

23 December 2008

CURRICULUM VITAE

Charles Samuel Cox, Jr.

Present Position:

The Children's Fund Distinguished Professor of Surgery and Pediatrics, The University of Texas Medical School at Houston
Adjoint Professor of Biomedical Engineering, The University of Texas at Austin,
Cockwell School of Engineering

Address:

Academic office

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Bellaire, Texas 77401
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Birth date: February 26, 1962

Citizenship: USA

Undergraduate Education:

1980-1984 University of Texas at Austin - BA

Graduate Education:

1984-1988 University of Texas Medical Branch at Galveston - MD

Postgraduate Training:

Internship in Surgery

1988-1989 University of Texas Health Science Center at Houston

Residency in Surgery

1989-1990 University of Texas Health Science Center at Houston

1992-1993 University of Texas Health Science Center at Houston

1993-1994 University of Texas Health Science Center at Houston

Fellowship

1990-1992 NIH Research Fellow in Trauma and Burns

Shriner's Burns Institute, University of Texas Medical Branch

1994-1996 Pediatric Surgery, University of Michigan

1996-1997 Surgical Critical Care, University of Texas-Houston

Military:

Captain, Medical Corps United States Army Reserve - 1990 to 1996

Major, Medical Corps United States Army Reserve - 1996 to 2002

Lieutenant Colonel, Medical Corps United States Army Reserve - 2002 to 2004

Awards: Meritorious Unit Citation; Joint Meritorious Unit Award; Army Service Ribbon; National Defense Service Medal with Bronze Star Device; Army Commendation Medal; Armed Forces Reserve Medal with M device, Bronze Hourglass, and numeral 2 device; Reserve Component Achievement Medal with 3 Oak Leaf Clusters; Global War on Terror Expeditionary Medal; Global War on Terror Medal; Afghanistan Campaign Medal; Expert-Pistol; Combat Medical Badge; Overseas Service Bar; 82nd Airborne Combat Patch- 2002-2003 – 909th Forward Surgical Team; 44th Medical Command; 82nd Airborne Division; FOB Salerno Afghanistan.

Other: Invited Panelist: HLS C2 Prioritization Workshop/USAMRMC-TATRC. 27 April 2003, Orlando, Florida. Gary P. Wratten Memorial Visiting Professor, 20 May 2003, San Antonio, Texas.

Invited Panelist: 10th Annual Trauma Symposium – Brooke Army Medical Center, 10 August 2004, San Antonio, Texas. American Association for the Surgery of Trauma Honorary Combat Surgery Medal, 2004. The Association of Military Surgeons-Texas Medical Center Chapter Faculty Advisor.

The University of Texas Center for Biosecurity and Public Health Preparedness-Associate Director, Hospital and Trauma Preparedness.

Academic Appointments:

1995-1996 Instructor of Pediatric Surgery
University of Michigan Medical School

1996-1997 Instructor of Pediatric Surgery
University of Texas-Houston Medical School

1997-2001 Assistant Professor of Surgery and Pediatrics
University of Texas-Houston Medical School

2001-2005 Associate Professor of Surgery and Pediatrics
University of Texas-Houston Medical School

2005-Present Professor of Surgery and Pediatrics
University of Texas-Houston Medical School

2008-Present Adjoint Professor of Biomedical Engineering
University of Texas-Austin, Cockrell School of Engineering

Hospital Appointments:

Texas Children's Hospital

Children's Memorial Hermann Hospital

LBJ/Ben Taub General Hospitals

M.D. Anderson Cancer Center

1996-Present Co-Director UT-HMS/Hermann Hospital ECMO Program

1996-Present Director UT-HMS/Hermann Hospital Pediatric Trauma Program

Licensure:

Texas State Board of Medical Examiners: H 6136

Texas DPS: L0086846; DEA: BC 4844634

Michigan State Board of Medical Examiners: 4301063982

Board Certification:

Diplomate, American Board of Surgery #40103, May 2, 1995.
Special Qualifications in Pediatric Surgery #755, April 20, 1998.
Added Qualifications in Surgical Critical Care #1531, October 24, 1997.
Recertification in Surgery 2003 #40103, July 1, 2015 (Exp)
Recertification in Surgical Critical Care #1531, July 1, 2018 (Exp)
Recertification in Pediatric Surgery #755, July 1, 2018(Exp)

Other Certifications:

Advanced Trauma Life Support – Provider and Instructor
Basic Cardiac Life Support

Professional Organizations:

American Academy of Pediatrics
American Association for the Surgery of Trauma
American College of Surgeons
American College of Surgeons South Texas Chapter
American Pediatric Surgical Association
American Physiological Society-Cardiovascular Section
American Society for Artificial Internal Organs
Association of Academic Surgery
DeBaKey Institute
Extracorporeal Life Support Organization
Microcirculatory Society
Shock Society
Society of Critical Care Medicine
Society of University Surgeons
Surgical Biology Club III
Mission Connect

Honors and Awards:

1984 Graduate, University of Texas Plan II Liberal Arts Honors Program
1986 Dean's List, University of Texas Medical Branch
1987 University of Texas Medical Branch at Galveston representative to American College of Surgeons Clinical Congress, Medical Student Program.
1990 Resident Award, American College of Surgeons - Committee on Trauma, South Texas Chapter Resident's Competition
1991 American Society of Artificial Internal Organs Traveling Fellowship Award
1992 Alpha Omega Alpha
1992 Resident Award, American College of Surgeons, South Texas Chapter Scientific Session
1993 Co-winner Carl A. Moyer Award for Burn Research (American Burn Association)
1994 George W. Waldron Surgical Award (Outstanding Chief Resident, University of Texas Health Science Center at Houston)
1997 Dean's Excellence Award, University of Texas Medical School-Houston
1998 Dean's Excellence Award, University of Texas Medical School-Houston
2000 Physician of the Year – Memorial Hermann Children's Hospital

- 2002 Charter Fellow, Michael E. DeBakey Institute for Comparative Cardiovascular Science and Biomedical Devices
- 2002 Faculty Advisor – The Association of Military Surgeons of the United States: Texas Medical Center Chapter
- 2003 Microcirculatory Award for Excellence in Lymphatic Research
- 2006 William Pokorny Surgical Science Lectureship
- 2007 Michael E. DeBakey Institute Master Lecturer in Cardiovascular Physiology
- 2007 Surgery Chief Resident Surgical Teaching Award, University of Texas Medical School-Houston

Editorial Positions:

