kollenberg SJ, Brandt ML, Wesson DE, Nuchtern JG, **Minifee PK,** Cass DL.Surgery for peptic ulcer disease in children in the post-histamine2-blocker era. J Pediatr Surg. 2005 May;40(5):850-4.
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9. Helmrath MA, Dorfman SR, **Minifee PK**, Bloss RS, Brandt ML, DeBakey ME. Right lower quadrant pain in children caused by omental infarction.Am J Surg. 2001 Dec;182(6):729-32.


# Bindi Naik-Mathuria, MD, MPH

**Associate Professor of Surgery and Pediatrics**
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**Trauma Medical Director**
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## Keywords

Pediatric trauma and injury prevention
Pediatric surgical oncology
Outcomes following pediatric surgical procedures
Global pediatric surgery


## Research interests

Dr. Naik-Mathuria's research interest is primarily in pediatric trauma and finding ways to improve trauma care of children through prospective multi center studies, national database reviews, and system-based quality improvement. She is also interested in injury prevention, particularly firearm safety for children. Additionally, she performs outcomes studies on a variety of pediatric surgical problems, as well as solutions for global pediatric surgery. Residents who join our team would have a broad-based experience in clinical research. Obtaining a degree in public health concurrently with the research time would be an ideal complement, but is not a requirement.

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## Selected publications

1. Proposed Clinical Pathway for Non-Operative Management of High-Grade Pediatric Pancreatic Injuries based on a Multicenter Analysis: A Pediatric Trauma Society Collaborative. **Naik-Mathuria** BJ, Rosenfeld EH, Vogel A, Gosain A, Burd R, Falcone RA Jr, Thakkar R, Gaines B, Mooney D, Escobar M, Jafri M, Stallion A, Klinkner DB, Russell R, Campbell B, Burke RV, Upperman J, Juang D, St Peter S, Fenton SJ, Beaudin M, Wills H, Polites S, Pattyn A, Leeper C, Veras LV, Maizlin I, Thaker S, Smith A, Waddell M, Drews J, Gilmore J, Armstrong L, Alex Ler A, Moody S, Behrens B, Carmant L; And the Pancreatic Trauma Study Group (PTSG) Collaborators. J Trauma Acute Care Surg. **2017** Jun 6. doi: 10.1097/TA.0000000000001576. [Epub ahead of print] PMID:28590353
2. Focused assessment with sonography for trauma in children after blunt abdominal trauma: A multi-institutional analysis. Calder BW, Vogel AM, Zhang J, Mauldin PD, Huang EY, Savoie KB, Santore MT, Tsao K, Ostovar-Kermani TG, Falcone RA, Dassinger MS, Recicar J, Haynes JH, Blakely ML, Russell RT, **Naik-Mathuria** BJ, St Peter SD, Mooney DP, Onwubiko C, Upperman JS, Zagory JA, Streck CJ. J Trauma Acute Care Surg. **2017** Aug;83(2):218-224. doi: 10.1097/TA.0000000000001546. PMID:28590347
3. Increasing use of endovascular therapy in pediatric arterial trauma. Branco BC, **Naik-Mathuria** B, Montero-Baker M, Gilani R, West CA, Mills JL Sr, Chung J. J Vasc Surg. **2017** Jul 26. pii: S0741-5214(17)31588-4. doi: 10.1016/j.jvs.**2017**.04.072. [Epub ahead of print] PMID: 28756045
4. Acute procedural interventions after pediatric blunt abdominal trauma: A prospective multicenter evaluation. Arbra CA, **Vogel AM**, Zhang J, Mauldin PD, Huang EY, Savoie KB, Santore MT, Tsao K, Ostovar-Kermani TG, Falcone RA, Dassinger MS, Recicar J, Haynes JH, Blakely ML, Russell RT, **Naik-Mathuria BJ**, St Peter SD, Mooney DP, Onwubiko C, Upperman JS, Streck CJ. J Trauma Acute Care Surg. **2017** Oct;83(4):597-602. doi: 10.1097/TA.0000000000001533. PMID:28930954
5. Increasing use of endovascular therapy in pediatric arterial trauma. Branco BC, **Naik-Mathuria B**, Montero-Baker M, Gilani R, West CA, Mills JL Sr, Chung J. J Vasc Surg. **2017** Oct;66(4):1175-1183.e1. doi: 10.1016/j.jvs.**2017**.04.072. Epub **2017** Jul 26. PMID:28756045
6. Postoperative Feeding Regimens After Laparoscopic Gastrostomy Placement. Rosenfeld EH, Mazzolini K, DeMello A, Yu YR, Lee TC, **Naik-Mathuria B,** Mazziotti MV, Shah SR. J Laparoendosc Adv Surg Tech A. **2017** Oct 2. doi: 10.1089/lap.**2017**.0295. [Epub ahead of print]PMID:28969523
7. Injury patterns of child abuse: Experience of two Level 1 pediatric trauma centers.Yu YR, DeMello AS, Greeley CS, Cox CS, **Naik-Mathuria BJ, Wesson DE**. J Pediatr Surg. **2018** May;53(5):1028-1032. doi: 10.1016/j.jpedsurg.**2018**.02.043. Epub **2018** Feb 10. PMID: 29523358
8. Regarding global pediatric surgery training opportunities. Baird R, Pandya K, Lal DR, Calkins CM, Oldham KT, Tsai A, **Naik-Mathuria B**, St-Louis E, Luc MK, LaRusso K, Petroze R, Lofberg KM, Biller CK, Villalona GA, Gourlay DM, Klein M, DeUgarte D, Cleary M, Berdan EA, Siddiqui S, Lo A, Langer M, Duffy D, Blair G, Beres A, Laberge JM, Berdan EA, Radulescu A, Holterman A, Hoover JD, Fitzgerald T, Ganey M, Krishnaswami S, Ozgediz D. J Pediatr Surg. **2018** Mar 8. pii: S0022-3468(18)30186-6. doi: 10.1016/j.jpedsurg.**2018**.03.003. [Epub ahead of print] No abstract available. PMID:29605263
9. Therapeutic response of metastatic angiomatoid fibrous histiocytoma carrying EWSR1-CREB1 fusion to the interleukin-6 receptor antibody tocilizumab. Potter SL, Quintanilla NM, Johnston DK, **Naik-Mathuria** B, Venkatramani R. Pediatr Blood Cancer. **2018** Jun 22:e27291. doi: 10.1002/pbc.27291. [Epub ahead of print] PMID:29932283

10. Scratching Below the Surface: Screening for Posttraumatic Stress Symptoms Following Hospitalization With the Pediatric Trauma Service. Cline VD, Whitaker B, Duran PA, Ratcliff K, Rosenfeld EH, **Naik-Mathuria** B. J Trauma Nurs. 2018 Jul/Aug;25(4):228-232. doi: 10.1097/JTN.0000000000000377. PMID: 29985855

# Jed G. Nuchtern, MD

**Professor of Surgery and Pediatrics**
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**Chief, Global Surgery**
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## Keywords

- Neuroblastoma in infants
- Tumor progression
- Cancer target discovery

## Research Interests

Dr. Nuchtern leads a collaborative research program that includes translational and clinical research on developing new treatments for pediatric solid tumors, particularly neuroblastoma. The primary focus in the laboratory is identifying new targets for neuroblastoma therapy. Bioinformatic studies have identified several proteins whose expression is increased in high risk neuroblastoma tumors; the laboratory has validated these findings and demonstrated that blocking expression of these targets decreases tumor growth and progression. Current research is directed toward identifying the pathways through which these molecules affect tumor progression. In addition to these translational studies, Dr. Nuchtern is involved in clinical research on neuroblastoma in infants. Through the Children's Oncology Group, he designed and implemented a prospective international study investigating the safety and efficacy of expectant observation as the primary treatment modality for infants with low risk adrenal tumors.

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## Selected publications


1. Nuchtern JG, London WB, Barnewolt CE, Naranjo A, McGrady PW, Geiger JD, Diller L, Schmidt ML, Maris JM, Cohn SL, Shamberger RC. A Prospective Study of Expectant Observation as Primary Therapy for Neuroblastoma in Young Infants: A Children's Oncology Group Study. Ann Surg. 2012 Oct;256(4):573-580.
2. Zhang H, Dou J, Yu Y, Zhao Y, Fan Y, Cheng J, Xu X, Liu W, Guan S, Chen Z, Shi Y, Patel R, Vasudevan SA, Zage PE, Zhang H, Nuchtern JG, Kim ES, Fu S, Yang J. mTOR ATP-competitive inhibitor INK128 inhibits neuroblastoma growth via blocking mTORC signaling. Apoptosis. 2015 Jan;20(1):50-62.
3. Bagatell R, McHugh K, Naranjo A, Van Ryn C, Kirby C, Brock P, Lyons KA, States LJ, Rojas Y, Miller A, Volchenboum SL, Simon T, Krug B, Sarnacki S, Valteau-Couanet D, von Schweinitz D, Kammer B, Granata C, Pio L, Park JR, Nuchtern J. Assessment of Primary Site Response in Children With High-Risk Neuroblastoma: An International Multicenter Study. J Clin Oncol. 2016 Mar 1;34(7):740-6.
4. Lu J, Guan S, Zhao Y, Yu Y, Wang Y, Shi Y, Mao X, Yang KL, Sun W, Xu X, Yi JS, Yang T, Yang J, Nuchtern JG. Novel MDM2 inhibitor SAR405838 (MI-773) induces p53-mediated apoptosis in neuroblastoma. Oncotarget. 2016 Oct 13. doi: 10.18632/oncotarget.12634. [Epub ahead of print] PubMed PMID: 27764791.
5. Newman EA, Nuchtern JG. Recent biologic and genetic advances in neuroblastoma: Implications for diagnostic, risk stratification, and treatment strategies. Semin Pediatr Surg. 2016 Oct;25(5):257-264. doi: 10.1053/j.sempedsurg.2016.09.007. PubMed PMID: 27955728.
6. Chen Z, Wang L, Yao D, Yang T, Cao WM, Dou J, Pang JC, Guan S, Zhang H, Yu Y, Zhao Y, Wang Y, Xu X, Shi Y, Patel R, Zhang H, Vasudevan SA, Liu S, Yang J, Nuchtern JG. Wip1 inhibitor GSK2830371 inhibits neuroblastoma growth by inducing Chk2/p53-mediated apoptosis. Sci Rep. 2016 Dec 19;6:38011. doi: 10.1038/srep38011. PubMed PMID: 27991505; PubMed Central PMCID: PMC5171816.
7. Bieerkehazhi S, Chen Z, Zhao Y, Yu Y, Zhang H, Vasudevan SA, Woodfield SE, Tao L, Yi JS, Muscal JA, Pang JC, Guan S, Zhang H, Nuchtern JG, Li H, Li H, Yang J. Novel Src/Abl tyrosine kinase inhibitor bosutinib suppresses neuroblastoma growth via inhibiting Src/Abl signaling. Oncotarget. 2017 Jan 3;8(1):1469-1480. doi: 10.18632/oncotarget.13643. PubMed PMID: 27903968.
8. Shi Y, Rojas Y, Zhang W, Beierle EA, Doski JJ, Goldfarb M, Goldin AB, Gow KW, Langer M, Meyers RL, Nuchtern JG, Vasudevan SA. Characteristics and outcomes in children with undifferentiated embryonal sarcoma of the liver: A report from the National Cancer Database. Pediatr Blood Cancer. 2017 Apr;64(4). doi: 10.1002/pbc.26272. PubMed PMID: 27781381.

9. Sun W, Rojas Y, Wang H, Yu Y, Wang Y, Chen Z, Rajapakshe K, Xu X, Huang W, Agarwal S, Patel RH, Woodfield S, Zhao Y, Jin J, Zhang H, Major A, Hicks MJ, Shohet JM, Vasudevan SA, Coarfa C, Yang J, Nuchtern JG. EWS-FLI1 and RNA helicase A interaction inhibitor YK-4-279 inhibits growth of neuroblastoma. Oncotarget. 2017 Oct 19;8(55):94780-94792. doi: 10.18632/oncotarget.21933. eCollection 2017 Nov 7. PubMed PMID: 29212266; PubMed Central PMCID: PMC5706912.
10. Richards MK, Goldin AB, Ehrlich PF, Beierle EA, Doski JJ, Goldfarb M, Langer M, Nuchtern JG, Vasudevan S, Gow KW. Partial Nephrectomy for Nephroblastoma: A National Cancer Data Base Review. Am Surg. 2018 Mar 1;84(3):338-343. PubMed PMID: 29559046.


