

Curriculum Vitae

JANE HOYT BUCKNER, M.D.

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Education

1983 B.A., Carleton College, Northfield, MN, Chemistry, Magna cum laude
1987 M.D., The Johns Hopkins University School of Medicine, Baltimore, MD

Postgraduate Training

1987-1990 Resident, Internal Medicine, University of Minnesota, Minneapolis, MN
1990-1991 Chief Resident, Internal Medicine, Minneapolis Veteran's Hospital, Minneapolis, MN
1991-1992 Fellow, Rheumatology, University of Minnesota, Minneapolis, MN
1992-1995 Fellow, Rheumatology, University of Washington, Seattle, WA

Faculty Positions Held

1995-1999 Acting Instructor/Senior Fellow, University of Washington, Seattle, WA
1999-2001 Clinical Instructor, University of Washington, Seattle, WA
2001-2008 Clinical Assistant Professor, University of Washington, Seattle, WA
1999-2005 Assistant Member, Benaroya Research Institute, Seattle, WA
2005-2009 Associate Member, Benaroya Research Institute, Seattle, WA
2008-2014 Clinical Associate Professor of Medicine, Department of Medicine,
Division of Rheumatology, University of WA, Seattle, WA
2005-present Director, Translational Research Program, Benaroya Research Institute, Seattle, WA
2010-present Member, Benaroya Research Institute, Seattle, WA
2012-2015 Associate Director, Benaroya Research Institute, Seattle, WA
2014-present Affiliate Professor of Medicine, Department of Medicine,
Division of Rheumatology, University of WA, Seattle, WA
2016-present Affiliate Professor of Immunology, University of WA, Seattle
2015-present President, Benaroya Research Institute, Seattle, WA

Honors

1979 National Merit Scholar
1980-1983 Carleton College Dean's List
1983 Sigma Xi, Scientific Honor Society
1983 Phi Beta Kappa
1994 American College of Rheumatology Senior Fellow Award
1997 Arthritis Foundation Postdoctoral Fellowship
1999 -2004 American College of Rheumatology Arthritis Investigator Award
2016 Life Science Innovation Northwest Women in Life Science Award

Board Certification

1990, 2000, 2014 American Board of Internal Medicine, Certification
1994, 2004, 2014 American Board of Internal Medicine, Certification Rheumatology

Current Licenses To Practice

1992-present Washington Medical License

Hospital Privileges

Virginia Mason Medical Center, Seattle, WA
Harborview Medical Center, Seattle, WA

Professional Organizations

American Association of Immunologists
American College of Physicians
American College of Rheumatology
Northwest Rheumatism Association
FOCIS

Professional Service

2017 Member, FOCIS 2018 Program Committee
2015-present Member, Brehm Coalition
2015 Member, TrialNet Biomarkers and Mechanisms Panel
2015 Member, TrialNet Early Autoimmunity Science Working Group #1
2015 Member, TrialNet Immune Markers Working Group #6
2013-present Director, Seattle FOCIS Center of Excellence
2012-2015 Director, FOCIS Educational Committee
2011-2017 Chair, NIAID Cooperative Study Group for Autoimmune Disease Prevention Committee
2011-present Member, AAI Clinical Immunology Committee
2011-2015 Member, FOCIS Board of Directors
2011-2014 Member, TrialNet, Mechanistic Outcomes Committee
2010-2014 Member, TrialNet, Ancillary Studies Committee

Editorial Boards/Review Committees

2018 FOCIS Abstract Review Committee
2016 Advisory Board member for Science Immunology
2016 Editor, Up To Date
2015, 2012 Special Emphasis Panel: NIH/NIAID/DHHS Grant Review
2011-2015 Section Editor for The Journal of Immunology
2010-2014 Investigator, TrialNet
2012-2014 FOCIS Abstract Co-Chair
2012 PPG Scientific Review Committee
2012 Local Chair, Rheumatoid Arthritis Innovative Research Grant Review Panel
2012 Co-Chair, JDRF Grant Reviewer
2005-present Ad hoc reviewer for the following Journals:
American Journal of Pathology
Arthritis and Rheumatism
Autoimmunity
Blood

Clinical Immunology
Diabetes
Immunogenetics
Journal of Clinical Investigation
Journal of Experimental and Clinical Immunology
Journal of Experimental Medicine
The Journal of Immunology
Mayo Clinic Proceedings
Proceedings of the National Academy of Science
2012 Review Panel Arthritis Foundation Fellowship Awards
2009-2010 Review Panel Arthritis Foundation Fellowship Awards
2012 JDRF Training Grants review panel
2012 JDRF Innovative Grants Review Panel
2010 Wellcome Trust Grants
2009 NIH Autoimmunity Centers of Excellence
2008 JDRF Immunology and Genetics Section
2008 JDRF Innovative Grants Review Panel
2008 Lupus Research Institute grant review panel
2008 Ad hoc reviewer for NIH Study Section
2007 Ad Hoc Reviewer – NIH & NIAID Special Emphasis Panel
2005-2008 Member- JDRF Immunology and Genetics Section
2005 Ad hoc reviewer- NIH CMIB Study Section
2005 Ad hoc reviewer- JDRF Immunology and Genetics section

BIBLIOGRAPHY

Publications

1. **Hoyt JC**, Hutchins GM. Angiomatous variant of so-called mesothelioma of the atrioventricular node. *Arch Pathol Lab Med.* 1986; 110:851-52.
2. Roubenoff R, **Hoyt J**, Petri M, Hochberg M, Hellman D. Effects of anti-inflammatory and immunosuppressive drugs on pregnancy and fertility. *Sem Arthritis Rheum.* 1988; 18:88-110.
3. **Hoyt JC**, Hutchins GM. Variceal transformation of the subendocardial microvasculature in regions of chronic myocardial ischemia. *Am Heart J.* 1989; 117:830-36.
4. Sasso EH, **Buckner JH**, Susuki LA. Ethnic differences of polymorphism of an immunoglobulin VH3 gene. *J Clin Invest.* 1995; 96:1591-1600. PMID:185785.
5. Sasso EH, **Buckner JH**, Susuki LA. Ethnic differences in VH gene polymorphism. *Ann NY Acad Sci.* 1995; 764:72-3.
6. Nepom GT, Ou D, Lybrand TP, DeWeese C, Domeier ME, **Buckner JH**, Mitchell LA, Tingle AJ. Recognition of altered self major histocompatibility complex molecules modulated by specific peptide interactions. *Eur J Immunol.* 1996; 26:949-952.