- Clinical Science - reviewer
- Journal of Trauma - reviewer
- Journal of Surgical Endoscopy - reviewer
- Surgery - reviewer
- Journal of Thoracic and Cardiovascular Surgery – reviewer
- ASAIO Journal – Editorial Board: Gas Exchange/Pediatric Circulatory Support and Perfusion Sections
- Critical Care Medicine – reviewer
- ACS Surgical Forum (Pediatric Surgery) – reviewer
- Cytotherapy – reviewer
- Brazilian Journal of Medical and Biological Sciences – reviewer
- Drug Discovery Today – reviewer
- Journal of Applied Physiology – reviewer
- Recent Patents on CNS Drug Discovery – reviewer
- Journal of Pediatric Surgery – reviewer

Service on National Grant Review Panels, Study Sections, Committees:

- 1998-Present State of Florida Emergency Medical Services Trauma Center Site Reviewer
- 2000-Present Reviewer, National Student Research Forum
- 2001-Present State of Missouri Department of Health Trauma Center Site Reviewer
- 2001-2007 State of Pennsylvania Department of Health Trauma Center Site Reviewer
- 2002-2002 Canadian Institutes of Health Research: Cardiovascular Systems Study Section
- 2002-2002 US Civilian Research and Development Foundation Bilateral Grants Program-III Reviewer (ID #16331)
- 2000-2003 Society of University Surgeons: Chairman, local arrangements for 2003 meeting
- 2003-2003 Medical Advisory Council: Congress of the United States House of Representatives; 25th District, Texas
- 2003-Present Southeast Texas Regional Advisory Council – Pediatric Trauma Subcommittee Chairman
- 2004-2004 Centers for Disease Control Injury Center: Measurement of Quality Outcomes Work Group
- 2004-Present American College of Surgeons Southern Texas District #1 Committee on Applicants
- 2005-2008 Society of University Surgeons Membership Committee
- 2005-Present Association of Academic Surgery: Fundamentals of Surgical Research Course Faculty
- 2005-2006 National Medical Research Council (Singapore): Sepsis Study Section

2005-Present American Heart Association, Western Review Consortium - (Lung, Immunology, Surgery) Study Section

2006-Present American Heart Association, Western States Affiliate - Research Advisory Committee

2006-2009 American College of Surgeons Committee on Trauma
Subcommittees:
- Pediatric Trauma
- Publications
- Disaster Management
- South Texas Chapter

2007-2009 RAPTOR TRIAL: Data Safety Monitoring Board Member

2007-Present Department of Veterans Affairs Joint Biomedical Laboratory Research and Development Scientific MERIT Review Board (Subcommittee for Surgery)

2008-Present Chairman: Study Section - Department of Veterans Affairs Joint Biomedical Research A: Integrated Review Group; Office of Research and Development (Subcommittee for Surgery)

2007-Present American Pediatric Surgical Association Committee on Trauma

2007 American Institute of Biological Sciences (DOD/USAMRMC) Ad Hoc Grant/Program Reviewer

2007 National Institutes of Health - ZHD1 DSR-A (18) Special Emphasis Review Committee: "New Approaches for the Prevention and Treatment of NEC"

2007 National Institute on Disability and Rehabilitation Research (Department of Education): Traumatic Brain Injury Model Systems Centers Collaborative Research Projects

2008 Medical Monitor: Whole blood resuscitation trial (Gonzalez, E: PI)

2008 Czech Science Foundation: International Project Reviewer

2008 Department of Defense Deployment Related Medical Research Program: Psychological Health and Traumatic Brain injury – 4 Clinical Trial Award – Scientific Review Panelist

2008 National Medical Research Council (Singapore): Surgery Study Section

2008 External Reviewer: LeBonheur Children's Hospital/University of Tennessee-Division of Pediatric Surgery

2008 External Reviewer: Sarah Jane Brain Foundation

Service on the University of Texas Medical School at Houston Committees:

1. Residency Advisory Council, Department of Surgery, University of Texas Health Science Center at Houston, 1993-1994.
2. House Officer Association Representative, University of Texas Health Science Center at Houston 1993-1994.
3. Faculty Senate, University of Texas Medical School-Houston 1996-1997; 2001-2002; 2004-2006.
4. ACGME Residency review committee for Department of Pediatrics, University of Texas Health Science Center at Houston, 1994.
5. Student Evaluation and Promotions Committee, 2001-2005.
6. Research Conflict of Interest Committee, 2006-Present.
7. Faculty Appointments, Promotion & Tenure Committee: Ad Hoc Member 2007-Present
8. Advisory Committee on Resource Development and Utilization. 2008.

9. Center for Clinical and Translational Sciences
 - a. Institutional Data Safety Monitoring Board Member
 - b. CCTS Engine of Innovation

Service on the University of Texas Medical School at Houston Affiliated Hospital Committees:

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|--------------|---|
| 1996-1998 | Director-PAT for Pediatric Trauma Center Development (Hermann Hospital) |
| 1996-Present | Pediatric Operating Room Subcommittee (Memorial Hermann Hospital) |
| 1996-1998 | Pharmacy and Therapeutics Committee (Memorial Hermann Hospital) |
| 1999-Present | Medical Staff Peer Review Committee (Memorial Hermann Hospital) |
| 2003-2005 | Chair – Medical Staff Quality Assurance (Memorial Hermann Hospital) |
| 2005-2008 | Co-Chair Pediatric Medical Staff Quality Assurance (Children’s Memorial Hermann Hospital) |

Sponsorship of Candidates for Postgraduate degree (Includes undergraduate, graduate and post-doctoral candidates):

1. Sheena Kim: (NIH Sponsored summer medical student research program, 1991); Project: Hollow fiber membrane removal of circulating endotoxin.
2. David Butler: (NMF/Bristol-Myers-Squibb Scholarship, 1999) Project: Endotoxin increases microvascular permeability associated with cardiopulmonary bypass. Manuscript Published/Abstract Published
3. Laura Johnson, MD: (Neonatology post-doctoral fellow, 2000). Project: PMN priming by gut lymph after ECMO.
4. Jarrod Little: (American Heart Association Cardiovascular Diseases Scholarship, 2000). Project: Mechanisms of PMN priming by gut lymph.
5. Jeff Padaleck: (NIH Sponsored summer medical student research program, 2003); Project: Does enteral feeding improve resuscitation induced ileus? (NIH T35 DK 007676-14) Manuscript Submitted/Abstract Published
6. Samuel Lance: (NIH Sponsored summer medical student research program, 2005); Project: Role of aquaporins in the resolution of resuscitation induced intestinal edema. (NIH T35 DK 007676-14) Manuscript Submitted/Abstract Published
7. Zachary Wright: (NIH sponsored summer medical student research program, 2005); Project: NF- κ B and resuscitation induced gut edema. (NIH T35 DK 007676-14) Manuscript Submitted/Abstract Published
8. LeeAnn Sloan: (NIH sponsored summer medical student research program, 2007); Project: Neural Stem Cell Transplantation for Traumatic Brain Injury. (NIH T35 DK 007676-14); Winner Student Travel Award for Presentation at Academic Surgical Congress, Huntington Beach, CA, 2008. Manuscript in J Surg Res; Oral presentation at American College of Surgeons, South Texas Chapter, Houston, TX, 2008.
9. Scott Collins: UT BME Graduate Student – 2008-2009: Microfluidics and Tissue Scaffolding Designs. Thesis: “Guided vascular growth by mesenchymal stem cells”.
10. Lindsey Fogle: (NIH Sponsored summer medical student summer research program, 2008); Project: Mechanotransductive forces mimic intestinal edema induced STAT-3 activation.

Post-Doctoral Fellows:

NIH T32 GM 0879201: Trauma Research Training Program

1. Stacey Moore-Olufemi, MD (2002-2004); Developed novel model of resuscitation induced intestinal edema. Began work on mechanisms of edema induced gut dysfunction, describing iNOS mediated smooth muscle dysfunction. Developed model of intestinal ischemic preconditioning and mechanisms of organ protection. Matriculated to Pediatric Surgery Residency, University of Texas-Houston, 2007-2009.
2. Ravi Radhakrishnan, MD (2004-2006); Described physical characteristics of edema-induced intestinal dysfunction using engineering methods. Subsequently defined the cytoskeletal/subcellular events that cause the tissue level changes. Re-entered General Surgery Residency at University of Texas-Houston Medical School, 2006-2009. Pediatric Surgery Residency – Northwestern McGaw Medical School/Children’s Memorial Hospital; Chicago, IL, 2009-2011.
3. Matthew Harting, MD (2006-2008); Developed a controlled-cortical impact model of TBI with treatment using GFP (+) bone-marrow progenitor cells and mesenchymal stem cells. This included a novel flow-cytometry based method to regionally quantify cell migration in the brain. Described the regional pro-inflammatory microenvironments of TBI. Used mesenchymal stem cells, neural progenitor cells, and bone marrow derived mononuclear cells in models of TBI and stroke. Completing General Surgery Residency at University of Michigan (2008-2011).
4. Peter Walker, MD (2008-2010); Use of multipotent adult progenitor cell treatment of traumatic brain injury. Modulation of the inflammatory response to TBI using progenitor cell transplantation.
5. Shinil Shah, MD (2008-2010); Developed advanced models of abdominal compartment syndrome and intestinal edema. Mechanisms of edema induced intestinal dysfunction. Identified mechanotransductive mechanism of signal transduction that initiates/amplifies edema induced organ dysfunction.

Dr. F. Kohler Chemie GmGH Scholars

1. Henning Sauer, MD (1998-2000); Focused on role of varying myocardial protection strategies with emphasis on relationship of myocardial edema and myocardial performance.
2. Uwe Fischer, MD (2000-2002); Extended work on PMN/oxidative injury of myocardium during cardioplegic arrest. Demonstrated mechanisms of apoptosis associated with cardioplegic arrest.

Alexander von Humboldt Foundation Fellow

1. Uwe Fischer, MD (2007-2009); Developed novel therapeutics for minimizing myocardial dysfunction associated with various myocardial injuries. Defined the effect of NF- κ B blockade on gut I/R induced myocardial dysfunction. Used AAV-GFP tagged gene transfer as a strategy for myocardial protection.

Biomedical Engineering Research Program

- A. UTCBME Internship
 1. Michael Yim (2008); Effects of catheter-based delivery systems on progenitor cell survival and function.
 2. Sean Paschall (2008) – Electrospun nanofiber tissue scaffolds for organ replacement/repair.
 3. Greg Minwell (2007) – Circulatory system modeling for intravascular catheter navigation system.
 4. Tanmay Gokhale (2007) – Mechanotransductive forces in small intestine.
 5. Lindsey Villarrubia (2006) – Interstitial pressure-volume relationship with resuscitation induced gut edema. (Manuscript published)
 6. Lindsey Fogle (2006) – Dynamic fluid flow modeling of an arteriovenous resuscitation device. (Manuscript Published)
 7. Kunal Shah (2005) – Bioimpedance analysis quantifies level of edema and capacitance of small intestine. (Manuscript published)
 8. Sima Yazdani (2005) – In vitro pressure – flow modeling of ATR device.
 9. David Rainosek (2005) – Cardiovascular variable display project.

- B. Bioengineering Research Partnership
 1. Nate Kemp, PhD: Assisted in developing control system feedback for Active Thermal Resuscitation.
 2. Kevin Aroom, MS: Integrated combustion/manufacturing and control systems for GEN 3 ATR device. (Master’s thesis)
 3. Ozgur Ekici, BS: First principle heat exchanger calculations, including materials testing.
 4. Alex Bjelica, BS: Initial translation of optical/ultrasound guided automated thoracic access.
 5. Albert Espinosa, BS: Automated vascular access device.

- C. Senior Tutorial
 1. Sheena Black: Real time calorimetric determination of HCT.
 2. Santhisri Kodali: Real time calorimetric determination of HCT.
 3. Chris King: Real time calorimetric determination of HCT.
 4. Kaiwun Lee: Real time calorimetric determination of HCT.

- D. Summer College Internships
 1. Amanda Hayley (2008) (USC): Osmolar effects on progenitor cell size/function.
 2. Adam Baumgartner (2008) (UT-Austin): Neural progenitor cell culture optimization.

