Curriculum Vitae

Date Prepared: June 17, 2011

Name: Carl J. Hauser, MD, FACS, FCCM

Office Address: Beth Israel Deaconess Medical Center
110 Francis Street, Suite 2G
Boston, MA 02215

Work Phone: (617) 632-7364

Work Fax: (617) 632-9917

Work E-Mail: cjhauser@bidmc.harvard.edu

Place of Birth: New York, NY

Education

1973	B.A., Biology *summa cum laude*	Hunter College of City University of New York; New York, NY
1977	M.D.	New York University School of Medicine; New York, NY

Post Doctoral Training

1977-1978	Intern, General Surgery	Harbor/UCLA Medical Center and the UCLA School of Medicine; Torrance, CA
1978-1979	Surgical Critical Care Fellowship	Harbor/UCLA Medical Center and the UCLA School of Medicine; Torrance, CA William C. Shoemaker, MD, Director
1979-1982	Resident, General Surgery	Harbor/UCLA Medical Center and the UCLA School of Medicine; Torrance, CA
1982-1983	Chief Resident, General Surgery	Harbor/UCLA Medical Center and the UCLA School of Medicine; Torrance, CA

Faculty Academic Appointments

1990-1992	Instructor of Surgery, University of Southern California School of Medicine; Los Angeles, CA
1992-1996	Associate Professor of Surgery, University of Mississippi School of Medicine; Jackson, MS
1996-2002	Associate Professor of Surgery, New Jersey Medical School; Newark, NJ
2002-2004	Associate Professor of Surgery (with Tenure), New Jersey Medical School; Newark, NJ
2004-2006	Professor of Surgery (with Tenure), New Jersey Medical School; Newark, NJ
2006-	Visiting Professor of Surgery, Harvard Medical School

Appointments at Hospitals/Affiliated Institutions

1983-1988	Attending Surgeon	Brotman Medical Center; Culver City, CA
1983-1988	Attending Surgeon	Hollywood Presbyterian Medical Center; Los Angeles, CA
1983-1988	Attending Surgeon	Cedars-Sinai Medical Center; Beverly Hills, CA
1988-1992	Attending Surgeon	Los Angeles County and USC Medical Center; Los Angeles, CA
1992-1996	Attending Surgeon	Jackson Veterans Affairs Medical Center; Jackson, MS
1992-1996	Attending Surgeon	University of Mississippi Medical Center; Jackson, MS
1996-2006	Attending Surgeon	University Hospital of UMDNJ / New Jersey Medical School; Newark, NJ
2006-2009	Attending Surgeon	Beth Israel Deaconess Medical Center; Boston, MA

Other Professional Positions

2003-2004	Consultant	ZLB Bioplasm; Glendale, CA
2003-2009	Chair, NovoSeven US Trauma Steering Committee	Novo Nordisk A/S; Copenhagen, DK
2005-2010	Co-Chair, International Trial for the Study of Recombinant Human Factor VIIa in Traumatic Hemorrhage (CONTROL Trial)	

2005-2009	Member, International Advisory Board for NovoSeven Recombinant Human Factor VIIa Use in Traumatic Hemorrhage	Novo Nordisk A/S; Copenhagen, DK
2009-2011	Member, Adjudication Board for CSL Behring study program: Beriplex in warfarin reversal	CSL Behring. Marburg, Germany

Major Administrative Leadership Positions

1984-1988	Trauma Surgeon-in-Chief	Hollywood Presbyterian Medical Center; Los Angeles, CA
1992-1996	Chief of Surgery	Veterans Affairs Medical Center; Jackson, MS
1992-1996	Associate Director of Trauma	University of Mississippi Medical Center; Jackson, MS
1992-1996	Director of Surgical Critical Care	Veterans Affairs Medical Center; Jackson, MS
1996-2005	Chief of Surgical Research, Department of Surgery	UDNJ/New Jersey Medical School; Newark, NJ
1996-2006	Associate Chief of Trauma Service	UMDNJ/New Jersey Medical School; Newark, NJ
1996-2006	Associate Director of Trauma	New Jersey State Trauma Center; Newark, NJ
2007-2008	Acting Chief, Division of Trauma & Critical Care, Department of Surgery	Beth Israel Deaconess Medical Center; Boston, MA

Committee Service:

Jackson VA Medical Center

1992-1996	Chairman, ICU and CPR Committees
1992-1996	Support Services Committee
1992-1996	Research Committee

University of Mississippi Medical Center

1992-1996	Trauma Committee
1992-1996	Critical Care Committee
1992-1996	Pharmacy and Therapeutics Committee
1992-1996	Chairman, Antibiotic Use Subcommittee

UMDNJ/New Jersey Medical School

1996-2006 Trauma Committee
1996-2006 Critical Care Committee
1998-2002 Ethics Committee
2002-2004 Biomedical Research Support Committee
2002-2006 Transfusion Committee
2002-2006 Pharmacy and Therapeutics Committee
Chair - Antibiotic Use Subcommittee
2005-2006 Chair, Factor VIIa Use Committee

Professional Societies

1992- Shock Society
1992-2002 Member, Development Committee
2002-2004 Clinical Councilor
2002-2004 Chairman, Development Committee
2002-2007 Member of the Board
2004-2007 Treasurer
2008-2009 Finance Committee

1992- Society of Critical Care Medicine
1992-1994 Joint Task Force on Quality Assurance Indicators in Intensive Care Units
1992-1994 Membership Committee

1993-1996 Society of Critical Care Medicine Mississippi Chapter
1993-1996 Chairman

1992-1996 Society of Critical Care Medicine Southeast Chapter
1992-1996 Medical Affairs Committee

1994- American Association for the Surgery of Trauma

1996- Eastern Association for the Surgery of Trauma
2001-2004 Program Committee

2000-2003 American College of Surgeons New Jersey Committee on Trauma, Vice-Chair

2000- Surgical Infection Society
2000-2003 Chairman, Education and Fellowship Committee
2000-2004 Board of Directors

2004- College of Critical Care Medicine

2005-	Western Trauma Association 2005-2008 Publications Committee	

Grant Review Activities

1996	Head and Spinal Cord Trauma Initiative, Grant Study Section Permanent Member	Dept of Defense (DoD)
1997-2000	Merit Review Consultant	Dept of Veterans Affairs
2000	Combat Casualty Resuscitation Initiative, Grant Study Section Permanent Member	DoD
2000-2004	Review of WRAIR Blunt Trauma Research Program Site Reviewer	DoD
2002	Lung Biology and Pathology Study Section (NIH/LBPA) 2002, NHLBI Grant Study Section Ad hoc Member	NIH/NHLBI
2006	Special Emphasis Panel (SEP) for Glue Grant Review: Inflammation and the Host Response to Injury, Grant Study Section	NIH/NIGMS
2006	Blood Products Advisory Committee (BPAC) Lead Pre-Clinical Reviewer for Clinical Trials of Hemoglobin Solutions	FDA
2009	Special Emphasis Panel (SEP) for Review of Research Center Grant 2 P50 GM053789-13, Molecular Biology of Hemorrhagic Shock, Grant Study Section	NIH/NIGMS
2010	Scientist Reviewer / Study Section. Defense Medical Research and Development Program (DMRDP). Wound Infection and Healing #2 (WIH-2)	DoD

2006-2012	Consultant Food and Drug Administration (FDA) Center for Biologics Evaluation and Research (CBER).	Dept of Health and Human Services
2010	Scientist Reviewer – Congressionally Directed Military Research Program (CDMRP) – Wound management.	DoD

Editorial Activities

***Ad hoc* Reviewer**

1998-2010	The Journal of Leukocyte Biology
2000-2010	The Journal of Surgical Research
2001-2006	Surgery
2003-2010	The Journal of Immunology
2004-2006	The American Journal of Physiology: Cell Physiology
2004-2006	Biochemical Pharmacology
2004-2007	The Journal of Biological Chemistry
2006-2009	The Journal of Clinical Investigation
2007-2008	Resuscitation
2009-	Medical Letter on Drugs and Therapeutics
2011-	Nature Reviews in Immunology

Other Editorial Roles

1995-2002	Reviewer	The Journal of Trauma
1996-2009	Reviewer	Critical Care Medicine
1996-2009	Reviewer	Shock
2002-2008	Senior Reviewer	The Journal of Trauma
2008-2011	Associate Editor	The Journal of Trauma
2006-2010	Editorial Board	Shock

Honors and Prizes

1971	National Biologic Honor Society	City University of New York
1972	Phi Beta Kappa	City University of New York
1973	Jonas Salk Scholarship for the Study of Medicine	City of New York
1982	Resident Award, Best Paper	Los Angeles Surgical Society
1995	Research Award, Scholarship	Society of American Gastrointestinal and Endoscopic Surgeons (SAGES)
2001	Surgery Residents' Teaching Award, Awarded by the Graduating Surgical Chief Residents	New Jersey Medical School
2006	Elected Fellow of the College of Critical Care Medicine (FCCM)	

2009 Shock Society Distinguished Service Award

Report of Funded and Unfunded Projects

COMPLETED

1994-1995 PI Society of American Gastrointestinal Endoscopic Surgeons $13,500
Peritoneal macrophage function in surgical patients
The major goal for this study was to assess the effects of laparoscopic surgery on peritoneal immunity.

1994-1996 Site PI Alpha Therapeutics Contract $29,850
Fibrin Sealants in hepatic parenchymal injuries
The major goal of the study was to find new methods to control hepatic hemorrhage.

1995-1997 PI AO/ASIF Research Foundation $98,500
The immune events leading to organ failure after bone and soft-tissue trauma in the human
The major goal of this study was to discover the immune effects of high energy traumatic factures on human trauma victims.

1998-1999 PI Foundation Grant of UMDNJ/New Jersey Medical School $25,000
Modulation of human neutrophil function
The major goal of this study was to study the effects of G-protein coupled receptor ligands on neutrophil function.

1998-1999 Site PI Protodigm, Inc. Contract $98,000
Ascending dose, parallel group, double blind, placebo controlled, does finding study of rhuMab CD18 in patients with hemorrhagic shock
The major goal of this study was to evaluate the effects of a monoclonal antibody inhibitor of neutrophil adhesion on global immune function.

2000-2003 Co-PI Office of Naval Research
For the study of resuscitation based gut protective strategies in hemorrhage:
My contributions to the project were to evaluate the responses of neutrophils to shock in the presence of specific drug therapies aimed at decreasing post-traumatic inflammation.

2000-2004 PI NIGMS R01 GM59179-04 $988,000
For the study of Chemokine interactions and PMN $[Ca^{2+}]_i$ priming in trauma
The major goal of this study was to evaluate the effects of injury on cytosolic calcium signaling in the neutrophil.

2000-2004 Co-Investigator NHLBI
For the study of trauma related erythropietic suppression

My contributions to the project were to evaluate calcium signaling in response to G-protein coupled ligands in bone marrow cells.

2006-2007 PI Year one: $185,000
P50 Sub-project: PMN dysregulation by gut lymph in shock. Overall Project Title: Sexual dimorphism in gut related distant organ failure.
The major goal of the study was to evaluate the role of gut lymph inflammatory mediators in the pathogenesis of post-traumatic neutrophil dysfunction.

