CURRICULUM VITAE AND BIBLIOGRAPHY

PART I: General Information

Date Prepared: October 26, 2009

Name: Douglas W. Hanto, M.D., Ph.D.

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Department of Surgery
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Place of Birth: Great Falls, Montana, U.S.A.

Education:

1973	B.A.	*Magna cum laude*	St. Olaf College; Northfield, MN
1977	M.D.	*First in Class*	University of Arizona College of Medicine; Tucson, AZ
1987	Ph.D.	Surgery	University of Minnesota; Minneapolis, MN
2003	M.A.	(Hon)	Harvard University; Cambridge, MA

Postdoctoral Training:

1977-1978	Intern, General Surgery University of Minnesota Health Sciences Center, Minneapolis, MN
1978-1984	Resident, General Surgery University of Minnesota Health Sciences Center, Minneapolis, MN
1980-1983	Research Fellow, Transplant Immunology University of Minnesota Health Sciences Center, Minneapolis, MN
1984-1985	Transplant Fellow University of Minnesota Health Sciences Center; Minneapolis, MN

Licensure and Certification:

Licensure:

1978-1991	Minnesota Medical License
1985-1992	Missouri Medical License
1987-1993	Illinois Medical License
1988-1991	Arkansas Medical License
1991-2006	Ohio Medical License
2001-	Massachusetts Medical License

Certification:

1978	National Board of Medical Examiners
1986	The American Board of Surgery

1995	The American Board of Surgery: Recertification
2004	The American Board of Surgery: Recertification
2008	Advanced Cardiac Life Support Certification
2008	Fundamentals of Laparoscopic Surgery Certification

Academic Appointments:

1985-1989	Assistant Professor of Surgery Washington University School of Medicine, St. Louis, MO
1989-1991	Associate Professor of Surgery Washington University School of Medicine, St. Louis, MO
1991-1997	Associate Professor of Surgery University of Cincinnati College of Medicine, Cincinnati, OH
1997-2001	Professor of Surgery University of Cincinnati College of Medicine, Cincinnati, OH
2001-2003	Visiting Professor of Surgery Harvard Medical School, Boston, MA
2003	Professor of Surgery Harvard Medical School, Boston, MA
2003-	Lewis Thomas Professor of Surgery Harvard Medical School, Boston, MA

Hospital or Affiliated Institution Appointments:

1985-1991	Attending, Barnes Hospital, St. Louis, MO
1985-1991	Active Staff, St. Louis Children's Hospital, St. Louis, MO
1985-1991	Attending, The Jewish Hospital of St. Louis, St. Louis, MO
1985-1991	Attending, St. Louis Regional Medical Center, St. Louis, MO
1985-1991	Consult & Attending, St. Louis Veterans Administration Hospital, St. Louis, MO
1991-2001	Attending Regular, The University of Cincinnati Hospital, Cincinnati, OH
1991-1997	Consult, Cincinnati Veterans Administration Hospital, Cincinnati, OH
1992-2001	Associate, Children's Hospital Medical Center, Cincinnati, OH
1994-2001	Courtesy, The Christ Hospital, Cincinnati, OH
1994-2001	Courtesy, Bethesda Hospital, Cincinnati, OH
1995-2001	Courtesy, The Jewish Hospital of Cincinnati, Cincinnati, OH
1998-2001	Affiliate, Deaconess Hospital, Cincinnati, OH
1998-2001	Consulting, Drake Center, Inc., Cincinnati, OH
2000-2001	Courtesy, Good Samaritan Hospital, Cincinnati, OH
2002-2006	Courtesy, Children's Hospital, Boston, MA
2001-	Active, Beth Israel Deaconess Medical Center, Boston, MA

Other Professional Positions and Major Visiting Appointments:

02/07/2001	Visiting Professor. Institute for Cellular Therapeutics, University of Louisville Health Sciences Center, Louisville, KY. Suzanne T. Ildstad, M.D., Director.
04/03/2001	Visiting Professor. Department of Surgery, Case Western Reserve University, Cleveland, OH. James A. Schulak, M.D., Chairperson.
03/02/2005	Visiting Professor. Department of Surgery, University of Arizona, Tucson, AZ. Marlys Witte, M.D., Professor of Surgery.
06/26/2006	Visiting Professor. Department of Surgery, Mayo Clinic, Rochester, MN. Charles B. Rosen, M.D., Associate Professor of Surgery.

06/09/2009 Visiting Professor. Department of Surgery, Medical University of South Carolina, Charleston, SC. Prabhakar K. Baliga, M.D., Professor of Surgery.

Hospital and Health Care Service Organization Responsibilities:

1986-1989 **Member,** Scientific Advisory Board, National Kidney Foundation of Eastern Missouri and Metro East, Inc., St. Louis, MO
1987-1991 **Member,** Board of Directors, Mid-America Transplant Association (after 1990 renamed Mid-America Transplant Services*), St. Louis, MO
1988-1989 **Member,** Technical Review Committee, Missouri Kidney Program, Jefferson City, MO
1996-2001 **Member,** Medical Advisory Board, LifeCenter*, Cincinnati, OH
1999-2001 **Member**, Board of Trustees, LifeCenter, Cincinnati, OH
2000-2001 **President,** Board of Trustees, LifeCenter, Cincinnati, OH
2001- **Member,** Board of Trustees, New England Organ Bank*, Boston, MA
2001- **Member,** New England Consortium for Liver Transplantation, New England Organ Bank, Boston, MA
2003- **Member,** New England Consortium for Intestinal Transplantation, New England Organ Bank, Boston, MA
2003-2004 **Member**, Ad Hoc Transplantation Group, Department of Public Health, Boston, MA
2004-2006 **Member**, New England Consortium for Pancreas Transplantation, New England Organ Bank, Boston, MA
2004- **Representative** for Beth Israel Deaconess Medical Center to the Organ Procurement and Transplantation Network (OPTN)/United Network for Organ Sharing (UNOS), Richmond, VA
2004-2009 **Inpatient Medical Director**, Transplant Unit, Beth Israel Deaconess Medical Center; Boston, MA

*Regional organ procurement organization (OPO)

Major Administrative Responsibilities:

1988-1991 **Director,** Section of Transplantation, Washington University School of Medicine, Department of Surgery; St. Louis, MO
1991-2001 **Director,** Liver Transplant Program, University of Cincinnati College of Medicine, Department of Surgery; Cincinnati, OH
1999-2001 **Medical Director,** LifeCenter; Cincinnati, OH
2001- **Chief,** Division of Transplantation, Beth Israel Deaconess Medical Center; Boston, MA
2003-2008 **Co-Director,** The Transplant Center, Beth Israel Deaconess Medical Center; Boston, MA
2008- **Clinical Director,** The Transplant Institute, Beth Israel Deaconess Medical Center; Boston, MA
2008- **Medical Director,** Advanced Vascular Care Center; Boston, MA
2008- **Department of Surgery Academic Representative,** Surgical Executive Committee, Harvard Medical School, Boston, MA

Major Committee Assignments:

Washington University School of Medicine, St. Louis, MO:
1988-1991 **Member,** Postgraduate Medical Scientist (M.D., Ph.D.) Program Advisory Committee

Barnes Hospital, St. Louis, MO:
1985-1991 **Member,** Barnes Hospital Organ Transplantation Committee
1988-1991 **Member,** Pharmacy and Therapeutics Committee

St. Louis Children's Hospital, St. Louis, MO:
1990-1991 **Member,** Advisory Committee for the Pediatric Clinical Research Center

University of Cincinnati College of Medicine, Cincinnati, OH:
1992-1993 **Member,** Cancer/Environmental Health Subcommittee
Focus Area Review Task Force
1996-1997 **Chair,** Transplantation Programs Task Force
1997-1998 **Member,** Department of Surgery Clinical Study Evaluation Committee

University of Cincinnati Hospital, Cincinnati, OH:
1995-1996 **Member,** Clinical Practice Improvement Team
1995-1996 **Member,** Surgery Clinical Practice Improvement Cost Reduction Team
1995-1996 **Chair,** Liver Transplant Clinical Practice Improvement Team
1997-1998 **Member,** Essential Services Committee
2000-2001 **Member,** Organ Donation Committee

The Health Alliance of Greater Cincinnati, Cincinnati, OH:
1996-1999 **Chair,** Clinical Resource Management Group for Transplantation

Ohio Solid Organ Transplant Consortium (OSOTC), Columbus, OH:
1993-2001 **Chair,** Small Bowel Transplant Selection Committee
1996-2001 **Member,** Members Council
1996-2001 **Member,** Board of Trustees
1997-1998 **Chair**
1999-2000 **Treasurer**
2000-2001 **Secretary**
1998-2001 **Chair,** Liver Transplant Selection Committee

Beth Israel Deaconess Medical Center, Boston, MA:
2001-2003 **Member,** Organ Donation Council
2002-2003 **Member,** Volume Development Subcommittee
2001- **Co-Chair,** Liver Transplant Selection Committee
2001- **Co-Chair,** Kidney Transplant Selection Committee
2002-2003 **Member,** Search Committee for Chair, Department of Orthopedic Surgery
2002- **Member,** Network Development Committee
2002-2009 **Member,** Operating Room Work Environment Committee
2002- **Chair,** Transplant Center Executive Committee
2002- **Member,** Operating Room Executive Committee
2003-2005 **Chair,** Subcommittee on OR PACS Imaging
2003-2005 **Member,** Perioperative Operations Committee
2002-2006 **Member,** Housestaff Education Committee, Department of Surgery
2002- **Member,** Appointments, Reappointments and Promotions (ARP) Committee, Department of Surgery
2003-2004 **Member,** Surgery Intensive Care Unit Working Committee
2003-2004 **Member,** Operating Room Supply Committee

2003-2004 **Chair,** Wound Closure Task Force
2003- **Member,** Board of Directors, Department of Surgery Foundation, Inc.
2009 **Chair,** Department of Surgery Foundation Scholarship Committee
2004- **Member,** Transplant Research Center Executive Committee
2004- **Chair,** Transplant Center Operations Committee
2004-2009 **Member-at-Large,** Medical Executive Committee
2006-2009 **Member,** Board of Directors, Harvard Medical Faculty Physicians
2006-2008 **Co-Chair,** Committee to Search for Director of HLA Laboratory at Beth Israel Deaconess Medical Center
2007-2009 **Member,** Surgical Patient Care Committee
2007-2009 **Member,** BIDMC Web Redesign Task Force
2008- **Member,** Committee on Senior Appointments