Current Teaching Responsibilities:

1. Problem based learning instructor: Junior student surgery rotations. (1996-1998)
2. Oral examinations: Junior student surgery rotations. (1996-1998)
3. Surgery House Officer Clinical Teaching: (1996-Present)
 - Departmental Morbidity and Mortality
 - Divisional Morbidity and Mortality
 - Teaching rounds (patient care teaching)
 - Intraoperative teaching (technical components of surgery)
 - Pediatric house officer, clinical teaching – didactic lecture series
4. Teaching of Surgical Tutorial for Senior Medical students. (1997-1998)
5. Chairman CME course: “Pediatric Review and Update, 1998”, University of Texas-Houston Medical School (1998)
6. Instructor: Pediatric Advanced Life Support (PALS) (1996-2000)
7. Instructor: Advanced Pediatric Life Support (APLS) (1996-2000)
8. Instructor: Hermann Hospital Life Flight cadaver procedure lab; update on TBI management
9. Pediatric Transport Team curriculum
10. Instructor: Advanced Trauma Life Support (ATLS) – 2-4 Courses/Year (1998-date)
11. Lecturer: Neonatal Fellows Conference: Surgical Problems of the Neonate.
12. Lecturer: ECMO Team Training Conference (Annual) (1996-Present) – 1 Course/Year
13. The Center for Biomedical Engineering: University of Texas-Houston and MD Anderson Cancer Center (2004-Present)
14. Instructor: Seminar-Topics in Translational Research (2006-Present)
 - a. Innovation by Surgeons
 - b. Translational Surgical Research and Regenmed 2.0
15. Developer: Pediatric Trauma Airway Management Course for pre-hospital providers. 3 Courses/Year

Current Grant Support:

1. National Institutes of Health 1T32 GM 087-92-01: \$1,181,532 – 2001-2009. *NRSA Institutional Training Grant. Trauma Research Training Program.* Support Faculty.
 - Fellow – Stacey Moore-Olufemi, M.D. (2002-2004)
 - Fellow – Ravi Radhakrishnan, M.D. (2004-2006)
 - Fellow – Matt Harting, M.D. (2006-2008)
 - Fellow – Peter Walker, M.D. (2008-2010)
2. Congressional Mandated Program/United States Army Medical Research and Material Command. T5 (Texas Training and Technology Against Trauma and Terrorism); \$748,609 – 2004-2008. *Portable veno-venous rewarming for hypothermia.* Principal Investigator.
3. National Institutes of Health 1 R01 NS 046308-01A1; \$1,307,374 – 2004-2009. *Academic Outcomes After Pediatric Traumatic Brain Injury.* Co-Investigator. (Ewing-Cobbs)
4. Texas Higher Education Coordinating Board; \$1,800,000 – 2005-2008. *Center for Engineered Microtherapeutics.* Principal Investigator.

5. National Institutes of Health/NHLBI P018/N01-HB-37163 (Gee PI/Baylor College of Medicine Subcontract); \$29,468.80 – 2006-2008. *Production assistance for cellular therapies*. Principal Investigator. (Subcontract)
6. National Institutes of Health M01 RR 02558; \$30,000 – 2006-2008. *Safety of autologous stem cell treatment for traumatic brain injury in children*. Principal Investigator.
7. National Institutes of Health ULI RR024148; \$21,000 – 2006-2008. *Supplement: Safety of autologous stem cell treatment for traumatic brain injury in children*.
8. National Institutes of Health 1K01 DK 070758; \$515,008 – 2005-2010. *Effects of edema on cadherins in small intestine*. Co-Sponsor (Uray)
9. National Institutes of Health 5 T35 DK 007676-14; \$10,000-2003-2007. *Short-term Research Training*. Subcontract (Rosenfeld)
10. National Instruments; \$50,000 – 2007-2008. *Mechanics and control for an automated field tube thoracostomy*. Co-Investigator (Longoria)
11. CBR, Inc.; \$80,000 – 2007-2008. *Protocol development for UCB treatment of ischemic encephalopathy of the newborn*. Principal Investigator
12. USAMRMC/TATRC/DOD; \$872,504 – 2006-2008. *Active thermal resuscitation*. Co-Principal Investigator (Gill)
13. National Science Foundation; \$90,000 – 2007-2008. *Mechanics and control for an automated field tube thoracostomy*. Co-Investigator (Longoria)
14. Kinetic Concepts, Inc.; \$275,151 – 2008-2009. *Negative pressure therapy modulates the inflammatory response to intraabdominal hypertension*. Principal Investigator
15. Athersys, Inc.; \$200,000 – 2008-2010. *Multipotent adult progenitor cell therapy for traumatic brain injury*. Principal Investigator
16. National Institutes of Health; P50 GM 38529: Project 2; \$213,313 (year 5 budget); 2008-2009. *Molecular pathogenesis of gut injury in multiple organ failure*. Co-Investigator (Ko, T)
17. The Brown Foundation, Inc. \$666,667 – 2008-2011: *Program in Regenerative Medicine*. Principal Investigator

Pending Grant Support:

1. National Institutes of Health: 2008-2012. *Short-term mesenteric lymphatic adaptation to trauma related intestinal edema*. Consultant (Stewart), In Revision.
2. National Institutes of Health: \$100,000- 2009-2011. *Mesenchymal stem cell transplantation for traumatic brain injury*. Principal Investigator, In Revision.

3. National Institutes of Health: \$3,622,165- 2009-2014. *Academic outcome after pediatric traumatic brain injury*. Co-Investigator. (Ewing-Cobbs). Submitted.
4. National Institute of Health: \$400,358- 2009-20011. *Induction of molecular mediators by enteral nutrients in the postischemic gut*. Collaborator (Kozar). Submitted.

Past Grant Support:

1. Shriner's Burns Institute: \$288,444 - 1991-1994; *Pathophysiology of ovine smoke inhalation injury treated with intravascular oxygenation and carbon dioxide removal device and intratracheal pulmonary ventilation*. Co-Investigator. (Zwischenberger)
2. Children's Miracle Network Telethon Grant: \$25,850, 1997-1998. *Peripheral microvascular permeability in the systemic inflammatory response syndrome*. Principal Investigator.
3. Children's Miracle Network Telethon Grant: \$8,300, 1997-1998. *Equipment funding for Pediatric lung injury and inflammation research group*. Co-Principal Investigator. (Okhuysen)
4. Merck KGaA: \$125,500, 1999-2000. *Effects of Na⁺/H⁺ exchange inhibition on cardiac function*. Principal Investigator.
5. National Highway Transportation Safety Administration: \$50,000 – 1999-2001. *Development of a pediatric functional capacity index*. Consultant.
6. University of Texas JSP grant \$1,500 – 2000. *Development of PMN superoxide assay*. Principal Investigator.
7. National Institutes of Health 1 K08 GM 00675-01: \$596,430 – 1999-2005. *Mentored Clinical Scientist Award. Microvascular injury during extracorporeal life support*. Principal Investigator.
8. United States Army Medical Research and Material Command/TATRC 04343002: \$98,369 – 2004-2005. *A portable fluid warming system*. Co Principal Investigator. (Gill)
9. National Institutes of Health 1 R21 HD042659-01A1; \$222,750 – 2003-2006. *Multi-center Traumatic Brain Injury Network*. Principal Investigator.
10. National Institutes of Health P30 DK 56338; \$10,000 – 2005-2006. *Digestive Diseases Center Award – Pilot/Feasibility. Role of iNOS in Gut Edema Induced Ileus*. Principal Investigator (Subcontract)
11. University of Texas Center for Biomedical Engineering/Charles W. Tate and Judy Spencer Tate Charitable Foundation; \$20,000- 2005-2006. *Engineering problems of portable biologic fluid warmers*. Co-Principal Investigator (Gill).

12. American Heart Association Grant-in-Aid; \$124,000 – 2005-2008. *Mechanisms of myocardial dysfunction after gut ischemia/reperfusion*. Principal Investigator.
13. Charles W. Tate and Judy Spencer Tate Charitable Foundation; \$30,000 – 2006-2007. *A System for Automated Field Tube Thoracostomy*. Co-Principal Investigator (Gill).

Inventions/Patents/Intellectual Property:

Patents:

1. Gill, Brijesh; Cox, Charles S.; “Portable Fluid Warming System.” US Patent 7,261,557; August 28, 2007. Assignee: The Board of Regents of the University of Texas System (Austin, TX). Continuation-in-Part, 2007. 11/832,415,PCT/USO5/47209;PCT/US08/70812
2. Gill BS, Cox CS, Aroom KR; “Centrifugal Pump”. US Provisional Patent Pending. Assignee: The Board of Regents of the University of Texas System (Austin, TX). 61/074,053

Consulting:

1. Cord Blood Registry, Inc. (2006-Present)
2. VidaCare, Intraosseous Infusion Device (2004-Present)
3. Gerson Lehman Group: Council of HealthCare Advisors (2003-Present)
4. Kinetic Concepts, Inc. (2008-Present)
5. The Sarah Jane Brain Project – National Advisory Board (2008-Present)

Biotechnology Small Business:

1. EMIT, Inc., Scientific Advisory Board: (Evolution/Successor to ThermaLabs, Inc.)
2. Alation, Inc. – Founder; Secretary
3. VEI, Inc. – Royalty Interest
4. Athersys, Inc. – Scientific Advisory Board
5. CBR, Inc. – Scientific Advisory Board

Investigational New Drugs (FDA – CBER/OCTGT)

1. BB-IND-12620 (2005): Safety of autologous bone marrow progenitor cell treatment for traumatic brain injury. (Active)
2. BB-IND-13127 (2006): Autologous stem cell treatment for hypoxic-ischemic encephalopathy in the newborn. (Closed)
3. BB-IND-XXXXXX (2008): Autologous hUCB for the treatment of traumatic brain injury. (Pending)

Publications

Abstracts:

1. **Cox CS**, James E, McClellan DG, Townsend CM, Thompson JC: Calmodulin antagonist trifluoperazine inhibits growth and survival of pancreatic cancer *in vitro*. Dig Dis Sci 1986; 31(10):1186. (Poster presentation)
2. **Cox CS**, Zwischenberger JB, Traber LD, Traber DL, Herndon DN: Application of an intravenous mechanical blood oxygen/carbon dioxide exchange device (IVOX) for smoke inhalation injury in an *ovine* model. Cardiovascular Science and Technology: Basic and Applied, II 1:391, 1990.

3. Wang CZ, **Cox CS**, Barrow RE, Herndon DN. Detergent induced change in pulmonary microvascular permeability. *FASEB J* 5:A769, 1991.
4. Fleming RYD, **Cox CS**, Gore D, Honeycutt DA, Jahoor F, Wolfe RR, Herndon DN. Effect of propranolol on glucose uptake in hypermetabolic burned patients. *Proc Am Burn Assoc*, 124:125, 1992.
5. **Cox CS**, Fleming RYD, Zwischenberger JB, Myers T., Kurusz M, Alison WE, Herndon DN. Ileal mucosal hypoperfusion during cardiopulmonary bypass. *Crit Care Med* 20:S64, 1992. (Poster presentation)
6. **Cox CS**, Zwischenberger JB, Traber DL, Traber LD, Herndon, DN. Intravascular oxygenation/CO₂ removal allows reduction of mechanical ventilation support in an *ovine* model of acute lung injury. *Crit Care Med* 20:S60, 1992. (Poster presentation)
7. **Cox CS**, Zwischenberger JB, Graves D, Raymond G. Mortality from severe ARDS remains unchanged. *Am Rev Resp Dis* 145:A83, 1992. (Poster presentation)
8. **Cox CS**, Zwischenberger JB, Graves D, Cardenas, V. Permissive hypercapnia with IVOX: A ventilation technique to reduce barotrauma. *ASAIO Abstracts* 21:65, 1992. (Poster presentation)
9. **Cox CS**, Traber DL, Gasser H, Redl H, Schlag G, Herndon DN. Interleukin 6 levels in burned patients: Effect of inhalation injury. *FASEB J* 6:A2042, 1992. (Poster presentation)
10. **Cox CS**, Zwischenberger JB, Traber DL, Traber LD, Haque AK, Herndon DN. Heparin improves oxygenation and minimizes barotrauma after severe smoke inhalation in an *ovine* model. *Proc Am Burn Assoc* 124:20, 1992. (Oral presentation)
11. **Cox CS**, Zwischenberger JB, Traber LD, Traber DL, Herndon DN. Beneficial effects of heparin treatment of smoke inhalation injury not due to reduced oxygen free-radical activity. *Am Rev Resp Dis* 145:A80, 1992. (Poster presentation)
12. Zeigler ST, **Cox CS**, Meyer J, Traber DL, Herndon DN. The role of nitric oxide in the pulmonary pathophysiology of burn/sepsis. *Am Rev Resp Dis* A45:A313, 1992.
13. Zwischenberger JB, **Cox CS**, Graves DF. Initial clinical experience with an intravascular oxygenator and carbon dioxide removal device (IVOX). *Thorac Cardiovasc Surg* 40:104, 1992.
14. Meyer J, **Cox CS**, Traber DL, Nakazawa H, Herndon DN. Cardiopulmonary effects of heparin in endotoxemia. *Circ Shock* 37:40, 1992.