2006-2009 Chair, Steering Committee Novo Nordisk A/C Total cost approx.
Leader, Writing Committee $60,000,000
CONTROL Trial: Efficacy and Safety of Recombinant Activated Factor VII in the Management of Refractory Traumatic Hemorrhage
This study is a Phase III ('pivotal') trial evaluating the role of recombinant activated human Factor VII (rhuVIIa) in the clinical management of exsanguinating traumatic hemorrhage.

2006-2010 PI NIH/NIGMS 2 R01 GM059179-05A2 Year one: $234,222
Sphingosine-1-phosphate and PMN Ca^{2+} in Trauma
The major goal of the study was to evaluate the role of lysolipid signaling in neutrophil activation and in neutrophil-mediated immune attack on endothelia.

CURRENTLY ACTIVE PROGRAMS

2010-2014 PI NIH/NIGMS 1 R01 GM089711-01A1 Year one: $250,000
Mitochondrial DAMPs and inflammation after injury
The major goal of the study is to define the pathways by which mitochondria-derived peptides and DNA activate immune function, causing SIRS and organ injury after trauma.

2009-2011 PI DOD Hypothesis Grant DR080924 Year one: $100,000
Mitochondrial Debris as a Discriminator between Inflammatory and Infectious Complications of Blast Injuries: The Enemy Within. (Funded beginning 7-1-09)
The major goal of the study is to define role of mitochondria-derived DNA in SIRS after major blunt trauma and to create tests to discriminate between SIRS due to tissue trauma and SIRS due to infection.

2011-2013 PI CIMIT grant 2010 Year one: $100,000
A Rapid PCR-Based, Point of Care Test to Discriminate Between Sterile and Infective SIRS. (Funding starting date 10/1/10). The goal of the study is to create a "PCR on a chip" test to tell sepsis from SIRS based upon the premise that mitochondrial DNA is a biomarker for sterile SIRS that can be discriminated from bacterial DNA that is detectable in the circulation in sepsis.

Report of Local Teaching and Training

Teaching of Students in Courses

1992-1996 University of Mississippi School of Medicine; Jackson, MS
3rd Year Core Curriculum, 90 Medical Students per Year
4th Year Sub Internship, 12 Medical Students per Year

My role in the teaching and Training of medical students at the University of Mississippi included formal didactic course material, clinical conferences, bedside teaching and teaching in the OR. At the 3rd year level this was done mostly in group conferences and using a 'Socratic method' on rounds. At the sub-intern level I placed more of an emphasis on bedside clinical teaching in the OR and in the ICU.

1996-2006 University of Medicine and Dentistry of New Jersey; Newark, NJ
3rd Year Core Curriculum, 140 Medical Students per Year
4th Year Sub Internship, 24 Medical Students per Year

My role in the teaching and Training of medical students at the University of Medicine and Dentistry of New Jersey also included formal didactic course material, clinical conferences, bedside teaching and teaching in the OR. At the 3rd year level this was done mostly using the 'Socratic method' on rounds. We also had formal morning 'sit-down' teaching rounds seven days a week. Again, at the sub-intern level I place more of an emphasis on bedside clinical teaching in the OR and in the ICU, with sub-interns expected to learn to manage difficult ICU patients.

2007-2009 Harvard Medical School
3rd Year Core Curriculum, 30 Medical Students per Year
4th Year Sub Internship, 6 Medical Students per Year

My role in the teaching and Training of medical students at Harvard Medical School consists of presenting formal didactic course material several times a year to the incoming 3rd year level students. Most teaching to them is done during morning work rounds. This is limited by the time limitations placed on the residents, but I try to do at least ½ hour of formal teaching (aimed the care of current patients) per day. At the sub-intern level I place more of an emphasis on bedside clinical teaching in the ICU.

Formal Teaching of Residents, Clinical Fellows and Research Fellows (Post-Docs):

Supervisory, Laboratory, and Other Training Responsibilities

I have supervised, trained and mentored surgical residents and fellows in the OR, on the wards in ICUs and in my laboratory for my entire career. I consider this type of training to be a continuous Socratic process and believe there should be no event in the course of managing a patient that cannot be used as the subject of either review or new knowledge. Thus in all cases, I have been there to teach the residents and students at all times and I think it should be difficult to tell care from instruction. I lecture at the bedside more than in classrooms, but I do semi-formal lectures at least 1 hour per week every week. Supervision of surgical residents and students also includes teaching operative surgery as well as peri-operative care. Laboratory and clinical research fellows also get 2-4 hours per week of one-on-one didactic time as well as participation in lab meetings.

1984-1987 Hollywood Presbyterian Medical Center, Regional Level I Trauma Center; Los Angeles, CA. supervised and taught 12 Kaiser Permanente surgical residents (PGY 3-5) per year.

My role in the supervision, teaching and training of surgical residents at Hollywood Presbyterian Medical Center Level I Trauma Center included all aspects of surgical education. I generated and delivered formal didactic course material and arranged educational conferences. I delivered bedside teaching and teaching on walk rounds in the SICU. I supervised resident 'first assistants' on several hundred operations for abdominal, thoracic and vascular injuries per year. The HPMC trauma program was cited by the Kaiser Permanente Department of Surgery as the favorite experience of the Kaiser Permanente surgical residents for the academic years 1985 and 1986.

1988-1992 Los Angeles County/USC Medical Center; Los Angeles, CA
Supervised and taught 24 general chief surgery residents per year.

My role in the supervision and teaching of residents at Los Angeles County/USC Medical Center was operative supervision and education of PGY5-PGY6 residents in trauma surgery. I supervised chief residents on several hundred operations for abdominal, thoracic and vascular injuries per year. I also supervised general surgery residents at all levels on emergency general surgical and pediatric surgical operations.

1992-1996 University of Mississippi Medical Center; Jackson, MS and the Jackson, MS Veterans Affairs Medical Center:
General Surgery Residents: 25 per year
ICU Fellows: one per year
Research Fellows: 2 total

My role in supervision and teaching University of Mississippi Medical Center (UMMC) was operative supervision and education of all PGY level residents in trauma, general and vascular surgery. I did didactic, bedside and ICU teaching as well as operative resident supervision on a broad spectrum of abdominal, thoracic and vascular surgeries. I also supervised resident surgeons on general surgical procedures and supervised Vascular Fellows on vascular procedures at the Jackson Veterans Affairs Medical Center. I taught and mentored one surgical ICU fellow per year and mentored two research fellows during my time at UMMC, with each of them producing 1 or 2 clinical publications.

1996-2006 University Hospital of UMDNJ; Newark, NJ
Trauma and ICU Fellows: 2 per year
Research Fellows: 5 lab fellows mentored

My role in supervision and teaching residents at University of Medicine and Dentistry of New Jersey University Hospital of UMDNJ was pervasive. I provided operative supervision and education of all PGY level residents in trauma, general and trauma vascular surgery. I provided didactic and bedside ICU teaching for the residents and trauma / ICU fellows. I mentored 5 PGY2/3 resident laboratory fellows in my laboratory with a research output of 3-14 publications per fellow subsequent to their lab experience.

2007- Beth Israel Deaconess Medical Center; Boston, MA
Trauma and ICU Fellows: 3 per year

Research Fellows: 2 lab fellows mentored

My role in surgical education at Beth Israel Deaconess Medical Center includes clinical supervision of all PGY level residents. I provided clinical and operative supervision of trauma and general surgery cases. I provide both didactic and bedside ICU teaching for the Surgical ICU fellows and the Anesthesia ICU fellows. I have mentored one laboratory fellow in my laboratory with a research output of 5 publications during and subsequent to their 6 month lab experience and have now begun to mentor a second.

Formally Supervised Trainees

Years	Trainee Name	Current Position
1997-1998	Nirali Desai, MD	Private practice of Urology

Dr. Desai authored or co-authored 3 papers or abstracts during her time with me and presented an oral paper at a major trauma meeting.

1998-1999	John M. Adams, MD	Chief of Trauma, Morristown Memorial Medical Center

Dr. Adams authored or co-authored 14 papers or abstracts subsequent to his lab experience with me and presented oral papers at five major trauma meetings (every major trauma meeting possible).

2000-2001 Michael Tarlowe, MD Private practice of Colorectal Surgery
Dr. Tarlowe authored or co-authored 5 papers and abstracts during his time with me and presented oral papers at two major trauma meetings.

2002-2003 Cindy Lee, MD Private practice of General Surgery
Dr. Lee authored or co-authored 6 papers or abstracts during her time with me. She presented oral papers at two major trauma meetings and won the Earl Young Prize of the Western Trauma Association for best resident paper.

2007-2008 Mustafa Raoof, MD Resident at Univ. of AZ Medical Center
Dr. Raoof authored or co-authored 5 papers or abstracts during his time with me, including doing ground breaking basic science work.

2009-present Tolga Sursal BA. MS candidate has authored or co-authored 4 papers and 2 abstracts to date. Accepted to UVA Medical School for fall 2011.

Formal Teaching of Peers

1992-	Advanced Trauma Life Support (ATLS) Instructor, 6 hours/course, 2-4 courses per year
2003	American College of Surgeons Postgraduate Course. Moderator, Resuscitation and the Immediate Care of the Trauma Patient: "Can Multiple Organ Failure Be Prevented?" New York, NY, April 12, 2003.
2009	American College of Surgeons Postgraduate Course on Surgical Critical Care: Sepsis and Metabolism. Chicago, October 2009.

Local Invited Presentations

1995 Visiting Professor, Department of Surgery, University of Medicine and Dentistry of New Jersey; Newark, NJ

2007 CIMIT Lecture on Post Resuscitation Injury. Immune cell calcium signaling in ischemia/reperfusion and post-resuscitation shock, Massachusetts General Hospital; Boston, MA

2007 Massachusetts General Hospital Critical Care and Trauma Symposium. After the antibiotics: steroids, Protein C? Fairmont Copley Plaza Hotel; Boston, MA

2007 Massachusetts General Hospital Critical Care and Trauma Symposium. Non-operative management of penetrating wounds of the neck. Fairmont Copley Plaza Hotel; Boston, MA

2008 Inflammation biology in Surgery. Surgical Grand Rounds, Beth Israel Deaconess Medical Center; Boston, MA

2010 Sepsis and SIRS; DAMPs and PAMPs: Telling sterile inflammation from infection. Surgical Grand Rounds, Mount Auburn Hospital, Cambridge MA

2010 DAMPs and PAMPs. Interdisciplinary Surgical Intensive Care Conference. Massachusetts General Hospital; Boston, MA.

2010 Mitochondrial DAMPs, Bacterial PAMPs and our evolving understanding of Sepsis and SIRS. Surgical Grand Rounds, Beth Israel Deaconess Medical Center; Boston, MA

2010 Invited lecture: Harvard Lung Conference: PAMPs, DAMPs and our evolving understanding of sepsis and SIRS. Harvard Medical School; Boston, MA. October 7, 2010.

2011 Research Seminar: The emerging role of mitochondrial DAMPs in inflammation: Center for Vascular Biology. Beth Israel Deaconess Medical Center; Boston, MA

Report of Regional, National and International Invited Teaching Presentations

Regional Invited Presentations

1986 Candida peripheral thrombophlebitis. Paper presented to the Southern California Chapter of the American College of Surgeons Meeting. Los Angeles, CA.

1995 Postsurgical Gout. Paper presentation at the Southeastern Surgical Conference; Savannah, GA.

1997 Suppression of natural killer cell activity in patients with fracture / soft tissue injury. Paper presentation to the Surgical Infection Society. Pittsburgh, PA.