7. **Buckner J**, Kwok WW, Nepom B, Nepom GT. Modulation of HLA-DQ binding properties by differences in class II dimer stability and pH-dependent peptide interactions. *J Immunol.* 1996; 157:4940-45.
8. Bourdette DN, Chou Y, Whitham R, **Buckner J**, Kwon HJ, Nepom GT, Buenafe A, Cooper S, Allegretta M, Hashim G, Offner H, Vanderbark AA. Immunity to T cell receptor peptides in multiple sclerosis. III. Preferential immunogenicity of complementarity-determining region 2 peptides from disease-associated T cell receptor BV genes. *J Immunol.* 1998; 161:1034-44.
9. **Buckner J** and Nepom GT. The role of MHC antigens in autoimmunity. In: *Immunologic Aspects of Rheumatic Disease: Cambridge Reviews in Clinical Immunology*, J.S.H. Gaston, ed. Cambridge University Press, 1998.
10. **Buckner JH**, Wu JJ, Riefe RA, Terato K, Eyre DR. Autoreactivity against matrilin-1 in a patient with relapsing polychondritis. *Arthritis Rheum.* 2000; 43:939-43.
11. Gebe JA, Novak EJ, Kwok WW, Farr AG, Nepom GT, **Buckner JH**. T cell selection and differential activation on structurally related HLA-DR4 ligands. *J Immunol.* 2001; 167:3250-56.
12. **Buckner JH**, Van Landeghen M, Kwok WW, Tsarknaridis L. Identification of type II collagen (261-273) specific T cell clones in a patient with relapsing polychondritis. *Arthritis Rheum.* 2002; 46:238-44.
13. Nepom GT, **Buckner JH**, Novak EJ, Reichstetter S, Reijonen H, Gebe J, Wang R, Swanson E, Kwok WW. HLA class II tetramers: Tools for direct analysis of antigen-specific CD4+ T cells. *Arthritis Rheum.* 2002; 46:5-12.
14. Molitor JA, **Buckner JH**, and Nepom GT. Transcript array analysis in rheumatology. *Rheum Dis Clin North Am.* 2002; 28:151-76, vii-viii.
15. **Buckner JH**, Nepom GT. Genetics of rheumatoid arthritis: is there a scientific explanation for the human leukocyte antigen association? *Curr Opin Rheumatol.* 2002; 14:254-59.
16. **Buckner JH**, Holzer U, Novak EJ, Reijonen H, Kwok WW, Nepom GT. Defining antigen-specific responses with human MHC class II tetramers. *J Allergy Clin Immunol.* 2002; 110:199-208.
17. Kwok WW, Ptacek NA, Liu AW, **Buckner JH**. Use of class II tetramers for identification of CD4+ T cells. *J Immunol Methods.* 2002; 268:71-81.
18. Holzer U, Kwok WW, Nepom GT, **Buckner JH**. Differential antigen sensitivity and costimulatory requirements in human Th1 and Th2 antigen specific CD4+ cells with similar TCR avidity. *J Immunol.* 2003; 170:1218-23.
19. Walker MR, Kasprovicz D, Gersuk B, Benard A, Van Landeghen M, **Buckner J**, Ziegler S. Induction of FoxP3 and acquisition of T regulatory activity by stimulated human CD4+CD25- T cells. *J Clin. Invest.* 2003; 112:1437-43. PMID:228469

20. **Buckner JH**, Ziegler SF. Regulating the immune system: the induction of regulatory T cells in the periphery. *Arthritis Res Ther.* 2004; 6:215-22. PMID:546291.
21. Kalamasz D, Long SA, Taniguchi R, **Buckner JH**, Berenson RJ, Bonyhadi M. Optimization of human T-cell expansion ex vivo using magnetic beads conjugated with anti-CD3 and Anti-CD28 antibodies. *J Immunother.* 2004; 27:405-18.
22. Nepom GT, **Buckner J**, Holzer U, Reichstetter S, Danke N and Kwok WW. MHC peptide tetramers: analysis of adaptive immune responses. In: *HLA 2004: Immunobiology of the Human MHC. Proceedings of the 13th International Histocompatibility Workshop and Congress.* Hansen JA and Dupont B, eds., Volume I & II, IHWG Press, Seattle, WA, 2004.
23. **Buckner JH**, Nepom GT. Structure, function, and genetics of the human leukocyte antigen complex in rheumatic disease. In: *Arthritis and Allied Conditions; Fifteenth Edition*, W.J. Koopman and L. W. Moreland, eds. Lippincott Williams and Wilkins 2005.
24. Walker MR, Carson BD, Nepom GT, Ziegler SF, **Buckner JH**. De novo generation of antigen-specific CD4+CD25+ regulatory T cells from human CD4+CD25- cells. *Proc Natl Acad Sci U.S.A.* 2005; 102:4103-08. PMID:554797.
25. