

**Todd Victor Brennan, MD, MS, FACS**

Curriculum Vitae 2018

**Business Address:** **Cedars-Sinai Medical Center**  
Comprehensive Transplant Center  
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**Email Address:** [todd.brennan@cshs.org](mailto:todd.brennan@cshs.org)

**Education:** 1989-1994 University of California-Los Angeles, Los Angeles CA – B.S.  
1993-1994 University of California-Los Angeles, Los Angeles CA –M.S.  
1994-1999 Harvard Medical School, Boston, MA – M.D.  
1999-2000 University of California-San Francisco, CA – Intern  
2000-2006 University of California-San Francisco, CA - Resident  
2006-2007 University of California-San Francisco, CA – Chief Resident  
2007-2009 University of California-San Francisco, CA - Fellowship

**Licensure:** Medical Board of California, License A75140

**Board Certification:** American Board of Surgery (053346) – 3/05/2008 - Present

**Professional Experience:** 2007-2009 Clinical Instructor, Division of Abdominal Transplantation  
University of California-San Francisco

2009-2010 Clinical Instructor, Division of Abdominal Transplantation  
Duke University Medical Center

2010-2014 Assistant Professor, Division of Abdominal Transplantation  
Duke University Medical Center

2010-2014 Associate Professor, Division Abdominal Transplantation  
Duke University Medical Center

2018 – Staff Physician II, Comprehensive Transplant Center  
Cedars-Sinai Medical Center

**Honors and Special Awards:**

- 2018 Session Moderator, American Transplant Congress, “Endothelial Cell Biology”
- 2018 Reviewer, 3<sup>rd</sup> Annual Duke University Department of Surgery Resident Research Award
- 2018-Present Ad hoc reviewer for *Surgery*
- 2017-2020 Society of University Surgeons, Publications Committee
- 2017-2020 American Society of Transplant Surgeons, Cell Transplant Committee
- 2017 Session Moderator, Academic Surgical Congress “Basic Science: Cardiothoracic, Vascular, Transplantation Quickshot”
- 2017 Grant Reviewer, Duke Center for AIDS Research, Duke University Medical Center
- 2017 Reviewer, 2<sup>nd</sup> Annual Duke University Department of Surgery Resident Research Award
- 2017 Reviewer, Duke Physician-Scientist Strong Start Award
- 2017 Member, Duke Physician-Scientist Retreat Steering Committee Meeting
- 2017 Abstract Reviewer for the American Transplant Congress 2018
- 2016 Reviewer, 1<sup>st</sup> Annual Duke University Department of Surgery Resident Research Award
- 2016 Abstract Reviewer, 26<sup>th</sup> International Congress of the Transplantation Society
- 2016-2018 Clarence Gardner, M.D. Award at Duke University Medical Center
- 2016-2018 Duke Transplant Center Award for funding of pilot projects
- 2016 Duke University School of Medicine Health Scholar
- 2016-Present Ad hoc reviewer for *Science Translational Medicine*
- 2015-2017 Nominating Committee for the Association for Academic Surgery (AAS)
- 2015-2016 Grant Reviewer, Duke Translational Research Institute
- 2015 Reviewer for National Health and Medical Research Council (NHMRC) Research Grants Management System (RGMS), Australia
- 2014-2016 Executive Councilor Elect for the Association for Academic Surgery (AAS)
- 2014-Present Ad hoc reviewer for *International Immunopharmacology*
- 2014-Present Ad hoc reviewer for *Clinical Transplantation*
- 2014 School of Medicine Core Voucher Award at Duke University Medical Center
- 2014-Present Ad hoc reviewer for *Transplantation*
- 2013-Present Ad hoc reviewer for *Annals of Surgery*
- 2012-Present Ad hoc reviewer for *Expert Opinion on Emerging*

### *Drugs*

- 2012-Present Ad hoc reviewer for *Immunology Letters*
- 2012-Present CTIL Oversight Committee, Duke University Health System
- 2012 Poster of Recognition at American Transplant Congress
- 2012-2017 Career Development Award (NIAID), NIH 1K08AI101263
- 2011 Duke University Medical Center, Surgery Fund Award
- 2011 American Transplant Congress, Poster of Distinction
- 2011 American Surgical Congress, Top 10 Oral Presentation
- 2011-Present Ad hoc reviewer for *Journal of Clinical Investigation*
- 2011-Present Ad hoc reviewer for *American Journal of Transplantation*
- 2011-2013 Membership Committee, Association for Academic Surgery
- 2010-2012 NIH/NIAID, Loan Repayment Program
- 2010 American Association for the Study of Liver Disease, Career Development Award in Liver Transplantation
- 2010 American Society of Transplantation, Basic Science Faculty Development Grant
- 2010 American Society of Transplant Surgeons, Vanguard Award
- 2007 American Society of Transplant Surgeons, Novartis Fellowship in Transplantation
- 2004 American Transplant Congress, Young Investigator Award
- 2004 American Society of Transplant Surgeons, Roche Laboratories Scientist Scholarship
- 2004 & 2008 University of California, San Francisco, Department of Surgery, Most Outstanding Resident Research Award
- 2003 American College of Surgeons, Resident Research Fellowship
- 1994 University of California, Los Angeles, Merck Index Award for Undergraduate Research
- 1994 University of California, Los Angeles, Departmental Highest Honors
- 1994 University of California, Los Angeles, Departmental Scholar
- 1994 Harvard Medical School, Medical Scientist Training Program
- 1993 University of California, Los Angeles, Arthur Furst Award for Undergraduate Research
- 1992 University of California, Los Angeles, Dept of Chemistry & Biochemistry, Undergraduate Research Award
- 1992 University of California, Los Angeles, Nominated Undergraduate Student of the Year
- 1992 University of California, Los Angeles, Presidential Fellowship
- 1991 University of California, Los Angeles, Geissman Award for Organic Chemistry

**Research Grants:**

	<u>PI</u>	<u>%Effort</u>	<u>Purpose</u>	<u>Amount</u>	<u>Duration</u>
a) Past:	Todd Brennan & Sang-Mo Kang	0%	American College of Surgeons. Tolerogenic Dendritic Cells in Transplantation.	\$60,000	2003-2005
	Todd Brennan & Sang-Mo Kang	0%	American Society of Transplant Surgeons. Roche Laboratories Scientist Scholarship. Development of a New T cell receptor transgenic mouse with direct allospecificity.	\$70,000	2004-2006
	Todd Brennan & Sang-Mo Kang	0%	American Society of Transplant Surgeons. Novartis Fellowship in Transplantation. Study of immune tolerance at the maternal-fetal barrier	\$85,000	2007-2009
	Todd Brennan	0%	American Society of Transplantation. Basic Scientist Award. Role of the innate immune system in the activation of allospecific T cells	\$85,000	2010-2012
	Todd Brennan	0%	American Association for the Study of Liver Disease. Career Development Award. Role of the innate immune system in the activation of allospecific T cells	\$90,000	2010-2012
	Todd Brennan	0%	Duke University School of Medicine Research Core Facilities Voucher Award	\$10,000	2014
	Todd Brennan	5%	Biomarker Foundation. Heparan Sulfate as a Serum	\$535,131	2013-2015