2001 Surgery Grand Rounds speaker: The open abdomen. Robert Wood Johnson Medical Center; New Brunswick, NJ.

2003 Visiting Scientist, Merck Pharmaceuticals, Rahway, NJ. Research Seminar topic: Sphingolipid-mediated inflammatory calcium signaling in neutrophils.

2003 Visiting Professor, Nassau University Medical Center; Nassau, NY. Lecture topic: The Biology and Surgical Critical Care of the Open Abdomen.

2007 Lecture to Boston MedFlight Paramedics “Neck Trauma”. Hanscom Air Force Base; Bedford, MA.

2007 CIMIT Innovation Conference: Symposium on battlefield and trauma resuscitation. “Modifying inflammation with lipids: building a better raft” Back Bay Events Center; Boston, MA.

2007 Invited lecture: Lysolipids, cholesterol and calcium channels in trauma. 40th Annual Meeting of the Society for Leukocyte Biology, Inflammation, Innate Immunity & Cancer; Cambridge, MA.

National Invited Presentations

1980 Pathologic classification of peripheral vascular disease by Transcutaneous Oximetry. Paper presentation at the 22nd Annual Society of University Surgeons Resident's Meeting; Louisville, KY.

1980 Hemoglobin solution in the treatment of hemorrhagic shock. Current Concepts in Combat Casualty Resuscitation Symposium. USUHS, Bethesda MD. Sponsor: DOD

1983 Transcutaneous oximetry in the Diabetic Foot. Paper presented at the Western Surgical Association; Monterrey, CA.

1983 Noninvasive measurements of systemic oxygen transport in the critically ill patient. Lecture - Indiana College of Chest Physicians, Postgraduate Update on Intensive Care. Indianapolis, IN.

1994 Symposium Moderator; resident presentations; Critical Care section. Society of University Surgeons.

1994 Contemporary Management of Colorectal Injuries. Southeastern Surgical Conference Postgraduate Review Course.

1994 Prospective, consecutive analysis of infectious complications following chest tube insertion without antibiotic prophylaxis in trauma patients. Paper presented at the American College of Surgeons Clinical Congress; New Orleans, LA.

1995 Invited Discussant: Prospective saline loading improves outcome following elective, non cardiac surgical procedures. Southeastern Surgical Conference.

1995 Visiting Professor, Columbia College of Physicians and Surgeons, Department of Surgery, Harlem Hospital Medical Center.

1996 Invited discussant: Use of fibrin sealant in mastectomies. Southeastern Surgical Conference.

1996 The inflammatory micro-environment of human fracture / soft tissue hematomas and their suppressive impact on systemic immunity. Paper presentation to the American Association for the Surgery of Trauma; Houston, TX.

1997 Effects of open and laparoscopic surgery on peritoneal immunity. Paper presentation at the SAGES meeting. Nashville, TN.

1997 Visiting Professor / Trauma Grand Rounds speaker, the Immune effects of Injury. Los Angeles County / University of Southern California Medical Center.

1998 Efficacy of Fibrin Glue in a porcine model of hepatic hemorrhage. Presentation at Symposium on Emerging Applications of Tissue Sealants. San Diego, CA. Sponsor: Alpha Therapeutics.

1998 PMN priming by ARDS plasma is the result of integrated chemokine-induced $[Ca^{2+}]_i$ signaling. Paper presentation to the Society of Leukocyte Biology. San Diego CA.

1998 Invited discussant: Fibrin glue in hepatic hemorrhage. Eastern Association for the Surgery of Trauma; Sanibel, FL.

1998 Neutrophil $[Ca^{2+}]_i$ signaling in trauma and ARDS. Invited lecture, Surgical Biology Club III, Orlando FL.

1999 PMN priming in trauma / ARDS by integrated, chemokine-induced $[Ca^{2+}]$i signaling. Paper presentation to the Society of University Surgeons, New Orleans, LA.

1999 Priming of neutrophil $[Ca^{2+}]$i signaling and oxidative burst by human fracture fluids. Western Trauma Association, Crested Butte, CO.

1999 Major trauma enhances store-operated calcium influx in human neutrophils. Paper presentation to the American Association for the Surgery of Trauma. Boston, MA.

1999 Visiting Professor; Washington Hospital Center, Washington, D.C. Invited Lecture: Serial chemokine stimulation in human PMN. Washington, DC.

2000 Recombinant humanized monoclonal antibody against CD18 in traumatic hemorrhagic shock: results of a phase II clinical trial. Paper presentation to the Eastern Association for the Surgery of Trauma, Sanibel, FL.

2000 The development of pathologic G-protein signaling in trauma neutrophils. Paper presentation to the Western Trauma Association, Lake Tahoe CA.

2000 Interactions between lipid and peptide G-protein coupled receptors in rat PMN model human inflammation. Paper presentation to the 23rd Annual Conference on Shock, Snowbird, UT.

2000 Trauma / Hemorrhage activates rat PMN responses to multiple G-protein coupled chemoattractants. Paper presentation to the 23rd Annual Conference on Shock, Snowbird, UT.

2000 The immunomodulatory effects of damage control abdominal packing on local and systemic neutrophil activity. Paper presentation to the American Association for the Surgery of Trauma. San Antonio, TX.

2001 Early trauma PMN responses to chemokines are associated with development of sepsis, pneumonia and organ failure. Paper presentation to the Eastern Association for the Surgery of Trauma Fourteenth Scientific Assembly, Palm Harbor, FL.

2001 Visiting Professor, Trauma / Critical Care Grand Rounds speaker, LAC-USC Medical Center, Los Angeles.

2001 Visiting Professor, UC Irvine Medical Center, Los Angeles, CA.

2001 Visiting Professor, University of Arkansas Medical Center. Surgery Grand Rounds Lecture: The role of abdominal packing in SIRS. Little Rock, AK.

2001 Moderator and Lecturer: Modeling the shock/septic state with human cells and tissues. Shock Society workshop on modeling in shock and trauma research. Twenty-fourth Annual Conference on Shock. Marco Island, FL.

2001 Moderator of workshop on modeling in shock and trauma research. Twenty-fourth Annual Conference on Shock. Shock Society; Marco Island, FL.

2001 Invited lecture: Modeling the shock/septic state with human cells and tissues. Twenty-fourth Annual Conference on Shock. Shock Society; Marco Island, FL.

2002 Visiting Professor of Surgery and Grand Rounds Speaker, University of Florida Jacksonville, Shands Hospital Medical Center.

2002 Invited Speaker: Management of Difficult Abdominal Injuries. 33rd Annual Meeting of the Orange County Surgical Society; Irvine, CA.

2002 Invited Speaker: The Surgery and Biology of the Open Abdomen. 33rd Annual Meeting of the Orange County Surgical Society; Irvine, CA.

2002 Invited Speaker: The Critical Care of the Abdominal Compartment Syndrome. 33rd Annual Meeting of the Orange County Surgical Society; Irvine, CA.

2002 Invited discussant: Organ-specific Changes in High-Energy Phosphates after Hemorrhagic Shock and Resuscitation in the Rat. Eastern Association for the Surgery of Trauma; Orlando, FL.

2002 Invited discussant: Owen H. Wangensteen Forum on Fundamental Surgical Problems. Mesenteric lymph diversion prevents myocardial edema and dysfunction after gut ischemia / reperfusion. American College of Surgeons Clinical Congress.

2002 Trauma can suppress neutrophil chemotaxis. Paper presentation to the 25th Annual Conference on Shock. Big Sky, MT.

2002 Neutrophil calcium entry channels and their role in inflammation. Invited presentation to the Surgical Biology Club III, San Francisco, CA.

2002 Trauma suppresses neutrophil chemotaxis toward G-protein coupled chemoattractants. American College of Surgeons Owen H. Wangensteen Forum on Fundamental Surgical Problems. San Francisco, CA.

2003 Prospective validation of CT screening of the thoracolumbar spine in trauma. Paper presentation to the Eastern Association for the Surgery of Trauma Sixteenth Scientific Assembly. Fort Meyers, FL.

2003 Small volume albumin administration protects against hemorrhagic shock induced bone marrow dysfunction. Paper presentation to the 33rd Annual meeting of the Western Trauma Association, Snowbird, UT.

2003 Visiting Professor and Grand Rounds Presentation: Integrating Immunobiology into Surgical Critical Care. Rush-Presbyterian Medical Center; Chicago, IL.

2003 Temperature dependent changes in PMN respiratory burst depend on altered store operated calcium entry. Paper presentation to the Twenty-Sixth Annual Conference on Shock, Phoenix, AZ.

2003 Visiting Scientist, Research Seminar topic: Basic mechanisms of inflammatory calcium signaling in human PMN. Brown University Medical Center; Providence, RI.

2003 Invited Discussant: 58th annual Owen Wangensteen Surgical Forum on Fundamental Surgical Problems. Stored PRBC transfusion induces recipient leukocyte IL-8 gene expression and production. American College of Surgeons; Chicago, IL.

2003 Invited Discussant: 58th annual Owen Wangensteen Surgical Forum on Fundamental Surgical Problems. Natural Killer T-cells regulate neutrophil accumulation in the lung during bacterial peritonitis. American College of Surgeons; Chicago, IL.

2003 Shock Society 2003 Symposium on the Immune Effects of Resuscitation: Moderator. Twenty-Sixth Annual Conference on Shock; Phoenix, AZ.

2004 Advocate Injury Institute Conference, Invited lecturer: The Surgical Management of Abdominal Compartmental Hypertension, Chicago IL.

2004 Advocate Injury Institute Conference, Keynote Speaker: Bringing Molecular Biology into the Surgical ICU. Chicago IL.

2004 Moderator: Owen Wangensteen Forum on Basic Surgical problems. Critical Care Session II. American College of Surgeons; New Orleans, LA.

2004 Seminar: Retroperitoneal vascular injuries in the age of damage control surgery. Eastern Association for the Surgery of Trauma; Fort Lauderdale, FL.

2004 FASEB / American Physiological Society, invited lecture; Lysophospholipid-mediated calcium entry and neutrophil-mediated inflammation in shock. Washington, DC.

2005 Recombinant Factor VIIa – Invited seminar on Uses, misuses and abuses. Sixty-Fourth Meeting of the American Association for the Surgery of Trauma; Atlanta, GA.

2005 Moderator: Symposium on emerging technologies: siRNA in shock research. Twenty-Eighth Annual Conference on Shock. Shock Society; Marco Island, FL.

2005 Surgical Grand Rounds, Harvard Medical School/Beth Israel-Deaconess Medical Center: Chemokines – the Yin and Yang of Lung Injury and Sepsis; Boston, MA.

2005 Visiting Professor, Hollywood Memorial Medical Center; Hollywood, FL.

2005 Visiting Professor, University of Hawaii Medical Center; Honolulu, HI.

2005 Visiting Professor, Trippler Army Medical Center; Honolulu, HI.

2006 Isolated Thoracolumbar Transverse Process Fractures: Call Physical Therapy, Not Spine. Paper presentation to the Western Trauma Association, Big Sky, MT.

2006 Trauma suppresses PMN function by inhibiting lysophospholipid-dependent Ca^{2+} entry. Paper presentation to the Surgical Infection Society. La Jolla, CA

2006 Multidisciplinary Damage Control in Surgery. Memorial Regional Trauma Center 13th Annual Trauma Symposium; Fort Lauderdale, FL.