15. Meyer J, Kramer GC, **Cox CS**, Traber DL, Nakazawa H, Herndon DN. Continuous small volume resuscitation with hypertonic saline/dextran solution improves survival in experimental sepsis. *Circ Shock* 39:12.49, 1993.
16. **Cox CS**, Zwischenberger JB, Fleming RYD, Myers T, Kurusz M, Herndon DN, Kramer GC. Hypertonic saline-dextran does not improve regional perfusion in a *porcine* model of cardiopulmonary bypass. *Proc Intl Conf on Hypertonic Resuscitation* 5:4, 1992. (Oral presentation)
17. **Cox CS**, Biondo N, Traber LD, Lentz CW, Herndon DN, Traber DL. Effects of superoxide dismutase (SOD) on pulmonary microvascular response to endotoxin. *Proc Intl Endotoxin Society.* 2:245, 1992. (Poster presentation)
18. McDaniel LB, **Cox CS**, Zwischenberger JB, Kurusz M, Kramer GC. Effects of hypertonic saline dextran on intracranial pressure and brain water during CPB. *Anesthesiology* 77:A661, 1992.
19. Nguyen TT, Herndon DN, **Cox CS**, Biondo N, Traber LD, Bush PE, Traber DL. Effects of MnSOD on lung fluid balance after smoke inhalation injury. *Proc Am Burn Assoc* 75:31, 1993.
20. Nguyen TT, **Cox CS**, Fleming RYD, Traber DL, Gasser H, Redl H, Schlag G, Herndon DN. Free radical activity and loss of plasma antioxidants, Vitamin E, and sulfhydryl groups in burned patients. *Proc Am Burn Assoc* 75:146, 1993.
21. Nguyen TT, **Cox CS**, Matheis E, Bush P, Traber DL, Herndon DN, Bidani A, Zwischenberger JB. Marked enhancement of carbon dioxide removal by second generation IVOX. *ASAIO Abstracts*, 1993.
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85. Aroom KR, **Cox CS**, Harting MT, Radhakrishnan RS, Smith C, Gill BS. Bioimpedance analysis: A guide to simple design and implementation. *J Surg Res* (In Press)
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89. Fischer UM, Harting MT, Jimenez F, Monzon-Posado WO, Xue H, Savitz SI, Laine GA, **Cox CS**. Pulmonary passage is a major obstacle for intravenous stem cell delivery: The pulmonary first pass effect. *Stem Cells: Development* (In Press).

Invited Articles in Journals:

1. Zwischenberger JB, **Cox CS**. Staging and surgery for lung cancer. *J Thorac Imaging* 7:57-69, 1991.
2. Zwischenberger JB, **Cox CS**. Extracorporeal membrane oxygenation in the management of cardiac failure. *ASAIO Trans* 38, 751-753, 1992.
3. Boyars M, Zwischenberger JB, **Cox CS**. Clinical manifestations of pulmonary fungal infections. *J Thorac Imaging* 7:12-22, 1992.
4. Lentz CW, Traber DL, Zeigler ST, **Cox CS**, Herndon DL, Traber LD. Cytokine response to injury. In *Shock, Sepsis and Organ Failure, Third Annual Bernard Wiggers Conference*, eds G. Schlag, H Redl, JH Siegel, DL Traber. Springer-Verlag, New York, NY, pp 245-264, 1993.
5. Beech TR, **Cox CS**, Lally KP. Current management of congenital diaphragmatic hernia. *Curr Surg* 50:44-47, 1993.
6. **Cox CS**, Zwischenberger JB, Traber DL, Herndon DN. Effect of heparin on smoke induced lung injury: A review of potential mechanisms of action in Saliba, M. ed., *The effects of heparin in the treatment of burns*, San Diego, CA, pp.74-83, 1993.
7. **Cox CS**, Baumgartner JE. Emerging Stem Cell Therapies: The Role of Cord Blood Banks. *Obgmanagement.com* Oct 2006; S2-S16.
8. Harting MT, Baumgartner JE, Worth LL, Ewing-Cobbs L, Gee A, Day MC, **Cox CS**. Cell therapies for traumatic brain injury. *Neurosurg Focus* 24: 3-4; E18, 2008.

9. Walker PA, Baumgartner JE, Fletcher S, Strobel N, **Cox CS**. Modern approaches to pediatric brain injury therapy. *J Trauma* (In Press)
10. Walker PA, Shah SK, Harting MT, **Cox CS**. Progenitor cell therapies for traumatic brain injury: Barriers and opportunities in translation. *Diseases Models and Mechanisms* (In Press)

Book Chapters:

1. Zwischenberger JB, **Cox CS**: Extracorporeal Membrane Oxygenation Emergencies, In Arensman R, Cornish D (ed): *Extracorporeal Life Support*. Boston, Blackwell Scientific, pp. 207-225, 1993.
2. Herndon DN, Rutan R, Alison WE, **Cox CS**: Treatment of Pediatric Burns (Inhalation Injury), in Eichelberger M (ed): *Pediatric Trauma*. St. Louis, Mosby-Year Book, pp. 568-590, 1993.
3. Allison P, **Cox CS**, Cornish D, Zwischenberger JB: Management of Complications in Extracorporeal Membrane Oxygenation, in Cornish D, *et al* (ed): *Extracorporeal Life Support Organization Manual*. Ann Arbor, pp. 128-142, 1993.
4. **Cox CS**, Zwischenberger JB, Traber DL, Herndon DN: Cardiovascular Function in Acute Burns, in Schlag G and Redl H (eds): *Pathophysiology of Shock, Sepsis, and Multi-Organ Failure*. New York, Springer-Verlag, pp. 242-256, 1993.
5. Traber DL, Lentz CW, **Cox CS**, Herndon DN: Thermal Injury, in Mortillaro NA and Taylor AE (eds): *Pathophysiology of the Microcirculation*, Boca Raton, CRC Press, Inc., 35:171-198, 1994.
6. Zwischenberger JB, **Cox CS**: Extracorporeal Membrane Oxygenation (ECMO) for Neonatal Respiratory Failure, in Fraedrich, Hasse, Schlosser (eds): *Kardiotechnik 1992* Berlin, Steinkopff, Verlag, Darmstadt, pp. 37-42, 1992.
7. Zwischenberger JB, **Cox CS**: Intracorporeal Membrane Oxygenation and Carbon Dioxide Removal, in Fraedrich, Hasse, Schlosser (eds): *Kardiotechnik 1992*. Berlin, Steinkopff, Verlag, Darmstadt, pp. 1-12, 1992.
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12. Neville H, **Cox CS**: Cystic hygroma, in: Zevitz M (ed): EMedicine: Surgery (1st edition), www.emedicine.com/ped/.
13. Neville H., **Cox CS**: Hirschsprung's disease, in: Zevitz M (ed): Emedicine: Surgery (1st edition), www.emedicine.com/ped/topic1010.htm.
14. **Cox CS**: Neonatal Jaundice, in: Toy EC, Liu TH, (ed): Case Files in General Surgery, McGraw-Hill/Lange Medical Books, New York, pp. 499-506, 2004.
15. Lally KP, **Cox CS**, Andrassy RJ: Appendicitis, in: Townsend CM (ed): Textbook of Surgery (17th edition), New York, Elsevier Saunders Company, pp. 1381-1399, 2004.
16. Radhakrishnan R, **Cox CS**: Systemic inflammatory response and extracorporeal life support, in: Lally KP and Van Meurs K (ed): Extracorporeal Life Support. Extracorporeal Life Support Organization (4th edition), pp. 59-83, 2005.
17. **Cox CS**: Child Abuse, in: Wesson D (ed): Pediatric Trauma. WB Saunders, New York, pp. 73-82, 2006.
18. Hayes-Jordan AA, **Cox CS**, Lally KP: "Pediatric Surgical Oncology", in Advanced Therapy in Surgical Oncology, in: Pollock RE, Curley EA, Ross MI, Perrier ND (ed): BC Decker, Hamilton, Ontario, Canada, pp. 751-763, 2008.
19. **Cox CS**: Neonatal Jaundice, in Toy EC, Liu TH (ed): Case Files: Surgery, 2nd edition. McGraw Hill Medical, New York, pp. 403-409, 2007.
20. Harting MT, **Cox CS**, Hall S. Adult Stem Cell Therapy for Neurological Disease: Preclinical evidence for cellular therapy as a treatment for neurological disease. In Vemore and Vinoglo (eds): Regulatory Networks in Stem Cells. (In Press)