Harvard Medical School, Boston, MA:
2003-2005 **Co-Chair,** Ad Hoc Committee to Search for Chief of Surgical Oncology at Beth Israel Deaconess Medical Center
2003-2005 **Member,** Ad Hoc Committee to Search for Chair, Department of Pathology at Beth Israel Deaconess Medical Center
2004-2005 **Chair,** Ad Hoc Committee to Search for a Professor of Surgery to serve as Head of the Division of Trauma and Critical Care at Beth Israel Deaconess Medical Center
2004-2007 **Member,** Promotions, Reappointments, and Appointments Committee
2004-2005 **Chair,** Ad Hoc Committee to Search for a Professor of Surgery to serve as Chief, Division of Vascular and Endovascular Surgery at Beth Israel Deaconess Medical Center
2005-2006 **Member,** Ad Hoc Committee to Search for a Professor of Surgery to serve as Chief of Transplant Surgery at Massachusetts General Hospital
2005-2006 **Member,** Ad Hoc Committee to Search for a Professor of Surgery to serve as Chief, Division of Neurosurgery at Beth Israel Deaconess Medical Center
2005-2006 **Member,** Medical Education Reform In-Depth Experience Committee
2005-2006 **Member,** Patient-Oriented Research Subcommittee
2005-2006 **Member,** In-Depth Concentrations Design Group
2006-2007 **Member,** Task Force on Promotion Criteria
2006-2007 **Member,** Ad Hoc Committee to Search for a Professor of Surgery to serve as Clinical Chief of Nephrology at Beth Israel Deaconess Medical Center-Joslin Clinic
2006-2007 **Chair,** Ad Hoc Committee to Evaluate the Appointment of Joren Madsen, M.D., D.Phil., as Professor of Surgery, full time, Investigator Criteria, to serve at Massachusetts General Hospital
2006-2007 **Member,** Ad Hoc Committee to Search for a Professor of Neurosurgery to serve as Chair of the Department of Neurosurgery at Brigham and Women's Hospital
2006-2008 **Member,** Ad Hoc Committee to Evaluate the Appointment of John J. Reilly, Jr., M.D., as Professor of Medicine, full time, Clinician-Teacher Criteria, to serve at Brigham and Women's Hospital
2006-2007 **Member,** Ad Hoc Committee to Evaluate the Appointment of Takashi Maki, M.D., Ph.D. as Professor of Surgery (full-time), Investigator Criteria, to serve at Beth Israel Deaconess Medical Center
2007-2008 **Member,** Ad Hoc Committee to Search for a Professor of Surgery to serve as Vice Chairman for Clinical Resources in the Department of Surgery at Beth Israel Deaconess Medical Center
2007-2008 **Member,** Ad Hoc Committee to Search for a Professor of Radiology to serve as Chair of the Department of Radiology at Beth Israel Deaconess Medical Center
2007-2008 **Member,** Ad Hoc Committee to Search for an Assistant/Associate Professor to serve as a Clinical Surgeon in the Division of Vascular Surgery at Beth Israel Deaconess Medical Center

2007-2008 **Member,** Ad Hoc Committee to Search for a Professor of Anaesthesia, full time, to serve as Chairperson of the Department of Anesthesia and Critical Care at Beth Israel Deaconess Medical Center

2007- **Member,** Executive Committee, Harvard Longwood Medical Area Training Grant in Transplantation (T32 AI070085-01A1 from NIAID, PI John Iacomini, Ph.D.)

2008-2009 **Member,** Ad Hoc Committee to Search for the Head of the Department of Obstetrics, Gynecology and Reproductive Biology at the Beth Israel Deaconess Medical Center and as the Harold H. Rosenfield Professor at Harvard Medical School

2008- **Member,** Ad Hoc Committee to Search for a Professor of Medicine, full time, to serve as Associate Director for Clinical Programs in the Cancer Center at Beth Israel Deaconess Medical Center

2008-2009 **Member,** Ad Hoc Committee to Search for a Professor of Surgery, full time, to Serve as Chief of the Department of Neurosurgery at Beth Israel Deaconess Medical Center

2008 **Member,** Ad Hoc Selection Committee to Review Applications for the Doris Duke Clinical Scientist Development Award (CSDA) and Select Harvard Medical School Nominees

2008-2009 **Member,** Ad Hoc Search Review Committee to Evaluate the Proposed Appointment of Jeanine Weiner-Kronish, M.D., as Professor of Anaesthesia at Harvard Medical School

2008- **Member,** Ad Hoc Committee to Search for a Professor of Psychiatry, full time, to serve as Chair of the Department of Psychiatry at Beth Israel Deaconess Medical Center

2008- **Member,** Ad Hoc Committee to Search for a Professor of Surgery or Medicine, full time, to serve as CEO of the Cardiovascular Institute (CVI) at Beth Israel Deaconess Medical Center

2009- **Member,** Task Force on Faculty Development and Diversity

2009-2012 **Member,** Subcommittee of Professors

2009- **Member,** Streamlining Promotions Task Force

2009 **Member,** Ad Hoc Selection Committee to Review Applications for the Doris Duke Clinical Scientist Development Award (CSDA) and Select Harvard Medical School Nominees

2009- **Chair,** Ad Hoc Committee to Search for a Professor of Surgery, full time, to serve in the Division of Trauma and Critical Care at Beth Israel Deaconess Medical Center

*National:**

1988-1998 **Member,** Board of Medical Advisors, World Children's Transplant Fund; Los Angeles, CA

1989-2008 United Network for Organ Sharing (UNOS), Richmond, VA

Liver and Intestinal Organ Transplantation Committee:

1989-1991 **Region XIII Representative**

1999-2001 **Region X Representative**

2000-2003 **Vice-Chair**

2000-2003 **Member,** Liver Allocation and Distribution Subcommittee

2000-2003 **Member,** Liver Disease Severity Subcommittee

2001-2003 **At-Large Member**

Region 10 Review Board

1999-2001 **Chair**

Region 1 Review Board

2001-2003 **Member**

Ethics Committee

2004-2008 **Member**

2004-2007 **ASTS Representative,** UNOS Ad Hoc Solicitation Committee

1989-1995 **Member,** Surgical Advisory Board, Smith, Kline, Beecham; Philadelphia, PA

1989-1990 **Member,** Ad Hoc Review Committee, Liver Transplantation Center, National Institutes of Diabetes, Digestive, and Kidney Diseases; Bethesda, MD

1994-1995 **Special Reviewer,** Surgery, Anesthesiology, and Trauma Study Section, National Institutes of Health; Bethesda, MD

1995-1997 **Member,** Ortho Biotech Institute Advisory Board, Ortho Biotech; Raritan, NJ

1998-2000 **Member,** Board of Directors, CenterSpan; Ann Arbor, MI
2002 **Special Reviewer,** Surgery, Anesthesiology, and Trauma Study Section, National Institutes of Health; Bethesda, MD
2005-2009 **Member,** Transplantation Advisory Council, American Board of Surgery
2006-2007 **Member,** Organizing Committee for Research Workshop on Future Challenges in Pediatric Liver Transplantation; Liver Diseases Research Branch, National Institute of Diabetes & Digestive & Kidney Diseases, National Institutes of Health; Bethesda, MD
2007-2008 **Member,** External Advisory Board for T32 Training Grant in Transplant Immunology at the University of Wisconsin (PI, Stuart J. Knechtle, M.D.)
2008 **Chair,** Ad Hoc Review Committee, Adult-to-Adult Living Donor Liver Transplantation Cohort Study (A2ALL), Division of Digestive Diseases and Nutrition, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); Bethesda, MD
2009-2015 **Director,** American Board of Surgery
- 2009- **Chair,** Transplantation Advisory Council
- 2009- **Member,** Qualifying Examination Committee
- 2009- **Member,** Credentials Committee
- 2009- **Member,** Diplomates Committee

2009 **Chair,** Ad Hoc Review Committee, Adult-to-Adult Living Donor Liver Transplantation Cohort Study (A2ALL) (UO1), Division of Digestive Diseases and Nutrition, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); Bethesda, MD

*See also Professional Societies

International

2009-2010 **Member**, Organizing Committee, Consensus Conference on HCC and Liver Transplantation; Zurich, Switzerland (November, 2010)

Professional Societies:

1983-2007 American Association for the Advancement of Science

1985- Association for Academic Surgery
- 1987-1989 **Member,** Program Committee

1986- American Association for the Study of Liver Diseases
- 2001-2003 **Chair,** Clinical Transplantation and All Other Transplantation Review Group for Annual Meeting
- 2001-2004 **Member,** Experimental Transplantation; Preservation, Ischemia/Reperfusion; Cell Transplantation; Hepatobiliary Abstract Review Committee for Annual Meeting
- 2004-2006 **Member,** Clinical Transplantation and All Other Transplantation Review Group for Annual Meeting
- 2005-2007 **Chair,** Surgery and Liver Transplantation Committee
- 2005-2007 **Representative** to United Network for Organ Sharing
- 2005-2007 **Member**, Scientific Program Committee
- 2007-2010 **Councilor-at-Large,** Governing Board
- 2008-2010 **Member,** Awards Committee
- 2009-2010 **Member,** Liver Transplantation Special Interest Group Steering Committee
- 2009-2011 **Member,** Clinical Liver Transplantation and Liver Surgery - Immunosuppression, Outcomes, and Complications Abstract Review Committee

1986- American Society of Transplant Surgeons
- 1991-1994 **Member,** Medical Data Review Committee
- 1994-1996 **Member,** Education Committee

	1994-1998	**Member,** Informatics and Data Management Committee
	1997-1998	**Member,** Nominations Committee
	1997-2000	**Member,** Government and Scientific Liaison Committee to United Network for Organ Sharing
	1995-1998	**Councilor-at-Large,** Board of Directors (Council)
	1998-2001	**Chair,** By-Laws Committee
	1998-1999	**Chair,** Ad hoc Committee on Communications
	1999-2000	**Member,** Ad hoc Committee on Public Policy
	2001-2004	**Member,** Advisory Committee on Issues
	2002	**Member,** Planning Council, 2003 Winter Symposium
	2002-2005	**Chair,** Ethics Committee
	2002-2008	**Member,** Ad hoc Committee on Professional Reimbursement
	2004-2007	**ASTS Representative,** UNOS Ethics Committee
	2005-2007	**Member,** Ad hoc Committee on Transplant Codes
	2005-2007	**ASTS Representative,** UNOS Ad Hoc Solicitation Committee
	2006-2008	**Member,** Standards on Organ Transplantation Committee
	2008-	**Member (Representative from American Board of Surgery),** MOC (Maintenance of Certification) Committee
	2008-2011	**Chair,** Government and Scientific Liaison Committee
1986-	The Transplantation Society (International)	
	2006-	**Member,** Ethics Committee
	2009-	**Member,** Organizing Committee, XXIII International Congress of the Transplantation Society, Vancouver, BC (August, 2010)
1987-	American Association of Immunologists	
1988-	Fellow, American College of Surgeons	
	1996-2001	**Member,** District #4 Committee on Applicants
1988-	American Liver Foundation	
	2003	**Member,** Bid for Life Committee
	2004-2008	**Member,** Medical Advisory Committee, New England Chapter
1988-2003	Collegium Internationale Chirurgiae Digestivae (ISDS)	
1988-	Society of University Surgeons	
	1989-1995	**Representative,** Council of Academic Societies
1989-2007	Central Surgical Association	
1989-2006	European Society for Organ Transplantation	
1990-	American Society of Transplantation	
1990-	International Liver Transplantation Society	
1991-2001	Cincinnati Academy of Medicine	
1991-2001	Cincinnati Graduate Surgical Society	
1991-2001	Ohio State Medical Association	
1992-2006	Cell Transplant Society	
1993-2003	Surgical Infection Society	
1994-	American Hepato-Pancreato-Biliary Association	
	2004-2008	**Member,** Program Committee
1994-	International Hepato-Pancreato-Biliary Association (American Chapter)	
1995-2001	American College of Surgeons, Ohio Chapter	
1996-	American Surgical Association	
1996-	Society for Surgery of the Alimentary Tract	
	2003-2004	**Member,** Nominating Committee
2001-2008	Lillehei Surgical Society	
2002-	Massachusetts Medical Society	
2002-	American College of Surgeons, Massachusetts Chapter	
2003-	The Halsted Society	