2006 Diagnosis and Understanding of Sepsis and SIRS in Trauma. Memorial Regional Trauma Center 13th Annual Trauma Symposium; Fort Lauderdale, FL.

2006 Diagnostic Trends in Cervical and Thoracolumbar Spine Injuries. Memorial Regional Trauma Center 13th Annual Trauma Symposium. Fort Lauderdale, FL.

2006 Management of Thoracic Trauma. Memorial Regional Trauma Center 13th Annual Trauma Symposium; Fort Lauderdale, FL.

2006 Management of Penetrating Neck Injuries. 8th Annual Warren Wetzel, M.D. Trauma / Emergency Medicine Symposium. Jacobi Medical Center; Bronx, NY.

2007 Shock Society, Moderator: Symposium on hormones in cell signaling. Thirtieth Annual Conference on Shock. Baltimore, MD.

2007 Invited Lecture: Rafts, lysolipids and cholesterol signaling in neutrophils after injury. Presented to the Meeting of Surgical Biology Club III; New Orleans, LA.

2009 Surgical Biology Club 3. DAMPs and PAMPs: The Role of Mitochondria in SIRS and Sepsis. American College of Surgeons; October 11, 2009 Chicago, IL.

2009 Moderator: Owen Wangensteen Forum on Basic Surgical Problems. Critical Care Session I. American College of Surgeons; October 12, 2009 Chicago, IL.

2009 Speaker; General Surgery Review Course, Hemodynamics, Shock, Sepsis and Rescusitation. American College of Surgeons; October 13, 2009 Chicago, IL.

2009 Invited Lecturer: Harvard Trauma Symposium: DAMPs, PAMPs, Sepsis and SIRS. Boston, MA. November, 2009.

2010 First Eric Munoz Memorial Visiting Professor: UMDNJ/NJ Medical School. Newark NJ, Jan 28-29, 2010.

2010 Results of the CONTROL Trial: Efficacy and Safety of Recombinant Activated Factor VII in the Management of Refractory Traumatic Hemorrhage. Western Trauma Association, Telluride CO, March 4, 2010.

2010 Western Trauma Association Panel of Trauma Experts (WTA “Hard Liquor Session”). Western Trauma Association, Telluride CO, March 4, 2010.

2010 Anti-platelet Agents, Coumadin and Epidemic Intracranial Hemorrhage. Central Surgical Association, Chicago: March 11-13, 2010. Chicago, Illinois.

2010 Invited Lecturer: Berkshire Trauma Symposium, PAMPs and DAMPs: Bio-markers for Sepsis. Pittsfield, MA. March 26, 2010.

2010 Plenary Address: The role of Mitochondrial DAMPs in recognition of tissue injury: Shock Society conference: The Role of Pattern Recognition Receptors in Non-Immune Cell Types in Shock and Sepsis. Portland OR, June 12-15, 2010.

2011 Western Trauma Association Founders lecture on Basic Science, March 3, 2011. Inflammation after Injury – sniffing the trail from femur fractures to formyl peptides.

2011 Distinguished Visiting Lecturer, University of Texas San Antonio, April 9-11, 2011. Surgery Grand Rounds Lecture: Inflammation after Injury – sniffing the trail from femur fractures to formyl peptides.

2011 Discussant, Surgical Infection Society, Four Seasons Resort West Palm Beach, May 11-15, 2011. The Role of Antibiotics in Open Fractures Revisited: Characteristics of Staphylococcus aureus (S. aureus) and Susceptibility Profile.

2011 Keynote Lecturer, American Thoracic Association, Denver Convention Center, May 16-16, 2011. DAMPs In Trauma-Induced SIRS.

2011 Invited Lecturer, Harvard Shock Symposium, Harvard Medical School, May 31, 2011. Mitochondrial DAMPs in Shock: Cause or Effect?

2011 Invited Keynote lecture: Mitochondrial DAMPs and the inflammatory response to tissue injury: ***Gordon Conference*** on Tissue Repair and Regeneration: Danger signaling: sensing the presence of damage. New London, NH, June 5-10, 2011.

2011 Distinguished Visiting Professor of Surgical Sciences: 10th Annual Department of Surgery Research Day. Emory University, Atlanta GA, June 16, 2011.

International Invited Presentations

1980 Shock and Resuscitation. Lecture at the British Columbia Society of Emergency Medical Technicians. Kamloops, British Columbia, Canada.

1985 Visiting Professor of Surgery, Shanghai 2nd Medical College. Lectures on trauma care, tissue oxygenation and hemodynamic monitoring in critical care. Shanghai, China. Sponsor: Bivona Technologies.

1985 Visiting Professor of Surgery, Beijing Heart, Lung and Blood Vessel Institute. Lectures on trauma care, tissue oxygenation and hemodynamic monitoring in critical care. Beijing, China. Sponsor: Bivona Technologies.

1985 Visiting Professor of Surgery. Tienjien Medical Society. Lecture on tissue oxygenation in critical care. Sponsor: Bivona Technologies.

1994 Tissue salvage by the use of transcutaneous oximetry. Lecture presented at the XVI World Congress of the International Union of Angiology; Paris, France. Sponsored by the Congress.

1995 Alterations in expression of Major Histocompatbility Complex Class II genes by human monocytes and macrophages in trauma. Presented at the American Association for the Surgery of Trauma, Nova Scotia, Canada.

2002 Sexual dimorphism in the activation of neutrophils by shock mesenteric lymph. Paper presentation to the combined meeting of the Surgical Infection Society and Surgical Infection Society East; Madrid Spain.

2002 The role of BLT-1 mediated calcium entry in PMN motility after trauma. Paper presentation to the 22nd annual meeting of the Surgical Infection Society; Madrid, Spain.

2004 Sixth World Congress on Trauma, Shock, Inflammation and Sepsis. Invited lecture: Neutrophil chemokines and their receptors – the Yin and Yang of lung injury and sepsis. Munich, Germany.

2004 Sixth World Congress on Trauma Shock, Inflammation and Sepsis. Invited Lecture: U.S. transfusion practices in critically ill trauma and surgical patients. Munich, Germany.

2004 Invited lecture; Shock Society / International Sepsis Forum Symposium on The Translational Biology of Acute Illness: Topic: Pre-clinical models of traumatic hemorrhagic shock. Halifax, Nova Scotia, Canada. Sponsor: International Sepsis Forum.

2004 Distinguished Trauma Visitor: University of the Witwatersrand, Department of Surgery, Johannesburg Hospital; Johannesburg, South Africa.

2005 Visiting Professor, Hospital Universitario “Doce de Octubre”, XXVIII Curso Internationale de Actualizacion en Cirugia. Madrid, Spain.

2008 Panel Moderator: Choosing the right parameters to monitor in shock. International Shock Society meeting 2008, Cologne, Germany.

2008 Invited lecture: The Swan-Ganz catheter: still there when we need it. International Shock Society meeting 2008, Cologne, Germany.

2008 Invited lecture: The early prioritization of multiple bleeding injuries. International Shock Society Meeting, Cologne, Germany.

2008 Symposium Moderator: Hemodynamic Monitoring of Shock in the 21st Century. International Shock Society; Cologne, Germany.

2008 Chairman: Novo Nordisk Scholarship Award session. International Shock Society Meeting; Cologne, Germany.

2008 Symposium Moderator: Organ Injury - Treatment Priorities. International Shock Society meeting; Cologne, Germany, June 2008.

2009 Shock Society Symposium moderator: Immune Modulation. International Shock Society meeting; Cologne, Germany, June 2008.

2010 Invited lecture: Modern concepts of sepsis. Region Sjaelland Danish Emergency Conference. Roskilde, Denmark, May 20-21, 2010.

2010 Invited lecture: Mitochondrial debris including mitochondrial DNA and formyl peptides appear in the blood after trauma inducing a syndrome resembling sepsis. *Homo sapiens liberatus* workshop: Belozersky Institute, Moscow State University, Moscow, Russia. May 24-27, 2010.

2010 Invited Keynote address: New roles for Mitochondria in the Inflammatory Response to injury: Targeting Mitochondria 2010, Strategies, innovations & clinical applications**.** Berlin, Germany; November 18-19 2010.

Report of Clinical Activities and Innovation

Licensure

1979	California	Active
1992	Mississippi	Inactive
1996	New Jersey	Inactive
2006	Massachusetts	Active

Certification

1978 Diplomat, National Board of Medical Examiners
1984 American Board of Surgery: General Surgery
1994 Recertification
2003 Recertification
1993 American Board of Surgery: Surgical Critical Care
1998 Ultrasound for the General Surgeon (coursework done at Sanibel Harbor meeting of EAST, Grace Rozyki, Chairperson)

2003	American Board of Surgery Recertification in Surgery and
2003	American Board of Surgery Recertification in Surgical Critical Care
2008	Fundamentals in Laparoscopic Surgery

Ongoing:
Basic Life Support Certificate
Advanced Life Support Certificate (BLS)
Advanced Cardiac Life Support Certificate (ACLS)
Advanced Trauma Life Support Instructor

Practice Activities

Ambulatory Care	Outpatient Clinic	Trauma and General Surgery, BIDMC	One session (3 hours) per week
Surgery	Hospital	Trauma, General Surgery, Critical Care	30 hours per week
Inpatient Attending	Hospital	Trauma	30 hours per week

As an attending in the Beth Israel Deaconess Medical Center Level 1 Trauma Center, I render primary care for 400-500 patients per year. As an attending on the critical care service I provide consultative service for from 6-14 patients per day, twelve weeks per year. My Acute Care Surgery practice currently leads me to see 15-20 patients per week either in consultation or in the ED. I operate on about 25% of these and to render primary care to a like number.

Clinical Innovations

- In the early 1980s I invented and developed the use of transcutaneous oximetry in vascular disease and to predict successful healing at specific amputation levels.
- In the early 1980s I showed that fibrin glue could be injected into the liver to obtain hemostasis on injured hepatic parenchyma.
- In the mid 1980s I pioneered the use of CT scanning as a triage tool in penetrating injuries of the abdomen.
- In the early 1990s I discovered that fracture hematomas were a significant source of cytokines and inflammation in trauma, that they were important in the generation of the “SIRS” response, and that the timing of fracture fixation should depend upon the inflammatory response.
- In 1999 we proved that the rate of recurrent pneumothorax after pulling chest tubes could be diminished by performing a chest X-ray after 6 hours “water-seal”.
- In 2003, our paper “Prospective validation of CT screening of the thoracolumbar spine in trauma” was the first to show that trauma patients could be mobilized more rapidly by use of integrated trumcal CT scans. This has become the national standard of care.

- In 2004-2006 we performed a series of clinical studies showing that there was no need for repeated cranial CT scans in patients who were recovering from their head injuries.
- In 2007 we showed that isolated thoraco-lumbar transverse process fractures did not benefit by spine consultation and we standardized their care.
- We have recently participated in landmark international studies re-evaluating the coagulopathy of trauma. These studies are altering transfusion and blood product replacement algorithms world-wide.
- We have recently completed the CONTROL trial of recombinant factor VIIa in severely injured trauma patients. This paper will form the standard of care for the management of trauma patients for many years to come.

Report of Technological and Other Scientific Innovations

- US Patent # 7,879,821 B2: Method for modulating inflammatory responses by altering plasma lipid levels.
- Provisional patent 01948/189001: methods for predicting and treating infection-induced illnesses and predicting the severity of infection-induced illnesses: granted December 3, 2010.