Films:

1. Coran AG, **Cox CS**. Partial gastric transposition for esophageal atresia as a primary procedure. American College of Surgeons Clinical Congress Video presentation, 1996.

Letters-to-Editor:

1. **Cox CS**. Epiphenomenology of feeding access of the neurologically impaired child. Pediatrics 100:899, 1997.

2. Cox CS. Same day ileostomy closure. Not for children! Am J Man Care 3:1444, 1997.
3. Cox CS. Heparin for smoke inhalation injury. Crit Care Med 31:1291, 2003.
4. Harting MT, Jimenez F, Cox CS. The pulmonary first-pass effect, xenotransplantation, and translation to clinical trials – a commentary. Brain doi 10.1093/brain/awn142, 2008.
5. Cox, CS., Harting MT. Editorial response to: Chopp M, et al. J Neurosurgery, 2008 (In Press).

**Other Professional Communications:
Presentations (Invited)**

1. "Hemostasis, Coagulation and Blood-Surface Interactions during ECMO", University of Texas Medical Branch at Galveston, ECMO Training Course, Galveston, Texas, 10/19/90.
2. "Respiratory Assist Devices: Future Trends", University of Texas Medical Branch at Galveston, Galveston, Texas, 12/12/90.
3. "Extracorporeal membrane oxygenation (ECMO) and Intravascular Oxygenation for Acute Respiratory Failure in an Ovine Model", University of Texas Health Science Center at Houston Surgical Research Symposium, Houston, Texas, 6/1/91.
4. "Acute Respiratory Failure", Shriner's Burns Institute Basic Science Lecture Series, Galveston, Texas, 10/25/91.
5. "ECMO for neonatal and pediatric respiratory failure", Houston Area Respiratory Care Conference, Houston, Texas, 8/5/92.
6. "Pathophysiology of smoke inhalation injury", University of Texas Health Science Center at Houston, Houston, Texas, 10/25/92.
7. "New treatments of smoke inhalation injury", University of Texas Health Science Center at Houston, Houston, Texas, 6/24/94.
8. "Pediatric Shock Update", University of Texas Health Science Center at Houston, 7/7/97.
9. "Pediatric Trauma: ABC's-Abuse, Burns and Closed Head injury", Hermann Life Flight Roseann Waindell Memorial Emergency Care Symposium. 8/13/96.
10. "Oxygen Kinetics of ECMO", University of Texas Medical School-Houston-ECMO and Neonatal Transport Course, Houston, Texas, 7/23/97.
11. "Venoarterial and Venovenous ECMO", University of Texas Medical School-

Houston-ECMO and Neonatal Transport Course, Houston, Texas, 7/24/97.

12. "ECMO Cannulation", University of Texas Medical School-Houston-ECMO and Neonatal Transport Course, 10/25/00.

Presentations (Scientific; not represented by abstracts)

1. "Malignant fibrous histiocytoma arising from the superficial femoral artery", San Antonio Vascular Surgery Society, San Antonio, Texas, 9/29/89. (Oral)
2. "Subclavian Artery Trauma", American College of Surgeons Committee on Trauma Meeting, Dallas, Texas, 11/2/90. (Oral)
3. "Consumptive Coagulopathy during ECMO?", Extracorporeal Life Support Organization, Ann Arbor, Michigan, 11/30/90. (Poster)
5. "Use of an Intravascular Oxygenator in an *Ovine* Smoke Inhalation Injury Model", Society of University Surgeons, Galveston, Texas, 2/7/91. (Resident's Program) (Oral)
5. "Mechanical and Patient Complications of Extracorporeal membrane oxygenation for respiratory failure", Ninth Biomedical Engineering Research Conference, Houston, Texas, 2/12/91. (Oral)
6. "Airtrapping capability of the SCIMED Ectotherm heat exchanger", Extracorporeal Life Support Organization Meeting, Ann Arbor, Michigan, 9/12/91. (Poster/Device Demonstration)
7. "Heparin improves oxygenation and minimizes barotrauma after smoke inhalation in an *ovine* model", American College of Surgeons, So. TX. Ch. Meeting, San Antonio, Texas, 2/17/92. (Oral)
8. "Ileal mucosal hypoperfusion during cardiopulmonary bypass", Society of University Surgeons, Cincinnati, Ohio, 2/15/92. (Resident's Program) (Oral)
9. "Intratracheal pulmonary ventilation - a new technique of mechanical ventilation", Biomedical Engineering Research Meeting, Houston, Texas, 3/19/92. (Oral)
10. "Reduction of ventilator support with IVOX", Biomedical Engineering Research Meeting, Houston, Texas, 3/19/92. (Oral)
11. "Effects of heparin on smoke-induced pulmonary injury: A review of potential mechanisms of action", University of California, San Diego; Effects of heparin in burns Meeting, San Diego, California, 2/25/94. (Oral)
12. "Heparin and experimental sepsis", University of California, San Diego; Effects of heparin in burns Meeting, San Diego, California, 2/25/94. (Oral)