Biomarker for Kidney  
Transplant Rejection

M. Louise Markert & Todd Brennan	5%	Hartwell Foundation. Use of Thymus Transplantation to Induce Tolerance to Liver Transplants Transplant Rejection	\$300,000	2012-2015
Todd Brennan	10%	A Phase 1, Open Label Study to Evaluate the Effect of Tofacitinib (CP-690,550) Administration and Withdrawal on Immune Cell Function in Healthy Volunteers	\$776,211	2015
Todd Brennan	75%	NIH/NIAID:1K08AI101263  The Innate Immune System in the Regulation of Allospecific T lymphocytes	\$644,085	2012-2017
Todd Brennan	2%	Clarence Gardner, M.D. Award, Duke University Department of Surgery	\$80,000	2016-2017
Todd Brennan	0%	Duke Transplant Center Award for funding of pilot projects	\$15,000	2016
Todd Brennan	0%	Duke Health Scholar Award	\$450,000	2016

**Invited Lectures and Presentations:**

1. “Multi-Gene Expression Using Lentivirus.” University of California, San Francisco, Department of Surgery Resident Research Day, San Francisco, CA, March 2003.
2. “Early Graft Function after Living Donor Kidney Transplantation Predicts Rejection but Not Outcomes.” American Transplant Congress, Washington, DC, May 2003.
3. “Lentiviral-Based Gene Transduction System Capable of Delivering Multiple Genes to Bone Marrow Cells.” Federation of Clinical Immunology Societies, Paris, France, May 2003.

4. "Development of a Direct Allogeneic CD4+ T Cell Receptor Transgenic Mouse." University of California, San Francisco, Department of Surgery Resident Research Day, San Francisco, CA, March 2004.
5. "Who is the Better Living Kidney Donor? A Predictive Model Based on Simple Donor- Recipient Demographics." American Transplant Congress, Boston, MA, May 2004.
6. "A New MHC Class II-Restricted TCR Transgenic Mouse Model for the Study of Alloimmunity." American Transplant Congress, Boston, MA, May 2004.
7. "Participation in Clinical Studies Does Not Alter Outcomes after Primary Living Donor Kidney Transplantation." American Transplant Congress, Boston, MA, May 2004.
8. "Tracking the Alloimmune Response Using a New CD4+ T Cell Receptor Transgenic Mouse." FASEB Summer Research Conference in Transplantation Immunology, Snowmass Village, CO, June 2004.
9. "Tracking the Direct Alloimmune Response in vivo Using a New CD4+ T Cell Receptor Transgenic Mouse Model." American College of Surgeons 90th Annual Clinical Congress, New Orleans, LA, October 2004.
10. "A New Model for Tracking the Alloimmune Response in vivo." University of California, San Francisco, Department of Surgery Resident Research Day, San Francisco, CA, March 2005.
11. "Allospecific Regulatory T Cells Can Prolong Allograft Survival." American Transplant Congress, Seattle, WA, May 2005.
12. "Disproportionate Expansion of CD4 Indirect T Cells Relative to CD4 and CD8 Direct T Cells in Acute Allograft Rejection." 9th Basic Science Symposium of the Transplantation Society, La Baule, France, June 2005.
13. "Allospecific Regulatory T Cells Can Prolong Allograft Survival." 9th Basic Science Symposium of the Transplantation Society, La Baule, France, June 2005.
14. "Microlaparoscopic (ML) Placement of Chronic Ambulatory Peritoneal Dialysis (CAPD) Catheters: Comparison to Open Technique (OT)." Society of American Gastrointestinal and Endoscopic Surgeons Annual Meeting, Philadelphia, PA, April 2008.
15. "Simultaneous Liver Kidney Transplantation: Impact on One Year Patient Survival Among Liver Transplant Candidates with Renal Dysfunction." American Association for the Study of Liver Diseases, San Francisco, CA, November 2008.
16. "Regulation of Alloimmunity by Innate Immune Pathways." National Institute of Environmental Health Sciences (NIEHS), Durham, NC, February 2010.
17. "Role of Innate and Adaptive Immune Pathways in Transplantation." Grand Rounds, Department of Surgery, Duke University Medical Center, Durham, NC, July 2010.
18. "Endogenous Innate Immune Activators of Alloimmunity." The Division of General, Vascular, High-Risk Trauma, Transplant, and Surgical Critical Care Medicine (GVTCCM) Anesthesia Conference Series, Durham, NC, October 2010.
19. "Modulation of GVHD by endogenous TLR ligand, heparan sulfate." Hematological Malignancies and Cellular Therapy Retreat, Duke University Medical Center, Durham, NC, February 2011.
20. "Heparan sulfate is a potent stimulator of the alloimmune response." Academic Surgical Congress, Huntington Beach, CA, February 2011.
21. "Modulation of Graft-vs-Host Disease by Endogenous TLR Ligand, Heparan Sulfate." Southern Society of Clinical Surgeons, Durham, NC, March 2011.

22. "Heparan sulfate is a biomarker of rejection and a potent stimulator of allospecific T cells through innate immune pathways." American Transplant Congress 2011, Philadelphia, PA, April 2011.
23. "Liver Transplant Tolerance: A New Look at an Old Puzzle." American Transplant Congress 2011, Philadelphia, PA, April 2011.
24. "Use of Rectus Sheath as a Vascularized Composite Tissue Allograft in Multivisceral Transplantation." American Transplant Congress 2011, Philadelphia, PA, April 2011.
25. "Analysis of Renal Outcomes for Simultaneous Liver Kidney Transplant (SLKT) and Liver Transplant Alone (LTA) Recipients." American Transplant Congress 2011, Philadelphia, PA, April 2011.
26. "Murine Pancreatic Ischemia-Reperfusion Injury Up-Regulates Interleukin-1 beta, Interleukin-6, and CCL-2". American Society of Transplant Surgeons (ASTS) Winter Conference, Miami, FL, January 2012.
27. "Pilot study of contrast-enhanced renal transplant MRA with a nongadolinium-based agent." American Roentgen Ray Society (ARRS) Annual Meeting, Vancouver, BC, Canada, April 2012.
28. "Novel Murine Model of Pancreatic Ischemia Reperfusion Injury Up-Regulates Interleukin-1 Beta, Interleukin-6, and CCL-2." American Transplant Congress 2012, Boston, MA, June 2012.
29. "Reduces Alloreactive T Cell Activation and Decreases Graft-vs-Host Disease Following Hematopoietic Stem Cell Transplantation." American Transplant Congress 2012, Boston, MA, June 2012.
30. "Lymphocyte Regulation by the Innate Immune System." Solid Organ Transplant Translational Research Interdisciplinary Colloquium at Duke University, Durham, NC, December 2012.
31. "Pilot study of contrast-enhanced renal transplant MRA with a nongadolinium-based agent." 113<sup>th</sup> Annual Meeting of the ARRS, Washington, DC, April 2013.
32. "Long-term persistence of recipient MHC class-II antigen following allogeneic bone marrow transplantation. 10th International Conference on New Trends in Immunosuppression and Immunotherapy. Barcelona, Spain. March 11-12, 2013.
33. "Jak3 Dependent Inhibition of Alloreactive T Cell Proliferation in the Setting of Chronic TLR Stimulation". American Transplant Congress. Seattle, WA. May 2013.
34. "Mitochondrial DNA Can Function as an Endogenous Activator of Alloreactive T Cells" World Transplant Congress. San Francisco, CA. July 2014.
35. "The heparan sulfate mimetic, PG545, induces a potent anti-lymphoma effect by enhancing innate immune activation by endogenous nucleic acids". World Transplant Congress. San Francisco, CA. July 2014.
36. Duke University Medical Center Basic Science Day. Oct 2015 "The heparan sulfate mimetic, PG545, induces a potent anti-lymphoma effect by enhancing innate immune activation by endogenous nucleic acids"
37. "Complete Thymectomy in Adult Rats with Non-invasive Endotracheal Intubation." Academic Surgical Congress. Las Vegas, NV. Feb 2015.
38. Radojic V, Chung J, Friedman A, **Brennan TV**, Siebel CW, Maillard I. Evaluating the early effects of Notch blockade on alloantigen-specific T-cells after allogeneic bone marrow transplantation. Autumn Immunology Conference 2014
39. Vedran Radojic, Jooho Chung, Ann Friedman, Pavan Reddy, Bruce Blazar, Leo Luznik, **Todd V. Brennan**, Christian W. Siebel, Ivan Maillard. Early post-transplant Notch signaling activity is