2003- Boston Surgical Society
2006- New England Surgical Society
2007- Owen H. Wangensteen Surgical Society

Community Service Related to Professional Work:

1991- Volunteer General Surgeon, Medical Ministry International;
Santo Domingo, Dominican Republic
2003-2008 Red Sox Mentor, Beth Israel Deaconess Medical Center; Boston, MA

Other Educational Activities Related to Professional Work:

2003 Leadership Development for Physicians in Academic Health Centers, Harvard School of Public Health, November 9-21, 2003, Boston, MA
2009 Executive Development Seminar for Associate Deans and Department Chairs, Association of American Medical Colleges, October 9-13, 2009, Ft. Lauderdale, FL

Editorial Boards:

1987-2001 **Member,** Editorial Board, *Transplantation*
2001-2005 **Member,** Editorial Board, *Liver Transplantation*
2008 **Member**, Editor Search Committee
2005-2006 *Current Opinion in Organ Transplantation*
Section Editor, *Liver Transplantation*
2007- **Associate Editor**, *American Journal of Transplantation*
2007 **Member**, Evaluation Board, Faculty of 1000 Medicine,
Liver Failure and Liver Disease Section, Gastroenterology & Hepatology Faculty
Online service for researchers and clinicians
2008- **Member,** Editorial Board, *Transplantation*
2009-2013 **Member,** Editorial Board, *World Journal of Gastrointestinal Surgery*

Ad hoc reviewer for:

American Journal of Gastroenterology
American Journal of Kidney Diseases
American Journal of Transplantation
Annals of Surgery
Annals of Thoracic Surgery
Clinical Transplantation
Hepatology
Journal of the American College of Surgeons
Journal of the American Society of Nephrology
Journal of Gastroenterology and Hepatology
New England Journal of Medicine
Surgery
Transplantation

Awards and Honors:

1973 Magna cum laude, St. Olaf College
1973 Phi Beta Kappa, St. Olaf College
1973 Blue Key Honor Society, St. Olaf College
1977 Alpha Omega Alpha, University of Arizona College of Medicine

1977 Arizona Foundation Outstanding Senior Award (First in Class),

	University of Arizona College of Medicine
1986	Smith, Kline, and French Fellowship of the American College of Surgeons
2003	The Halsted Society
2003-2010	Best Doctors in America
2005	First "Charles Witte Legacy Lecture," University of Arizona College of Medicine
2005	Boston Red Sox Medical All Star
2005	University of Minnesota 2005 Surgical Alumnus of the Year
2006	Boston's Best Doctors, Boston Magazine

PART II: Research, Teaching, and Clinical Contributions

A. Narrative Report of Research, Teaching, and Clinical Contributions:

Basic research: My current laboratory research is focused on the ability of carbon monoxide (CO) at low concentrations to be protective in rodent and large animal models of ischemia-reperfusion injury (IRI) and delayed graft function (DGF), allograft rejection and survival, and in hepatic regeneration. CO is a product of HO-1 action on heme and has potent anti-inflammatory, anti-apoptotic, and anti-proliferative effects. It is of great interest that the CO effects are observed with intermittent exposure, e.g., 1 hour per day. DGF is a common complication of kidney transplantation, occurring in 20%-50% of deceased donor kidneys, and is associated with decreased short-term and long-term function, decreased graft survival, increased risk of rejection, and increased costs. We have developed a novel kidney allograft model of DGF in swine that allows us to examine the ability of CO to prevent IRI and the resulting DGF, as well as acute and chronic rejection. We have shown that treatment of the recipient with intra-operative inhaled CO using a novel CO gas delivery system is effective in restoring kidney function more rapidly than in non-CO treated animals and accelerating the recovery of renal function post-transplant. We are currently determining the optimal treatment regimen (dose, duration, timing), studying whether CO treatment will allow longer cold storage time, what role O_2 plays in the efficacy of CO, and importantly, whether treatment of the donor and the allograft will further limit DGF. We are also examining the potential usefulness of non-invasive real time imaging (MRI) to evaluate renal function over time in recipients. We believe the mechanisms of protection in the recipient and donors are different with regard to the innate immune response to IRI. We are currently investigating the molecular mechanisms by which CO decreases DGF utilizing immunopathology and gene expression profiling using highly sensitive RT-PCR and Affymmetrix gene arrays. Preliminary data has shown decreased cell death and enhance epithelial cell repair in CO treated animals with a likely component being more rapid recruitment and differentiation of stem cells. In our rodent models we know that CO enhances endothelial cell (EC) repair that is otherwise lost as a result of warm and cold ischemia followed by reperfusion injury. CO treatment of the recipient is unlikely to have an impact on EC preservation, but rather influences a repair process of the lost endothelium and subsequent epithelial renal tubule cells. Such a mechanism would be different yet complemented by donor treatment that would be likely to prevent IRI-induced cell death through prophylactic cell preservation. We are planning to test whether CO treatment of the recipient will augment EC repair and whether treatment of the donor plus recipient results in additive repair. From a cell signaling and molecular standpoint, we are also examining *in vitro* the role of RhoA, Akt, and eNOS/NO in the ability of CO to augment motility and proliferation of EC that has been shown to be important in EC preservation and proliferation. This work has been the basis for planned human clinical trials of CO in organ donation and transplantation to prevent DGF that will take place in part under my direction at BIDMC. This work is being done in collaboration with Leo Otterbein, Ph.D. in our Division, who has made seminal contributions to our understanding of the biological effects of CO in many different animal models and is recognized as one of the world's experts in CO. Taken together, we have the unique opportunity to study a truly novel gaseous molecule therapy with a true bench to bedside application.

Clinical research: A complication of immunosuppression is the development of post-transplant lymphoproliferative diseases (PTLD). We were the first to clearly describe the clinical syndromes associated with these PTLD, their association with the Epstein-Barr virus (EBV), and that they were polyclonal B-cell proliferations that could evolve into monoclonal B-cell proliferations. We were the first to define the morphological features of these polymorphic lymphoproliferations and to propose their classification as polymorphic diffuse B-cell hyperplasia or polymorphic B-cell lymphoma. The two papers published in *Cancer Research* remain the classic descriptions and have been the basis for many subsequent clinical, immunopathologic, and virologic studies of these diseases. We were also the first to report the clinical use of acyclovir in a patient with EBV infection and showed suppression of oropharyngeal shedding of EBV during acyclovir therapy and regression of a polyclonal B-cell proliferation. By examining immunoglobulin gene rearrangements and cytogenetic abnormalities, we

were able to demonstrate in predominantly polyclonal B-cell proliferations, a subpopulation of B-cells that were monoclonal and in some cases oligoclonal. Polyclonal proliferations were shown to evolve into monoclonal B-cell lymphomas and were no longer responsive to anti-viral therapy. The elucidation of the pathogenesis of the EBV-related PTLD has improved the ability to prevent and treat these diseases leading to improved patient survival. Recent studies have been focusing on the relative risks of various immunosuppressive drugs and combinations of drugs in the development of PTLD. We have also published data defining when it is safe to retransplant patients with a history of PTLD.

I am also actively involved in other clinical trials examining the safety and efficacy of kidney and liver transplantation in HIV+ patients, examining the safety and efficacy of various new immunosuppressive drugs and combinations in kidney and liver transplant patients, and assessing the role of clinical pathways in improving the quality and consistency of transplant patient care. We have developed over 25 comprehensive clinical pathways that begin during the pre-transplant evaluation phase and include the peri-operative, inpatient, and post-transplant phases of kidney, liver, and pancreas transplant recipients and living donors. I have also written and spoken about some of the ethical challenges and controversies in transplantation such as solicitation of donor organs, buying and selling of organs, as well as others.

We have also established a "Center for Transplant Outcomes and Quality Improvement" within the Transplant Institute at BIDMC that has been supported by a generous gift from a liver transplant recipient and her husband. The purpose of this center is to develop a comprehensive database on pre- and post-transplant patients and to provide regular and timely analyses that will be geared to identifying opportunities for enhancing the quality of care delivered to inpatients and outpatients and improving outcomes. Interactive adult learning educational programs and tools for patients and their families that involve them in their care are being developed. We are examining the challenges presented by patients and families who struggle financially and socially in order to determine their impact on access to transplant, quality of care, and outcomes. These disparities and how to intervene to reverse them will be a major focus of the Center.

Clinical Practice: I am actively involved in deceased donor and living-related donor kidney, liver, and pancreas transplantation, deceased donor and donor after cardiac death organ procurement, dialysis access, and nontransplant hepatobiliary surgery. My primary focus is liver transplantation and non-transplant hepatobiliary surgery. I have elective operating time one to two days per week for non-transplant hepatobiliary surgery in addition to the large volume of unscheduled cases that are part of the practice of transplantation. I see outpatients one full day per week. I am also Medical Director of Advanced Vascular Care, our outpatient facility for the non-invasive treatment of complications of dialysis access procedures, and perform procedures one day per week. This is a collaborative effort among surgery, nephrology, and interventional radiology.

Teaching: My teaching responsibilities include teaching medical students, surgical interns and residents, and transplant fellows on the clinical wards, in the operating room, in the laboratory, and in the classroom. This involves teaching an organized approach to the pre-operative evaluation and care of patients with surgical diseases, the performance of the surgical procedure itself including surgical technique and decision making in the operating room, and care of the post-operative patients and their complications.

Administration/Leadership: With the cooperation of many clinicians and the support of the hospital, I have led a turnaround of the BIDMC clinical transplant program to a position of being one of the two largest and most comprehensive programs in New England with an emphasis on innovation, quality, outcomes, and patient service. I have aligned support from the hospital administration, the departments of surgery, medicine, pathology, and research to develop an integrated business plan that combines volume, quality, and financial benchmarks for inpatient, outpatient, ancillary services, and research in what I refer to as a "mutual accountability model." The model has been accepted as a monitoring tool by all

stakeholders and has been cited as a blueprint for other centers. The second 5-year plan began in October 2007. We have improved patient service and satisfaction and the clinical financial model and performance. The July 2008 approval by CMS as a transplant center under the new set of rigorous clinical and administrative guidelines indicates the strength of the program. Since my arrival in 2001 I have worked collaboratively with Dr. Terry Strom to build on the strengths of the basic and translational research program that has seen continued growth and expansion in NIH and other funding in the areas of tolerance induction, cytoprotection, liver regeneration, molecular profiling, vascular biology, and immunology.