# Kristy Lynn Rialon, M.D.

**Assistant Professor of Surgery**

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## Keywords

- Vascular anomalies
- Graduate medical education
- Surgical oncology


## Research interests

During her residency, she was awarded a research grant from the National Institutes of Health to study pancreatic cancer. She also subsequently completed a research fellowship in Vascular Anomalies at Boston Children's Hospital.

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## Selected publications


1. Ray P, Rialon-Guevara KL, Veras E, Sullenger BA, White RR. "In vitro aptamer selection strategy using secretomes for pancreatic cancer biomarker discovery." J Clin Invest.
2. Ceppa EP, Burbridge RA, Rialon KL, Omotosho PA, Emick D, Jowell PS, Branch MS, Pappas TN. "Endoscopic vs. surgical ampullectomy: an algorithm to treat disease of the ampulla of Vater." Ann Surg.
3. Turkbey B, Kobayashi H, Hoyt RF, Choyke PL, Nakajima T, Griffiths GL, Bernardo M, Rialon K, Fishman SJ, Sena LM. "Magnetic resonance lymphography of the thoracic duct after interstial injection of gadofosveset trisodium: a pilot dosing study in a porcine model." Lymphat Res Biol.
4. Rialon KL, Murillo R, Fevurly RD, Kulungowski AM, Christison-Lagay ER, Zurakowski D, Kozakewich HPW, Alomari AI, Fishman SJ. "Risk factors for

mortality in patients with multifocal and diffuse hepatic hemangiomas." J Pediatr Surg.

5. Luks VL, Kamitaki N, Vivero MP, Rab R, Bovee JVMG, Uller W, Rialon KL et al. "Somatic mutations in a catalytic subunit of phosphatidylinositol-3 kinase (PIK3CA) cause a spectrum of malformative vascular disorders with overgrowth." J Pediatr.
6. Rialon KL, Gulack BC, Englum BR, Routh J, Rice HE. "Factors impacting survival in children with renal cell carcinoma." J Pediatr Surg.
7. Rialon KL, Murillo R, Fevurly RD, Kulungowski AM, Zurakowski D, Liang M, Kozakewich HPW, Alomari AI, Fishman SJ. "Impact of screening for hepatic hemangiomas in patients with multiple cutaneous infantile hemangiomas." Pediatr Dermatol.
8. Rialon KL, Englum BR, Gulack BC, Bhattacharya SD, Talbot LJ, Guevara CJ, Shapiro ML, Adibe OO, Scarborough JE, Rice HE. "Comparative effectiveness of treatment strategies for severe splenic trauma in the pediatric population." Am J Surg.
9. Guevara CJ, Rialon KL, Ramaswamy R, Kim SK, Darcy MC. "Ultrasound guided, direct puncture retrograde thoracic duct access, lymphangiography and embolization: feasibility and efficacy." J Vasc Interv Radiol.
10. Rialon KL, Crowley E, Seemann NM, Fahy AS, Muise A, Langer JC. "Long-term outcomes for children with very early-onset colitis: implications for surgical management." J Peds Surg.


# Jose Ruben Rodriguez, MD, MMSc

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## Research Interests

Dr. José Ruben Rodríguez is a general pediatric surgeon whose research interests include improving outcomes and quality of care for pediatric trauma patients, and clinical trials to improve outcomes following general pediatric surgical operations.

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## Selected publications


1. Clinical presentation of Crohn's, ulcerative colitis, and indeterminate colitis: Symptoms, extraintestinal manifestations, and disease phenotypes. Yu YR, **Rodriguez JR**. Semin Pediatr Surg. **2017** Dec;26(6):349-355. doi: 10.1053/j.sempedsurg.**2017**.10.003. Epub **2017** Oct 5. PMID:29126502
2. Characteristics and outcomes of children with ductal-dependent congenital heart disease and esophageal atresia/tracheoesophageal fistula: A multi-institutional analysis. Puri K, Morris SA, Mery CM, Wang Y, Moffett BS, Heinle JS, **Rodriguez JR**, Shekerdemian LS, Cabrera AG. Surgery. **2018** Apr;163(4):847-853. doi: 10.1016/j.surg.2017.09.010. Epub **2018** Jan 8. PMID: 29325785
3. Effect of Gastrointestinal Malformations on the Outcomes of Patients With Congenital Heart Disease. Mery CM, De León LE, **Rodriguez JR**, Nieto RM, Zhang W, Adachi I, Heinle JS, Kane LC, McKenzie ED, Fraser CD Jr. Ann Thorac Surg. **2017** Jul 11. pii: S0003-4975(17)30605-7. doi: 10.1016/j.athoracsur.**2017**.04.042. [Epub ahead of print]

PMID:28709660

4. Evaluating the effect of time process measures on appendectomy clinical outcomes. Abbas PI, Peterson M, Stephens LJ, **Rodriguez JR,** Lee TC, Brandt ML, Lopez ME. J Pediatr Surg. **2016** May;51(5):810-4. doi: 10.1016/j.jpedsurg.**2016**.02.027. Epub **2016** Feb 12. PMID: 26976776
5. Upper Endoscopic Diagnosis of a Jejunocolonic Fistula. **Rodriguez JR**, Masand P, Kellermayer R. J Pediatr Gastroenterol Nutr. **2016** Jul;63(1):e14. doi: 10.1097/MPG.0000000000000517. No abstract available. PMID:25079482 [not reported in July]
6. Sternal Wound Salvage in Post-Transplant Adolescents: Omental Flap Reconstruction in Patients With Prior Abdominal Surgery. Pickrell BB, Coursen JS, **Rodriguez JR**, Monson LA. J Craniofac Surg. **2016** May 12. [Epub ahead of print] PMID:27192657
7. Management of traumatic duodenal hematomas in children. Peterson ML, Abbas PI, Fallon SC, Naik-Mathuria BJ, **Rodriguez JR.** J Surg Res. **2015** Nov;199(1):126-9. doi: 10.1016/j.jss.**2015**.04.015. Epub **2015** Apr 7.PMID:25976857
8. Delaying Appendectomy Does Not Lead to Higher Rates of Surgical Site Infections: A Multi-institutional Analysis of Children With Appendicitis. Boomer LA, Cooper JN, Anandalwar S, Fallon SC, Ostlie D, Leys CM, Rangel S, Mattei P, Sharp SW, St Peter SD, **Rodriguez JR**, Kenney B, Besner GE, Deans KJ, Minneci PC. Ann Surg. **2015** Dec 16. [Epub ahead of print] PMID:26692077
9. Evaluating the impact of infliximab use on surgical outcomes in pediatric Crohn's disease. Abbas PI, Peterson ML, Fallon SC, Lopez ME, Wesson DE, Walsh SM, Kellermayer R, **Rodriguez JR**. J Pediatr Surg. **2016** Feb 14. pii: S0022-3468(16)00086-5. doi: 10.1016/j.jpedsurg.**2016**.02.023. [Epub ahead of print] PMID:26944181
10. Fallon SC, Kim ES, Naik-Mathuria BJ, Nuchtern JG, Cassady CI, Rodriguez JR. "Needle decompression to avoid tension pneumoperitoneum and hemodynamic compromise after pneumatic reduction of pediatric intussusception.." Pediatr Radiol. 2013 June;43(6):662-7. Pubmed PMID: 23283408


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## Keywords

- Pediatric surgery outcomes
- Patient-centered outcomes
- Healthcare delivery


## Research interests

Dr. Shah's research interests focus on enhancing pediatric surgical outcomes, improving healthcare delivery, and establishing evidence-based practice guidelines. He has authored numerous peer-reviewed articles, written book chapters, and given dozens of presentations to national and international audiences on a full range of pediatric surgery topics. He is currently a candidate for a Master of Science in Clinical Research from the University of Kansas Medical Center.

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## Selected publications


1. Yu YR, **Shah SR**.Can the Diagnosis of Appendicitis Be Made Without a Computed Tomography Scan? Adv Surg. 2017 Sep;51(1):11-28. doi: 10.1016/j.yasu.2017.03.002. Epub 2017 May 17. Review. No abstract available.
   PMID:28797333
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3. Yu YR, **Shah SR**. Can the diagnosis of appendicitis be made without a computed tomography scan? Advances in Surgery. 2017 Sep; 51(1):11-28.
4. **Shah SR**, Sinclair KA, Theut SB, Johnson KM, Holcomb GW 3rd, St. Peter SD. Computed tomography utilization for the diagnosis of acute appendicitis in children decreases with a diagnostic algorithm. Annals of Surgery. 2016 Sep; 264(3):474-81.
5. Friske TC, Sola R Jr, Yu YR, Jamal AR, Rosenfeld E, Zhu H, Mazziotti MV, St. Peter SD, **Shah SR**. Are Foley catheters needed following minimally invasive repair of pectus excavatum? Surgery. In press.
6. **Sola R** Jr, Theut SB, Sinclair KA, Rivard DC, Johnson KM, Zhu H, St. Peter SD, Shah SR. Standardized reporting of appendicitis-related findings improves reliability of ultrasound in diagnosing appendicitis in children. Journal of Pediatric Surgery.
7. Rosenfeld EH, Sola R Jr, Yu YR, St Peter SD, **Shah SR**. Battery ingestions in children: variations in care and development of a clinical algorithm. Journal of Pediatric Surgery.
8. Sola R Jr, Rosenfeld EH, Yu YR, St Peter SD, **Shah SR**. Magnet foreign body ingestion: rare occurrence but big consequences. Journal of Pediatric Surgery. 2017 Aug.
9. St Peter SD, **Shah SR**, Adibe OO, Sharp SW, Reading B, Cully B, Holcomb GW 3rd, Rivard DC. Saline vs Tissue Plasminogen Activator irrigations after drain placement for appendicitis-associated abscess: A prospective randomized trial. Journal of the American College of Surgeons. 2015 Aug; 221(2): 390-6.
10. Shah SR, McKenna C, Miller M, Shultz B, Upperman JS, Gaines BA. Safety Factors Related to All-Terrain Vehicle (ATV) Injuries in Children. Journal of Trauma and Acute Care Surgery. 2012 Oct; 73(9): 273-6.

# Shawn Stafford, M.D.

**Assistant Professor of Surgery**

**Division of Pediatric Surgery**

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## Keywords

Minimally invasive surgery

Congenital anomalies

## Research interests

During his time at LSU he was involved in research looking at angiogenesis and its impact on malignancy and wound healing. Additionally, he was instrumental in the development of a novel injectable for sentinel lymph node dissection.

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## Selected publications

1. Harkrider WW, Diebold AE, Maloney T, Espenan G, Wang YZ, Stafford SJ, Camp A, Frey D, Chappuis C, Woltering EA. "A phase I/II trial of 125I methylene blue for one-stage sentinel lymph node biopsy." Annals of Surgery. 2007 February
2. Harkrider WW1, Diebold AE, Maloney T, Espenan G, Wang YZ, Stafford SJ, Camp A, Frey D, Chappuis C, Woltering EA.. "An extended phase II trial of iodine-125 methylene blue for sentinel lymph node identification in women with breast cancer." J Am Coll Surg. 2013 April
3. Stafford SJ, Peyman GA, Conway MD, Kazi AA, AnthonyCT, Blake DA, Woltering EA. "Clearance of Radiolabeled Somatostatin Analogs from the Vitreous: Implications for Targeted Intravitreal Therapy with Radiolabeled Somatostatin Analogs." Invest Ophthalmol Vis Sci. 2004

4. Stafford SJ, Schwimer J, Anthony CT, Thomson JL, Wang Y, Woltering EA. "Colchicine and 2-methoxyestradiol Inhibit Human Angiogenesis." Journal of Surgical Research. 2005 May 1
5. Stafford SJ, Wright JL, Schwimer J, Anthony CT, Cundiff JD, Thomson JL, Wang Y, Espenan G, Maloney T, Camp A, Woltering EA. "Development of 125I-methylene blue for sentinel lymph node biopsy." Journal of Surgical Oncology. 2006 September 15
6. Khan AR; Blackwell LM; Stafford SJ; Thompson AD; Romero RJ; Goodier CD; Kwan D; Khan IR; Schellack JV; Perkowski PE. "Femororenal arteriovenous graft: a viable option for hemodialysis access." Annals of Vascular Surgery. 2008 January


# Sanjeev A. Vasudevan, MD

**Assistant Professor of Surgery and Pediatrics**
**Division of Pediatric Surgery and Surgical Research**
**Baylor College of Medicine**



## Keywords

- Pediatric surgical oncology
- Neuroblastoma
- Pediatric liver cancer
- p53 regulation, and MYCN tumorigenesis


## Research Interests

Dr. Vasudevan's laboratory focuses on validation of potential therapeutic targets found in pediatric solid tumors and cancer, in particular neuroblastoma and hepatoblastoma. During his postdoctoral training in the Texas Children's Cancer Center with Drs. Jed G. Nuchtern and Jianhua Yang, Dr. Vasudevan cloned two novel genes, NDSP and DUSP26, which were found to be specifically expressed in neuroblastoma and play critical roles in neuroblastoma tumor growth and chemosensitivity. Dr. Vasudevan is furthering this work as a prinicipal investigator by focusing on the function and regulation of the p53 pathway in both neuroblastoma and hepatoblastoma. He is also helping to develop patient derived xenografts for these tumors in order to better study the biology and develop patient-specific therapies. Dr. Vasudevan's lab hopes to validate multiple targets in order to find novel and less toxic therapeutic agents to improve outcomes in neuroblastoma and hepatoblastoma.