- critical for the differentiation of pathogenic alloantigen-specific T cells mediating acute graft-versus-host disease. The American Society for Blood and Marrow Transplantation. 2015
40. **Brennan TV**. Surgery Grand Rounds, Duke University, Nov 19, 2014 “Innate Immunity in Graft Injury and Tumor Therapy”
  41. **Brennan TV**. 50th Anniversary of Transplantation at Duke University. Feb 2015. “Scientific Growth of the Transplantation Program and the Scientific Future Transplantation Research at Duke University”.
  42. Samy KP, Lin L, Yang Y, Kirk AD, **Brennan TV**. Endogenous Innate Immune Activation by Free Mitochondria. *Academic Surgical Congress*, Jacksonville FL, 2016.
  43. McDade JE, Naqvi J, Lee J, Pisetsky DS, Sullenger BA, **Brennan TV**, White RR. The Role of Circulating DNA in Pancreatic Cancer and Potential for DNA Scavengers as Therapeutics. *Academic Surgical Congress*, Jacksonville FL, 2016.
  44. Feng F, Xu H, Lin L, Kirk AD, **Brennan TV**. Mitochondria-Vascular Endothelial Cell Interaction: A Critical Danger Signal Linking Host Immune Responses to Allograft Injury. 1<sup>st</sup> Annual Duke Surgery Science Day. Durham, NC, 2016.
  45. Feng F, Xu H, Lin L, Kirk AD, **Brennan TV**. Vascular Endothelial Cell Activation by Mitochondria Links Innate and Adaptive Immune Responses to Allograft Injury. American Transplant Congress. Boston. June 2016.
  46. Reddy J, Rege A, Vikraman D, Collins B, **Brennan T**, Knechtle S, Sudan D, Ravindra K. Use of En-Bloc Vascularized Rectus Sheath Allograft to Achieve Abdominal Closure in Pediatric Liver and Multivisceral Transplantation. American Transplant Congress. Boston. June 2016.
  47. **Brennan TV**. “N-Acetyl-beta-D-glucosaminidase (NAG) Assay for the Detection of Renal Allograft Rejection”. Promega, Madison Wisconsin. June 2016.
  48. MacDonald A, Samy KP, Parker BS, Truong T, Kuchibatia M, Espinosa J, McRae M, Cheeseman J, Kirk AD, **Brennan TV**. Urinary N-acetyl-beta-D-glucosaminidase Activity is Increased in Renal Transplant Rejection. Academic Surgical Congress. Las Vegas, NV, Feb 2017.
  49. Lin L, McRae M, MacDonald A, **Brennan TV**. Plasma Heparan Sulfate is a Biomarker of Acute Kidney Allograft Rejection. Academic Surgical Congress. Las Vegas, NV, Feb 2017.
  50. **Brennan TV**. Impact of Tissue Injury on Allograft Tolerance. Royal College of London. London, UK March 30, 2017.
  51. **Brennan TV**, Lin L, Song M, Feng F, Li QJ, Kirk AD, Xu H. Extracellular Mitochondria Cause B7 Costimulation Blockade Resistant Allograft Rejection in Mice. American Transplant Congress. Chicago, IL. April 2017.
  52. **Brennan TV**, Feng F, Lin L, Song M, Li QJ, Kirk AD, Xu H. Uptake of Extracellular Mitochondria Activates Human Endothelial Cells that Stimulate Alloreactive Effector T cell Responses. American Transplant Congress. Chicago, IL. April 2017.
  53. **Brennan TV**, Lin L, Pollara J. Circulating Inflammatory Factors in Deceased Organ Donors Result in Innate Immune Activation. American Transplant Congress. Chicago, IL. April 2017.
  54. Xu H, **Brennan TV**, Kirk AD. Evaluation of function and TCR signaling profile of CD57+ T cells in allospecific immunity. American Transplant Congress. Chicago, IL. April 2017.
  55. Xu H, **Brennan TV**, Kirk AD. IL-7 receptor heterogeneity as a mechanism for repertoire change during post-depletional homeostatic proliferation and its relation to costimulation blockade resistant rejection. American Transplant Congress. Chicago, IL. April 2017.



56. Dredge K, **Brennan TV**, Brown MP, Lickliter J, Bampton D, Hammond E, Lin L, Yang Y, Millward M. An open-label, multi-center phase I study of the safety and tolerability of the novel immunomodulatory agent PG545 in subjects with advanced solid tumors. American Society of Clinical Oncology 2017 Annual Meeting. Chicago, Illinois. June 2017
57. **Brennan TV**, Circulating Mitochondrial DAMPs in Deceased Organ Donors Promote Allograft Rejection. Cedars Sinai Medical Center, Los Angeles, CA. November 7, 2017
58. **Brennan TV**, Circulating Mitochondrial DAMPs in Deceased Organ Donors Promote Allograft Rejection. University of California San Diego, CA. November 27, 2017
59. Lubkin DT, Song M, Pollara J, **Brennan TV**, Kirk AD Link Between Extracellular Mitochondrial DNA and Soluble CD40 Ligand in Post-Traumatic Sterile Inflammation. Duke Surgery Annual Research Day, Durham, NC, April 2018
60. Nash A, **Brennan TV**. Effect of Immunosuppressive Reagents on Mitochondrial Function in Human T cells. Duke Surgery Annual Research Day, Durham, NC, April 2018
61. Nash A, Samoylova ML, **Brennan TV**. Pumping donor kidneys reduces delayed graft function, improves allograft survival, and reduced rates of rejection. Duke Surgery Annual Research Day, Durham, NC, April 2018
62. Zhu M, Samy K, Lin L, Wang J, Cendales L, Kirk AD, Barbas A, **Brennan TV**. Selective loss of RIP3 phosphokinase activity shortens cardiac allograft survival in the setting of costimulation blockade. Oral presentation at the American Transplant Congress, Seattle, June 4, 2018

#### **Teaching Activities:**

	2010-2018 Transplant Surgery Journal Club
	2010-2018 Transplant Surgery Fellow and Resident Education
2012	Immunology 310 – Immunopathogenesis
2013	Immunology 601 - Immunology of Human Disease
2013	Alpha Omega Alpha 44 <sup>th</sup> Annual Scientific Research Symposium
2014	Immunology 601 - Immunology of Human Disease
2014	Introductory team-based learning house course on immunology for Duke undergraduate students: Challenges in Contemporary Transplant Immunology
2015	Immunology 601 - Immunology of Human Disease
2016	Immunology 601 - Immunology of Human Disease
2017	Immunology 601 - Immunology of Human Disease

#### **Publications**

##### **Research Papers – Peer Reviewed (Published)**

1. **Brennan TV** & Clarke S. Spontaneous degradation of polypeptides at aspartyl and asparaginyl residues: Effects of the solvent dielectric. Protein Science, 2(3):331-338, Mar 1993.
2. **Brennan TV** & Clarke S. Mechanism of Cleavage at Asn 148 during the Maturation of Jack Bean Concanavalin A. Biochem Biophys Res Comm, 193(3):1031-1037, Jun 1993.

3. **Brennan TV**, Anderson JW, Jia Z, Waygood EB, & Clarke S. Repair of spontaneously deamidated HPr phosphocarrier protein catalyzed by the L-isoaspartate-(D-aspartate) O-methyltransferase. J Biol Chem, 269(40):24586-24595, Oct 1994.
4. **Brennan TV** & Clarke S. Effect of adjacent histidine and cysteine residues on the spontaneous degradation of asparagine and aspartic acid containing peptides. Int J Peptide Protein Res, 45(6):547-553, Jun 1995.
5. Xavier R\*, **Brennan T\***, Li Q, McCormack C, Seed B. Membrane Compartmentation is Required for Efficient T Cell Activation. Immunity, 8(6):723-732, Jun 1998. \*Co-First Authors.
6. **Brennan TV**, Rodefeld MD, Tacy TA, Reddy VM, Hanley FL. Late Thrombosis of the Native Aortic Root after Norwood Reconstruction for Hypoplastic Left Heart Syndrome. J Thorac Cardiovasc Surg, 121(3):580-2, Mar 2001.
7. **Brennan TV**, Lipshutz GS, Gibbs VC, Norton JA. Total Mesenteric Excision in the Treatment of Rectal Carcinoma: Methods and Outcomes. Surg Oncol, 10(4):171-6, May 2002.
8. **Brennan TV**, Horn JK, Stollman N. Laparoscopic Treatment of Acute Mesenteric Torsion. Surg Endosc, 16(6):1004, Jun 2002.
9. Lipshutz GS, **Brennan TV**, Warren RS. Thorotrast-Induced Liver Neoplasia: a Collective Review. J Am Coll Surg, 195(5):713-8, Nov 2002.
10. Yun EJ, Meng MV, **Brennan TV**, McAninch JW, Santucci RA, Rogers SJ. Novel Microlaparoscopic Technique for Peritoneal Dialysis Catheter Placement. Urology, 61(5):1026-8, May 2003.
11. **Brennan TV**, Lipshutz GS, Posselt AM, Horn JK. Congenital Cleft Spleen with CT Scan Appearance of High-Grade Splenic Laceration after Blunt Abdominal Trauma. J Emerg Med, 25(2):139-42, Aug 2003.
12. Lal G, **Brennan TV**, Hambleton J, Clark OH. Coagulopathy, Marantic Endocarditis and Cerebrovascular Accidents as Paraneoplastic Features in Medullary Thyroid Cancer--Case Report and Review of the Literature. Thyroid, 13(6):601-5, Jun 2003.
13. Vincenti F, **Brennan TV**, Fuller TF, Feng S. Optimizing the Use of Cyclosporine (Neoral) for Recipients of Living Donor Kidneys. Transplant Proc, 36(2 Suppl):50S-53S, Mar 2004.
14. **Brennan TV**, Freise CE, Fuller TF, Bostrom A, Tomlanovich SJ, Feng S. Early Graft Function after Living Donor Kidney Transplantation Predicts Rejection but not Outcomes. Am J Transplant, 4(6):971-9, Jun 2004.
15. Fuller TF, Feng S, **Brennan TV**, Tomlanovich S, Bostrom A, Freise CE. Increased Early Rejection in Living Unrelated vs. Living Related Kidney Transplants does not Affect Graft Function and Survival. Transplantation, 78(7):1030-5, Oct 15, 2004.
16. **Brennan TV**, Bostrom A, Tomlanovich SJ, Feng S. Optimizing Living Donor Kidney Graft Function by Donor-Recipient Pair Selection. Transplantation, 82(5):651-6, Sep 15, 2006.
17. Fuller TF, **Brennan TV**, Feng S, Kang S-M, Stock PG, Freise CE. End Stage Polycystic Kidney Disease: Indications and Timing of Native Nephrectomy Relative to Kidney Transplantation. J Urology, 174(6):2284-8, Dec 2005.
18. Garrod KR, Chang CK, Liu F-C, **Brennan TV**, Foster RD, Kang S-M. Targeted Lymphoid Homing of Dendritic Cells is Required for Prolongation of Allograft Survival. J Immunol, 177(2):863-8, Jul 15, 2006.

19. **Brennan TV**, Vincenti F, Chang CK, Bostrom A, Zlatunich JK, Fuller TF, Tomlanovich SJ, Feng S. Living Donor Kidney Transplant Recipients and Clinical Trials: Participation Profiles and Impact on Post-Transplant Care. Am J Transplant, 6(10):2429-35, Oct 2006.
20. **Brennan TV**, Hoang V, Garrod KR, Liu FC, Hayden T, Kim J, Kang SM. A New T-Cell Receptor Transgenic Model of the CD4+ Direct Pathway: Level of Priming Determines Acute Versus Chronic Rejection. Transplantation, 85(2):247-55, Jan 27 2008. PMID:1821263
21. **Brennan TV**, Hoang V, Hayden T, Liu FC, Zaid H, Chang CK, Bucy RP, Tang Q, Kang SM. Preferential Priming of Alloreactive T Cells with Indirect Reactivity. Am J Transplant, 9(4):709-18, Apr 2009. PMID:19344462 \*Featured in editorial by G. Benichoua and A. W. Thomson. Direct versus Indirect Allorecognition Pathways: On the Right Track. Am J Transplant, 9(4):655-6, Apr 2009.
22. **Brennan TV**, Lunsford KE, Kuo PC. Contribution of Innate Immune Pathways to Immune Activation in Liver Transplantation. J Transplant. Epub Aug 31, 2010. PMID:20871653
23. **Brennan TV**, Tang Q, Liu FC, Hoang V, Bi M, Bluestone JA, Kang SM. Requirements for prolongation of allograft survival with regulatory T cell infusion in lymphosufficient hosts. J Surg Res. 2011 Jul;169(1):e69-75. doi: 10.1016/j.jss.2011.03.021. Epub 2011 Apr 5. PMID: 21571317 \*Featured in editorial by Matthew Levine: Transplant tolerance and regulatory T cells: let's get into specifics. J Surg Res. 2011 Jul;176(1):17-9. doi: 10.1016/j.jss.2011.05.007. Epub 2011 Jun 12. PMID: 21696771
24. Lunsford KE, Barbas AS, **Brennan TV**. Recent advances in immunosuppressive therapy for prevention of renal allograft rejection. Curr Opin Organ Transplant, 16(4):390-7, Aug 2011. PMID:21666473
25. Vyas GN, Stoddart CA, Killian MS, **Brennan TV**, Goldberg T, Ziman A, Bryson Y. Derivation of Non-Infectious Envelope Proteins from Virions Isolated from Plasma Negative for HIV Antibodies. Biologicals, 40(1):15-20, Jan 2012. PMID:22192456
26. Ravindra KV, Martin AE, Vikraman D, **Brennan TV**, Collins BH, Hollenbeck ST, Chinappa-Nagappa L, Eager K, Cousino D, Sudan DL. Use of Vascularized Posterior Rectus Sheath Allograft in Pediatric Multivisceral Transplantation – Report of 2 Cases. Am J Transplant, 12(8):2242-6, Aug 2012. PMID:22594310
27. **Brennan TV**, Lin L, Huang X, Chao N, Yang Y. Heparan Sulfate, an Endogenous TLR4 Agonist, Promotes Acute GVHD following Allogeneic Stem Cell Transplantation. Blood, 120(14):2899-908, Oct 4, 2012. PMID: 22760779\*  
\*Featured in editorial by Pavan Reddy:  $\alpha$ -1 antitrypsin DAMPs GVHD. Blood, 120(14):2780-1, Oct 4, 2012. PMID: 23043026
28. Zhang H, Jun S, **Brennan TV**. Pneumatosis Intestinalis: Not Always a Surgical Indication. Case Rep Surg. Epub Nov 12, 2012. PMID: 23198249
29. Barbas AS, Rege AS, Castleberry AW, Gommer J, Ellis MJ, **Brennan TV**, Collins BH, Martin AE, Ravindra KV, Vikraman DS, Sudan DL. Posterior Reversible Encephalopathy Syndrome Independently Associated with Tacrolimus and Sirolimus after Multivisceral Transplantation. Am J Transplant, 13(3):808-10, Mar 2013. PMID:23331705
30. Lunsford KE, Baird BH, Sempowski GD, Cardona DM, Weinhold KJ, Sudan DL, **Brennan TV**. Up-Regulation of IL-13, IL-6 and CCL-2 by a Novel Mouse Model of Pancreatic Ischemia-Reperfusion Injury. Transplantation. 2013 Apr 27;95(8):1000-7. PMID:23416685

31. Bashir MR, Jaffe TA, **Brennan TV**, Patel UD, Ellis MJ. Renal Transplant Imaging Using Magnetic Resonance Angiography with a Non-nephrotoxic Contrast Agent. Transplantation. 2013 Jul 15;96(1):91-6 PMID:23680931
32. Tripuraneni V, Patel K, **Brennan TV**, Ho LM. Fulminant herpes simplex viral hepatitis: ultrasound and CT imaging appearance and a review of the imaging literature. Clin Imaging. 2013 Dec 4. pii: S0899-7071(13)00322-7. PMID: 24387920
33. Reddi DM, Barbas AS, Castleberry AW, Rege AS, Vikraman DS, **Brennan TV**, Ravindra KV, Collins BH, Sudan DL, Lagoo AS, Martin AE. Liver transplantation in an adolescent with acute liver failure from acute lymphoblastic leukemia. Pediatr Transplant. 2014 Jan 20. doi: 10.1111/petr.12221. [Epub ahead of print] PMID: 24438382
34. Rege AS, Rendell VR, Shrimal A, Engstrom BI, Miller MJ, Bashir MR, **Brennan TV**. May-Thurner Syndrome Complicating Left-Sided Donor Nephrectomy. Transplantation. 2014 Apr 15;97(7):e40-1. PMID: 24686428
35. **Brennan TV**, Lunsford KE, Vagefi PA, Bostrom A, Ma M, Feng S. Renal Outcomes of Simultaneous Liver-Kidney Transplantation Compared to Liver Transplant Alone for Candidates with Renal Dysfunction. Clin Transplant. 2014 Oct 18. doi: 10.1111/ctr.12479. [Epub ahead of print] PMID: 25328090
36. Rendell VR, Giamberardino C, Li J, Markert ML, **Brennan TV**. Complete Thymectomy in Adult Rats with Non-invasive Endotracheal Intubation. J Vis Exp. 2014 Dec 29;(94). PMID: 25590868.
37. **Brennan TV**, Rendell VR, Yang Y. Endogenous innate immune activators in hematopoietic stem cell transplantation. Front Immunol. 2015 Mar 16;6:101. PMID: 25852683
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43. Xu H, Bendersky VA, **Brennan TV**, Espinosa JR, Kirk AD. IL-7 receptor heterogeneity as a mechanism for repertoire change during postdepletional homeostatic proliferation and its relation to costimulation blockade-resistant rejection. Am J Transplant. 2018 Mar;18(3):720-730. doi: 10.1111/ajt.14589. Epub 2017 Dec 12. PMID: 29136317.

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50. Lubkin D, Bishawi M, Barbas A, **Brennan TV**, Kirk AD. Extracellular Mitochondrial DNA and N-Formyl Peptides in Trauma and Critical Illness: A Systematic Review. *Crit Care Med*. *In Press*.

#### Chapters in books:

1. Rege A, Nanavati A, **Brennan TV**. Elderly Transplant Recipients. In: *Principles and Practice of Geriatric Surgery*, edited by Ronnie A. Rosenthal, Michael E. Zenilman and Mark R. Katlic. Springer, Switzerland. Pp. 1-15, September 19, 2017. DOI 10.1007/978-3-319-20317-1\_56-1
2. **Brennan TV** & Clarke S. Deamidation and isoaspartate formation in model synthetic peptides: The effects of sequence and solution environment. Chapter 5 in *Deamidation and Isoaspartate Formation in Peptides and Proteins*. In Aswad D. W. (ed.) *Deamidation and Isoaspartate Formation in Peptides and Proteins*. CRC Press, Boca Raton, Florida. pp. 65-90, October 1995.

#### Research Papers - Peer-Reviewed (Submitted)

- 1.

#### Papers in Preparation (Research Completed):

1. Nash A, Samoylova M, **Brennan TV**. Machine perfusion of kidney allografts decreases acute rejection and improves graft survival. *In preparation*.
2. Nash A, Samy KP, MacDonald AL, Parker BS, Truong T, Kuchibatla M, Espinosa, JR, McRae M, Cheeseman J, Niles A, Kirk AD, **Brennan TV**. Detection of Preclinical Renal Allograft Rejection using a Novel Assay for Urinary N-acetyl-beta-D-glucosaminidase (NAG) Activity. *In preparation*.

3. Zhu M, Lin L, Wang J, Kirk AD, Barbas AS, **Brennan TV**. Mitochondria released during apoptotic cell death cause inflammasome activation and neutrophil recruitment . *In preparation*.
4. Zhu M, Samy K, Lin L, Wang J, Kirk AD, Barbas A, **Brennan TV**. Selective loss of RIP3 phosphokinase activity shortens cardiac allograft survival in the setting of costimulation blockade. *In preparation*.
5. **Brennan TV**, Lin L, Dredge K, Huang X, Yang Y. PG545 promotes DC activation by regulating the autophagy pathway and the accumulation of autolysosomes. *In preparation*.
6. Lin L, Kirk AD, **Brennan TV**. Mitochondria-endothelial interaction generates danger signal in promoting costimulation resistant T cell-mediated allograft rejection *In preparation*.
7. Xu H, Feng F, Lin L, Li Q, Kirk AD, **Brennan TV**. Uptake of Extracellular Mitochondria Activates Human Endothelial Cells that Stimulate Alloreactive Effector T Cell Responses. *In preparation*.
8. Heyman B, **Brennan TV**, Dredge K, Huang X, Yang Y. Neutrophil Dependence of PG545 Mediated Anti-Tumor Activity. *In preparation*.
9. Nash AL, Zhu M, Lin L, **Brennan TV**. Immunosuppressive reagents used in transplantation impair mitochondrial function. *In preparation*.
10. Medawar's Paradox and Immune Mechanisms of Fetomaternal Tolerance. Rendell VR, **Brennan TV**. OBM Transplantation. *In preparation*.

#### Abstracts:

1. **Brennan TV**, Fuller TF, Tomlanovich S, Bostrom A, Freise C, Feng S. Initial graft function after living donor kidney transplantation predicts rejection but not outcomes. *Am J Transplant*, 3(S5):360, 2003.
2. **Brennan TV**, Garrod K, Kang SM. Development of a novel lentiviral-based gene transduction system capable of delivering multiple genes to bone marrow cells. *Clinical Immunology*, 4(S1):146, 2003.
3. Garrod KR, **Brennan TV**, Kang S-M. Rational design of donor derived dendritic cells for tolerance induction. *Am J Transplant*, 4(S8):326, May 2004.
4. **Brennan TV**, Chang CK, Tomlanovich SJ, Bostrom A, Zlatunich JK, Vincenti F, Feng S. Participation in clinical studies does not alter outcomes after living donor kidney transplantation. *Am J Transplant*, 4(S8):352, May 2004.
5. **Brennan TV**, Garrod KR, Chang CK, Kang SM. A new MHC class II-restricted TCR transgenic mouse model for the study of alloimmunity. *Am J Transplant*, 4(S8):585, May 2004.
6. **Brennan TV**, Tomlanovich SJ, Bostrom A, Feng S. Who is the better living kidney donor? A predictive model based on simple donor-recipient demographics. *Am J Transplant*, 4(S8):594, May 2004.
7. Chang CK, Garrod KR, Liu F, **Brennan TV**, Kang SM. Targeted delivery of tolerogenic dendritic cells to secondary lymphoid organs is required for prolonging allograft survival. *Am J Transplant*, 5(S11):564, May 2005.
8. **Brennan TV**, Tang Q, Liu F, Bi M, Hoang V, Chang C, Bonyhadi M, Bluestone J, Kang SM. Allospecific regulatory T cells can prolong allograft survival. *Am J Transplant*, 5(S11):575, May 2005.

9. Jaigirdar AA, Jang J, **Brennan TV**, Carter J, Hayden T, Bucy RP, Kang SM. Islet transplantation preferentially stimulates the indirect pathway of alloreactivity. *Am J Transplant*, 6(S2):990-1, Aug 2006.
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11. Ma M, **Brennan T**, Reyes I, Tamura M, Feng S. Post-transplant hemodialysis drastically reduces one-year survival in patients entering liver transplantation without renal dysfunction. *Am J Transplant*, 9(S2):261, May 2009.
12. Finger B, **Brennan TV**, Kang SM, Tang Q. Imaging direct and indirect alloreactive T cell modulation by Tregs in islet transplantation using in vivo multiphoton microscopy. *Am J Transplant*, 9(S2):359, May 2009.
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14. Vikraman D, Collins BH, Harris MT, Martin AE, **Brennan TV**, Nicoll KN, Dudan DL, Kuo PC. Single Incision Laparoscopic Donor Nephrectomy Offers No Advantage over Standard Laparoscopic Donor Nephrectomy. *Am J Transplant*, 10(S4):539, April 2010.
15. Lee K, Miao G, Nguyen V, Scholz H, **Brennan TV**, Kang S-M, Tang Q. Inducing Islet Allograft Tolerance by Combining Regulatory T Cell Therapy with Donor-specific T Cell Deletion. XXIII International Congress of the Transplantation Society, Vancouver, BC, Canada, Jul 2010.
16. Vyas G, Stoddart C, Fielding C, Norman J, Goldberg T, Lai-Hipp C, **Brennan T**. Membrane-bound HIV-envelope proteins from inactivated virions of newly transmitted HIV-1 in humans are infection-free in SCID-hu Thy/Liv mouse models. AIDS VACCINE, Atlanta, GA, Sep 2010.
17. Sparks MA, Eckel JJ, Raasch EW, Lehrich RW, Smith SR, **Brennan TV**, Ellis MJ. *Corynebacterium Striatum*: A Rare but Dangerous Cause of Infective Endocarditis in Renal Transplant Patients. American Society of Nephrology – Renal Week, Denver, CO, Nov 2010.
18. **Brennan TV**, Lin L, Sudan DL, Yang Y. Heparan sulfate is a potent stimulator of the alloimmune response. Academic Surgical Congress. *J Surg Research*, 165(2):181, February 2011.
19. Ahearn AJ, Klein I, Hayden T, Lui FC, Lee K, **Brennan T**, Tang Q, Kang SM. Liver transplant tolerance: A new look at an old puzzle. *Am J Transplant*, 11(S2):520, May 2011.
20. Ravindra KV, Hollenbeck S, Martin A, Vikraman D, **Brennan T**, Erdman D, Collins B, Sudan D. Use of rectus sheath as a vascularized composite tissue allograft in multivisceral transplantation. *Am J Transplant*, 11(S2):281, May 2011.
21. **Brennan TV**, Lin L, Griffiths R, Coffman T, Sudan DL, Yang Y. Heparan sulfate is a biomarker of rejection and a potent stimulator of allospecific T cells through innate immune pathways. *Am J Transplant*, 11(S2):231, May 2011.
22. Lunsford KE, Ma M, Vagefi PA, **Brennan TV**, Feng S. Analysis of renal outcomes for simultaneous liver kidney transplant (SLKT) and liver transplant alone (LTA) recipients. *Am J Transplant*, 11(S2):197, May 2011.
23. Tang Q, Lee K, Laszkowska M, Nguyen V, **Brennan T**, Kang S. "Regulatory T cell therapy for transplantation: from mouse to man." Presented at Federation of Clinical Immunology Societies Meeting, Washington, DC, June 2011.

24. Ahearn A, Liu F-C, **Brennan TV**, Tang Q, Kang S-M. Tolerance Induced by Liver Transplantation Is Characterized by Depletion of CD8+ Alloreactive T Cells and Regulation of CD4+ Alloreactive T Cells. *Transplantation*. 94(10S):468, 2012
25. Lunsford KE, Baird BJ, Sempowski GD, Cardona DM, Weinhold KJ, **Brennan TV**. Novel Murine Model of Pancreatic Ischemia Reperfusion Injury Up-Regulates Interleukin-1 Beta, Interleukin-6, and CCL-2. *Am J Transplant*, 12(S3):220, May 2012.
26. Ravindra K, Vikraman D, Martin A, **Brennan T**, Collins B, Rege A, Cousino D, Sudan D. Survey of Practices at Small Bowel Transplant Centers in the United States. *Am J Transplant*, 12(S3):272, May 2012.
27. **Brennan TV**, Lin L, Huang X, Sudan DL, Yang Y. Alpha 1-Antitrypsin Therapy Reduces Alloreactive T Cell Activation and Decreases Graft-vs-Host Disease Following Hematopoietic Stem Cell Transplantation. *Am J Transplant*, 12(S3):292, May 2012.
28. “Long-Term Persistence of Recipient MHC Class-II Antigen Following Allogeneic Bone Marrow Transplantation.” 10th International Conference on Immunosuppression and Immunotherapy, Barcelona, Spain, March 11-12, 2013.
29. **Brennan TV**, Lin L, Yang Y. Jak3 Dependent Inhibition of Alloreactive T Cell Proliferation in the Setting of Chronic TLR Stimulation. *Am J Transplant*, 13(S5):256, Sept 2013.
30. **Brennan TV**, Lin L, Yang Y. Long-Term Persistence of Recipient MHC Class-II Antigen Following Allogeneic Bone Marrow Transplantation. *Am J Transplant*, 13(S5):375, Sept 2013.
31. **Brennan TV**, Lin L, Rendell VR, Huang X, Yang Y. Mitochondrial DNA Can Function as an Endogenous Innate Immune Activator of Alloreactive T Cells. *Am J Transplant*, ?, Sept 2014
32. **Brennan TV**, Lin L, Brandstadter JD, Rendell VR, Dredge K, Huang X, Yang Y. The Heparan Sulfate Mimetic, PG545, Induces a Potent Anti-Lymphoma Effect by Enhancing Innate Immune Activation by Endogenous Nucleic Acids *Am J Transplant*, Sept 2014
33. Bracamonte-Baran W, Zhou Y, **Brennan TV**, Burlingham W. Is Semi-Direct Pathway the Missing Link Between Microchimerism and Tolerance? *Am J Transplant*, Philadelphia, PA, Sept 2015
34. Zhu M., Samy K., Lin L., Wang J., Cendales L., Kirk A., Barbas A., **Brennan T**. Donor Deficiency of RIP3 Phosphokinase Activity Shortens Cardiac Allograft Survival in the Setting of Costimulation Blockade *Am J Transplant*. 2018;18 (suppl 4).
35. Lin L., Wang J., Cendales L., Kirk A., **Brennan T**. In Vivo Allograft Exposure to Mitochondrial DAMPs Prior to Organ Procurement Increases Graft Rejection in Mice *Am J Transplant*. 2018;18 (suppl 4).
36. Samoylova M., Nash A., **Brennan T**. Pumping Donor Kidneys Reduces DGF and Improves Allograft Survival without Affecting Rejection Rates *Am J Transplant*. 2018;18 (suppl 4).

#### **Major invited lectures (since November 2002)**

1. “Multi-Gene Expression Using Lentivirus.” University of California, San Francisco, Department of Surgery Resident Research Day, San Francisco, CA, March 2003.
2. “Early Graft Function after Living Donor Kidney Transplantation Predicts Rejection but Not Outcomes.” American Transplant Congress, Washington, DC, May 2003.
3. “Lentiviral-Based Gene Transduction System Capable of Delivering Multiple Genes to Bone Marrow Cells.” Federation of Clinical Immunology Societies, Paris, France, May 2003.



4. "Development of a Direct Allogeneic CD4+ T Cell Receptor Transgenic Mouse." University of California, San Francisco, Department of Surgery Resident Research Day, San Francisco, CA, March 2004.
5. "Who is the Better Living Kidney Donor? A Predictive Model Based on Simple Donor- Recipient Demographics." American Transplant Congress, Boston, MA, May 2004.
6. "A New MHC Class II-Restricted TCR Transgenic Mouse Model for the Study of Alloimmunity." American Transplant Congress, Boston, MA, May 2004.
7. "Participation in Clinical Studies Does Not Alter Outcomes after Primary Living Donor Kidney Transplantation." American Transplant Congress, Boston, MA, May 2004.
8. "Tracking the Alloimmune Response Using a New CD4+ T Cell Receptor Transgenic Mouse." FASEB Summer Research Conference in Transplantation Immunology, Snowmass Village, CO, June 2004.
9. "Tracking the Direct Alloimmune Response in vivo Using a New CD4+ T Cell Receptor Transgenic Mouse Model." American College of Surgeons 90th Annual Clinical Congress, New Orleans, LA, October 2004.
10. "A New Model for Tracking the Alloimmune Response in vivo." University of California, San Francisco, Department of Surgery Resident Research Day, San Francisco, CA, March 2005.
11. "Allospecific Regulatory T Cells can Prolong Allograft Survival." American Transplant Congress, Seattle, WA, May 2005.
12. "Disproportionate Expansion of CD4 Indirect T Cells Relative to CD4 and CD8 Direct T Cells in Acute Allograft Rejection." 9th Basic Science Symposium of the Transplantation Society, La Baule, France, June 2005.
13. "Allospecific Regulatory T Cells Can Prolong Allograft Survival." 9th Basic Science Symposium of the Transplantation Society, La Baule, France, June 2005.
14. "Microlaparoscopic (ML) Placement of Chronic Ambulatory Peritoneal Dialysis (CAPD) Catheters: Comparison to Open Technique (OT)." Society of American Gastrointestinal and Endoscopic Surgeons Annual Meeting, Philadelphia, PA, April 2008.
15. "Simultaneous Liver Kidney Transplantation: Impact on One Year Patient Survival Among Liver Transplant Candidates with Renal Dysfunction." American Association for the Study of Liver Diseases, San Francisco, CA, November 2008.
16. "Regulation of Alloimmunity by Innate Immune Pathways." National Institute of Environmental Health Sciences (NIEHS), Durham, NC, February 2010.
17. "Role of Innate and Adaptive Immune Pathways in Transplantation." Grand Rounds, Department of Surgery, Duke University Medical Center, Durham, NC, July 2010.
18. "Endogenous Innate Immune Activators of Alloimmunity." The Division of General, Vascular, High-Risk Trauma, Transplant, and Surgical Critical Care Medicine (GVTCCM) Anesthesia Conference Series, Durham, NC, October 2010.
19. "Modulation of GVHD by endogenous TLR ligand, heparan sulfate." Hematological Malignancies and Cellular Therapy Retreat, Duke University Medical Center, Durham, NC, February 2011.
20. "Heparan sulfate is a potent stimulator of the alloimmune response." Academic Surgical Congress, Huntington Beach, CA, February 2011.
21. "Modulation of Graft-vs-Host Disease by Endogenous TLR Ligand, Heparan Sulfate." Southern Society of Clinical Surgeons, Durham, NC, March 2011.

22. "Heparan sulfate is a biomarker of rejection and a potent stimulator of allospecific T cells through innate immune pathways." American Transplant Congress 2011, Philadelphia, PA, April 2011.
23. "Liver Transplant Tolerance: A New Look at an Old Puzzle." American Transplant Congress 2011, Philadelphia, PA, April 2011.
24. "Use of Rectus Sheath as a Vascularized Composite Tissue Allograft in Multivisceral Transplantation." American Transplant Congress 2011, Philadelphia, PA, April 2011.
25. "Analysis of Renal Outcomes for Simultaneous Liver Kidney Transplant (SLKT) and Liver Transplant Alone (LTA) Recipients." American Transplant Congress 2011, Philadelphia, PA, April 2011.
26. "Murine Pancreatic Ischemia-Reperfusion Injury Up-Regulates Interleukin-1 beta, Interleukin-6, and CCL-2". American Society of Transplant Surgeons (ASTS) Winter Conference, Miami, FL, January 2012.
27. "Pilot study of contrast-enhanced renal transplant MRA with a nongadolinium-based agent." American Roentgen Ray Society (ARRS) Annual Meeting, Vancouver, BC, Canada, April 2012.
28. "Novel Murine Model of Pancreatic Ischemia Reperfusion Injury Up-Regulates Interleukin-1 Beta, Interleukin-6, and CCL-2." American Transplant Congress 2012, Boston, MA, June 2012.
29. "Reduces Alloreactive T Cell Activation and Decreases Graft-vs-Host Disease Following Hematopoietic Stem Cell Transplantation." American Transplant Congress 2012, Boston, MA, June 2012.
30. "Lymphocyte Regulation by the Innate Immune System." Solid Organ Transplant Translational Research Interdisciplinary Colloquium at Duke University, Durham, NC, December 2012.
31. "Pilot study of contrast-enhanced renal transplant MRA with a nongadolinium-based agent." 113<sup>th</sup> Annual Meeting of the ARRS, Washington, DC, April 2013.
32. "Long-term persistence of recipient MHC class-II antigen following allogeneic bone marrow transplantation. 10th International Conference on New Trends in Immunosuppression and Immunotherapy. Barcelona, Spain. March 11-12, 2013.
33. "Jak3 Dependent Inhibition of Alloreactive T Cell Proliferation in the Setting of Chronic TLR Stimulation". American Transplant Congress. Seattle, WA. May 2013.
34. "Mitochondrial DNA Can Function as an Endogenous Activator of Alloreactive T Cells" World Transplant Congress. San Francisco, CA. July 2014.
35. "The heparan sulfate mimetic, PG545, induces a potent anti-lymphoma effect by enhancing innate immune activation by endogenous nucleic acids". World Transplant Congress. San Francisco, CA. July 2014.
36. Duke University Medical Center Basic Science Day. Oct 2015 "The heparan sulfate mimetic, PG545, induces a potent anti-lymphoma effect by enhancing innate immune activation by endogenous nucleic acids"
37. "Complete Thymectomy in Adult Rats with Non-invasive Endotracheal Intubation." Academic Surgical Congress. Las Vegas, NV. Feb 2015.
38. Radojic V, Chung J, Friedman A, **Brennan TV**, Siebel CW, Maillard I. Evaluating the early effects of Notch blockade on alloantigen-specific T-cells after allogeneic bone marrow transplantation. Autumn Immunology Conference 2014
39. Vedran Radojic, Jooho Chung, Ann Friedman, Pavan Reddy, Bruce Blazar, Leo Luznik, **Todd V. Brennan**, Christian W. Siebel, Ivan Maillard. Early post-transplant Notch signaling activity is