I have also applied for a further patent aimed at exploiting the presence of mitochondrial biomarkers in trauma and sepsis:

- U.S. Provisional Application Serial No. 61/266,990: Discriminative Test for Infective Versus Sterile Inflammation.

Report of Education of Patients and Service to the Community

1994-2006	Multiple trauma lectures to regional organizations.
2004	Latex in the surgical operating room: New Jersey State Legislature committee expert testimony on the use of latex in surgical settings.

Report of Scholarship

Original Articles

1. Nees JE, **Hauser CJ,** Shippy C, State D, Shoemaker WC. Comparison of the cardiorespiratory effects of crystalline hemoglobin, whole blood, albumin and Ringer's lactate in the resuscitation of hemorrhagic shock in dogs. *Surgery* 1978; 83:639-47.

2. **Hauser CJ**, Nees JE, Shippy C, Shoemaker WC. Salt-poor albumin and Ringer's lactate in the critically-ill shock patient. *Crit Care Med* 1978;6:122-23.

3. Shoemaker WC, **Hauser CJ**. Critique of colloid versus crystalloid therapy in shock and shock lung. *Crit Care Med* 1979;7:117-23.

4. **Hauser CJ**, Shoemaker WC. Volume loading in massive acute pulmonary embolism. *Crit Care Med* 1979;7:304-7.

5. **Hauser CJ**, Shoemaker WC, Turpin I, Goldberg SJ. Oxygen transport responses to colloids and crystalloids in critically-ill surgical patients. *Surg Gynecol Obstet* 1980;150:811-16.

6. **Hauser CJ**, Shoemaker WC. Volume therapy: I. Diagnosis of hypovolemia. *Hospital Physician* 1980;15:24-30.

7. **Hauser CJ**, Shoemaker WC. Volume therapy: II. Treatment of hypovolemia. *Hospital Physician* 1980;16:38-44.

8. **Hauser CJ**, Shoemaker WC. Albumin resuscitation for shock. *Surgery* 1980; 88:183.

9. **Hauser CJ**, Kaufman C, Frantz R, Shippy C, Schwartz S, Shoemaker WC. Use of crystalline hemoglobin as replacement of RBC mass. *Arch Surg* 1982;117:782-6.

10. **Hauser CJ**, Shoemaker WC. Crystalline hemoglobin in the treatment of hemorrhagic shock. *Crit Care Med* 1982 Apr;10(4):283-7.

11. **Hauser CJ**, Shoemaker WC. Colloid therapy for patients in traumatic shock. *Surgery* 1982;91(1):119-20.

12. **Hauser CJ**, Shoemaker WC. Use of a transcutaneous PO2 regional perfusion index to quantify tissue perfusion in peripheral vascular disease. *Ann Surg* 1983 Mar;197(3):337-43.

13. **Hauser CJ**, Kamrath RO, Sparks J, Shoemaker WC. Calcium homeostasis in acute pancreatitis. *Surgery* 1983;94(5):830-5.

14. **Hauser CJ**, Harley DP. Transcutaneous gas monitoring in the management of intraoperative apnea. *Crit Care Med* 1983 Oct;11(10):830-1.

15. **Hauser CJ**, Appel P, Shoemaker WC. Pathophysiologic classification of peripheral vascular disease by positional changes in regional transcutaneous oxygen tension. *Surgery* 1984 Jun; 95(6):689-93.

16. **Hauser CJ** and Shoemaker WC. Transcutaneous oximetry in the non-invasive diagnosis of peripheral vascular disease. *Practical Cardiology* 1984;10:153-165.

17. **Hauser CJ**, Klein SR, Mehringer CM, Appel P, Shoemaker WC. Superiority of transcutaneous oximetry in non-invasive vascular diagnosis in patients with diabetes. *Arch Surg* 1984 Jun;119(6):690-4.

18. Locke R, **Hauser CJ**: Visceral surface oximetry as an aid to the assessment of bowel viability. *Arch Surg* 1984;119:1252.

19. Patterson JB, Kau H, Locke R, **Hauser CJ**, Zipser RD. Prostaglandin and thromboxane hypersensitivity to bradykinin and angiotension in colitis: Implications to colonic blood flow regulation. *Gastroenterology* 1984;86:1355.

20. **Hauser CJ**, Klein SR, Mehringer CM, Appel P, Shoemaker WC. Assessment of perfusion in the diabetic foot by regional transcutaneous oximetry. *Diabetes* 1984 Jun;33(6):527-31.

21. Zipser RD, Patterson JB, Kao HW, **Hauser CJ**. Prostaglandin and thromboxane hypersensitivity to bradykinin and angiotension in colitis. *Am J Physiol* 1985;249:457-63.

22. Locke R, **Hauser CJ**. Use of surface oximetry to assess bowel viability. *Current Surgery* 1985;9:426-29.

23. **Hauser CJ**, Huprich JE, Bosco P, Gibbons L, Mansour AY, Weiss AR. Triple contrast CT in the evaluation of posterior penetrating abdominal wounds. *Arch Surg* 1987 Oct;122(10):1112-1115.

24. **Hauser CJ**. Tissue salvage by mapping of skin surface PO_2. *Arch Surg* 1987 Oct;122(10):1128-1130.

25. **Hauser CJ**, Locke R, Kao HW, Patterson J, Zipser RD. Prostanoid induced vasospasm and splanchnic hypoxia in rabbit immune colitis. *J Lab Clin Med* 1988;112(1):68-71.

26. **Hauser CJ**. Hemostasis of solid viscus trauma by intraparenchymal injection of fibrin glue. *Arch Surg* 1989;124:291-293.

27. **Hauser CJ**, Bosco P, Davenport M, Ehrensaft D, Latif M, McNamara BT. Surgical management of Candida thrombophlebitis. *Surgery* 1989 Apr;105:510-514.

28. **Hauser CJ** and Poole GV. Laparoscopic fenestration of simple hepatic cysts. *Surg Endosc* 1994 Aug;8(8):884-6.

29. White JW, El-Newihi H, **Hauser CJ**. Granular cell tumor of the stomach presenting with gastric outlet obstruction. *Am J Gastro* 1994;89:2259-60.

30. Craig M, Poole GV and **Hauser CJ**. Perioperative Gout. *Am Surg* 1995 Jan;61(1):56-9.

31. Talton D, Craig M, **Hauser CJ**. Major gastroenteric injuries from blunt trauma. *Am Surg* 1995;61:69-73.

32. Craig M, Talton DS, **Hauser CJ**. Pancreatic injuries from blunt trauma. *Am Surg* 1995;61:125-128.

33. **Hauser CJ** et al. Constitutive priming of tumor necrosis factor alpha but not IL-1 beta transcription in normal human peritoneal macrophages. *J Miss Acad Sci* 1995;40:61-3.

34. Craig M and **Hauser CJ**. Leiomyosarcoma of the anus. *J Miss State Med Assoc* 1993 Apr; 4:1.

35. **Hauser CJ**, Lagoo S, Lagoo A, Hale E, Hardy KJ, Barber WH, Bass JD, Poole GV. Human peripheral mononuclear cells do not show pro-inflammatory patterns of cytokine transcription in early trauma. *Shock* 1995 Oct;4(4):247-50.

36. **Hauser CJ**, Lagoo S, Lagoo A, Hale E, Hardy KJ, Barber WH, Bass JD, Poole GV: Tumor Necrosis Factor-α expression in human peritoneal macrophages is suppressed by extra abdominal trauma. *Arch Surg* 1995;130(11):1186-91.

37. **Hauser CJ**. Regional macrophage activation after injury and the compartmentalization of inflammation in trauma. *New Horiz* 1996 May; 4(2):235-251.

38. Poole GV, Tinsley M, Tsao AK, Thomae KR, Martin RW, **Hauser CJ**. The abbreviated injury scale does not reflect the added morbidity of multiple lower extremity fractures. *J Trauma* 1996 Jun;40(6):951-4.

39. **Hauser CJ**, Joshi P, Zhou X, Kregor P, Hardy KJ, Devidas M, Scott P, Hughes JL. Production of Interleukin 10 in human fracture / soft-tissue hematomas. *Shock* 1996 Jul;6(1):3-6.

40. Poole, GV, Lewis JL, Devidas M, **Hauser CJ**, Martin RW, Thomae KR. Psychopathologic risk factors for intentional and non-intentional injury. *J Trauma* 1997 Apr;42(4):711-5.

41. **Hauser CJ**, Zhou X, Joshi P et al. Surface expression of TNFα and IL-1α in circulating mononuclear cells after trauma. *Crit Care Med* 1997; 25:A127.

42. Joshi P, **Hauser CJ**, Jones Q et al. Suppression of natural killer cell function by plasma from trauma patients. *J Allerg Clin Immunol* 1997;99:LB86.

43. **Hauser CJ**, Zhou X, Joshi P, Cuchens MA, Kregor P, Devidas M, Kennedy RJ, Poole GV, Hughes JL. The immune micro-environment of human fracture / soft tissue hematomas and its relationship to systemic immunity. *J Trauma* 1997; 42:895-903.

44. **Hauser CJ**, Joshi P, Jones Q, Zhou X, Livingston DH, Lavery RF. Suppression of natural killer cell activity in patients with fracture soft tissue injury. *Arch Surg* 1997 Dec;132(12):1326-30.

45. Goodman ER, Kleinstein E, Fusco AM, Quinlan DP, Lavery R, Livingston DH, Deitch EA, **Hauser CJ**. Role of IL-8 in the genesis of Acute Respiratory Distress Syndrome through an effect on neutrophil apoptosis. *Arch Surg* 1998 Nov;133(11):1234-9.

46. **Hauser CJ**, Fekete Z, Livingston DH, Deitch EA. Chemokine stimulation of human neutrophil $[Ca^{2+}]_i$ signaling in biologic environments. *Shock* 1998 Nov;10(5):324-8.

47. Quinlan DP Jr, Rameshwar P, Qian J, Maloof PB, Mohr A, **Hauser CJ**, Livingston DH. Effect of hypoxia on the hematopoietic / immune modulator Preprotachykinin I. *Arch Surg* 1998;133:1328-1334.

48. Kleinstein E, Goodman ER, Fusco A, **Hauser CJ** et al. CXC chemokine modulated neutrophil apoptosis; Implications in the treatment of ARDS. *Surgical Forum* 1998; 49:111-112.

49. Quinlan DP Jr, Rameshwar P, **Hauser CJ** and Livingston DH. Effect of hypoxia on bone marrow myeloid and erythroid progenitor cells. *Surgical Forum* 1998; 49:35-37.

50. Martino K, Merrit S, Boyakye K, Sernas T, Koller C, **Hauser CJ**, Lavery R, Livingston DH.. Prospective randomized trial of thoracostomy removal algorithms. *J Trauma* 1999 Mar;46(3):369-71.

51. Joshi P, **Hauser CJ**, Jones Q, Kennedy R, Thomae KR, Zhou X. Mechanisms of suppression of natural killer cell activity in trauma patients. *Res Commun Mol Pathol Pharmacol* 1998; 101:241-8.

52. **Hauser CJ,** Fekete Z, Livingston DH, Goodman ER, Deitch EA. Integrated stimulation by CXC chemokines enhances PMN $[Ca^{2+}]_i$ signaling in trauma and ARDS . *Surgery* 1999;126:208-15.