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## Selected publications


1. Breast Malignancies in Children: Presentation, Management, and Survival.
   Richards MK, Goldin AB, Beierle EA, Doski JJ, Goldfarb M, Langer M, **Nuchtern JG**, **Vasudevan S**, Gow KW, Javid SH.
   Ann Surg Oncol. **2017** Jun;24(6):1482-1491. doi: 10.1245/s10434-016-5747-5. Epub **2017** Jan 5.
   PMID:28058544
2. Effects of socioeconomic status on children with well-differentiated thyroid cancer.
   Garner EF, Maizlin II, Dellinger MB, Gow KW, Goldfarb M, Goldin AB, Doski JJ, Langer M, **Nuchtern JG, Vasudevan SA,** Raval MV, Beierle EA.
   Surgery. **2017** Sep;162(3):662-669. doi: 10.1016/j.surg.**2017**.04.008. Epub **2017** Jun 8.
   PMID:28602495
3. Vascular invasion is a prognostic indicator in hepatoblastoma.
   Shi Y, Commander SJ, Masand PM, Heczey A, Goss JA, **Vasudevan SA**.
   J Pediatr Surg. **2017** Jun;52(6):956-961. doi: 10.1016/j.jpedsurg.**2017**.03.017. Epub **2017** Mar 16. PMID:28347528
4. Dual targeting of MDM2 and BCL2 as a therapeutic strategy in neuroblastoma.
   Van Goethem A, Yigit N, Moreno-Smith M, **Vasudevan SA**, Barbieri E, Speleman F, Shohet J, Vandesompele J, Van Maerken T.
   Oncotarget. **2017** Jul 4. doi: 10.18632/oncotarget.18982. [Epub ahead of print]
   PMID:28723622
5. Local therapy to distant metastatic sites in stage IV rhabdomyosarcoma. Mohan AC, Venkatramani R, Okcu MF, Nuchtern JG, **Vasudevan SA**, Mahajan A, Rainusso NC, Allen-Rhoades W, Chintagumpala M, Paulino AC. Pediatr Blood Cancer. **2017** Oct 19. doi: 10.1002/pbc.26859. [Epub ahead of print] PMID:29049857
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7. Indocyanine green fluorescence in second near-infrared (NIR-II) window. Starosolski Z, Bhavane R, Ghaghada KB, **Vasudevan SA**, Kaay A, Annapragada A. PLoS One. **2017** Nov 9;12(11):e0187563. doi: 10.1371/journal.pone.0187563. eCollection **2017**.
   PMID:291210788l
8. **Vasudevan SA**, Fan Y, Cheng J, Patel RH, Liang L, Xu X, Zhao Y, Jia W, Lu F, Zhang H, Nuchtern JG, Kim ES, Yang J. TAK1 inhibitor 5Z-7-oxozeaenol sensitizes neuroblastoma to chemotherapy. *Apoptosis*, 2013 Oct;18(10):1224-34.
9. ***Vasudevan SA***, Shang X, Ge N, Ludwig AD, Wesson CW, Wang K, Burlingame SM, Nuchtern JG, and Yang J. Dual-specificity phosphatase 26 (DUSP26) is a novel p53

phosphatase and inhibits p53 tumor suppressor functions in human neuroblastoma. *Oncogene*, 2010 Sep;29(35):4938-46.

10. ***Vasudevan SA*****,** Ge N, Ludwig AD, Wesson CW, Burlingame SM, Russell HV, Okcu MF, Yang J, and Nuchtern JG. NDSP, a novel protein overexpressed in neuroblastoma. *Molecular Cancer Therapeutics*, 2009 Aug;8(8):2478-89.


## Adam Vogel, M.D.

**Associate Professor of Surgery and Pediatrics**
**Division of Pediatric Surgery**
**Baylor College of Medicine**



## Keywords

- Goal directed hemostatic resuscitation
- Pediatric trauma
- Extracorporeal life support


## Research interests

Dr. Vogel's research focuses on improving clinical outcomes in critically ill children. He investigates the use of viscoelastic monitoring techniques in goal-directed hemostatic resuscitation and massive transfusion to improve outcomes in severely injured patients. His research focuses on the impact of nutritional adequacy on outcomes and techniques for optimizing systemic anticoagulation and mechanical ventilation during ECLS. Dr. Vogel is an active participant in several multicenter collaborative research networks whose goal is to improve the care and outcomes of pediatric surgical patients.

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## Selected publications


1. Diaz-Miron P, Miller JR, **Vogel AM**. Neonatal Hematology. Semin Pediatr Surg. 2013 Nov;22(4):199-204.
2. Zaveri PG**, Vogel AM**, Vachharajani AJ. Late preterm baby with recurrent respiratory distress. Neoreviews. 2014. May;15(5):e199-201.
3. Choi PM Vogel **AM**. Acute Coagulopathy in Pediatric Trauma. Curr Opin Pediatr. 2014 Jun;26(3):343-9.

4. **Vogel AM**, Lew DF, Kao LS, Lally KP. Defining risk for infectious complications on extracorporeal life support. J Pediatr Surg 2011 Dec;46(12):2260-4.
5. Lew DF, Wray CJ, Lally, KP, Kao LS, **Vogel AM.** Outcomes of extracorporeal life support in trauma. J Surgery. 2014 Dec;2(2):1-5.
6. Kassel R, Robertson JO, Kung VL, White FV, Hulbert ML, Rothbaum RJ, **Vogel AM**. Small intestinal ulcers in hemophagocytic lymphangiohistiocytosis presenting as acute appendicitis. J Ped Surg Case Reports. 2014 Jun;2(6):325-7.
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# David E. Wesson, MD

**Professor of Surgery and Pediatrics**
**Division of Pediatric Surgery**
**Baylor College of Medicine**

**Associate Surgeon-in-Chief**
**Chief, Department of Surgery**
**Texas Children's Hospital**



## Keywords

- Pediatric trauma
- Pediatric injury prevention
- GI disorders


## Research Interests

Dr. Wesson has been interested in research relating to pediatric trauma and pediatric injury prevention for over 30 years. For example, he participated in some of the earliest definitive studies on the non-operative treatment of solid organ injuries in children. This research helped to define the indications for operation in children with splenic trauma. This approach was very controversial when first described but it has since become the standard of care for children around the world, and more recently in all age groups. Dr. Wesson's interest in pediatric injury prevention grew out of his experience in pediatric trauma care. This led to his research into the promotion of bike helmet use and the subsequent impact on the incidence of fatal bicycling injuries in a defined population of children. Dr. Wesson also played a role in the development of the trauma system in the City of Toronto and the Province of Ontario, Canada. His research into the incidence of preventable trauma deaths among children in Ontario documented a significant overall reduction in the incidence of fatal injuries and in the proportion of preventable deaths over the period from the late 1980's to the early 2000's. His research supported the hypothesis that these improvements were attributable to improvements in the system of care. Dr. Wesson has a variety of other research interests particularly in gastrointestinal disorders in children. He published one of the earliest studies of the results of restorative proctocolectomy in children with ulcerative colitis and familial polyposis. He also has a strong interest in the treatment of biliary atresia and entered many of his patients with this disease into the NIH funded study of this problem by the Bilary Atresia Research Consortium (BARC).

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## Selected publications

1. Injury patterns of child abuse: Experience of two Level 1 pediatric trauma centers.
   Yu YR, DeMello AS, Greeley CS, Cox CS, Naik-Mathuria BJ, **Wesson DE.**
   J Pediatr Surg. 2018 Feb 10. pii: S0022-3468(18)30097-6. doi:
   10.1016/j.jpedsurg.2018.02.043. [Epub ahead of print] PMID:29523358

2. Necrotizing enterocolitis in patients with congenital heart disease: A single center experience.
   Lau PE, Cruz SM, Ocampo EC, Nuthakki S, Style CC, Lee TC**, Wesson DE,** Olutoye OO.
3. J Pediatr Surg. **2018** Feb 7. pii: S0022-3468(18)30068-X. doi:
   10.1016/j.jpedsurg.**2018**.02.014. [Epub ahead of print] PMID: 29526349
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5. Injury patterns of child abuse: Experience of two Level 1 pediatric trauma centers.
   Yu YR, DeMello AS, Greeley CS, Cox CS, **Naik-Mathuria BJ, Wesson DE**.
   J Pediatr Surg. **2018** May;53(5):1028-1032. doi: 10.1016/j.jpedsurg.**2018**.02.043. Epub **2018** Feb 10. PMID: 29523358
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7. Vasudevan SA, Patel JC, Wesson DE, Plon S, Finegold MJ, Nuchtern JG: Severe dysplasia in children with familial adenomatous polyposis: rare or simply overlooked? Journal of Pediatric Surgery 2006:41:3 pp 658-661.
8. Wesson DE, Stephens D, Lam K, Parsons D, Spence L Parkin PC: Trends in pediatric and adult bicycling deaths before and after passage of a bicycle helmet law. Pediatrics 2008:122:3 pp 605-610.
9. Diamond IR, Parkin PC, Wales PW, Bohn D, Kreller M, Dykes EH, McLellan BA, Wesson DE: Preventable paediatric trauma deaths in Ontario: A comparative population-based study. Journal of Trauma 2009:66:4 pp1189-1195.
10. Pediatric Trauma: Pathophysiology, Diagnosis, and Treatment, Second Edition by David E. Wesson (Editor), Bindi Naik-Mathuria (Editor) CRC Press, New York, NY

# Plastic Surgery

Division faculty members pursue a wide variety of clinical and basic science research projects. The majority of this work focuses on improving the care of patients with facial injuries or congenital deficiencies.

The division, for example, is currently leading a large-scale study of outcomes in pediatric craniofacial surgery. Faculty members have also been studying new and better treatments for mandibular fractures, including studies evaluating the biologic response to resorbable plate and screw fixation, and a clinical study to determine the optimal method to stabilize mandibular fractures.


# Larry H. Hollier Jr., MD, FACS

**Surgeon-in-Chief, Texas Children's Hospital**

**Professor of Surgery, Orthopedic Surgery and Pediatrics**
**S. Baron Hardy Chair in Plastic Surgery**
**Chief, Division of Plastic Surgery**
**Baylor College of Medicine**



## Keywords

- Reconstructive pediatric surgery
- Facial trauma
- Distraction osteogenesis


## Research Interests

Dr. Hollier has a broad background in craniofacial reconstruction procedures. As the chief of the largest group of full-time, academic craniofacial surgeons in the United States, he believes he has an opportunity to substantially contribute to this subject.

He has undertaken an enormous research effort focused on quantifying outcomes in craniofacial surgery. He and other senior researchers in the department are currently applying for a new NIH funded project, which will allow them to take that effort to the next level by stratifying craniosynostosis patients according to their unique genetic background. By accurately defining the true underlying genetic causes, procedures can be custom tailored for each patient and patients can be properly educated regarding their expected course of treatment. Dr. Hollier feels that this is something that has been sorely lacking in plastic surgery. For too long, plastic surgery has been a specialty where outcomes are deemed acceptable so long as the patient and their family are happy. He believes plastic surgery should be elevated to the next level of scientific scrutiny, and is dedicated to leading the endeavor.

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## Selected Publications


1. Lloyd MS, Trost JG, Khechoyan DY, Hollier LH Jr., Buchanan EP. Identical Twins with Crouzon's Syndrome: Eight year follow up, Genetic Considerations and Operative Management. Craniomaxillofacial Trauma and Reconstruction. 2017;10(4):286-291.
2. Jubbal KT, Zavlin D, Olorunnipa S, Echo A, Buchanan EP, Hollier Jr LH Comparing Plastic Surgery and Otolaryngology Management in Cleft Care: An Analysis of 4,999 Cases Craniomaxillofacial Trauma and Reconstruction. 2017;10(4):271-277.
3. Jubbal KT, Zavlin D, Buchanan EP, Hollier Jr LH. Analysis of Risk Factors Associated with Unplanned Re-Operations following Pediatric Plastic Surgery. J Plast Reconstru Aesthet Surg. 2017;70(10):1440-1446.
4. Braun TL, Hollier LH Jr. Discussion: Head Orthosis Therapy in Positional Plagiocephaly: Influence of Age and Severity of Asymmetry on Effect and Duration of Therapy. Plastic and Reconstructive Surgery. 2017;140(2):359-360.
5. Brown RH, Sharabi SE, Kania KE, Hollier LH, Izaddoost, SA. The Split Pectoralis Flap: Combining the Benefits of Pectoralis Major Advancement and Turnover Techniques in One Flap. Plastic and Reconstructive Surgery. 2017;139(6):1474-1477.
6. Pickrell BB, Hollier LH Jr. Evidence-Based Medicine: Mandible Fractures. Plastic Reconstructive Surgery. 2017:140(1):192e-200e.
7. Krasnosky R, Meaike JD, McAndrews JL, Hyman CH, Hollier Jr LH. Development of a Multidisciplinary Pediatric Surgery Fellowship. Journal of Physician Assistant Education. 2017;28(2):86-91.
8. Jubbal KT, Agrawal N, Hollier LH Jr. Analysis of Morbidity, Readmission, and Reoperation after Craniosynostosis Repair in Children. Journal of Craniofacial Surgery. 2017;28(2):401-405
9. Patel AS, Wagner JL, Hollier LH Jr. Improved Patient Experience through Expansion of Pediatric Outpatient Pharmacy Services-Case Study. NEJM Catalyst Oct. 11, 2016.
10. Braun TL, Hamilton KL, Monson LA, Buchanan EP, Hollier LH Jr. Tissue Expansion in Children. Seminars in Plastic Surgery 2016;30(4):155-161.


# Edward Reece, M.D., EMBA

**Professor and Chief, Adult Plastic Surgery**
**Josephine Abercrombie Endowed Professor**
**Michael E. DeBakey Department of Surgery**
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## Keywords

- Telehealth
- Nerves
- Reconstruction


## Research interests

Educated at the University of Virginia, he graduated with distinction with a Bachelor of Arts. He has a passion for research enterprises from the cellular level to the clinical and societal levels which have led to peer reviewed publications and lectures. His completion of medical school at Case Western Reserve University School of Medicine produced both a Doctor of Medicine degree and a Master's degree for applied anatomical sciences.

He is the founder of several biomedical companies which seek to find efficiency and cost savings for institutions while preserving the highest quality to patients. System analysis of Supply Chain in Hospitals has been another of his interests and he has served as a Healthcare Supply Chain consultant at Dignity Health, in Phoenix, Arizona.

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## Selected publications


1. Pezeshk RA, Pulikkottil BJ, Bailey SH, Schaffer NE, Reece EM, Thornton NJ, Gupta AR, Hoxworth RE. An Evidence Based Model for the Successful Treatment of Flank and Lateral Abdominal Wall Hernias. Plastic Reconstructive Surgery. 2015: April 24.
2. Edward M Reece: Fascia Cutaneous Flaps: A logistic Regression Analysis. Plastic and Reconstructive Surgery (in press).
3. Edward M Reece: Telehealth-Is the Future Now? Plastic and Reconstructive Surgery. April. 2015.
4. Jeffrey E. Janis, M.D., Daniel A. Hatef, M.D., Edward M. Reece, M.D., and Corrine Wong, M.D.: Does Empiric Antibiotic Therapy Change Hand
5. Infection Outcomes? Cost Analysis of a Randomized Prospective Trial in a County Hospital. Plast Reconstr Surg. 2014 April:133(4): 511e
6. Edward M. Reece, Rod J. Rohrich. The Aesthetic Jaw Line: Management of the Aging Jowl. Volume 28, Issue 6, Pages 668-674.
7. Reece EM, Schaverien M, Rohrich RJ. The paramedian forehead flap: a dynamic anatomical vascular study verifying safety and clinical implications. Plast Reconstr Surg. 2008 Jun;121(6):1956-63.
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10. Rohrich RJ, Reece EM. Is there a role for adolescent breast augmentation? The Female Patient. 2008 March;33(32-35):669-72.


# Edward Buchanan, MD, FACS, FAAP

**Associate Professor and Chief,**
**Pediatric Plastic Surgery**
**Program Director Craniofacial Fellowship**
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**Chief, Division of Plastic Surgery**
**Director of Cleft Care**
**Texas Children's Hospital**



## Keywords

- Cleft Lip and Palate
- Craniosynostosis
- Craniofacial syndromes
- Microtia Reconstruction
- Craniofacial Oncologic Reconstruction


## Research Interests

Dr. Buchanan's primary research interest is in the evaluation and analysis of surgical outcomes in patients treated for cleft and craniofacial conditions. These patients suffer from specific anatomical malformations that need to be addressed at specific time points with specialized procedures. The success of these interventions is important for long-term health and quality of life. Dr. Buchanan's research focuses on understanding the best timing and types of operations for patients with cleft and craniofacial related issues.

As the head of the Cleft and Craniofacial Center at Texas Children's Hospital, I take a specific interest in patient centered outcomes. One of my primary goals is to ensure that our patients receive the world's best treatment. In order for me to do this, I must understand how the treatment experience affects them during every stage of their care. By thoroughly understanding the patient experience, their expectations, satisfactions and quality of life, our craniofacial team can truly take care of the whole patient. By studying patient centered outcomes, health care delivery can become more efficient and effective.

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## Selected Publications

11. Lloyd MS, Trost JG, Khechoyan DY, Hollier LH Jr., Buchanan EP. Identical Twins with Crouzon's Syndrome: Eight year follow up, Genetic Considerations and Operative Management. Craniomaxillofacial Trauma and Reconstruction. 2017;10(4):271-277.
12. Jubbal KT, Zavlin D, Olorunnipa S, Echo A, Buchanan EP, Hollier Jr LH Comparing Plastic Surgery and Otolaryngology Management in Cleft Care: An Analysis of 4,999 Cases. Craniomaxillofacial Trauma and Reconstruction. 2017;10(4):286-291.
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14. Buchanan EP, Xue Y, Xue AL, Olshinka A, Lam S. Multi-Disciplinary Care of Craniosynostosis. Multidisciplinary Healthcare. 2017;10:263-270.
15. LoPresti M , Buchanan EP, Shah V, Hadley CM, Monson LA, Lam S. Complete Resolution of Papilledema in Syndromic Craniosynostosis with Posterior Cranial Vault Distraction. Journal of Pediatric Neurosciences. 2017:12(2):97-100.
16. Wagner RD, Wolfswinkel EM, Buchanan EP, Khechoyan DY. Surgical Outcomes for Speech Surgery in 22q11.2 Deletion Syndrome: The Dilemma of Persistent Velopharyngeal Insufficiency After Pharyngeal Flap Operation. Journal of Craniofacial Surgery. 2017;28(5):1320-1324.
17. Xue Y, Magoulas PL, Wirthlin JO, Buchanan EP. Craniofacial manifestations in severe Nemaline Myopathy – a case report. Journal of Craniofacial Surgery. 2017;28(3):e258-e260.
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20. Lloyd MS, Buchanan EP, Khechoyan DY. Review of quantitative outcome analysis of cranial morphology in craniosynostosis. J Plast Reconstru Aesthet Surg. 2016;69:1464-1468.

# Claudia Harriehausen, D.D.S., M.S.D.

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# Amy Dao Huynh-Tran, DDS

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## Keywords

- Children with developmental differences
- Pediatric plastic surgery



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# John C. Koshy, M.D.

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# Renata Maricevich, MD

**Assistant Professor of Surgery**
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## Keywords


- Cleft lip and palate
- Pierre Robin Sequence
- DiGeorge Syndrome
- Craniosynostosis
- Vascular Anomalies
- Breast Surgery


## Research statement

Dr. Maricevich's current research interests are in Morphology in Cleft, Pierre Robin Sequence and Craniosynostosis patients, speech outcomes on DiGeorge population, outcomes on Pediatric Breast Surgery as well as challenges in Vascular Anomalies.

## Contact information

Texas Children's Hospital

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## Selected publications


1. Saksena A, Aho J, Winocour S, Maricevich R, Senchenkov A, Rose P, Leibovich B, Zietlow S, Saint-Cyr M. Combination of a fillet flap, free tissue transfer, and autologous tissue grafts in pelvic reconstruction following retroperitoneal sarcoma: A case report. Microsurgery. 2015 May;35(4):320-323.
2. Camison L, Morse JC, Naran S, Maricevich R, Wong K, Losee JE, Goldstein JA. The State Of Outcomes Research in Non-Syndromic Craniosynostosis: A Systematic Review of the Literature Over 20 Years. The Cleft Palate-Craniofacial Journal. 2015 July; 52(4):e103-e159.
3. Camison L, Naran S, Maricevich R, Adetayo O, Davit A, Grunwaldt LJ, Goldstein JA, Losee JE. Large Composite Cartilage Grafts with Hyperbaric Oxygen: An Alternative in Pediatric Facial Reconstruction. Plastic and Reconstructive Surgery. 2015;135(4S):1187.
4. Rammos CK, Mohan AT, Maricevich MA, Maricevich RL, Adair MJ, Jacobson SR. Is the SMAS Flap Facelift Safe? A Comparison of Complications Between the Sub-SMAS Approach Versus the Subcutaneous Approach With or Without SMAS Plication in Aesthetic Rhytidectomy at an Academic Institution. Aesthetic Plastic Surgery. 2015 Aug;39(6):870-6.
5. Braun TL, Maricevich RS. Soft Tissue Management in Facial Trauma. Seminars in Plastic Surgery 2017;31(2):73-79.
6. Pickrell BB, Serebrakian AT, Maricevich RS. Mandible Fractures. Seminars in Plastic Surgery 2017;31(2):100-107.
7. Braun TL, Xue AS, Maricevich RS. Differences in Management of Pediatric Facial Trauma. Seminars in Plastic Surgery 2017;31(2):118-122.
8. Bykowski MR, Naran S, Maricevich R, Goldstein JA, Losee JE. Asymmetric Multisutural Craniosynostosis: an Algorithm of Early Intervention to Prevent Evolving Deformity. Journal of Craniofacial Surgery. 2017 Jul;28(5):1211-1219.
9. Pickrell BB, Hughes CD, Maricevich RS. Partial Ear Defects – Reconstruction for the Plastic Surgeon. Seminars in Plastic Surgery. 2017;31(3):134-140.
10. Ali K, Meaike JD, Maricevich RS, Olshinka A. The Protruding Ear – Cosmetic or reconstruction. Seminars in Plastic Surgery. 2017;31(3):152-160.


# Laura Monson, MD

**Assistant Professor of Surgery**
**Division of Pediatric Plastic Surgery**
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## Keywords

- Clinical outcomes
- Quality of life
- Cleft lip and palate


## Research interests

Dr. Monson’s current research focus is on investigating the clinical outcomes of our pediatric plastic and craniofacial patients, especially our cleft patients from infancy through adulthood.

## Contact information


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## Selected publications


1. Braun TL, Kaufman MG, Hernandez C, Monson LA. Shared Medical Appointments for Adolescent Breast Reduction. Annals of Plastic Surgery. 2017;79(3):253-258.
2. Allori AC, Kelley T, Meara JG, Albert A, Bonanthaya K, Chapman K, Cunningham M, Daskalagiannakis J, de Gier H, Heggie AA, Hernandez C, Jackson O, Jones Y, Kangesu L, Koudstaal MJ, Kuchhal R, Lohmander A, Long RE, Magee L, Monson L, Rose E, Sitzman TJ, Taylor JA, Thornburn G, van Eeden S, Williams C, Wirthlin JO, Wong KW. A standard set of outcome measures for the comprehensive appraisal of cleft care. The Cleft Palate-Craniofacial Journal, 2017;54(5):540-554.
3. LoPresti M , Buchanan EP, Shah V, Hadley CM, Monson LA, Lam S. Complete Resolution of Papilledema in Syndromic Craniosynostosis with Posterior Cranial Vault Distraction. Journal of Pediatric Neurosciences. 2017:12(2):97-100.
4. LoPresti M, Daniels B, Buchanan EP, Monson LA, Lam S. Virtual surgical planning and 3D printing in repeat calvarial vault reconstruction for craniosynostosis: technical note. Journal of Neurosurgery: Pediatrics. 2017;19(4):490-494
5. Braun TL, Hamilton KL, Monson LA, Buchanan EP, Hollier LH Jr. Tissue Expansion in Children. Seminars in Plastic Surgery 2016;30(4):155-161.
6. Monson LA, Nelson NS, Donneys A, Farberg AS, Tchanque-Fossuo CN, Deshpande SS, Buchman SR. Amifostine Treatment Mitigates the Damaging Effects of Radiation on Distraction Osteogenesis in the Murine Mandible. Annals of Plastic Surgery. 2016;77(2):164-168.
7. Pickrell BB, Coursen JS, Rodriguez JR, Monson LA. Sternal Wound Salvage in Post-Transplant Adolescents: omental flap reconstruction in patients with prior abdominal surgery. Journal of Craniofacial Surgery. 2016;27(4):e381-e384.
8. Pickrell BB, Lam SK, Monson LA. Isolated Unilateral Frontosphenoidal Craniosynostosis: a rare cause of anterior plagiocephaly. Case Report and Review of the Literature. Journal of Craniofacial Surgery. 2015;26(6):1944-1946.
9. Monson LA, Khechoyan DY, Buchanan EP, Hollier LH Jr. Secondary Lip and Palate Surgery. Clinics in Plastic Surgery. 2014;41:301-309.
10. Monson LA, Kirschner R, Losee JE: CME: Primary Repair of Cleft Lip and Nasal Deformity: Plastic and Reconstructive Surgery. 2013;132(6):1040e-1053e.


# Shola Olorunnipa, M.D.

**Assistant Professor of Surgery**
**Division of Pediatric Plastic Surgery**
**Baylor College of Medicine**

## Keywords

- 3DMD
- Cleft
- Telemedicine

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## Selected publications

1. Yuan B, Goldman R, Wang E, Olorunnipa O, Khechoyan D. "Generating a 3D Normative Infant Cranial Model." Procedia Computer Science.
2. Coates S, Mitchell K, Olorunnipa O, Otterburn DM, Simmons RM. "An Unusual Breast Lesion: Granular Cell Tumor of the Breast with Extensive chest Wall Invasion." J Surg Oncol.
3. Munabi NC, Olorunnipa O, Goltsman D, Rohde CH, Ascherman JA. "The ability of intra-operative perfusion mapping with laser-assisted indocyanine green angiography to predict mastectomy flap necrosis in breast reconstruction: A prospective trial." J Plast Reconstr Aesthet Surg.
4. Olorunnipa O, Zhang AY, Curtin CM. "Invasive Aspergillosis of the hand caused by Aspergillus ustus: A case report." Hand.

# Tuan Truong, M.D.

**Assistant Professor of Surgery**
**Division of Pediatric Plastic Surgery**
**Baylor College of Medicine**

## Keywords

- Craniosynostosis
- Facial Fractures
- Cleft lip and Palate
- Virtual Surgical Planning

## Research interests

His research interests are cranial vault remodeling, facial fractures, midfacial and mandibular distraction, orthognathic surgery, and virtual surgical planning.

## Contact information

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## Selected publications

1. Ali K, Trost JG, Truong TA, Harshbarger RJ III. Total Ear Reconstruction Using Porous Polyethylene. Semin Plast Surg 2017; 31(3): 161-72
2. Olshinka A, Louis M, Truong TA. Autologous Ear Reconstruction. Semin Plast Surg 2017; 31(3): 146-51.
3. Truong TA. Initial Assessment and Evaluation of Traumatic Facial Injuries. Semin Plast Surg 2017;31(2):69-72
4. Schultz K, Braun TL, Truong TA. Frontal Sinus Fracture Semin Plast Surg 2017;31(2):80-84.
5. Louis M, Agrawal N, Truong TA. Midface Fracture I - Orbital, NOE, Nasal, Zygoma. Semin Plast Surg 2017;31(2):85-93.
6. Louis M, Agrawal N, Truong TA. Midface Fracture II - Palato-alveolar, LeFort, Dento-alveolar. Semin Plast Surg 2017;31(2):94-99.

7. Farkas JP, Kenkel JM, Hatef DA, Davis G, Truong T, Rohrich RJ, Brown SA. The effect of blood pressure on hematoma formation with perioperative Lovenox in excisional body contouring surgery. Aesthet Surg J. 2007 Nov-Dec; 27(6):589-93.


## Sebastian Winocour, M.D., M.Sc.

**Assistant Professor of Surgery**
**Division of Adult Plastic Surgery**
**Baylor College of Medicine**

## Research interests

Dr. Winocour's research interests focus on breast reconstruction, aesthetic surgery and the treatment of pathological scarring.

## Contact information

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## Selected publications

1. Winocour S, Saksena A, Oh C, Wu P, Laungani A, Saint-Cyr M. "A systematic review of comparison of autologous, allogeneic and synthetic augmentation grafts in nipple reconstruction." Plastic and Reconstructive Surgery. Pubmed PMID: 26710046
2. Reusche R, Winocour S, Degnim A, Lemaine V. "Diffuse Dermal Angiomatosis of the Breast: A Series of 22 Cases from a Single Institution." Gland Surgery. Pubmed PMID: 26645009
3. Saksena A, Aho J, Winocour S, Maricevich R, Senchenkov A, Rose P, Leibovich B, Zietlow S, Saint-Cyr M. "Combination of a Fillet Flap, Free Tissue Transfer and Autologous Tissue Grafts in Pelvic Reconstruction Following Retroperitoneal Sarcoma: A Case Report." Microsurgery. Pubmed PMID: 25382698
4. Wu P, Winocour S, Jacobson S. "Red Breast Syndrome: A Review of Available Literature." Aesthetic Plastic Surgery. Pubmed PMID: 25608912
5. Winocour S, Saint-Cyr M. "Discussion: Do Adjunctive Flap Monitoring Technologies Impact Clinical Decision Making? An Analysis of Microsurgeon Preferences and Behavior by Body Region." Plastic and Reconstructive Surgery. Pubmed PMID: 25719705

6. Winocour S, Martinez-Jorge J, Habermann E, Thomsen K, Lemaine V. "Early surgical site infection following tissue expander breast reconstruction with and without acellular dermal matrix: national benchmarking using NSQIP." Archives of Plastic Surgery. Pubmed PMID: 25798391
7. Winocour S, Vorstenbosch J, Trzeciak A, Lessard L, Philip A. "Effect of CD109, a novel TGF-β antagonist, in a skin flap-induced ischemic wound model." Experimental Dermatology. Pubmed PMID: 24815824
8. Winocour S, Murad M, Bidgoli-Moghaddam M, Jacobson S, Bite U, Saint-Cyr M, Tran N, Lemaine V. "A systematic review of the use of botulinum toxin type A with subpectoral breast implants." Journal of Plastic, Reconstructive & Aestheti. Pubmed PMID: 24094619
9. Winocour S, Lemaine V. "Hypoplastic breast anomalies in the female adolescent breast." Seminars in Plastic Surgery. Pubmed PMID: 24872739
10. Sinno H, Malholtra M, Lutfy J, Jardin B, Winocour S, Brimo F, Beckman L, Watters K, Philips A, Williams B, Prakash S. "Accelerated wound healing with topical application of complement C5." Plastic and Reconstructive Surgery. Pubmed PMID: 22929237


# John Wirthlin, DDS, MSD

**Assistant Professor of Surgery**
**Division of Pediatric Plastic Surgery**
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## Keywords

- Craniofacial development
- Pre-surgical infant orthopedics
- Cleft lip and palate orthodontics



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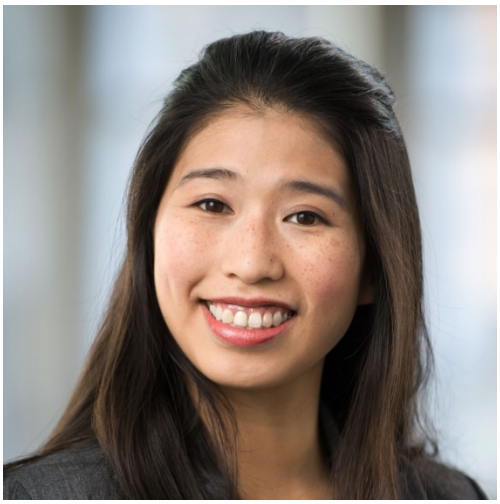
## Selected publications


1. Wirthlin J, Kau CH, English JD, Pan F, Zhou H. Comparison of facial morphologies between adult Chinese and Houstonian Caucasian populations using three-dimensional imaging. International Journal of Oral and Maxillofacial Surgery. 2013;42(9):1100-7.
2. Wolfswinkel EM, Weathers WM, Wirthlin JO, Monson LA, Hollier LH Jr, Khechoyan DY. Management Principles for Pediatric Mandible Fractures. Otolaryngologic Clinics of North America. Available online 7/19/2013.
3. Wirthlin JO. Shetye PR. Orthodontist's Role in Orthognathic Surgery. Seminars in Plastic Surgery. 2013;27:137-144.




# Esther Yang, DDS

**Assistant Professor of Surgery**
**Division of Pediatric Plastic Surgery**
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## Research interests

As a member of the cleft and craniofacial team, Dr. Yang helps treat patients born with a variety of facial abnormalities including, cleft lip and palate, hemifacial microsomia, Crouzon Syndrome, Pierre Robin, and a variety of other abnormalities. Treating these patients with a team-centered approach allows optimal treatment results as professionals from plastic surgery, speech pathology, orthodontics, pediatric dentistry, otolaryngology, and several other specialties can coordinate and optimize each step of the treatment.

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# Marco Maricevich, MD

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## Selected publications

1. Maricevich, M; Bykowski, M; Schusterman, M; Katzel, E; Gimbel, M. Lateral Thigh Perforator Flap for Breast Reconstruction: Computed Tomographic Analysis and Clinical Series. Journal of Plastic, Reconstructive, & Aesthetic Surgery. 2017 May;70(5):577-584.
2. Rammos CK, Mohan AT, Maricevich MA, Maricevich RL, Adair MJ, Jacobson SR. Is the SMAS Flap Facelift Safe? A Comparison of Complications Between the Sub-SMAS Approach Versus the Subcutaneous Approach With or Without SMAS Plication in Aesthetic Rhytidectomy at an Academic Institution. Aesthetic Plastic Surgery. 2015 Dec;39(6):870-6.
3. Maricevich M, Maricevich R, Chim H, Moran SL, Rose PS, Mardini S. Reconstruction following Sacrectomy Defects: an Analysis of Outcomes and Complications. Journal of Plastic, Reconstructive, & Aesthetic Surgery. Sep;67(9):1257-66.