- critical for the differentiation of pathogenic alloantigen-specific T cells mediating acute graft-versus-host disease. The American Society for Blood and Marrow Transplantation. 2015
40. Surgery Grand Rounds, Duke University, Nov 19, 2014 “Innate Immunity in Graft Injury and Tumor Therapy”
  41. 50th Anniversary of Transplantation at Duke University. Feb 2015. “Scientific Growth of the Transplantation Program and the Scientific Future Transplantation Research at Duke University”
  42. Samy KP, Lin L, Yang Y, Kirk AD, **Brennan TV**. Endogenous Innate Immune Activation by Free Mitochondria. *Academic Surgical Congress*, Jacksonville FL, 2016.
  43. McDade JE, Naqvi J, Lee J, Pisetsky DS, Sullenger BA, **Brennan TV**, White RR. The Role of Circulating DNA in Pancreatic Cancer and Potential for DNA Scavengers as Therapeutics. *Academic Surgical Congress*, Jacksonville FL, 2016.
  44. Feng F, Xu H, Lin L, Kirk AD, **Brennan TV**. Mitochondria-Vascular Endothelial Cell Interaction: A Critical Danger Signal Linking Host Immune Responses to Allograft Injury. 1<sup>st</sup> Annual Duke Surgery Science Day. Durham, NC, 2016.
  45. Feng F, Xu H, Lin L, Kirk AD, **Brennan TV**. Vascular Endothelial Cell Activation by Mitochondria Links Innate and Adaptive Immune Responses to Allograft Injury. American Transplant Congress. Boston. June 2016.
  46. Reddy J, Rege A, Vikraman D, Collins B, **Brennan T**, Knechtle S, Sudan D, Ravindra K. Use of En-Bloc Vascularized Rectus Sheath Allograft to Achieve Abdominal Closure in Pediatric Liver and Multivisceral Transplantation. American Transplant Congress. Boston. June 2016
  47. **Brennan TV**. “N-Acetyl-beta-D-glucosaminidase (NAG) Assay for the Detection of Renal Allograft Rejection”. Promega, Madison Wisconsin. June 2016.
  48. MacDonald A, Samy KP, Parker BS, Truong T, Kuchibatia M, Espinosa J, McRae M, Cheeseman J, Kirk AD, **Brennan TV**. Urinary N-acetyl-beta-D-glucosaminidase Activity is Increased in Renal Transplant Rejection. Academic Surgical Congress. Las Vegas, NV, Feb 2017.
  49. Lin L, McRae M, MacDonald A, **Brennan TV**. Plasma Heparan Sulfate is a Biomarker of Acute Kidney Allograft Rejection. Academic Surgical Congress. Las Vegas, NV, Feb 2017.
  50. **Brennan TV**. Impact of Tissue Injury on Allograft Tolerance. Royal College of London. London, UK March 30, 2017.
  51. **Brennan TV**, Lin L, Song M, Feng F, Li QJ, Kirk AD, Xu H. Extracellular Mitochondria Cause B7 Costimulation Blockade Resistant Allograft Rejection in Mice. American Transplant Congress. Chicago, IL. April 2017.
  52. **Brennan TV**, Feng F, Lin L, Song M, Li QJ, Kirk AD, Xu H. Uptake of Extracellular Mitochondria Activates Human Endothelial Cells that Stimulate Alloreactive Effector T cell Responses. American Transplant Congress. Chicago, IL. April 2017.
  53. **Brennan TV**, Lin L, Pollara J. Circulating Inflammatory Factors in Deceased Organ Donors Result in Innate Immune Activation. American Transplant Congress. Chicago, IL. April 2017.
  54. Xu H, **Brennan TV**, Kirk AD. Evaluation of function and TCR signaling profile of CD57+ T cells in allo-specific immunity. American Transplant Congress. Chicago, IL. April 2017.
  55. Xu H, **Brennan TV**, Kirk AD. IL-7 receptor heterogeneity as a mechanism for repertoire change during post-depletional homeostatic proliferation and its relation to costimulation blockade resistant rejection. American Transplant Congress. Chicago, IL. April 2017.

56. Dredge K, **Brennan TV**, Brown MP, Lickliter J, Bampton D, Hammond E, Lin L, Yang Y, Millward M. An open-label, multi-center phase I study of the safety and tolerability of the novel immunomodulatory agent PG545 in subjects with advanced solid tumors. American Society of Clinical Oncology 2017 Annual Meeting. Chicago, Illinois. June 2017
57. **Brennan TV**, Circulating Mitochondrial DAMPs in Deceased Organ Donors Promote Allograft Rejection. Cedars Sinai Medical Center, Los Angeles, CA. November 7, 2017
58. **Brennan TV**, Circulating Mitochondrial DAMPs in Deceased Organ Donors Promote Allograft Rejection. University of California San Diego, CA. November 27, 2017
59. Lubkin DT, Song M, Pollara J, **Brennan TV**, Kirk AD Link Between Extracellular Mitochondrial DNA and Soluble CD40 Ligand in Post-Traumatic Sterile Inflammation. Duke Surgery Annual Research Day, Durham, NC, April 2018
60. Nash A, **Brennan TV**. Effect of Immunosuppressive Reagents on Mitochondrial Function in Human T cells. Duke Surgery Annual Research Day, Durham, NC, April 2018
61. Nash A, Samoylova ML, **Brennan TV**. Pumping donor kidneys reduces delayed graft function, improves allograft survival, and reduced rates of rejection. Duke Surgery Annual Research Day, Durham, NC, April 2018
62. Zhu M, Samy K, Lin L, Wang J, Cendales L, Kirk AD, Barbas A, **Brennan TV**. Selective loss of RIP3 phosphokinase activity shortens cardiac allograft survival in the setting of costimulation blockade. Oral presentation at the American Transplant Congress, Seattle, June 4, 2018

**Patents:**

1. WO 2013/166163 “COMPOSITIONS AND METHODS FOR HEPARAN-SULFATE AS A BIOMARKER FOR TRANSPLANT REJECTION”.

**Consultant appointments:**

- 2013 Qiagen. Advisory Board for “The potential use of new standardised immune monitoring assays within a transplant setting”.