53. **Hauser CJ**, Fekete Z, Goodman ER, Kleinstein E, Livingston DH, Deitch EA. CXC-R2 Stimulation Primes CXC-R1 $[Ca^{2+}]_i$ Responses to IL-8 in Human Neutrophils. *Shock* 1999;12:411-490.

54. **Hauser CJ,** Desai N, Fekete Z, Livingston DH, and Deitch EA. Priming of neutrophil $[Ca^{2+}]_i$ signaling and oxidative burst by human fracture fluids. *J Trauma* 1999;47:854-858.

55. Goodman ER, Strickler P, Velavicius M, Fonseca R, Kleinstein E, Lavery R, Deitch EA, **Hauser CJ**, Simms HH. Role of granulocyte - macrophage colony-stimulating factor and its receptor in the genesis of acute respiratory distress syndrome through an effect on neutrophil apoptosis. *Arch Surg* 1999 Oct; 134(10):1049-54.

56. **Hauser CJ**, Fekete Z, Livingston DH, Adams J, Garced M and Deitch EA. Major trauma enhances store-operated calcium influx in human neutrophils. *J Trauma* 2000; 48:592-597.

57. Adams JM, **Hauser CJ**, Fekete Z, Livingston DH, Deitch EA. G-Protein Receptor Responses in Trauma Neutrophils. *J Trauma* 2000; 49:1096-1101.

58. **Hauser CJ,** Fekete Z, Adams JM, Garced M, Livingston DH, Deitch EA. PAF mediated Ca^{2+} influx in human neutrophils occurs via store operated mechanisms. *J Leukocyte Biol* 2001;69:63-68.

59. Fekete Z, **Hauser CJ**, Adams JM, Adams CA Jr, Forsythe RM, Haskó G, Xu DZ, Livingston DH, Deitch EA. Injury enhanced calcium mobilization in circulating rat neutrophils models human PMN responses. *Shock* 2001;16:15-20.

60. Adams JM, **Hauser CJ**, Livingston DH, Deitch EA. Damage control abdominal packing causes prolonged suppression of neutrophil IL-8 responses and phagocytosis. *Surg Forum* 2000;51:178-80.

61. Adams JM, **Hauser CJ**, Livingston DH, Fekete Z, Hasko G, Forsythe RM, Deitch EA. The immunomodulatory effects of damage control abdominal packing on local and systemic neutrophil activity. *J Trauma* 2001;50(5):792-800.

62. Rhee P, Morris J, Durham R, **Hauser CJ,** Cipolle M, Wilson R, Luchette F, McSwain N, Miller R. Recombinant humanized monoclonal antibody against CD18 (rhuMAb CD18) in traumatic hemorrhagic shock: results of a phase II clinical trial. Traumatic Shock Group. *J Trauma* 2000;49(4):611-620.

63. Anjaria DJ, Rameshwar P, Xu D, Adams CA Jr, Forsythe RM, Sambol JT, **Hauser CJ**, Deitch EA, Livingston DH. Bone Marrow Failure Induced by Hemorrhagic Shock is Partially Mediated by the Gut. *Surg Forum* 2000;51:169-171.

64. Wu J, Livingston DH, **Hauser CJ**, Deitch EA, Rameshwar P. Trauma inhibits BFU-E and CFU-GM colony growth through the production of TGF-B1 by bone marrow stroma. *Ann Surg* 2001;234:224-32.

65. Adams JM, **Hauser CJ**, Livingston DH, Lavery RF, Fekete Z, Deitch EA. Early trauma PMN responses to chemokines are associated with development of sepsis, pneumonia and organ failure. *J Trauma* 2001;51:452-7.

66. Shi HP, Deitch EA, Xu DZ, Lu Q and **Hauser CJ**. Hypertonic saline improves intestinal mucosal barrier function and lung injury after trauma-hemorrhagic shock. *Shock* 2002;17:496-501.

67. **Hauser CJ**, Hinrichs CR, Heary RF, Livingston, DH. Recurrent penetrating spinal cord injury. *J Trauma* 2002;53:167.

68. Adams JM, **Hauser CJ**, Adams CA Jr, Xu DZ, Livingston DH and Deitch EA. Entry of gut lymph into the circulation primes rat neutrophils respiratory burst in hemorrhagic shock. *Crit Care Med* 2001;29:2194-98.

69. Nemeth ZH, Deitch EA, Fekete Z, **Hauser CJ**, Feinman R and Hasko G. Inhibition of the Na+/H+ exchanger suppresses NF-kb activation and IL-8 production in human intestinal epithelial cells. *Am J Physiol* 2002;283:G122-G132.

70. Adams CA Jr., **Hauser CJ**, Adams JM, Fekete Z, Xu DZ, Sambol JT, and Deitch EA. Trauma-Hemorrhage Induced Neutrophil Activation Is Prevented by Mesenteric Lymph Duct Interruption. *Shock* 2002; 18:513-517.

71. Anjaria DJ, Rameshwar P, Deitch EA, Xu DZ, Adams CA, Forsythe RM, Sambol JT, **Hauser CJ**, Livingston DH. Hematopoietic failure after hemorrhagic shock is mediated partially through mesenteric lymph. *Crit Care Med* 2001; 29:1780-5.

72. Dayal SD, **Hauser CJ**, Feketeova E, Fekete Z, Adams JM, Lu Q, Xu DZ, Zaets S, Deitch EA l. Shock mesenteric lymph induced rat PMN activation and endothelial cell injury is mediated by aqueous factors. *J Trauma* 2002; 52:1048-55.

73. Nemeth ZH, Deitch EA, Szabo C, Fekete Z, **Hauser CJ** and Hasko G. Lithium induces NF-kb activation and IL-8 production in human intestinal epithelial cells. *J Biol Chem* 2002; 277:7713-9.

74. Itagaki K and **Hauser CJ**. Store-operated calcium entry in human neutrophils reflects multiple contributions from independently regulated pathways. *J Immunol* 2002; 168:4063-9.

75. Caruso JM, Feketeova E, Dayal SD, **Hauser CJ** and Deitch EA. Factors in intestinal lymph after shock increase neutrophil adhesion molecule expression and pulmonary leukosequestration. *J Trauma* 2003;55:727-733.

76. Forsythe RM, Livingston DH, Lavery RF, Mosenthal AC, and **Hauser CJ**. Autopsies in trauma do not add to peer review nor quality assurance. *J Trauma* 2002; 53:321-5.

77. Tarlowe MH Kannan KB, Itagaki K, Adams JM, Livingston DH, **Hauser CJ**: Inflammatory chemoreceptor cross-talk suppresses BLT1-mediated neutrophil calcium mobilization and chemotaxis after injury. *J Immunol* 2003 Aug 15;171(4):2066-73.

78. Adams JM, Adams CA, Xu DZ, Fekete Z, Livingston DH, Deitch EA and **Hauser CJ**. Sexual dimorphism in the activation of neutrophils by shock mesenteric lymph. *Surgical Infections* 2003; 4(1):37-44.

79. Itagaki K and **Hauser, CJ**. Sphingosine 1-Phosphate: a diffusible calcium influx factor mediating store-operated calcium entry. *J Biol Chem* 2003 Jul 25;278(30):27540-7.

80. Nemeth ZH, Deitch EA, **Hauser CJ** and Hasko G: Na+/H+ exchanger blockade inhibits enterocyte inflammatory response and protects against colitis. *Am J Physiol Gastrointest Liver Physiol* 2002 Jul;283(1):G122-32.

81. Song X, Mohr AM, Rameshwar P, Anjaria D, Fekete Z, **Hauser CJ**, Livingston DH. Delayed Differentiation of HL-60 Cells Following Exposure to Hypoxia. *J Surg Res* 2002; 108:243-249.

82. Hauser CJ Visvikis G, Hinrichs C, Eber CD, Cho K, Lavery RF, Livingston DH. Prospective validation of CT screening of the thoracolumbar spine in trauma. *J Trauma* 2003 Aug;55(2):228-35.

83. Itagaki K, Kannan KB, Singh BB and **Hauser CJ**. Cytoskeletal reorganization internalizes multiple TRP channels and blocks calcium entry into human neutrophils. *J Immunol* 2004;172(1); 601-607.

84. Osband AJ, Sifri ZC, Wang L, **Hauser CJ**, Mohr AM, Deitch EA, Livingston DH. Small volume albumin administration protects against hemorrhagic shock induced bone marrow dysfunction. *J Trauma* 2004, Feb;56(2):279-83.

85. Deitch EA, Shi HP, Feketeova E, **Hauser CJ**, Xu DZ. Hypertonic saline resuscitation limits neutrophil activation after trauma-hemorrhagic shock. *Shock* 2003;19:328-33.

86. Osband AJ, Deitch EA, **Hauser CJ**, Lu Q, Zaets S, Berezina T, Machiedo GW, Rajwant KK, Xu DZ. Albumin protects against gut-induced lung injury in vitro and in vivo. *Ann Surg* 2004 Aug;240(2):331-9.

87. Livingston DH, Anjaria D, Wu J, **Hauser CJ**, Chang V, Deitch EA, Rameshwar P. Bone marrow failure following severe injury in humans. *Ann Surg* 2003 Nov;238(5):748-53.

88. Deitch EA, Lu Q, Feketeova E, **Hauser CJ**, Xu DZ. Intestinal bacterial overgrowth induces the production of biologically active intestinal lymph. *J Trauma* 2004 Jan;56 (1):105-10.

89. Itagaki K, Kannan KB and **Hauser CJ**. Lysophatidic Acid Triggers Calcium Entry through a non-store-operated pathway in Human Neutrophils. *J Leukoc Biol* 2005 Feb;77(2):181-9. Epub 2004 Nov 2.

90. Sifri ZC, Livingston DH, Lavery RF, Homnick AT, Mosenthal AC, Mohr AM, **Hauser CJ**. Value of repeat cranial computed axial tomography scanning in patients with minimal head injury. *Am J Surg* 2004 Mar;187(3):338-42.

91. Lee C, Xu D-Z, Feketeova E, Kannan KB, Yun JK, Deitch EA, Fekete Z, Livingston DH, **Hauser CJ**. Attenuation of shock-induced acute lung injury by sphingosine kinase inhibition. (Winner, Earl Young Award of the Western Trauma Association). *J Trauma* 2004;57(5): 955-960.

92. Lee C Xu DZ, Feketeova E, Kannan KB, Fekete Z, Deitch EA, Livingston DH, **Hauser CJ**. Store-operated calcium channel inhibition attenuates neutrophil function and post-shock acute lung injury. *J Trauma* 2005;59:56-63.

93. Tarlowe MH, Duffy A, Kannan KB, Itagaki K, Lavery RF, Livingston DH, Bankey P, **Hauser CJ.** Prospective study of neutrophil chemokine responses in trauma patients at risk for pneumonia. *Am J Resp Crit Care Med* 2005 Apr; 1;171(7):753-9.

94. Itagaki K, **Hauser CJ**, Kannan KB, Deitch, EA. Non-specific Effects of 4-chloro-m-cresol may cause Calcium Flux and Respiratory Burst in Human Neutrophils. *Biochem Biophys Res Comm* 2005 Nov 4;336(4):1087-95.

95. Sifri ZC, Kaiser VL, Ananthakrishnan P, Wang L, Mohr AM, **Hauser CJ**, Rameshwar P, Deitch EA, Livingston DH. Bone marrow failure in male rats following trauma/hemorrhagic shock (T/HS) is mediated by mesenteric lymph and modulated by castration. *Shock* 2006 Jan;25(1):12-6.