4. Maricevich, M; Adair, M; Maricevich, R; Kashyap, R; Jacobson, S. Facelift Complications Related to Median and Peak Blood Pressure Evaluation. Aesthetic Plastic Surgery. 2014 Aug;38(4):641-7.
5. Chim, H; Maricevich, M; Carlsen, B; Moran, S; Salgado, C; Wei, FC; Mardini, S. Challenges in Replantation of Complex Amputations. Seminars in Plastic Surgery. 2013; 27(04):182-189.
6. Maricevich, M; Farley, D. Laparoscopic Totally Extraperitoneal Repair of Obturator Hernia. American College of Surgeons Multimedia Atlas of Surgery – Hernia Volume, Chapter 26.
7. Maricevich, M; Carlsen, B; Mardini, S; Moran, S. Upper Extremity and Digital Replantation. Hand. 2011. Dec; 6(4):356-363.
8. Maricevich, M; Grams, J; Aleff, P; Inwards, C; Jacobson, S. Mediastinal Silicone Lymphadenopathy Secondary to a Ruptured Breast Implant. The Breast Journal. 2011 Nov;17(6):674-5.
9. Sheth, R; Maricevich, M; Mahmood, U. In vivo Optical Molecular Imaging of Matrix Metalloproteinases Activity in Abdominal Aortic Aneurism Correlates with Growth Rate. Atherosclerosis. 2010 Sep; 212(1):181-7.
10. Hung, K; Maricevich, M; Richard, L; Chen, W; Richardson, M; Kunin, A; Bronson, R; Mahmood, U; Kucherlapati, R. Development of a Mouse Model for Sporadic and Metastatic Colon Tumors and its use in Assessing Drug Treatment. Proceedings of the National Academy of Sciences (PNAS). 2010 Jan 26;107(4):1565-70.

# VASCULAR SURGERY & ENDOVASCULAR THERAPY

Our faculty physicians in the Division of Vascular Surgery and Endovascular Therapy at Baylor College of Medicine are widely recognized as leaders in the fields of vascular surgery and endovascular therapy at several institutions in the Texas Medical Center, including Baylor St. Luke's Medical Center, the Texas Heart Institute, Texas Children's Hospital, the Michael E. DeBakey VA Medical Center and Ben Taub Hospital.

Equipped with state-of-the-art resources and funded by the National Institutes of Health, the American Cancer Society, the Dan L Duncan Comprehensive Cancer Center, the National Institute of Neurology Disorders and Strokes, and the Department of Veterans Affairs, the research center conducts basic and applied science programs in limb salvage, vascular surgery outcomes, precision health, diabetic foot care, wound care, offloading, prevention of ulcer recurrence, dialysis interventions , dementia, personalized exercise therapy, vascular biology, pancreatic cancer research, surgical immunology, and cancer vaccination.

To ensure that the newest treatment options are available to patients with vascular disease, the division actively participates in several clinical trials that evaluate new devices for the treatment of abdominal aortic aneurysms and peripheral arterial disease.

Our research efforts in clinical outcomes following surgical or endovascular treatment of aneurysms, dialysis interventions, lower extremity occlusive disease, and carotid disease, have helped define standards of care in vascular disease management.

The division hosts an interdisciplinary research infrastructure named Interdisciplinary Consortium on Advanced Motion Performance (iCAMP). iCAMP is an interdisciplinary research and development collaboration led by Bijan Najafi, Ph.D., between a host of productive, exciting, creative teams - from Vascular Surgery, Orthopedics, Podiatry, Nursing, Geriatrics, Neurology, Nephrology, Movement Science, and Engineering at the Baylor College of Medicine. The iCAMP lab houses many new technologies, many of which were developed in-house. iCAMP houses a state-of-the-art gait and human-performance laboratory equipped with innovative motion analyzer systems of both wearable and stationary systems. The facility is conveniently located near relevant resources for patient recruitment and patient follow-up and includes a HIPPA compliant patient recruitment facility.

# Joseph L. Mills Sr. M.D., F.A.C.S.

**Professor of Surgery and Chief**
**Division of Vascular Surgery & Endovascular Therapy**

**Michael E. DeBakey Department of Surgery**
**Baylor College of Medicine**

**Keywords**

- Limb salvage/Diabetic Foot
- Peripheral artery disease (PAD)
- Vein graft stenosis
- Endovascular therapy
- AAA

## Research interests

Dr. Mills has authored nearly 300 peer-reviewed journal articles and book chapters, focused on his clinical and research interests in noninvasive diagnosis, vein graft stenosis, intimal hyperplasia and limb-salvage in patients with diabetes mellitus. He has been the principal investigator for over 40 clinical trials, including a number of current investigations.

## Contact information

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## Selected publications

1. Schaper NC, Andros G, Apelqvist J, Bakker K, Lammer J, Lepantalo M, Mills JL, et al. Specific guidelines for the diagnosis and treatment of peripheral arterial disease in a patient with diabetes and ulceration of the foot. Diabetes Metab Res Rev Feb 2012 Vol 28(Supl 1):236-237.
2. Zhan LX, Bharara M, White ML, Bhatnagar S, Lepow B, Armstrong DG, Mills JL. Comparison of initial hemodynamic response after endovascular therapy and open surgical bypass in patients with diabetes mellitus and critical limb ischemia. J Vasc Surg 2012 (56): 380-386.

3. Mills JL, Conte MS, Armstrong DG, Pomposelli F, Schanzer A, Sidawy AN, Andros G. The Society for Vascular Surgery Lower Extremity Threatened Limb Classification System: Risk stratification based on Wound, Ischemia and foot Infection (WIfI). J Vasc Surg. 2014;59:220-34.
4. Armstrong DG, Rankin TM, Giovinco NA, Mills JL, Matsuoka Y. A Heads-Up Display for Diabetic Limb Salvage Surgery: A View Through the Google Looking Glass. J Diabetes Sci and Technol. 2014 Sep:8(5):951-6.
5. Skrepnek GH, Mills JL, Armstrong DG. Foot-in-Wallet Disease: Tripped up by 'cost saving' reductions. Diabetes Care. September 2014: Vol 37(9):e196–e197. DOI: 10.2337/dc14-0079
6. Branco BC, DuBose JJ, Hughes JD, Goshima KR, Trinidad-Hernandez M, Rhee P, Mills JL. Trends and Outcomes of Endovascular Therapy in the Management of Civilian Vascular Injuries. J Vasc Surg November 2014; 60(5):1297-1307. DOI: http://dx.doi.org/10.1016/j.jvs.2014.05.028
7. Skrepnek GH, Armstrong DG, Mills JL. Open bypass and endovascular procedures among diabetic foot ulcer cases in the United States from 2001 to 2010. J Vasc Surg November 2014; 60(5):1255-65. DOI: http://dx.doi.org/10.1016/j.jvs.2014.04.071
8. Miller JD, Carter E, Shih J, Giovinco NA, Boulton AJM, Mills JL, Armstrong DG. "The 3-Minute Diabetic Foot Exam and Risk Assessment: A Matter of Life and Limb in Primary Prevention", J Fam Pract 2014 November; 63(11):646-656.
9. Echeverria A, Branco BC, Goshima KR, Hughes JD, Mills JL. Outcomes of Endovascular Management of Acute Thoracic Aortic Emergencies in an Academic Level One Trauma Center. American Journal of Surgery December 2014; 208(6):974-80. doi: 10.1016/j.amjsurg.2014.08.008.
10. Conte MS (Co-Chair), Pomposelli FB (Co-Chair), Clair D, Geraghty PJ, McKinsey JF, Mills JL, Moneta GL, Murad MH, Powell RJ, Reed AB, Schanzer A, Sidawy AN (Society for Vascular Surgery Lower Extremity Guidelines Writing Group). SVS Practice Guidelines for Atherosclerotic Occlusive Disease of the Lower Extremities Part I: Asymptomatic Disease and Claudication. J Vasc Surg March 2015; 61 (3 Supplement):2S-41S. http://dx.doi.org/10.1016/j.jvs.2014.12.009



# Neal R. Barshes, M.D., M.P.H.

**Associate Professor of Surgery**
**Division of Vascular Surgery & Endovascular Therapy**
**Baylor College of Medicine**



## Keywords

- Diabetic foot ulcers
- Diabetic limb salvage
- Infrainguinal bypass


## Research interests

Dr. Barshes is an academic vascular surgeon who focuses on the treatment of foot infections and peripheral artery disease. His research activities have spanned the spectrum of care for this problem, including: foot ulcer prevention efforts; the microbiology of isolates involved in foot infections; patient selection for revascularization; the timing of soft tissue reconstruction after revascularization; and the cost-effectiveness of prevention and management strategies for peripheral arterial disease and non-healing foot ulcers. The clinical research methodologies used to investigate the research questions for these clinical topics have included randomized controlled trials, large database research, retrospective cohort studies with multivariate analyses and/or propensity scoring, and Markov model simulation with formal cost-utility analyses. Current efforts and plans for future direction include further studies are also focused on further optimizing the value of limb preservation efforts, especially through the improved coordination of multidisciplinary care within the context of a vertically-integrated health care system.

## Contact information


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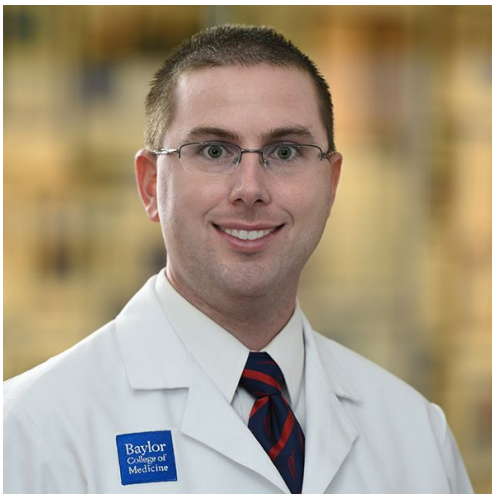
## Selected publications


1. Barshes NR, Belkin M, on behalf of the Model to Optimize health care Value in Ischemic Extremities (M.O.V.I.E.) study collaborators. Long-term cost-effectiveness in the contemporary management of critical limb ischemia with tissue loss. J Vasc Surg 2012; 56:1015-1024.
2. Barshes NR, Ozaki CK, Kougias P, Belkin M. A cost-effectiveness analysis of infrainguinal bypass in the absence of greater saphenous vein conduit. J Vasc Surg 2013; 57:1466-1470.
3. Barshes NR, Kougias P, Ozaki CK, Pisimisis G, Bechara CF, Henson HK, Belkin M. The cost-effectiveness of revascularization for limb preservation in patients with marginal functional status. Ann Vasc Surg 2014; 28:10-17.
4. Barshes NR, Gold B, Garcia A, Bechara CF, Pisimisis G, Kougias P. Minor amputation and palliative wound care as a strategy to avoid major amputation in patients with foot infections and severe peripheral arterial disease. Int J Low Extr Wounds 2014; 13:211-219.
5. Ozaki CK, Hamdan AD, Barshes NR, Wyers M, Hevelone ND, Belkin M, Nguyen LL. Prospective, randomized multi-institutional clinical trial of a silver alginate dressing to reduce lower extremity vascular surgery wound complications. J Vasc Surg, 2015; 61:419-427.
6. Barshes NR, Pisimisis GT, Kougias P. Compartment syndrome of the foot associated with a delayed presentation of acute limb ischemia. J Vasc Surg 2016; 63:819-822.
7. Sharath S, Kougias P, Pisimisis G, Barshes NR. The Impact of Clinical, Psychological, Behavioral, Social and Environmental Factors on Self-Perceived Symptom Severity in a Cohort with Intermittent Claudication. J Vasc Surg 2016; 63:1296-1304.
8. Barshes NR, Flores E, Belkin M, Kougias P, Armstrong DG, Mills JL Sr. The Accuracy and Cost-Effectiveness of Strategies Used to Identify Peripheral Artery Disease Among Patients with Diabetic Foot Ulcers. J Vasc Surg 2016; 64:1682-1690.
9. Gerhard-Herman MD, Gornik HL, Barrett C, Barshes NR, Corriere MA, Drachman DE, Fleisher LA, Fowkes FG, Hamburg NM, Kinlay S, Lookstein R, Misra S, Mureebe L, Olin JW, Patel RA, Regensteiner JG, Schanzer A, Shishehbor MH, Stewart KJ, Treat-Jacobson D, Walsh ME. 2016 AHA/ACC Guideline on the Management of Patients With Lower Extremity Peripheral Artery Disease: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Circulation 2017; 135:e686-e725.
10. Barshes NR, Mindru C, Ashong C, Rodriguez-Barradas M, Trautner BW.Risk Factors for Treatment Failure and Leg Amputation Among Patients with Foot Osteomyelitis. Int J Lower Ext Wounds 2016; 15:303-312. Barshes NR, Chang IF, Karpen SJ, Carter BA, Goss JA. Impact of pretransplant growth retardation in pediatric liver transplantation. J Pediatr Gastroenterol Nutr. 2006 Jul;43(1):89-94.