B. Funding Information:

Current Funding:

2004-2012 **Site Principal Investigator**. NIH/NIAID AI052748
"Solid organ transplantation in HIV: Multi-site study"

2004-2009 **Co-Investigator.** NIH/NIAID AI63623
"Clinical trials in organ transplantation"

2005-2008 **Co-Investigator.** Roche Laboratories.
"A prospective, open-label, multi-center randomized trial of the efficacy and safety of long term calcineurin inhibitor free maintenance regimen with mycophenolate mofetil and sirolimus in recipients of an orthotopic liver transplant"

2005-2008 **Co-Investigator.** Roche Laboratories.
"Open label, prospective, randomized controlled, multi-center study assessing fixed dose vs. concentration controlled CellCept regimens for patients following a single organ renal transplantation in combination full dose and reduced dose calcineurin inhibitors"

2005-2008 **Co-Investigator.** Bristol-Myers Squibb.
"Belatacept evaluation of nephroprotection and efficacy as first-line immunosuppresion trial-extended criteria donors"

2006-2008 **Co-Investigator.** Isotechnika.
"Novel calcineurin inhibitor for *de novo* renal transplant recipients"

2006-2008 **Co-Principal Investigator**. iNO Therapeutics.
"Inhaled CO in kidney transplantation in swine"

2006-2008 **Co-Investigator.** iNO Therapeutics.
"Renal ischemia reperfusion injury in rats"

2007-2010 **Co-Investigator.** ViroPharma.
"Randomized double-blind study to assess the efficacy and safety of prophylactic use of Maribavir versus oral gancyclovir for the prevention of cytomegalovirus disease in recipients of orthotopic liver transplants"

2007-2010 **Co-Investigator.** Novartis.
"A 12-month open-label randomized multi-center sequential cohort dose-finding study to evaluate the efficacy, safety, and tolerability of oral AEB071 versus tacrolimus in combination with Myfortic, Simulect, and corticosteroids in de novo adult renal transplants"

2008- **Co-Investigator.** Bayer/Onyx.
"Neoadjuvant sorafenib prior to RFA in HCC, a randomized controlled phase II trial"

2008-2009 **Site Principal Investigator.** Ikaria C201.
"Placebo-controlled, safety and tolerability study of the effects of carbon monoxide for inhalation in patients receiving kidney transplantation"

2009-2010 **Principal Investigator.** Harvard Catalyst Pilot Grants Program.
"Social networks and socialized risk: Understanding and mitigating disparities in renal transplantation."

Pending Funding:

2009-2014 **Principal Investigator.** NIH RO1.
"Carbon monoxide for the prevention of delayed graft function of a kidney allograft in swine"

Past Funding:

1982-1985 **Principal Investigator for subproject**. NIH AM 13083: Program Project Grant.
"Studies of transplantation in mice and man. Clinical IIb. Immune defects in organ transplant recipients with Epstein-Barr Virus (EBV) infections and relationship to post-transplant lymphoproliferative disorders"

1986-1987 **Principal Investigator.** Biomedical Research Support Grant (BSRG), Washington University School of Medicine 3325-52911A.
"Allograft rejection mediated by functionally distinct T cell clones"

1986-1988 **Principal Investigator**. Smith, Kline, and French Fellowship of the American College of Surgeons 22989269067.
"Adoptive transfer of functionally distinct T cell clones in a new T cell depleted mouse model to determine the cellular mediators of rejection"

1986-1989 **Principal Investigator**. NIH/NIAID RO1 AI24151.
"Allograft rejection in a new T cell depleted mouse model"

1987-1988 **Principal Investigator**. American Cancer Society Institutional Research Grant, Washington University School of Medicine IN-36-28-#3.
"T cell control of tumor growth in mice with severe combined immunodeficiency"

1988-1989 **Principal Investigator**. Ortho Pharmaceutical Corporation.
"Evaluation of immune response to OKT3 monoclonal antibody in transplant recipients"

1989-1994 **Co-Investigator.** NIH/NIAID.
"Immunoregulatory role of anti-idiotypic antibodies to HLA"

1992-1994 **Co-Principal Investigator.** Ortho Biotech.
"The effects of pentoxifylline on clinical symptoms and cytokine release associated with OKT3 therapy in liver transplant patients"

1993-1995 **Co-Principal Investigator.** Pfizer-Roerig.
"Randomized, controlled study of Fluconazole vs. Clotrimazole and Nystatin in the prevention of fungal infections in liver transplant recipients"

1994-1995 **Site Principal Investigator**. Sandoz Pharmaceuticals Corporation;
"A prospective, randomized, comparative, multicenter safety and tolerability study of Neoral vs. Sandimmune in primary liver transplant patients"

1996-1998 **Principal Investigator.** Ortho Biotech.
"A comparative study of low dose OKT3-based immunosuppression vs. cyclosporine/mycophenolate-based immunosuppression following liver transplantation"

1997-1999 **Site Principal Investigator.** Novartis Pharmaceuticals Corporation.
"A multicenter, double blind, placebo controlled trial of Simulect in *de novo* liver transplant recipients"

2000-2001 **Co-Investigator.** Fujisawa Pharmaceuticals Corporation.
"Retrospective analysis of outcomes and resource allocation in liver transplantation"

2004-2005 **Co-Investigator.** Novartis Pharmaceuticals Corporation.
"A one-year, multicenter partially blinded, double-dummy, randomized study to evaluate the efficacy and safety of FTY720 combined with reduced-dose or full-dose Neoral and corticosteroids versus mycophenolate mofetil (MMF, CellCept) combined with full-dose Neoral and corticosteroids in *de novo* adult renal transplant recipients"

2000-2006 **Co-Investigator.** SangStat Medical Corporation.
"A pilot study to determine the safety and efficacy of infusion of donor specific cytokine-mobilized peripheral blood bone marrow stem cells (PBSCs) into renal allograft recipients to induce donor specific hyporesponsiveness/unresponsiveness evidenced by reduction in prednisone and other immunosuppressive maintenance drug requirements"

2004-2006 **Co-Investigator.** Roche Laboratories.
"Open label, prospective, randomized controlled, multi-center study assessing fixed dose *vs.* concentration controlled CellCept regimens for patients following a single organ renal transplantation in combination full dose and reduced dose calcineurin inhibitors"

C. Report of Current Research Activities:

Project	Role
Bench Research	
CO in ischemia reperfusion injury and kidney transplantation in rats and pigs and liver regeneration in rodents	**PI**
Clinical Research	
Solid organ transplantation in HIV+ patients: multi-site study	**Site PI**
B-cell depletion by anti-CD20 (Rituximab) in renal allograft recipients who develop *de novo* anti-HLA alloantibodies	**Co-I**
Efficacy and safety of MMF and sirolimus in liver transplant recipients	**Co-I**
Fixed dose vs. concentration controlled CellCept in renal transplant recipients	**Co-I**
Belatacept evaluation of nephroprotection and efficacy in kidney transplantation	**Co-I**
Study of novel calcineurin inhibitor in renal transplant recipients	**Co-I**
Molecular diagnostics in predicting graft function and rejection after liver transplantation	**Co-PI**
Efficacy and safety of prophylactic Maribavir versus gancyclovir for prevention of CMV	**Co-I**
Efficacy, safety, and tolerability of oral AEB071 in kidney recipients	**Co-I**
Neoadjuvant sorafenib prior to RFA in HCC	**Co-I**
Study of disparities in renal transplantation	**PI**

D. Report of Teaching

1. Local Contributions

<u>Medical School</u>

University of Minnesota Health Sciences Center; Minneapolis, MN

1977-1985 Core Clerkship in Surgery
Teaching role: Resident and Fellow
Type of students: Average of 25 UM medical students per year
Preparation and contact time: Average 5-10 hours per week

Washington University School of Medicine; St. Louis, MO

1985-1991 Core Clerkship in Surgery
Teaching role: Attending
Type of students: Average of 25 WUSM students per year
Preparation and contact time: Average 2 hours per week

1985-1991 Transplant Elective
Teaching role: Attending
Type of students: Average of 8 WUSM students per year
Preparation and contact time: Average 2 hours per week

University of Cincinnati College of Medicine; Cincinnati, OH

1991-2001 Core Clerkship in Surgery
Teaching role: Attending
Type of students: Average of 25 UC medical students per year
Preparation and contact time: Average 2 hours per week

2001 Interactive Teaching Sessions
Teaching role: Discussion leader
Type of students: Average of 8-10 UC medical students every 2 months rotating on general surgery to discuss specific clinical surgical topics
Preparation and contact time: Average 4 hours per week

1991-2001 Transplant Elective
Teaching role: Attending
Type of students: Average of 8 UC medical students per year
Preparation and contact time: Average 2 hours per week

Harvard Medical School; Boston, MA

2001-present Core Clerkship in Surgery
Teaching role: Attending
Type of students: Average of 10 HMS students per year
Preparation and contact time: Average 2 hours per week

2001-present Transplant Elective
Teaching role: Attending
Type of students: Average of 2-4 HMS students per year
Preparation and contact time: Average 2 hours per week

2007 Introduction to the Abdominal Exam (November 19)
Teaching role: Faculty member
Type of students: 4 second-year HMS students
Preparation and contact time: 4 hours

Graduate Medical Courses

University of Minnesota Health Sciences Center; Minneapolis, MN

1977-1985 Surgical teaching surgical to interns and residents on the clinical surgical and transplant services
Average of 30 interns and residents per year
Preparation and contact time: Averaged 5-10 hours per week.

Washington University School of Medicine; St. Louis, MO

1985-1991 Residency Program in General Surgery
Samuel A. Wells, M.D., Chairman of Surgery and Program Director
Instructor for pre- and post-operative care and operative technique to general surgery residents
Average of 35 interns and residents per year
Preparation and contact time: Averaged 5-10 hours per week.

1985-1991 ASTS Approved Transplant Fellowship
M. Wayne Flye, M.D., Ph.D., Program Director 1985-1988
Douglas W. Hanto, M.D., Ph.D., Program Director 1988-1991
Instructor for pre- and post-operative care and operative technique to transplant fellows
Average of 1-2 fellows per year
Preparation and contact time: Averaged 5-10 hours per week.

University of Cincinnati College of Medicine; Cincinnati, OH

1991-2001 Residency Program in General Surgery
Josef E. Fischer, M.D., Chairman of Surgery and Program Director
Instructor for pre- and post-operative care and operative technique to general surgery residents
Average of 35 interns and residents per year
Preparation and contact time: Averaged 5-10 hours per week.

1991-2001 Transplant Fellowship
J. Wesley Alexander, M.D., Sc.D., Program Director
Instructor for pre- and post-operative care and operative technique to transplant fellows
Average of 1-2 fellows per year
Preparation and contact time: Averaged 5-10 hours per week.

Beth Israel Deaconess Medical Center; Boston, MA

2001-present Residency Program in General Surgery
Josef E. Fischer, M.D., Chairman of Surgery and Program Director (2001-2008)
James Hurst, M.D., Acting Chairman of Surgery; Scott Johnson, M.D., Program Director (2008-present)
Instructor for pre- and post-operative care and operative technique to general surgery residents
Average of 35 interns and residents per year
Preparation and contact time: Averaged 5-10 hours per week.

2001-present Transplant Fellowship
Douglas W. Hanto, M.D., Ph.D., Program Director (2001-2008)
Seth Karp, M.D., Program Director, 2008-present
Instructor for pre- and post-operative care and operative technique to transplant fellows
Average of 1-2 fellows per year
Preparation and contact time: Averaged 5-10 hours per week.

Local invited teaching presentations

Washington University School of Medicine; St. Louis, MO

1986 **Lecturer. 1986-1991.** "Portal Hypertension"; 3rd Year Medical Students on Surgical Services; Lecture given every 2 months to approximately 15 students each rotation as part of their core surgical curriculum. Preparation and contact time: Approximately 4 hrs.

1988 **Lecturer. 1988-1991.** "Organ Transplantation"; 3rd Year Medical Students on Surgical Services; Lecture given every 2 months to approximately 15 students each rotation as part of their core surgical curriculum. Preparation and contact time: Approximately 4 hrs.

Lecturer. Surgical Seminar; "Cirrhosis of the Liver"; Barnes Hospital, St. Louis, MO; May 16.

Lecturer. Surgical Seminar; "Cirrhosis of the Liver"; Barnes Hospital, St. Louis, MO; August 22.

Lecturer. Pediatric Grand Rounds; "Transplantation in Children"; St. Louis Children's Hospital, St. Louis, MO; September 2.

Lecturer. Surgery Grand Rounds; "Posttransplant Lymphoproliferative Disorders"; Barnes Hospital; St. Louis, MO; September 14.

Lecturer. Surgery Grand Rounds; "Hepatic Transplantation: Indications, Technique, and Results"; Jewish Hospital; St. Louis, MO; October 4.

Lecturer. Grand Rounds; "Liver Transplantation Indications, Results, and Complications"; St. Joseph's Hospital; Kirkwood, MO; October 12.

Invited Speaker. St. Louis Metropolitan Society of Critical Care Medicine Meeting; "Resuscitation of the Organ Donor"; St. Louis, MO; October 29.

Lecturer. Grand Rounds; "Current Topics in Renal Transplantation"; St. John's Mercy Medical Center, St. Louis, MO; November 10.

Lecturer. Citywide Infectious Disease Conference. "Neoplastic Complications of EBV Infection"; St. Louis, MO; December 13.

1989 **Lecturer.** Internal Medicine Grand Rounds; "Current Status of Renal Transplantation"; St. Louis Regional Medical Center, St. Louis, MO; January 17.

Lecturer. Surgery Grand Rounds; "Monoclonal Antibody Therapy in Renal Transplantation"; Washington University School of Medicine, Department of Surgery, St. Louis, MO; April 5.

Lecturer. Grand Rounds; "Liver Transplantation"; St. Louis Veteran's Administration Hospital, St. Louis, MO; November 8.

1990 **Lecturer.** Urology Grand Rounds; "Current Topics in Renal Transplantation"; Washington University School of Medicine, Division of Urology, St. Louis, MO; January 20.

Lecturer. Surgery Grand Rounds; "Cancer After Organ Transplantation"; Washington University School of Medicine, Department of Surgery, St. Louis, MO; March 23.

Lecturer. Grand Rounds; "Liver Transplantation"; St. Luke's Hospital, St. Louis, MO; April 24.

University of Cincinnati College of Medicine; Cincinnati, OH

1991 **Lecturer. 1991-1999.** "Organ Transplantation"; 3rd Year Medical Students on Surgical Services; Lecture given every 2 months to approximately 15 students each rotation as part of their core surgical curriculum. Preparation and contact time: Approximately 4 hrs.

1993 **Lecturer. 1993-2001.** "Transplant Immunology: Clinical Correlation"; Lecturer; 2nd Year Medical Students; Lecture given once per year to 100 students to bring clinical relevance to Medical Microbiology and Immunology Course. Preparation and contact time: Approximately 4 hrs.

1995 **Lecturer. 1995-2001**. "Surgical Diseases of the Liver"; 3rd Year Medical Students on Surgical Services; Lecture given every 2 months to approximately 15 students each rotation as part of their core surgical curriculum. Preparation and contact time: Approximately 4 hrs.

1991 **Invited speaker.** Surgical Grand Rounds; "Benign Liver Masses: Diagnosis and Management"; Miami Valley Hospital, Dayton, OH; October 12.

Lecturer. Surgical Grand Rounds; "Liver Transplantation: Who, When, and How - And Then What?"; University of Cincinnati, Cincinnati, OH; November 14.

1992 **Lecturer.** Medical Alumni Meeting, University of Cincinnati College of Medicine; "The Adult Liver Transplant Program: Bench Surgery and Liver Transplantation for Tumors"; University of Cincinnati, Cincinnati, OH; May 15.

Lecturer. Medicine Grand Rounds; "Liver Transplantation"; Providence Hospital, Cincinnati, OH; June 18.

Lecturer. Surgical Grand Rounds; "Liver Transplantation"; Bethesda North Hospital, Cincinnati, OH; September 17.

Lecturer. Basic Science Lecture Series; "Immunology"; University of Cincinnati, Department of Surgery, Cincinnati, OH; November 14.

1993 **Lecturer.** Medical Staff Grand Rounds; "Changing Indications for Liver Transplantation"; Drake Center, Cincinnati, OH; January 27.

Invited speaker. American Association of Critical-Care Nurses, Greater Cincinnati Chapter, Fifth Annual Critical Care Conference; "Liver Transplantation"; Cincinnati Marriott, Cincinnati, OH; April 23.

Invited speaker. American Society for Histocompatibility and Immunogenetics Midwest Regional Meeting; "Post-Transplant Clinical Complications"; Great Southern Hotel, Columbus, OH; May 7.

Lecturer. Grand Rounds; "Metastatic Malignancies of the Liver"; University of Cincinnati, Cincinnati, OH; June 9.

1994 **Lecturer.** Clinical and Experimental Immunology Seminar; "Vβ Restriction in Alloreactivity"; Children's Hospital Medical Center, Cincinnati, OH; December 15.

1995 **Lecturer.** Surgical Grand Rounds. "Changing Indications for Liver Transplantation"; The Christ Hospital, Cincinnati, OH; March 2.

1996 **Lecturer.** Mont Reid Surgical Society; "Management of Benign and Malignant Bile Duct Strictures"; University of Cincinnati, Department of Surgery, Cincinnati, OH; May 17.

2000 **Lecturer.** Mont Reid Surgical Society; "Evaluation and Treatment of Bile Duct Injuries and Benign Strictures"; University of Cincinnati, Department of Surgery, Cincinnati, OH; May 19.

Harvard Medical School; Boston, MA

2002 **Lecturer.** "Liver Failure and Liver Transplantation"; 3rd Year Medical Students on Surgical Services. Preparation and contact time: Approximately 4 hrs.

Lecturer. Grand Rounds; "Update in Liver Transplantation"; Department of Anesthesia and Critical Care, Beth Israel Deaconess Medical Center, Boston, MA; May 1.

Lecturer. Medical Grand Rounds; "Liver Transplantation: Problems Solved and Unsolved"; Beth Israel Deaconess Medical Center, Boston, MA; September 19.

Lecturer. Grand Rounds; "Liver Transplantation: Problems Solved and Unsolved"; Leonard Morse Hospital, Natick, MA; September 30.

Lecturer. Grand Rounds; "Liver Transplantation: Problems Solved and Unsolved"; South Shore Hospital, Weymouth, MA; October 29.

Lecturer. BIDMC Conference on New Horizons in Hepato-Pancreatico-Biliary Disease; "Technical Caveats of Hepatic Resection"; Boston, MA; December 7.

2003 **Lecturer.** Surgical Grand Rounds; "Management of Bile Duct Strictures"; Mt. Auburn Hospital, Cambridge, MA; February 11.

Lecturer. Surgical Grand Rounds; "Clinical Crossroads: A 50 Year Old Man Awaiting Transplant"; Beth Israel Deaconess Medical Center, Boston, MA; March 26.

Lecturer. Surgical Grand Rounds; "Management of Laparoscopic Bile Duct Injuries"; St. Luke's Hospital, New Bedford, MA; April 12.

Lecturer. Grand Rounds; "Transplantation 2003"; Beth Israel Deaconess Medical Center, Department of Anesthesia, Boston, MA; June 11.

Lecturer. Grand Rounds; "New Innovations in Transplantation"; Falmouth Hospital, Falmouth, MA; August 12.

Lecturer. Surgical Grand Rounds; "Liver Transplantation: Problems Solved and Unsolved"; Brigham and Women's Hospital, Boston, MA; September 10.

Lecturer. Grand Rounds; "Liver Transplantation for the General Internist"; Cambridge Hospital, Cambridge, MA; October 29.

2004 **Lecturer.** Transplant Conference; "State of the Transplant Center"; Beth Israel Deaconess Medical Center, Boston, MA; April 6.

2005 **Lecturer.** Transplant Conference; "Liver and Intestinal Transplantation: Summary Analysis of Data from the SRTR (Scientific Registry of Transplant Recipients) 1994-2003"; Beth Israel Deaconess Medical Center, Boston, MA; February 8.

Invited speaker. Harvard-MIT Division of Health Sciences and Technology, BioMatrix Program; "Ethical Issues in Transplantation"; BioMatrix Members' Meeting "Whose Organ Is It, Anyway?"; Massachusetts Institute of Technology, Cambridge, MA; October 18.

2006 **Lecturer.** Transplant Conference; "ECD and DCD Organ Transplantation in New England: Unique Problems and Solutions"; Beth Israel Deaconess Medical Center, Boston, MA; March 7.

Lecturer. Surgical Research Seminar; "Cytoprotection and its Potential Applications in Clinical Transplantation"; Beth Israel Deaconess Medical Center, Boston, MA; May 15.

Lecturer. Transplant Research Conference; "Cytoprotection: Future Possibilities in Transplantation"; Beth Israel Deaconess Medical Center, Boston, MA; May 16.

Lecturer. Grand Rounds Lecture; "New Innovations in Transplantation"; Milton Hospital, Milton, MA; June 20.

Lecturer. Surgical Grand Rounds; "Expanding Organ Donation through Extended Criteria Donors and Donors after Cardiac Death"; Beth Israel Deaconess Medical Center, Boston, MA; July 19.

2007 **Lecturer.** Grand Rounds; "Organ Donation and Transplantation: The Good, the Bad, and the Ugly"; Lowell General Hospital, Lowell, MA; March 7.

Keynote Speaker. "The Intersection of Patients' Needs, Economics, and Ethics in Organ Donation and Transplantation"; MIT Hippocratic Society Conference - "The Organ Trail: The Science and Ethics of Tissue Engineering, Transplantation and Organ Trafficking"; Massachusetts Institute of Technology, Cambridge, MA; March 10.

Lecturer. Grand Rounds; "Transplant Update"; MetroWest, Leonard Morse Hospital, Natick, MA; April 23.

Lecturer. Grand Rounds; "Update: Kidney, Liver, and Pancreas Transplantation"; Saint Vincent Hospital, Worcester, MA; May 17.

Lecturer. Transplant Conference; "When to Say No to Transplantation"; Baystate Medical Center, Springfield, MA; November 27.

2008 **Lecturer.** Resident Seminar; "Benign Liver Lesions"; Beth Israel Deaconess Medical Center; Boston, MA; April 1.

Lecturer. Resident Seminar; "Malignant Liver Lesions"; Beth Israel Deaconess Medical Center; Boston, MA; April 8.

Lecturer. Grand Rounds; "Hepatocellular Carcinoma: From Epidemiology to Transplant"; Caritas St. Elizabeth's Medical Center; Brighton, MA; September 25.

2009 **Lecturer.** Grand Rounds; "Protective Effects of Carbon Monoxide"; Department of Anesthesia, Beth Israel Deaconess Medical Center; Boston, MA; April 1.

Invited Speaker. Research and Academic Affairs All Staff Meeting; "Protective Effects of Carbon Monoxide"; Beth Israel Deaconess Medical Center; Boston, MA; May 1.

Invited Speaker. Grand Rounds. "Carbon monoxide in health and disease." Department of Surgery. Beth Israel Deaconess Medical Center; Boston, MA; September 23.

Continuing Medical Education Courses

1992 **Invited speaker.** 29th Regional Meeting of Ohio Society of Gastrointestinal Nurses and Associates "Liver Transplantation"; Sponsored by Ohio Nurses Association, Miami Valley Hospital, Dayton, OH; October 17.

1993 **Invited speaker.** 5th Annual Critical Care Symposium; "Liver Transplantation"; Greater Cincinnati Chapter American Association of Critical Care Nurses, Cincinnati, OH; April 23.

1994 **Invited speaker.** Dayton Gastroenterology Symposium for Primary Care Physicians; "Liver Transplantation 1994"; Sponsored by Wright State University School of Medicine, Department of Medicine, Dayton, OH; November 12.

1995 **Invited speaker.** Controversies in the Multi-disciplinary Approach to Pancreaticobiliary Diseases Symposium; Debates in Gastroenterology: "Invasive Klatskin Tumors Should be Managed Surgically"; "Advances in the Diagnosis and Management of Benign and Malignant Biliary Strictures: Surgical Options"; Sponsored by Division of Digestive Diseases, Department of Internal Medicine, University of Cincinnati, Cincinnati, OH; September 23-24.

Invited speaker. Hepatitis and Liver Disease 1995; "Update on the Surgical Management of Variceal Bleeding"; Sponsored by the Liver Unit at the University of Cincinnati and the Department of Continuing Medical Education, Cincinnati, OH; December 2.

1998 **Invited speaker.** Wright State University Department of Surgery 21st Annual Postgraduate Course "Selected Topics in Hepatobiliary Tract Disease"; "Surgical Treatment of Benign Liver Lesions"; "Acute and Chronic Liver Failure and the Indications for Liver Transplantation"; Dayton, OH; October 7.

2000 **Invited speaker.** University of Cincinnati College of Medicine Mini-Medical College; "Transplantable Spare Parts"; Cincinnati, OH; October 17.

2002 **Invited speaker.** Beth Israel Deaconess Medical Center Department of Nursing Critical Care Conference; "Liver Disease: Medical Treatment Leading to Surgical Treatment"; Boston, MA; April 23.

Invited speaker. Beth Israel Deaconess Medical Center Department of Nursing Liver Transplant Clinic; "Post-operative Management of Liver Transplant Patients"; Boston, MA; June 18.

2003 **Invited speaker.** UNOS Region 1 Transplant Coordinators' Meeting; "Maximizing Liver Donation – Donor and Recipient Factors"; Wyndham Westborough Hotel, Westborough, MA; March 25.

2005 **Invited speaker.** UNOS Region 1 Clinical Forum; "Ethical Controversies Facing Transplantation in 2005"; Beechwood Hotel, Worcester, MA, April 26.

2006 **Invited speaker.** Beth Israel Deaconess Medical Center Transplant Update Course for Nurses. "Living and Deceased Donor Criteria"; Boston, MA; December 12.

2007 **Invited speaker.** Joslin Diabetes Center. Advances in Diabetes 2007. "Pancreas Transplantation; Boston, MA; November 3.

Invited speaker. Harvard Medical International and Wockhardt Hospitals CME. "Current Status of Organ Transplantation and Future Trends." Mumbai, India; November 12.

Invited speaker. Harvard Medical International and Wockhardt Hospitals CME. "Current Status of Organ Transplantation and Future Trends." Bangalore, India; November 15.

2008 **Lecturer.** "Advanced Course in Liver Diseases." Harvard Medical School and Beth Israel Deaconess Medical Center. "Surgical Considerations in the Management of Portal Hypertension." Boston, MA; January 16-18.

Invited speaker. Joslin Diabetes Center and Beth Israel Deaconess Medical Center Physician Appreciation Day. "Transplantation Update." Boston, MA; March 15.

Lecturer. "Advanced Course in Liver Diseases." Harvard Medical School and Beth Israel Deaconess Medical Center. "Surgical Considerations in the Management of Portal Hypertension." Boston, MA; April 16-18.

Advisory and supervisory responsibilities in clinical or laboratory setting

1988-1991 **Director,** Section of Transplantation
Department of Surgery
Washington University School of Medicine; St. Louis, MO
Advise and supervise 35 interns/residents on clinical transplant rotations each year along with 1-2 clinical transplant fellows per year
Preparation and contact time: 5 hours per week

1985-1991 **PI,** Transplant Immunology Laboratory
Washington University School of Medicine; St. Louis, MO
Advise and supervise 1 post-doctoral fellow or surgical resident per year
Percent time devoted to the laboratory: 25%

1991-2001 **Director,** Liver Transplant Program,
University of Cincinnati College of Medicine; Cincinnati, OH
Advise and supervise 35 interns/residents on clinical transplant rotations as well as 1 clinical transplant fellow per year
Preparation and contact time: 5-10 hours per week

1991-1995 **PI,** Transplant Immunology Laboratory
University of Cincinnati College of Medicine; Cincinnati, OH
Advise and supervise 1 post-doctoral fellow or surgical resident per year.
Per cent time devoted to the laboratory: 25%

2001- **Chief,** Division of Transplantation
Beth Israel Deaconess Medical Center and Harvard Medical School; Boston, MA

Advise and supervise 35 interns/residents on clinical transplant rotations as well as 1 clinical transplant fellow per year
Preparation and contact time: 5-10 hours per week

Teaching leadership role in department and medical school

1988-1991 **Director**, ASTS Approved Transplant Surgery Fellowship
Washington University School of Medicine; St. Louis, MO
Responsible for recruitment, training, and certification of transplant surgery fellows

2001-2008 **Director,** ASTS Approved Transplant Surgery Fellowship
Beth Israel Deaconess Medical Center; Boston, MA
Responsible for recruitment, training, and certification of transplant surgery fellows

Names of advisees or trainees

Duration of Training	**Name**	**Current Position**
Washington University School of Medicine		
1985-1986	Martin D. Jendrisak, M.D.	Assistant Professor of Surgery, Washington University School of Medicine; St. Louis, MO
1986-1987	Norman Kneteman, M.D.	Professor of Surgery, University of Alberta; Regional Program Clinical Director of Transplantation at Capital Health Authority; Edmonton, Alberta
1986-1988	Eric S. Berens, M.D.	Private practice, general and vascular general surgery; Tucson, AZ
1987-1988	Chris S. McCullough, M.D.	Transplant surgeon, Jacksonville Memorial Hospital; Jacksonville, FL
1988-1990	Mark W. Shelton, M.D.	Private practice, general and vascular surgery; Columbia, TN
1988-1990	Lloyd E. Ratner, M.D.	Chief, Kidney and Pancreas Transplantation; Professor of Surgery, Columbia University; New York, NY
1989-1991	Kiichiro Uchiyama, M.D.	Assistant Professor of Surgery, Nippon Medical School; Chairman of Surgery, Ebina General Hospital; Ebina, Japan
University of Cincinnati College of Medicine		
1991-1993	Maria H. Alonso, M.D.	Assistant Professor of Pediatric Surgery, Children's Hospital Medical Center; Cincinnati, OH
1992-1994	William F. Marterre, M.D.	Private practice, general surgery; Winston-Salem, NC
1993-1995	John F. Valente, M.D.	Private practice, general surgery; Alabama
1993-1994	Steve I. Rossi, Pharm.D.	Director, Viral Hepatitis Research, San Francisco Veterans Administration Hospital; San Francisco, CA

1994-1995	Martha A. Ferguson, M.D.	Private practice, colon and rectal surgery; Atlanta, GA
1996-1998	Annie Fecteau, M.D.	Staff surgeon, Hospital for Sick Children of Toronto; Assistant Professor of Surgery, University of Toronto; Toronto, Ontario, Canada
1999-2001	Scott R. Johnson, M.D.	Assistant Professor of Surgery, Harvard Medical School; Vice Chairman for Surgical Education; Program Director, General Surgery; Surgical Director of Renal Transplantation, Beth Israel Deaconess Medical Center; Boston, MA
2000-2001	Greg M. Tiao, M.D.	Assistant Professor of Pediatric Surgery, Children's Hospital Medical Center; Cincinnati, OH

Beth Israel Deaconess Medical Center

2001-2002	Mohamed Akoad, M.D.	Attending transplant surgeon, Pittsburgh Veteran's Affairs Hospital; Pittsburgh, PA
2003-2004	Charudutt Paranjape, M.D.	Trauma surgeon, Akron General Hospital; Akron, OH
2003-2005	Charles F. Bratton, M.D.	Assistant Professor of Surgery, Medical University of South Carolina; Charleston, SC
2006-2007	Myung Hee Yoon, M.D.	Assistant Professor of Surgery, Gospel Hospital, Kosin University College of Medicine; Busan, South Korea
2006-2008	Lena Sibulesky, M.D.	Transplant surgery fellow, Mayo Clinic, Jacksonville, FL
2008-	Kaori Kuramitsu, M.D., Ph.D.	Postdoctoral fellow, The Transplant Institute research laboratory, Beth Israel Deaconess Medical Center
2007-	Keren Ladin, M.Sc.	Clinical Research Associate, The Transplant Institute, Beth Israel Deaconess Medical Center; Ph.D. candidate, Department of Health Policy, Harvard University
2008-	Kristopher Croome, M.D.	Research Fellow, The Transplant Institute, Beth Israel Deaconess Medical Center; Masters Epidemiology candidate, Harvard University

2. Regional, national, or international contributions

Invited Presentations

Regional

1988 **Invited speaker.** Mid-America Transplant Services Symposium on Organ Donation; "Donor Management"; St. Bernard's Regional Medical Center, Jonesboro, AR; September 29.

1989 **Invited speaker.** Pediatric Grand Rounds; "Current Status of Pediatric Transplantation"; The Children's Mercy Hospital, Kansas City, MO; May 11.

Invited speaker. Clinical Transplantation Symposium; "Monoclonal and Polyclonal Antibody Induction in Renal Transplantation"; Research Medical Center, Kansas City, MO; October 6.

1990 **Invited speaker.** Surgery Grand Rounds; "A Prospective Randomized Comparison of Prophylactic OKT3 vs. ALG in Cadaver Renal Transplant Recipients"; University of Kansas, Kansas City, KS; April 11.

Invited speaker. Grand Rounds; "Benign Liver Masses: Diagnosis and Management"; Miami Valley Hospital, Dayton, OH; October 12.

1992 **Invited speaker.** Grand Rounds; "Changing Indications for Liver Transplantation"; Holzer Clinic, Gallipolis, OH; June 5.

1993 **Invited speaker.** 50th Annual Meeting of Central Surgical Association; "T-cell Receptor Usage in Acute and Chronic Allograft Rejection"; University of Cincinnati Medical Center, Cincinnati, OH; March 4.

Invited speaker. Midwest American Society for Histocompatibility and Immunogenetics Regional Meeting; "Post-transplant Clinical Complications"; Ohio State University, Columbus, OH; May 17.

1996 **Invited speaker.** Grand Rounds; "Liver Resection for Benign and Malignant Diseases"; Holzer Clinic, Gallipolis, OH; May 10.

1998 **Invited speaker.** 43rd Annual Meeting of the Ohio Chapter of the American College of Surgeons; "Cryo Surgery for Hepatic Tumors"; Columbus, OH; May 8.

2001 **Visiting Professor.** Cleveland Surgical Society Visiting Professor; "Surgical Management of Extrahepatic Cholangiocarcinoma"; Cleveland Surgical Society, Cleveland, OH; April 3.

2003 **Invited speaker.** Grand Rounds; "Liver Transplantation: Problems Solved and Unsolved"; Maine Medical Center, Portland, ME; February 13.

2004 **Invited speaker.** Grand Rounds; "Transplant Strategies"; Lowell General Hospital, Lowell, MA; May 12.

2006 **Invited speaker.** Lecture; "Multimodality Management of Hepatocellular Carcinoma: Who Gets What"; Rhode Island GI Society, Providence, RI; June 15.

2007 **Invited speaker.** Grand Rounds; "Treatment Options for Hepatocellular Carcinoma"; Baystate Medical Center; Springfield, MA; October 25.

2008 **Invited speaker.** Grand Rounds; "Liver Transplantation"; Exeter Medical Center; Exeter, NH; May 20.

2009 **Invited speaker.** Medical Grand Rounds; "Transplantation: State of the Art (and Science)"; Saint Vincent Hospital; Worcester, MA; January 29.

Invited speaker. Medical Grand Rounds; "Ethical Issues in Transplantation"; Saints Medical Center; Lowell, MA; April 2.

National

1983 **Invited speaker.** American Cancer Society Science Writers' Seminar Participant and Lecturer; "Epstein-Barr Virus Induced B-cell Lymphoma after Kidney Transplantation"; American Cancer Society, San Diego, CA.

1988 **Invited speaker.** American Society of Transplant Physicians Consensus Conference; "Prophylactic Use of Monoclonal Antibodies in Renal Transplantation"; St. Louis, MO; November 2.

1989 **Invited speaker.** Transplant Grand Rounds; "OKT®3 and Minnesota ALG in Renal Transplantation"; Dallas Transplant Institute, Dallas, TX; March 21.

Invited speaker. Society of Clinical Surgery Meeting; "EBV Related Lymphoproliferative Diseases after Transplantation"; St. Louis, MO; November 3.

1990 **Invited speaker.** Grand Rounds; "Prophylactic Use of OKT®3 in Transplantation"; University of New York, Syracuse; Syracuse, New York; May 4.

1991 **Invited speaker.** Nephrology Grand Rounds; "Viral Infections in Transplant Patients"; St. Francis Medical Center, Tulsa, OK; November 11.

1992 **Invited speaker.** Transplant Conference; "Posttransplant Epstein-Barr Virus Related Lymphoproliferative Diseases"; Porter Memorial Hospital, Denver, CO; April 3.

Faculty. Ortho Biotech Training School; "Transplantation Immunology"; Ortho Biotech, Raritan, NJ; April 7.

Invited speaker. Multidisciplinary Transplantation Conference; "Clonality of EBV-Related Lymphoproliferative Disease in Transplant Recipients: Implications for Treatment"; University of California San Francisco, San Francisco, CA; September 30.

1993 **Invited speaker.** Surgical Grand Rounds; "Clonality of Post-Transplant Lymphoproliferative Diseases in Transplant Recipients: Implications for Treatment"; Yale Medical School, New Haven, CT; January 9.

Invited speaker. Central Surgical Association 50th Annual Meeting; "T-Cell Receptor Usage in Acute and Chronic Allograft Rejection"; University of Cincinnati Medical Center, Cincinnati, OH; March 4.

Invited speaker. Eighth Annual Meeting: Clinical Applications of Cytometry; "Overview of Monitoring the Transplant Recipient"; Charleston, SC; August 12.

Faculty. Ortho Biotech Training School; "Transplantation Immunology"; Ortho Biotech, Raritan, NJ; August 13.

1994 **Invited speaker.** Transplant Pathology Review Conference; "Spectrum of Post-Transplant EBV Related Lymphoproliferative Diseases and Implications for Therapy"; Swedish Medical Center, Seattle, WA; April 27.

1995 **Invited speaker.** Controversies in Transplant Infection; "PTLD: Role of Current and Future Therapies"; University of Iowa College of Medicine and Mayo Clinic, Tucson, AZ; February 5.
Invited speaker. Surgical Grand Rounds; "Current Outcomes in Liver Transplantation"; University of South Carolina School of Medicine, Columbia, SC; September 29.

Faculty. Ortho Biotech Training School; "Transplantation Immunology"; Ortho Biotech, Raritan, NJ; November 2.

Invited speaker. Southern Area Regional Transplant Symposium; "OKT3 Induction in Liver Transplantation"; Carolinas Medical Center, Charlotte, NC; December 1.

1996 **Invited speaker.** Transplant Conference; "OKT3 Prophylaxis in Liver Transplantation"; Oregon Health Sciences University, Portland, OR; June 20.

Invited speaker. Transplant Conference; "OKT3 Induction in Liver Transplantation: Role for Low Dose Therapy?"; University of Nebraska, Omaha, NE; October 24.

2001 **Visiting Professor.** Research Seminar Series; "To Induce or Not to Induce; Monoclonal Antibody Prophylaxis in Liver Transplantation"; Institute for Cellular Therapeutics, University of Louisville Health Sciences Center, Louisville, KY; February 7.

Visiting Professor. Cleveland Surgical Society; "Management of bile duct injuries after laparoscopic cholecystectomy"; Cleveland, OH; April 3.

Visiting Professor. Surgical Grand Rounds; "Lessons Learned from Adult Living Related Donor Right Lobe Liver Transplantation"; Case Western Reserve University, Department of Surgery, Cleveland, OH; April 4.

2003 **Invited speaker.** UMN Fellows' Symposium; "The Saga of PTLD"; University of Minnesota, Department of Surgery, Minneapolis, MN; November 8.

2004 **Invited speaker.** UMN Transplant Conference; "Malignancies and Transplantation, Before and After: What We Know and Don't Know"; University of Minnesota, Department of Surgery, Minneapolis, MN; February 18.

Invited speaker. The Halsted Society 78th Annual Meeting; "Pursuit of a Peaceful Death in the Face of Technology"; Stanford University, Stanford, CA; September 11.

2005 **Visiting Professor.** Charles Witte Legacy Lecture; "Translational Research: What Is It?"; University of Arizona, Department of Surgery, Tucson, AZ; March 2.

Visiting Professor. The Medical Student Research Program Seminar; "The Surgeon as Translational Scientist: Bench to OR. Adventures of a UA Medical Student/Researcher: From Tucson to Boston"; University of Arizona, Department of Surgery, Tucson, AZ; March 2.

2006 **Invited speaker.** ASTS Winter Basic Science Course; "Human Use Ethics"; Scottsdale, AZ, January 19.

Panelist. Association of Organ Procurement Organizations; Annual Meeting. Town Hall Forum on Public Solicitation. Boston, MA; June 23.

Visiting Professor. Mayo Clinic Grand Rounds. "Experience with ECD and DCD organs in New England: what are the outer limits?"; Rochester, MN; June 26.

Invited speaker. Transplantation Administration and Transplant Executive Physician Workshop. "Transplant Physician Leadership: Critical Success Factors in Leading a Transplant Center"; San Diego, CA; October 16.

2007 **Invited speaker.** American College of Surgeons 93rd Annual Clinical Congress, GS23: Evidence-Based Care for Patients with Acute Upper Gastrointestinal Hemorrhage, "Surgical Considerations in the Management of Portal Hypertension"; New Orleans, LA; October 8.

Invited speaker. "Transplant Immunosuppression 2007: The Ongoing Search for Improvement", University of Minnesota. "When to Say "No" to Transplantation"; Minneapolis, MN; October 18.

Invited speaker. "Transplant Immunosuppression 2007: The Ongoing Search for Improvement", University of Minnesota. "Pretransplant Malignancy: When is it Acceptable to Transplant"; Minneapolis, MN; October 18.

2008 **Invited speaker.** ASTS Winter Symposium: "The High Risk Recipient". Pre-meeting symposium: "Preparation for a career in Transplantation." "Managing your Time and Creating Margin."; Marco Island, FL; January 24.

Invited speaker. "Frontiers of Ethics in Transplantation: Dilemmas and Struggles". Northwestern University Feinberg School of Medicine, Academy of Psychosomatic Medicine, the American Society of Transplant Surgeons, and the Chicago Transplant Ethics Consortium. "Ethical Challenges Posed by the Solicitation of Deceased and Living Organ Donors." Chicago, IL; April 4-6, 2008.

Invited speaker. "DDW; AASLD Research Highlights: Hepatobiliary Surgery and Liver Transplantation." DDW 2008. San Diego, CA; May 17.

International

1986 **Visiting Professor.** Sixth Sapporo Cancer Seminar Visiting Lecturer; "EBV-Related B-Cell Lymphoproliferative Diseases in Immunosuppressed Patients"; Sapporo Cancer Society, Sapporo, Japan.

1994 **Visiting Lecturer.** Premier Congres D'oncologie Du Patient Transplante. "Lymphome et Transplantation: Epidémiologie"; French Transplantation Society, Corsica, France; May 27.

1995 **Visiting Lecturer.** The 29th Annual Meeting of the Japanese College of Surgeons Visiting Lecturer; "Controversies in Liver Transplantation"; Japanese College of Surgeons, Tokyo, Japan; June 24.

2001 **Invited speaker.** International Liver Transplantation Society/European Liver Transplantation Society Combined Annual Meeting 2001; "ABO Incompatible Liver Transplants: To Do or Not to Do. A Debate"; Berlin, Germany; July 13.

2004 **Invited speaker.** Roche Satellite Symposium, XX Annual Congress of the Transplantation Society; "Association of Immunosuppressive Regimens with Post-transplant Lymphoproliferative Disorder, Graft Survival and Patient Survival after Renal Transplantation"; Vienna, Austria; September 6.

2005 **Invited speaker.** Japan Society for Transplantation, 41st Annual Meeting; "ABO-incompatible Transplants and Accommodation by Upregulation of Protective Genes: a Hypothesis"; Niigata, Japan; October 29.

Invited speaker. Japan Society for Transplantation, 41st Annual Meeting; Special Lecture; "Post-transplant Lymphoproliferative Diseases: Current Status and When to Transplant"; Niigata, Japan; October 30.

Invited speaker. Kobe University Lecture; "Current Status: ABO-incompatible Organ Transplantation and Post-transplant Lymphoproliferative Diseases"; Kobe, Japan; October 31.

2006 **Invited speaker.** Satellite Symposium on Ethics of Transplantation. World Transplant Congress, XXI Annual Congress of the Transplantation Society; "The Bulletin versus the Billboard: Solicitation for Donors"; Boston, MA; July 25.