96. Kannan KB, Barlos D, **Hauser CJ**. Free Cholesterol Alters Lipid Raft Structure and Function Regulating Neutrophil Ca^{2+} Entry and Respiratory Burst: Correlations with Calcium Channel Raft-Trafficking. *J Immunol* 2007 Apr 15;178(8):5253-61.

97. Homnick A, Lavery RL, Nicastro O, Livingston DH, **Hauser CJ**. Isolated thoraco-lumbar transverse process fractures: Call Physical Therapy, not Spine. *J Trauma* 2007 Dec;63(6):1292-5.

98. Deitch EA, Ananthakrishnan P, Cohen DB, Xu DZ, Feketeova E, **Hauser CJ**. Neutrophil activation is modulated by sex hormones after trauma-hemorrhagic shock and burn injuries. *Am J Physiol Heart Circ Physiol* 2006 Sep;291(3):H1456-65.

99. Sifri ZC, Cohen D, Ananthakrishnan P, Wang L, Kaiser VL, Mohr AM, **Hauser CJ**, Rameshwar P, Deitch EA, Livingston DH. Sex hormones affect bone marrow dysfunction after trauma and hemorrhagic shock. *Crit Care Med* 2007 Mar;35(3):864-9.

100. Sifri ZC, Homnick AT, Vaynman A, Lavery R, Liao W, Mohr A, **Hauser CJ**, Manniker A, Livingston D. A prospective evaluation of the value of repeat cranial computed tomography in patients with minimal head injury and an intracranial bleed. *J Trauma* 2006 Oct;61(4):862-7.

101. Itagaki K, Yun JK, Hengst JA, Yatani A, **Hauser CJ**, Spolarics Z and Deitch EA. Sphingosine 1-Phosphate has Dual Functions in the Regulation of Endothelial Cell Permeability and Ca^{2+} Metabolism. *J Pharm Exp Therap* ePub July 12, 2007; doi:10..1124/jpet.107.121210

102. Mohr AM, Sifri ZC, Horng HS, Sadek R, Savetamal A, **Hauser CJ**, Livingston DH. Use of aerosolized aminoglycosides in the treatment of gram-negative ventilator-associated pneumonia. *Surg Infect (Larchmt)* 2007 Jun;8(3):349-58.

103. Deitch EA, Feketeova E, Lu Q, Zaets S, Berezina TL, Machiedo GW, **Hauser CJ**, Livingston DH, Xu DZ. Resistance of the female, as opposed

to the male, intestine to I/R-mediated injury is associated with increased resistance to gut-induced distant organ injury. *Shock* 2008 Jan;29(1):78-83.

104. Lee C, Xu DZ, Feketeova E, Nemeth Z, Kannan KB, Haskó G, Deitch EA, **Hauser CJ**. Calcium entry inhibition during resuscitation from shock attenuates inflammatory lung injury. *Shock* 2008 Jul;30(1):29-35.

105. Dutton RP, **Hauser CJ,** Boffard KD, Dimsitts J, Bernard G, Holcomb J, Leppaniemi A, Tortella B and Bouillion B. Scientific and logistical challenges in designing the CONTROL trial: Recombinant factor VIIa in severe trauma patients with refractory bleeding. *Clinical Trials*, 2009 Oct;6(5):467-79. Epub 2009 Sep 8.

106. Itagaki K, Zhang Q and **Hauser CJ**. Sphingosine Kinase Inhibition Alleviates Endothelial Permeability Induced By Thrombin and Activated Neutrophils. *Shock* 2010, 33(4);381-386. Epub Oct 21, 2009.

107. Zhang Q, Itagaki K, **Hauser CJ**. Mitochondrial DNA is released by shock and activates neutrophils via P38 MAP-Kinase. *Shock*, 2010 Jul;34(1):55-9. PMID: 19997055

108. Doucet DR, Bonitz RP, Feinman R, Colorado I, Ramanathan M, Feketeova E, Condon M, Machiedo GW, **Hauser CJ**, Xu DZ, Deitch EA. Estrogenic hormone modulation abrogates changes in red blood cell deformability and neutrophil activation in trauma hemorrhagic shock. *J Trauma*, 2010 Jan; 68(1):35-41.

109. Zhang, Q, Raoof, M, Sursal, T, Chen Y, Sumi Y, Junger W, Brohi K, Itagaki K and **Hauser CJ**. Circulating mitochondrial DAMPs cause inflammatory responses to injury. *Nature* **464**, 104–107 (2010)

110. Itagaki K, Menconi M, Antoniu B, Zhang Q, Gonnella P, Soybel D, **Hauser CJ** and Hasselgren P-O; Dexamethasone Stimulates Store-Operated Calcium Entry And Protein Degradation In Cultured L6 Myotubes Through A Phospholipase A2 -Dependent Mechanism. *American Journal of Physiology - Cell* 2010 May;298(5):C1127-39. Epub 2010 Jan 27 2010

111. Raoof, M, Zhang, Q, Itagaki K and **Hauser CJ**. Mitochondrial Peptides Activate Neutrophils Via FPR-1. *J Trauma* 2010 Jun;68(6):1328-32.

112. **Hauser CJ,** Boffard KD, Dutton R et al. For the CONTROL Trial Steering Committee: Results of the CONTROL Trial: Efficacy and Safety of Recombinant Activated Factor VII in the Management of Refractory Traumatic Hemorrhage. *J Trauma*, 2010 Sep;69(3):489-500.

113. Siracuse JJ, Robich MP, Gautum S, Moorman DW and **Hauser CJ**. Antiplatelet Agents, Warfarin, and Epidemic Intracranial Hemorrhage. Surgery. 2010 Oct;148(4):724-9.

114. Chen Y, Yao Y, Sumi Y, Li, A, To UK, Elkhal A, Inoue Y, Woehrle T, Zhang Q, **Hauser CJ**, Junger WG. Purinergic Signaling: A Fundamental Mechanism in Neutrophil Activation *Science Signaling*, June 2010 Jun8;3(125):ra45. PMID: 20530802.

115. **Hauser CJ,** Sursal T, Rodriguez EK, Appleton PT, Zhang Q and Itagaki, K. Mitochondrial DAMPs from femoral reamings activate neutrophils via formyl peptide receptors and P44/42 MAP Kinase. J Orthop Trauma. 2010 Sep;24(9):534-8.

116. Holcomb JB, Weiskopf R, Champion H, Gould SA, Sauer RM, Brasel K, Bochicchio G, Bulger E, Cotton BA, Davis D, Dutton R, **Hauser CJ**, Hess JR, Hides GA, Knudson P, Mackenzie E, McGinnis RL, Michalek J, Moore FA, Omert L, Pollock BH, Tortella B, Sugarman J, Schreiber MA, Wade CE. Challenges to effective research in acute trauma resuscitation: consent and endpoints. Shock 2011, 35(2):107-113.

117. Dutton R, Parr M, Tortella BJ, Champion HR, Bernard GR, Boffard K, Bouillon B, Croce MA, Dimsits J, Holcomb JB, Leppaniemi A, Vincent JL, and **Hauser CJ**. Recombinant FVIIa safety in trauma patients: results from the CONTROL trial. J Trauma, ***in press***

Reviews and Case Reports in Referred Journals

1. Deitch EA, Livingston DH, **Hauser CJ**. Septic complications in the trauma patient. *New Horizons* 1999; 7:158-172.

2. **Hauser CJ.** Preclinical models of traumatic, hemorrhagic shock. *Shock* 2005;24 Suppl 1:24-32.

3. **Hauser CJ**, Adams CA, Eachempati SR. Prophylactic antibiotic use in open fractures: an evidence-based guideline. Position paper of the Surgical Infection Society. *Surg Infect (Larchmt)* 2006 Aug;7(4):379-405.

4. **Hauser CJ.** Albumin resuscitation in critical care – an old debate revisited in the era of evidence-based medicine. *Emer Med* September 2006.

5. Caputo FJ, Magnotti LJ, **Hauser CJ**, Livingston DH. Descending Necrotizing Mediastinitis: Unique Complication of Central Venous Catheterization. *Surg Infect (Larchmt)* 2007 Dec;8(6):611-4.

6. Hoyt DB, Dutton RP, **Hauser CJ**, Hess JR, Holcomb JB, Kluger Y, Mackway-Jones K, Parr MJ, Rizoli SB, Yukioka T and Bouillon B. Management of Coagulopathy in the Patients With Multiple Injuries: Results From an International Survey of Clinical Practice. *J Trauma* 2008;65(4):755-765.

7. Hess JR, Brohi K, Dutton RP, **Hauser CJ**, Holcomb JB, Kluger Y, Mackway-Jones K, Parr MJ, Rizoli SB, Yukioka T, Hoyt DB and Bouillon B. The Coagulopathy of Trauma: A Review of Mechanisms. *J Trauma* 2008;65(4):748-754.

8. Parr MJ, Bouillon B, Brohi K, Dutton RP, **Hauser CJ**, Hess JR, Holcomb JB, Kluger Y, Mackway-Jones K, Rizoli SB, Yukioka T and Hoyt DB. Traumatic Coagulopathy: Where are the Good Experimental Models? *J Trauma* 2008; 65(4):766-771. PMID: 18849788

Editorials

1. **Hauser CJ**, Shoemaker WC. Albumin resuscitation for shock. *Surgery* 1980; 88:183-184.

2. **Hauser CJ**. The economy of good physiology. *Crit Care Med* 1982;10:699.

3. **Hauser CJ.** Ventilator-associated pneumonia. *Crit Care Med* 1996; 24:900-901.

4. **Hauser CJ.** Laparoscopic surgery and the management of traumatic hemoperitoneum in stable patients. *Surg Endosc* 1996;10:694 695.

5. **Hauser CJ.** Endotoxin tolerance after severe injury and its regulatory mechanisms. *J Trauma* 1996; 41:437-438.

6. **Hauser CJ.** New diagnostic peritoneal lavage criteria for diagnosis of intestinal injury. *J Trauma* 1998; 44:998-999.

7. **Hauser CJ.** Hepatocyte calcium signaling and oxidant injury after shock. *J Trauma* 2000; 49:296-297

8. **Hauser CJ.** Priming of neutrophil $[Ca^{2+}]_i$ signaling and oxidative burst by human fracture fluids. *J Trauma* 2000; 49:167-168.

9. **Hauser CJ.** Introductory editorial for the chapter on Shock. In: Moore EE, Mattox K, Feliciano DV, eds. Trauma, 5th Ed. New York: McGraw-Hill, 2003.

10. **Hauser CJ.** Free abdominal fluid on ultrasound in unstable pelvic ring fracture: is laparotomy always necessary? *J Trauma* 2004;57(2):288-9.

11. **Hauser CJ.** Fracture hematoma is a potent proinflammatory mediator of neutrophil function. Timlin M et al, *J Trauma* 2005; 58(6):1229.

12. **Hauser CJ.** Sixteen-Slice Multi-Detector Computed Tomographic Angiography Improves the Accuracy of Screening for Blunt Cerebrovascular Injury. *J Trauma* 2006;60:1210.