# Johnathan Braun, M.D.

**Assistant Professor of Surgery**
**Division of Vascular Surgery and Endovascular Therapy**
**Baylor College of Medicine**

## Research interests

Dr. Braun's areas of academic interest include cost-effectiveness in management of vascular disease, functional outcomes in peripheral artery disease treatment, and perfusion assessment in diabetic foot wounds. He has contributed articles to peer-reviewed journals such as Journal of Vascular Surgery and presented at national and regional meetings. He has also served as a co-author for Surgical CORE curriculum in carotid disease.

## Contact information

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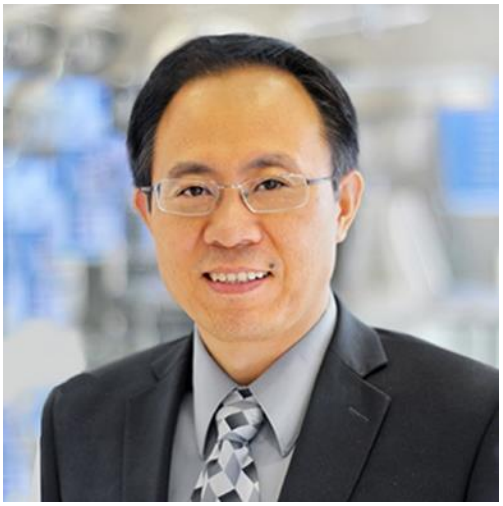
## Selected publications

1. Aziz H, Branco BC, Braun J, Hughes JD, Goshima KR, Trinidad-Hernandez M, Hunter G, Mills JL Sr.. "The Influence of Do-Not-Resuscitate Status on the Outcomes of Patients Undergoing Emergency Vascular Operations." J Vasc Surg.
2. Braun JD, Trinidad-Hernandez M, Perry D, Armstrong DG, Mills JL Sr. "Early Quantitative Evaluation of Indocyanine Green Angiography in Patients with Critical Limb Ischemia." J Vasc Surg.
3. Gasco J, Braun JD, McCutcheon IE, Black PM. "Neurosurgery Certification in Members Societies of the World Federation of Neurosurgical Societies: Asia." World Neurosurg.




# Changyi (Johnny) Chen, M.D., Ph.D.

**Professor of Surgery**
**Division of Vascular Surgery and Endovascular Therapy**
**Director, Basic Science and Translational Labs**
**Michael E. DeBakey Department of Surgery**

**Molecular Surgery Endowed Chair**
**Department of Molecular and Cellular Biology**
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**Keywords**

- Angiogenesis
- Atherosclerosis
- Cardiovascular disease
- Endothelial dysfunction
- Endothelial nitric oxide synthase
- Hemodynamics
- Oxidative stress and antioxidant
- Pancreatic cancer
- PLGA-based nanotechnology
- Vascular tissue engineering


## Research interests

Dr. Chen's laboratory is actively conducting several basic science and translational research projects that are highly relevant to clinical cardiovascular disease and pancreatic cancer.

Cardiovascular risk factors and their molecular mechanisms in cardiovascular disease
We are investigating the effects and the molecular mechanisms of several cardiovascular risk factors, including HIV protease inhibitors, the adipokine resistin, soluble CD40L, and uric acid, on biochemical pathways associated with endothelial cell functions. Some of the biochemical pathways under investigation are the endothelial nitric oxide synthase system, the oxidative stress system, and signal transduction pathways. We are carrying on these investigations using several experimental models, such as myographies, organ cultures, mouse models, human tissue samples, and different types of endothelial cells. Based on the molecular mechanisms we uncover, we develop effective therapeutic strategies to treat endothelial dysfunction and atherosclerosis.

Endothelial cell differentiation and
angiogenesis
We are studying the role played by and the molecular mechanisms of hemodynamic factors and several novel molecules on endothelial cells differentiated from embryonic

stem cells and from bone marrow-derived stem cells. We are identifying key regulatory genes that trigger endothelial cell differentiation and promote stable angiogenesis. These findings can potentially be applied to the design of novel therapeutic strategies to treat ischemic tissues using genetically engineered endothelial cells. In addition, these studies may provide useful information to genetically engineer novel tissues for vascular grafts.

*Pancreatic cancer*

We have been heavily involved in pancreatic cancer research programs for many years. We have several projects focusing on the role and on the mechanisms of several genes, such as microRNA
196a (miR-196a), X-inactive specific transcript (XIST), and Jude-2 in pancreatic cancer. Our comprehensive studies analyze human cancer specimens, clinical outcomes, established cell lines, a nude mouse model, and a genetically engineered mouse model of pancreatic cancer called the KPC model. We are developing PLGA [poly(lactic-co-glycolic acid)]-based nanotechnology for molecular imaging and for specific drug and gene delivery, which has great potential clinical applications, such as molecular diagnostics and targeted therapies.

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## Selected publications

4. 1. Chen C, Ochoa LN, Kagan A, Chai H, Liang Z, Peter Lin PH, Yao Q. (2012), Lysophosphatidic acid causes endothelial dysfunction in porcine coronary arteries and human coronary artery endothelial cells. *Atherosclerosis*, 222(1):74-83.
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**Jayer Chung, M.D., M.Sc.**
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## Keywords

- Diabetic foot
- Lower extremity revascularization
- Chronic critical limb ischemia

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## Selected publications

1. Chung J, Bartelson BB, Hiatt WR, Peyton BD, McLafferty RB, Hopley CW, Salter KD, Nehler MR. Wound healing and functional outcomes after infrainguinal bypass with reversed saphenous vein for critical limb ischemia. Journal of Vascular Surgery. 2006; 43 (6): 1183-1190.
2. Chung J, Brass EP, Ulrich RG, Hiatt WR. Effect of atorvastatin therapy on energy expenditure and substrate oxidation at rest and during exercise. Clinical Pharmacology and Therapeutics. 2007; 83(2): 243-250.
3. Chung J, Correire MA, Veeraswamy RK, Kasirajan K, Milner R, Dodson TF, Salam AA, Chaikof EL. Risk factors for late mortality after endovascular repair of the thoracic aorta. Journal of Vascular Surgery
4. Chung, J, Kasirajan, K, Veeraswamy, RK, Dodson, TF, Salam, AA, Chaikof, EL, Corriere, MA. Left subclavian artery coverage during thoracic endovascular aortic repair and risk of perioperative stroke or death. Journal of Vascular Surgery. 2011; 54(4): 979-984
5. Chung, J, Clagett GP. Neoaortoiliac System (NAIS) procedure for the treatment of the infected aortic graft. Seminars in Vascular Surgery. 2011 Dec; 24(4): 220-226
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10. Chung J, Modrall JG, Valentine RJ. The need for risk-stratification in chronic critical limb ischemia. Journal of Vascular Surgery. 2014; 60; 1677-1685.


# Ramyar Gilani, M.D.

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**Chief, Vascular Surgery**
**Medical Director, Vascular Laboratory**
**Ben Taub Hospital**



## Keywords

- Vascular surgery and endovascular interventions
- New paradigms in hemorrhage control
- Blood vessel prosthesis implantation


## Research interests

Dr. Gilani's research interest is in the clinical outcome of vascular surgical reconstructions and endovascular interventions, specifically in endovascular treatment of aortic aneurysms, venous disease, and endovascular treatment of lower extremity occlusive disease.

Dr. Gilani has contributed numerous articles to scholarly and professional journals such as Journal of Vascular Surgery, Vascular and Endovascular Surgery, Vascular Journal, and Journal of Endovascular Therapy. He has written many book chapters related to vascular disease management.

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## Selected publications


1. Wall MJ, Tsai PI, Gilani R, Mattox KL. "Open and endovascular approaches to aortic trauma. Tex Heart Inst J. 2010;37(6):675-7. PMID: 21224943
2. DuBose JJ, Rajani R, Gilani R, Arthurs ZA, Morrison JJ, Clouse WD, Rasmussen TE. "Endovascular management of axillo-subclavian arterial injury: a review of published experience. Injury. 2012 November;43(11):1785-92. PMID: 22921384
3. Kashyap VS, Gilani R, Bena JF, Bannazadeh M, Sarac TP. "Endovascular therapy for acute limb ischemia. J. Vasc. Surg.. 2011 February;53(2):340-6. PMID: 21050699
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6. Li LT, Gilani R, Tsai PI, Wall MJ. "Takayasu arteritis complicating pregnancy in adolescence. Ann Vasc Surg. 2012 August;26(6):858.e7-858.e10. PMID: 22633271
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# Panos Kougias, M.D.

**Associate Professor of Surgery**
**Division of Vascular Surgery & Endovascular Therapy**
**Baylor College of Medicine**

**Vascular Surgery Section Chief**
**Michael E. DeBakey VA Medical Center**

## Keywords

- Endovascular treatment abdominal aortic aneurysms
- Systems re-design and health care delivery optimization
- Carotid endarterectomy and stenting

## Research interests

Dr. Kougias's research interest focuses exclusively on clinical research within the following two areas:
1) Randomized controlled trials to answer critical clinical questions and address systems re-design issues
2) Observational studies utilizing large datasets from institutional or nationwide databases.
He currently runs two randomized controlled trials funded from a VHA Career Development Award and a VHA Merritt Review Award. Our group also runs more than 25 observational studies on topics that cover the areas of limb salvage, operating room time utilization, carotid disease and vascular infections, among others. He has mentored 12 students and/or residents over the past 3 years with a philosophy that emphasizes a progressive initiation of the mentee into the principles of clinical research; research question inception, data collection, data analysis, and scientific presentation/writing. Two of his current mentees are pursuing formal training in Clinical Research and/or Epidemiology as part of their research curriculum.

## Contact information

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## Selected publications


1. Kougias P, Tiwari V, Orcutt S, Chen A, Pisimisis G, Barshes NR, Bechara CF, Berger DH. Derivation and out of sample validation of a modeling system to predict surgical case duration. *Am J Surg*. (2012) 204, 563–568
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4. Kougias P, Bechara CF, Bakaeen F, Chu D, Lin PH. Impact of transfusion policy on acute coronary syndrome after major vascular reconstruction. *Am J Surg*. 2010;200:606-609
5. Kougias P, Weakly SM, Yao Q, Chen C, Lin PH. Arterial baroreceptors in the management of systemic hypertension. *Med Sci Monit. 2010* Jan;16(1):RA1-8.
6. Kougias P, Chen A, Cagiannos C, Bechara CF, Huynh TT, Lin PH. Subintimal placement of covered stent versus subintimal balloon angioplasty in the treatment of long-segment superficial femoral artery occlusion. *Am J Surg* Nov 2009;198(5):645-649
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8. Kougias P, Lau D, El Sayed HF, et al. Determinants of mortality and treatment outcome following surgical interventions for acute mesenteric ischemia. *J Vasc Surg.* 2007, 46(3): 467-74.
9. Kougias P, Lin PH, Dardik A, Lee A, El Sayed HF, Zhou W. Successful treatment of endotension and aneurysm sac enlargement with endovascular stent graft reinforcement. *J Vasc Surg*, Jul 2007. 46(1):124-7.
10. Kougias P, Kappa JR, Sewell DH, Feit RA, Michalik RE, Imam M, Greenfield TD. Simultaneous Carotid Endarterectomy and Coronary Artery Bypass Grafting: Results in Specific Patient Groups. *Ann Vasc Surg*, May 12 2007.


# Brian D. Lepow, D.P.M.

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## Keywords

- Diabetic foot
- Limb salvage
- Amputation prevention

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## Selected publications

1. Lepow, BD, Bluthe, DB. "It Takes a Team." *Podiatry Management*.
2. Lepow, GM; Lepow, BD. "Emerging Insights on Fixation for Austin/Chevron Bunionectomies." *Podiatry Today*.
3. Lepow BD, Perry D, Armstrong DG. "The Use of SPY Intraoperative Vascular Angiography as a Predictor of Wound Healing." *Podiatry Management*.
4. Lepow BD, Downey M, Yurgelon J, Klassen L, Armstrong DG. "Bioengineered Tissues in Wound Healing: A Progress Report." *Expert Rev Dermatology*.
5. Lepow BD, Bharara M, Armstrong DG. "Thermography and Thermometry: Building a Knowledge Base." *Podiatry Management*.