13. “Surgical management of ambiguous genitalia: An update”, University of Oklahoma, Pediatric Surgery Resident’s Conference, Oklahoma City, Oklahoma, 11/15/95. (Oral)
14. “Blunt versus penetrating subclavian artery injury: Presentation, injury pattern, and outcome”, American Association for Surgery of Trauma, Waikoloa, Hawaii, 9/25/97. (Poster)
15. “Imaging and decision making in pediatric blunt abdominal trauma”, University of Texas-Houston Medical School Department of Surgery Grand Rounds, Houston, Texas, 11/24/97. (Oral)
16. “Fundamentals of Pediatric Trauma Resuscitation”, University of Texas-Houston Medical School Department of Surgery Grand Rounds, Houston, Texas, 1/20/97. (Oral)
17. “PMN mediated microvascular injury with extracorporeal circulation”, Rice University Bioengineering Seminar, Houston, Texas 9/15/99. (Oral).
18. “Evaluation of Pediatric Blunt Abdominal Trauma”, East Texas Medical Conference Continuing Medical Education/Grand Rounds, Tyler, Texas, 5/19/00. (Oral)
19. “ECMO for Trauma-Related Cardiopulmonary Failure”, East Texas Medical Conference Continuing Medical Education/Grand Rounds, Tyler, Texas, 5/19/00. (Oral)
20. “Evaluation of Pediatric Blunt Abdominal Trauma”, Trauma Regional Advisory Council V Symposium, South Padre Island, Texas, 6/15/00. (Oral)
21. “Update on Smoke Inhalation Injury”, Southeast Texas Trauma Regional Advisory Council, Houston, Texas, 7/10/00. (Oral)
22. “Decision making in Pediatric Blunt Abdominal Trauma”, Southeast Memorial Hospital Grand Rounds, Houston, Texas, 9/16/00. (Oral)
23. “Management of Pediatric Blunt Abdominal Trauma”, Valley Baptist Medical Center, Harlingen, Texas, 12/7/00. (Oral)
24. “Unconventional adjuncts to mechanical ventilation in ARDS”, American College of Surgeons, New Orleans, Louisiana 10/11/01.
www.facs.org/clinical2001/cox.pdf (Oral)
25. “Intestinal edema – effect on function”, Red Duke Professorship Day, University of Texas – Houston, Houston, Texas, 1/15/02. (Oral)
26. “Pediatric Trauma Resuscitation”, East Texas Medical Center Trauma

- Symposium, Tyler Texas, 08/23/02. (Oral).
27. “Trauma Surgery in Afghanistan”, Valley Baptist Medical Center, Harlingen, Texas, 3/25/03. (Oral)
 28. “Terror in Afghanistan”, University of Texas-Houston Grand Rounds, Houston, Texas, 4/01/03. (Oral)
 29. “A Semester Abroad”, University of Chicago Grand Rounds, Chicago, Illinois, 5/22/03. (Oral)
 30. “Pediatric Trauma: Relevance for the Military Surgeon”, Gary Wratten Memorial Surgical Conference, San Antonio, Texas, 5/20/03. (Oral)
 31. “Fluid Balance and ECMO”, Extracorporeal Life Support Organization, Chicago, Illinois, 9/13/03. (Oral-Plenary)
 32. “Military Surgery as a Reservist”, Surgical Student Association, Houston, Texas, 10/4/03.
 33. “Pediatric Surgery in a Combat Zone”, Department of Pediatrics Grand Rounds, Houston, Texas, 12/7/03. (Oral)
 34. “AMEDD Recruiting Strategies”, AMEDD Advertising and Marketing Workshop, Louisville, Kentucky, 4/12/04. (Oral)
 35. “Military Medical Careers”, Joint Admission Medical Program, University of Texas-Houston Medical School, Houston, Texas, 6/25/04. (Oral)
 36. “Pediatric Trauma Management: FST or Tertiary Trauma Center”, BAMC 10th Annual Trauma Symposium, San Antonio, Texas, 8/10/04. (Oral)
 37. “Mechanisms of Myocardial Dysfunction after Gut Ischemia/Reperfusion.” Red Duke Professorship Day, University of Texas-Houston, Houston, Texas, 1/22/05. (Oral)
 38. “Immune Function During ECMO”, Arnold G. Coran, M.D. Symposium, University of Michigan, Ann Arbor, Michigan, 6/5/05. (Oral)
 39. “Thoracic Trauma”, Cook Children’s Hospital Trauma Symposium, Fort Worth, Texas, 6/10/05. (Oral)
 40. “Dynamic Fluid Flow Modeling of an Arteriovenous Resuscitation Device”, UTCBME Symposium, 4/29/05. (Poster)
 41. “Bioimpedance Analysis Quantifies Level of Edema and Capacitance of Rat Small Intestine”, UTCBME Symposium, 7/29/05. (Poster)

42. State of the Art Presentations: Meconium Aspiration - "ECMO for MAS – Do we use the right criteria?" Extracorporeal Life Support Organization Meeting, 9/17/05. (Oral-Panel)
43. "Development of Stem-Cell Therapy for Brain Injury", University of Texas-Houston Medical School, Houston, Texas, 10/28/05. (Oral)
44. "Bone-marrow Progenitor Cells and Traumatic Brain Injury", South Texas Chapter of the American College of Surgeons, Houston, Texas, 2/24/06. (Oral)
45. "Cellular Therapy for Traumatic Brain Injury", Pediatric Brain Injury Research Symposium, University of Texas Southwestern Medical School, Dallas, Texas, 3/31/06. (Oral)
46. "Human Umbilical Cord Blood as Cellular Progenitor Therapy for Brain Injury", Cord Blood Stem Cell Advisory Meeting, Tucson, Arizona, 4/6/06. (Oral)
47. "Trauma and Child Abuse", University of Texas Child Abuse Symposium, Houston, Texas, 5/12/06.
48. "Novel Cellular Therapies for Neurologic Diseases", University of Iowa Department of Surgery Grand Rounds, Iowa City, Iowa, 7/18/06.
49. "Edema-induced Intestinal Dysfunction", Columbus Children's Hospital/Ohio State University, Columbus, Ohio, 2/20/07.
50. "Mechanisms of edema-induced organ dysfunction", Michael E. DeBakey Institute, Texas A&M University, College Station, Texas, 7/26/07.
51. "Modern approach to pediatric TBI", Children's Hospital of Los Angeles Pediatric Disaster Summit. Los Angeles, California, 9/11/08.
52. "Progenitor cell therapy for TBI", MD Anderson Cancer Center Grand Rounds, Houston, Texas, 11/24/08.