13. Hoyt DB and **EICBT Faculty** (2008) Coagulopathy Associated With Trauma. *J* Trauma 2008;65(4):747.

Contributions to Textbooks

1. **Hauser CJ**, Shoemaker WC. Transcutaneous oximetry in vascular surgery. In: Wilson SE, Williams RA, Veith FJ, Hobson R, eds. *Vascular Surgery: Principles and Practice*. New York: McGraw-Hill, 1986.

2. **Hauser CJ**. Transcutaneous PO2 in the achievement of stable wound closure and tissue salvage. In: Boccalon H, ed. *Vascular Medicine: Proceedings of the 16th World Congress of the International Union of Angiology*. Amsterdam: Exerpta Medica 1993.

3. **Hauser CJ**. Contemporary management of colorectal injuries. In: Poole GV, ed. *Current Concepts in Colon and Rectal Diseases.* Atlanta: The Southeastern Surgical Congress, 1994.

4. **Hauser CJ**, Poole GV. The multiply traumatized burn patient. In: Scott Conner CEH, ed. *Problems in General Surgery*; 11(4):613 620. Philadelphia: J.B. Lippincott, 1994.

5. Poole GV, **Hauser CJ**. Infections, sepsis and multiple organ dysfunction in burns. In: Scott Conner CEH, ed. *Problems in General Surgery*; 11(4):736 746. Philadelphia: J.B. Lippincott, 1994.

6. Poole GV, Thomae KR, **Hauser CJ**. Laparoscopy in trauma. In: Scott Conner CEH, ed. *Surgical Clinics of North America*. 76(3) 547 556. Philadelphia: W.B. Saunders, 1996.

7. **Hauser CJ.** Is Supranormal Oxygen Delivery Beneficial? Pro. In: Deitch EA, Vincent JL, Windsor ACJ, eds. *Sepsis and Multiple Organ Dysfunction: A Multidisciplinary Approach*. London: W.B. Saunders, 2002.

8. Livingston DH, **Hauser CJ**. Trauma to the Chest Wall and Lung. In: Moore EE, Mattox K and Feliciano DV, eds. *Trauma, 5th ed.* New York: McGraw-Hill, 2003.

9. **Hauser CJ**. Preclinical models of traumatic, hemorrhagic shock. in Marshall JC, ed. *Translational Biology of Acute Illness*. Shock. 2005 Dec;24 Suppl 1:24-32.

10. **Hauser CJ,** Livingston DH. Pulmonary contusion and flail chest. In: Asensio JA and Trunkey D, eds. *Current Therapy of Trauma and Surgical Critical Care*. Philadelphia: W.B. Saunders / Elsevier, 2008.

11. Livingston DH, **Hauser CJ**. Trauma to the Chest Wall and Lung. In: Moore EE, Mattox K, Feliciano DV, eds. *Trauma, 6th ed.*. New York: McGraw-Hill, 2008.

Abstracts, Poster Presentations, Exhibits Presented at Professional Meetings (last 2 years only - more than 60 prior to that.)

1. Itagaki K, Yatani A, **Hauser CJ**, Spolarics Z, and Deitch EA. Sphingosine 1-Phoshate Has Dual Regulatory Functions In Endothelial Cell (EC) Permeability And Ca^{2+} Metabolism. Shock 2008;(6), 29:7 Suppl 1, P52.

2. Antoniu B, Itagaki K, Zhang Q, Raoof M, **Hauser CJ**. A Novel Evaluation Of Shock Associated Lung Injury By Activated Neutrophil Collagenase 2 in Rats. Shock 2008;(6), 29:7 Suppl 1, P52.

3. Zhang Q, Raoof M, Antoniu B, Itagaki K, **Hauser CJ**. Role of Store-Operated Calcium Entry in Degranulation of Human PMN. Shock 2008;(6), 29:7 Suppl 1, P85.

4. Itagaki K, Raoof M, **Hauser CJ**. Heterogeneity of Endothelial Cell Calcemic Responses to Coagulation and Inflammation. Shock 2008;(6), 29:7 Suppl 1, P262.

5. Mitochondrial DNA activates Neutrophils via TLR9 and p38 MAPK. Zhang Q, Itagaki K and **Hauser CJ**. Shock Society Young Investigator Award paper, Shock 2009; 31(S1) P2.

6. Circulating Mitochondrial DNA is increased by Trauma/Hemorrhagic Shock. Zhang Q, Itagaki K and **Hauser CJ**. Shock 2009; 31(S1) P82.

7. Efficacy And Safety Of Recombinant Activated Factor VII In The Management Of Hemorrhagic Shock Due To Trauma. **C. Hauser**, K. Boffard, R. Dutton, G. Bernard et al. for the CONTROL Study Group. Journal of Thrombosis and Haemostasis 2009; Volume 7, Supplement 2: OC-TH-069

8. Siracuse JJ, Robich MP, Gautum S, Moorman DW and **Hauser CJ**. Antiplatelet Agents, Warfarin, and Epidemic Intracranial Hemorrhage. 2010 Proceedings of the Central Surgical Association.

9. K.Itagaki, D.Mu, Q.Zhang, T.Sursal and **C.J. Hauser**. PCR-based discrimination of sepsis from SIRS. Shock Volume 33, Suppl 1; P174 page 66, 2010.

10. Sursal T, Zhang Q, Itagaki K and **Hauser CJ**: Host response to injury: the role of mitochondrial DAMPs in activation of PBMC. Shock Volume 33, Suppl 1; P159 page 61-62, 2010.

11. **Hauser CJ**: Mitochondrial debris including mitochondrial DNA and formyl peptides that appear in the blood following major trauma can induce a syndrome resembling sepsis. Proceedings of the A. N. Belozersky Institute of Physico-Chemical Biology, Moscow State University, May 25-26, 2010.

12. J. Manson,*, R. Davenport, A. Coates, C. Rourke, H. D. De'Ath, I. Raza, C. Spoors, S. Khan, C. Thiemermann 2, **Hauser CJ**, K. Brohi. Traumatic Tissue Damage: The Search for Trauma Alarmins. 10th World Congress on Inflammation, Paris, June 25-29, 2011.

13. Assays for Bacterial and Mitochondrial DNA Distinguish Between Sepsis and Sirs and Quantify Tissue Injury in Primate Sepsis Due to Anthrax. T. Sursal, D. Stearns-Kurosawa, S. Kurosawa, S. Oh, D. Day, S. Sun, K. Itagaki, **C.J. Hauser***
Shock Supplement 2011, P170. Shock Volume 35, Suppl 1; p76, 2011.

14. Mitochondrial Damage Associated Molecular Patterns (DAMPS) Induce Endothelial Barrier Dysfunction. **Hauser CJ,** Sursal, T. Sun, S. Xhao, C. Adibnia, Y**.** Itagaki K. Shock Supplement 2011, A55. Shock Volume 35, Suppl 1; p18, 2011.

15. The Role of Store-Operated Calcium Entry on the Regulation of Muscle Wasting. Itagaki, K. Sursal, T. Sun, S. Xhao, C. Alamdari, N. Aversa, Z. Hasselgren, PO and **Hauser, CJ**. Shock Supplement 2011, P175. Shock Volume 35, Suppl 1; p78, 2011.

Narrative Report

My career is divided in thirds between practicing surgery, teaching surgery and doing basic research concerning trauma and critical illness. My passion is to operate on any acute injury I can and then be that clinician with the breadth of knowledge to lead their multidisciplinary care team rather than follow it. My bibliography attests to my history of scientific contributions and I am widely seen as a leader in trauma surgery and science. But it is difficult to convey my commitment to excellence on paper. Excellence as a trauma-intensivist requires knowledge tempered with humility and humanity. I teach trainees to be clinical scientists who still can say "I don't know" and "I was wrong". That takes strength of character. Many lack the strength to challenge dogma. But without those realizations we fail to recognize our inevitable errors. My aim is to create great physicians, not merely good physicians. Operative surgery is often the domain of anatomy. But in the OR, I teach that the physiology of trauma is what matters. Recreating normal anatomy can be irrelevant or even harmful. With this philosophy, I have taught hundreds of surgical trainees over the past 25 years how to get out of trouble and (more important) how to stay out of it. I'm also proud to have done this while never taking the knife out of the residents' hands unless the patient's well-being demanded it.

My contributions to clinical care over the last 20 years include important work in:

1. Shock and resuscitation
2. Catastrophic abdominal trauma
3. Wound care / dysvascular extremities
4. Topical hemostatics
5. Traumatic brain injury
6. Spinal trauma
7. Chest trauma
8. Surgical infections
9. Trauma transfusion practices
10. Hemostasis
11. Sepsis, SIRS and inflammation biology

I recently chaired the Steering Committee of a large (600 patients, budget >$60,000,000) randomized clinical trial of recombinant human Factor VIIa. I developed most of the care algorithms used. These 'best practices' lowered the mortality of major injury by about half. When published, these pathways will become basic standards of trauma care worldwide. I lead the writing committee and we expect a high impact publication.

My laboratory programs center on:

1. Neutrophil signaling
2. Lipid raft function
3. Clinical inflammation biology
4. Chemokine biology
5. Regulation of endothelial permeability in SIRS
6. Immune modulation using calcium channels
7. The role of cellular damage molecules ("alarmins, DAMPs") in inflammation

My current R01 grant addresses lipid signaling in neutrophils, but we have recently discovered a key role for intracellular DAMPs (damage associated molecular patterns) from mitochondria in generation of post-traumatic inflammatory complications. This discovery may help us to discriminate between inflammation and infection. If so, it will do more to change clinical practice than any paper I have read in 20 years. This manuscript has now been published in *Nature* and has been immediately and widely hailed as a crucial, groundbreaking conceptual advance in sepsis and inflammation research. (see ***Culprits with evolutionary ties*** by Calfee and Matthay, ***Nature*** Vol 464;4 March 2010 p241-2; ***Innate immunity: The enemy within***, by Leavy O, ***Nature Reviews in Immunology***, Vol 10; April 2010, and ***Deadly Inflammation, But No Sign of Infection,*** Schenkman L, AAAS Science Now, March 3, 2010.

In the Faculty of 1000 Medicine (May 4, 2010) Michael Fessler of the National Institute of Environmental Health Sciences, Respiratory Disorders section said of our work. *"This landmark article demonstrates that the distinction between innate immunity stimuli that are microbial-derived (pathogen associated molecular patterns [PAMPs]) and host-derived (damage associated molecular patterns [DAMPs]) may not be absolute."*

Finally, the New England Journal of Medicine published a major review of the clinical implications of our basic research entitled ***The Mitochondrion - A Trojan Horse That Kicks Off Inflammation?*** The authors there said "*The study by Zhang et al. provides new clues about systemic inflammatory response syndrome in patients with major trauma, a condition that to a large extent has hitherto been unexplained."* and that *"The identification of mitochondria as instigators of inflammation may lead to a new, intriguing candidate for drug discovery."*

We have received a Department of Defense grant last year based upon this work and now have been awarded an NIGMS R01 based upon it. We have begun to work with bioengineers to create "PCR-on-a-chip" assays to discriminate sepsis and SIRS based on this model of information and have been awarded a CIMIT grant to further that translational collaboration. We believe the central mechanisms we have discovered are a solid basis for large-scale collaborative research and we have been encouraged by the NIGMS leadership to begin work on a P50 Research Center Grant proposal. We have begun to fashion this in collaboration with three other powerhouse inflammation laboratories (James Lederer, Wolfgang Junger and Michael Yaffe) within the Longwood campus areas.