## Bijan Najafi, PH.D., MSc.

**Professor of Surgery and Director, Clinical Research**
**Division of Vascular Surgery and Endovascular Therapy**

**Director, Interdisciplinary Consortium on Advanced Motion Performance (iCAMP)**
**Baylor College of Medicine**



## Keywords

- Wearable technology
- Movement science
- Digital health
- Exergame/Exercise Science
- Internet of Things (IoT)
- Motor Cognitive Performance
- Frailty


## Research interests

Dr Najafi has over two decades of experience in designing bio-inspired sensors for objective evaluation of healthy state of patients with locomotor dysfunctions, over 200 scientific publications in peer reviewed journals or conference proceeding with more than 5000 citations, 20+ issued or pending patents, and have been PI or a key investigator on over 50 industrial, national and international grants ($50M+). He worked with a wide network of clinical and bioengineering collaborators across the globe primarily in the clinical areas of falls, frailty, gait, cognitive impairment, dementia, and diabetes and diabetic foot ulcers. He has assisted in successful translation of several innovative technologies for commercialization in the area of remote heath monitoring, precision medicine, and movement assessment including several wearable and mHealth technologies for activities monitoring, gait analysis, balance assessment, automatic fall detection, patient adherence, smart home design for people with dementia, and various technologies for foot problems management including prevention of diabetic foot ulcers and wound management.

He has mentored over 200 postdoctoral, research fellows/interns, graduate, undergraduate, premed, and medical students - several of them received prestigious awards from their achievements while working in his team. He also serves as editor, associate editor, and guest editor for several scientific journals including as a section editor for Gerontology, 'Regenerative and Technological Section', PLOS One, Journal of Diabetes Science and Technology, and the Journal of American Podiatric Medical Association (JAPMA). He has served as the chair of research operation at the Southern Arizona Limb Salvage Alliance (SALSA), a collaborative clinical and research alliance dedicated to advancing care of the diabetic foot and preventing amputations in North America and worldwide.

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## Selected publications

1. Zhou H, Sabbagh M, Wyman R, Liebsack C, Kunik ME, Najafi B. Instrumented Trail-Making Task to Differentiate Persons with No Cognitive Impairment, Amnestic Mild Cognitive Impairment, and Alzheimer Disease: A Proof of Concept Study. Gerontology. 2017;63(2):189-200. doi: 10.1159/000452309. PubMed PMID: 27855415; PubMed Central PMCID: PMC5311006.
2. Razjouyan J, Lee H, Parthasarathy S, Mohler J, Sharafkhaneh A, Najafi B. Improving Sleep Quality Assessment Using Wearable Sensors by Including Information From Postural/Sleep Position Changes and Body Acceleration: A Comparison of Chest-Worn Sensors, Wrist Actigraphy, and Polysomnography. Journal of clinical sleep medicine : JCSM : official publication of the American Academy of Sleep Medicine. 2017;13(11):1301-10. doi: 10.5664/jcsm.6802. PubMed PMID: 28992827; PubMed Central PMCID: PMC5656479.
3. Lee H, Joseph B, Enriquez A, Najafi B. Toward Using a Smartwatch to Monitor Frailty in a Hospital Setting: Using a Single Wrist-Wearable Sensor to Assess Frailty in Bedbound Inpatients. Gerontology. 2017. doi: 10.1159/000484241. PubMed PMID: 29176316.
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Based Foot Protection System? Journal of diabetes science and technology. 2017;11(4):702-13. doi: 10.1177/1932296816689105. PubMed PMID: 28627227; PubMed Central PMCID: PMC5588829.

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7. Muchna A, Najafi B, Wendel CS, Schwenk M, Armstrong DG, Mohler J. Foot Problems in Older Adults: Associations with Incident Falls, Frailty Syndrome and Sensor-Derived Gait, Balance, and Physical Activity Measures. Journal of the American Podiatric Medical Association. 2017. doi: 10.7547/15-186. PubMed PMID: 28853612.
8. Najafi B, Talal TK, Grewal GS, Menzies R, Armstrong DG, Lavery LA. Using Plantar Electrical Stimulation to Improve Postural Balance and Plantar Sensation Among Patients With Diabetic Peripheral Neuropathy: A Randomized Double Blinded Study. Journal of diabetes science and technology. 2017;11(4):693-701. doi: 10.1177/1932296817695338. PubMed PMID: 28627217; PubMed Central PMCID: PMC5588835.
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## Miguel Montero-Baker, M.D.

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## Keywords

- Critical limb ischemia
- Endovascular
- Implantable technology


## Research interests

Dr. Montero-Baker graduated with honors both from medical school and his residency in Vascular Surgery at the University of Costa Rica. After his residency training, he was awarded a DAAD (German Academic Exchange Service) scholarship to further pursue his interest in interventional therapies in Leipzig, Germany and completed a peripheral vascular ultrasound fellowship, as well as an advanced peripheral endovascular interventions fellowship. Driven by his passion for research and development of new diagnostic techniques for ischemic limbs, Dr. Montero-Baker completed an Integrated Vascular Surgery Residency at the University of Arizona and went on to join the faculty as an assistant professor.

Dr. Montero-Baker is author of numerous journal publications, has co-authored several textbook chapters and is a well-recognized opinion leader for the Latin American medical community. Dr. Montero-Baker's main clinical interests are critical limb ischemia, implantable micro-technology and endovascular carotid disease management.

He is an active member of the Society for Vascular Surgery, the International Society for Vascular Surgery, the International Society of Endovascular Surgeons, Endovascular Surgeons of Latin America and the Latin America Society of Vascular Surgeons.

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## Selected publications


1. Montero-Baker MF, Au-Yeung KY, Wisniewski NA, Gamsey S, Morelli-Alvarez L, Mills JL Sr, Campos M, Helton KL. "The First-in-Man "Si Se Puede" Study for the use of micro-oxygen sensors (MOXYs) to determine dynamic relative oxygen indices in the feet of patients with limb-threatening ischemia during endovascular therapy." J Vasc Surg. Pubmed PMID: 26004327
2. Montero-Baker M, Schmidt A, Bräunlich S, Ulrich M, Thieme M, Biamino G, Botsios S, Bausback Y, Scheinert D. "Retrograde approach for complex popliteal and tibioperoneal occlusions." J Endovasc Ther. Pubmed PMID: 18840044
3. Montero-Baker MF, Branco BC, Leon LL Jr, Labropoulos N, Echeverria A, Mills JL Sr. "Management of inferior vena cava aneurysm." J Cardiovasc Surg (Torino). Pubmed PMID: 26088010
4. Abbott AL, Paraskevas KI, Kakkos SK, Golledge J, Eckstein HH, Diaz-Sandoval LJ, Cao L, Fu Q, Wijeratne T, Leung TW, Montero-Baker M, Lee BC, Pircher S, Bosch M, Dennekamp M, Ringleb P. "Systematic Review of Guidelines for the Management of Asymptomatic and Symptomatic Carotid Stenosis." Stroke. Pubmed PMID: 26451020
5. León LR Jr, Dieter RS, Gadd CL, Ranellone E, Mills JL Sr, Montero-Baker MF, Gruessner AC, Pacanowski JP Jr. "Preliminary results of the initial United States experience with the Supera woven nitinol stent in the popliteal artery." J Vasc Surg. Pubmed PMID: 23535039
6. Branco BC, Montero-Baker MF, Mills JL Sr. "The pros and cons of endovascular and open surgical treatments for patients with acute limb ischemia." J Cardiovasc Surg (Torino). Pubmed PMID: 25573443
7. Branco BC, Montero-Baker MF, Aziz H, Taylor Z, Mills JL. "Endovascular Therapy for Acute Mesenteric Ischemia: an NSQIP Analysis." Am Surg. Pubmed PMID: 26672589
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10. Marmagkiolis K, Sardar P, Mustapha JA, Montero-Baker M, Charitakis K, Iliescu C, Feldman DN Transpedal Access for the Management of Complex Peripheral Artery Disease" - *Journal of Invasive Cardiology* -– PubMed: 29207364
11. Rahemi H, Chung J, Hinko V, Hoeglinger S, Martinek WA, Montero-Baker M, Mills JL, Najafi B. Pilot study evaluating the efficacy of exergaming for the prevention of deep venous thrombosis" - *Journal of Vascular Surgery-Venous and Lymphatic Disorders* PubMed: 29292118


# Zachary Pallister, M.D.

**Assistant Professor of Surgery**

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**Keywords**

- Vascular Ultrasound
- Hemodialysis Access
- Vascular Trauma


## Research interests

Dr. Pallister's research interests involve clinical outcomes research in peripheral vascular intervention.

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**Selected publications**


1. Pallister, ZS; Mills, JL; Chung, J; et al. "Percutaneous suction thrombectomy of large tumor thrombus causing massive pulmonary embolism." *J Vasc Surg Cases Innov Tech*.
2. Pallister, ZS; Patel, VK; Pimpalwar, A; et al. "Transumbilical repair of umbilical hernia in children: The covert scar approach." *Journal of Pediatric Surgery*.
3. Rana, A; Pallister, ZP; Goss, JA; et al.. "Profiling risk for acute rejection in kidney transplantation: recipient age is a robust risk factor." *Journal of Nephrology*.
4. Rana, A; Pallister, ZS; Goss, JA; et al.. "Pediatric Liver Transplant Center Volume and the Likelihood of Transplantation." *Pediatrics*.
5. Rana, A; Pallister, ZS; Goss, JA; et al.. "Outcomes Following Pediatric Liver Transplantation (Pedi-SOFT) Score: A Novel Predictive Index." *Am J Trans*.
6. Pallister, ZS; Duran, MJ; Pressley, TJ. "Protein Kinase C regulation of the Na, K- ATPase 3 isoform in highly metastatic human prostate cells." *FASEB*.


## Jeffrey Alan Ross, D.P.M, M.D.

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## Selected publications


1. Agostinelli J, Ross JA. "Infracalcaneal heel pain in the athlete.." Clin Podiatr Med Surg. 1997 July;14(3):503-9. Pubmed PMID: 9257037
2. Ross JA. "Posterior tibial tendon dysfunction in the athlete.." Clin Podiatr Med Surg. 1997 July;14(3):479-88. Pubmed PMID: 9257035

Baylor College of Medicine

MICHAEL E. DEBAKEY DEPARTMENT OF SURGERY

The **Office of Surgical Research in the Michael E. DeBakey Department of Surgery** is pleased to offer you an opportunity to conduct clinical trials through our department representing 130+ faculty members, four major academic clinical centers, and 100,000+ patient visits per year. Our comprehensive clinical trial management services, provided by the dedicated research support team housed in our department, allow us to offer you, as our research partner, an efficient, cost-effective, and high-fidelity way of performing clinical trials under a single IRB platform.

**1) Our team**: Clinical trial coordinators, regulatory experts, grants and contract managers, research nurses, a biostatistician, a database expert, and a medical editor are available to assist with performing clinical trials and preparing the results for presentation.

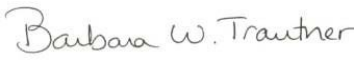
**2) Clinical research support:** Our pool of research coordinators can help with clinical trials by working with a research partner to convey proposals all the way from IRB submission to enrollment of the final subject at one or all our 4 major clinical sites of Baylor College of Medicine. Our team includes research nurses, a physician assistant, and five trials management research assistants who are available to support clinical studies. These individuals are skilled at IRB submission, informed consent, clinical monitoring, completing case reports, regulatory compliance, and final report submission.

**3) Budget planning:** In addition to the support with IRB preparation and actually carrying out the trial, our budget specialists stay on top of the invoicing process and keep the projects financially on track.

**4) Our clinical sites:** Baylor College of Medicine currently has four potential sites for clinical studies, covered under one IRB: the Michael E. DeBakey Veterans Affairs Medical Center, Ben Taub Hospital, Texas Children's Hospital, and the Baylor St. Luke's Medical Center. Our coordinators are credentialed to enroll subjects at all these sites.

Our experienced research core team can be a resource to you in getting your products tested. Please, consider the Department of Surgery at Baylor College of Medicine as a potential partner in your next trial. For more information about our core or conducting a trial with us, feel free to contact **Dr. Barbara Trautner,** at **surgicalresearch@bcm.edu.**

**For more information about our surgical research faculty, please see our website:**
**www.bcm.edu/departments/surgery/research**

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