Invited commentator. The Transplantation Society. Key Opinion Leaders Conference. Buenos Aires, Argentina; October 27-29.

2008 **Invited speaker.** State-of-the-Art Symposium. Ethical Issues in Donation and Transplantation. XXII International Congress of the Transplantation Society; "Directed and Conditional Donation from Deceased Donors - What is Acceptable?" Sydney, Australia; August 11.

2009 **Invited commentator.** The Transplantation Society. Key Opinion Leaders Conference. Jackson Hole, WY; July 16-19.

Professional and education leadership role related to teaching

1987-1989 American Association of Academic Surgery
Member, Program Committee
Responsible for evaluation and selection of abstracts for the annual meeting.

1994-1996 American Society of Transplant Surgeons
Member, Education Committee
Studied manpower needs in the United States and the ability of transplant fellows to find employment in their field (Kaufman D, Ascher N, Education Committee of the American Society of Transplant Surgeons: Quo vadis, my transplant fellow. Transplantation 1998;65:269-272).

2001-2003 American Association for the Study of Liver Diseases
Chair, Clinical Transplantation and All Other Transplantation Review Group for Annual Meeting
Responsible for evaluation and selection of abstracts for the clinical transplant sessions of the AALSD annual meeting.

2001-2004 American Association for the Study of Liver Diseases
Member, Experimental Transplantation; Preservation, Ischemia/Reperfusion; Cell Transplantation; Hepatobiliary Abstract Review Committee for Annual Meeting
Responsible for evaluation and selection of abstracts for the transplant and hepatobiliary sessions of the AALSD annual meeting.

2004-2006 American Association for the Study of Liver Diseases
Member, Clinical Transplantation and All Other Transplantation Review Group for Annual Meeting
Responsible for evaluation and selection of abstracts for the clinical transplant sessions of the AALSD annual meeting.

2004-2007 American Hepato-Pancreato-Biliary Association
Member, Program Committee
Responsible for abstract selection for transplant oral and poster sessions, recruitment of commentators on oral papers, and organization of special speaker events for the transplant sessions.

2005 American Association for the Study of Liver Diseases and
International Liver Transplant Society
Chair, Transplant Course Session
Case presentation/panel discussion; "Which patient should receive which graft?";
AASLD Annual Meeting; San Francisco, CA, November 11.

2005-2007 American Association for the Study of Liver Diseases
Member, Scientific Program Committee
The program committee was responsible for organizing all aspects of the AASLD Annual Meeting including abstract selection (plenary, oral, and poster sessions), special lectures, post graduate course, etc.

2006-2007 Liver Diseases Research Branch, National Institute of Diabetes & Digestive & Kidney Diseases, National Institutes of Health
Member, Steering Committee
Clinical Research Workshop "Improving Long-Term Outcomes for Pediatric Liver Transplantation."

2007 Liver Diseases Research Branch, National Institute of Diabetes & Digestive & Kidney Diseases, National Institutes of Health, Bethesda, MD
Moderator
Session "Long-Term Immunosuppression after Pediatric Liver Transplantation"; Clinical Research Workshop "Improving Long-Term Outcomes for Pediatric Liver Transplantation"; Bethesda, MD; February 12.

2007 American Association for the Study of Liver Diseases.
Member, Organizing Committee
Co-Moderator, Combined Clinical Session
Session "Diagnosis and Management of Benign Liver Masses"; DDW Annual Meeting. Washington, DC; May 22.

2007-2008 American Transplant Congress (joint annual meeting of ASTS/AST)
Co-Chair, Abstract Review Committee

2008 Harvard Medical School and Beth Israel Deaconess Medical Center.
Co-Director and Course Organizer along with Dr. Michael Curry.
"Advanced Course in Liver Diseases". January 16-18.

Harvard Medical School and Beth Israel Deaconess Medical Center.
Co-Director and Course Organizer along with Dr. Michael Curry.
"Advanced Course in Liver Diseases". April 16-18.

2009-2010 American Association for the Study of Liver Diseases.
Representative on Organizing Committee for International Consensus Conference "Consensus Conference on HCC and Liver Transplantation." Sponsored by AASLD, ELITA, IHPBA, ILCA, ILTS, and TTS
Zurich, Switzerland, 2010

E. Report of Clinical Activities:

Description of clinical practice

My clinical practice includes adult deceased donor and living donor liver transplants, nontransplant hepatobiliary surgery, adult deceased donor and living donor kidney transplants, pancreas transplants, deceased donor organ retrieval, and dialysis access.

Patient load and complexity of cases

My primary patient population consists of complex patients with end-stage liver and/or kidney disease, diabetes mellitus, benign and malignant diseases of the liver and biliary tree, as well as deceased donors and healthy living donors. I perform approximately 250 complex surgical procedures per year with excellent outcomes.

Clinical contributions

The most significant original contributions include:

a. Classification and elucidation of the pathogenesis of the post-transplant lymphoproliferative diseases that has influenced approaches to diagnosis and treatment (Ref # 3,4,5,8,12,24)
b. First description of antibody mediated hyperacute rejection of a liver in man (Ref # 19)
c. First description of the development of an immunoblastic lymphoma of T-cell type in a renal transplant recipient (Ref # 25)
d. First description of a technique for laparoscopic drainage of a post-kidney transplant lymphocele (CC Ref # 3)
e. First report of a new technique for complete percutaneous venovenous bypass during liver transplantation (Ref # 42)
f. Development and implementation of a protocol to prevent immunological graft losses in ABO incompatible liver transplants (Ref # 56)
g. Improved technique and long-term results of surgical repair of benign bile duct strictures (Ref # 53)
h. Description of relative risk of developing PTLD with various immunosuppressive drugs (Ref # 60, 69)
j. Demonstration of the feasibility of renal and extrarenal transplantation from donors after cardiac death with ICU extubation (Ref # 70)
i. Analysis of when it is safe to retransplant patients with a history of PTLD (Ref # 72)
j. Development of a novel model of delayed graft function in swine and the demonstration that carbon monoxide can reduce the severity and duration of DGF (Submitted, Abstract # 60)

PART III: Bibliography

Original Articles:

1. Witte MH, **Hanto DW**, Witte CL. Clinical and experimental techniques to study the lymphatic system. Vascular Surg 1977; 11:120-129.
2. Tack KJ, Peterson PK, Rasp FL, O'Leary M, **Hanto DW**, Simmons RL, Sabath LD. Isolation of Chlamydia trachomatis from the lower respiratory tract of adults. Lancet 1980; 1:116-120.
3. **Hanto DW**, Sakamoto K, Purtilo DT, Simmons RL, Najarian JS. The Epstein-Barr virus in the pathogenesis of post-transplant lymphoproliferative disorders. Clinical, pathologic, and virologic correlation. Surgery 1981; 90:204-213.
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5. Frizzera G. **Hanto DW**, Gajl-Peczalska KJ, Rosai J, McKenna RW, Sibley RK, Lindquist LL, Holahan KP. Polymorphic diffuse B-cell hyperplasia and lymphomas in renal transplant recipients. Cancer Research 1981; 41:4262-4279.
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7. **Hanto DW**, Hoffman R, Simmons RL. The recruitment of unsensitized circulating lymphocytes to sites of allogeneic cellular interactions. Transplantation 1982; 33:541-546.
8. **Hanto DW**, Frizzera G, Gajl-Peczalska KJ, Sakamoto K, Purtilo DT, Balfour HH Jr, Simmons RL, Najarian JS. Epstein-Barr virus induced B-cell lymphoma after renal transplantation. Acyclovir therapy and transition from a polyclonal to monoclonal B-cell proliferation. N Engl J Med 1982; 306:913-918.
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11. **Hanto DW**, Harty JT, Hoffman RA, Simmons RL. Cyclosporine suppression of lymphocyte recruitment, blood flow, and vascular permeability at sites of allogeneic cellular interactions. Surgery 1983; 94:218-224.
12. **Hanto DW**, Gajl-Peczalska KJ, Frizzera G, Arthur D, Balfour HH Jr, McClain K, Simmons RL, Najarian JS. Epstein Barr virus (EBV) induced polyclonal and monoclonal B-cell lymphoproliferative diseases occurring after renal transplantation. Clinical, pathologic, and virologic findings and implications for therapy. Ann Surg 1983; 198:356-369.
13. **Hanto DW**, Harty JT, Simmons RL. Lymphocyte recruitment properties of regional lymph node and spleen cells using skin allograft rejection. Transplantation 1983; 36:578-580.
14. Tubman DE, Frick MP, **Hanto DW**. Lymphoma after organ transplantation: radiologic manifestations in the central nervous system, thorax, and abdomen. Radiology 1983; 149:625-631.

15. Frick MP, Salomonowitz E, **Hanto DW**, Gedgaudas-McClees K. Computed tomography of abdominal post-transplant lymphomas. Am J Roentgenology 1984; 142:97-99.

16. **Hanto DW**, Simmons RL, Najarian JS. Epstein-Barr virus induced lymphoproliferative diseases in renal allograft recipients. Heart Transplantation 1984; 3:121-131.

17. **Hanto DW**, Widmer MB, Simmons RL. Mediation of cellular recruitment *in vivo* by functionally distinct T cell clones. Transplantation 1986; 42:168-171.

18. **Hanto DW**, Harty JT, Hoffman RA, Simmons RL. Evidence that secondary mixed leukocyte culture supernatant mediates changes in cellular recruitment, blood flow, and vascular permeability. Transplantation 1986; 42:621-627.

19. **Hanto DW**, Snover DC, Noreen HJ, Sibley RK, Gajl-Peczalska KJ, Najarian JS, Ascher NL. Hyperacute rejection of a human orthotopic liver allograft in a presensitized recipient. Clin Transplant 1987; 1:304-310.

20. Bucy RP, **Hanto DW**, Berens ES, Schreiber RD. Lack of an obligate role for IFN-α in the primary *in vitro* mixed lymphocyte response. J Immunol 1988; 140:1148-1152.

21. Billiar TR, **Hanto DW**, Simmons RL. Inclusion of uncomplicated infectious mononucleosis in the spectrum of Epstein-Barr virus infections in transplant recipients. Transplantation 1988; 46:159-161.

22. Farrar RP, **Hanto DW**, Flye MW, Chaplin H. Blood component use in orthotopic liver transplantation. Transfusion 1988; 28:474-478.

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78. Croome KP, Chudzinski R, **Hanto DW.** Increasing time delay from presentation until referral to tertiary care surgeons for hepatobiliary (HPB) malignancies. Canadian Surgery Forum. Victoria, BC, September 11, 2009 (poster presentation).

79. Kuramitsu K, Wegiel B, Csizmadia E, Otterbein LE, **Hanto DW**. The effect of carbon monoxide on liver regeneration after hepatectomy. American Association for the Study of Liver Diseases. The Liver Meeting 2009. Boston, MA, October 30-November 3, 2009, abstract #713 (accepted).

80. Kuramitsu K, Csizmadia E, Otterbein LE, **Hanto DW.** A new strategy to accelerate liver regeneration after hepatectomy. American Society of Transplant Surgeons Annual State of the Art Winter Symposium; Fort Lauderdale, FL, Jan 2010, abstract #13 (oral poster presentation) (accepted).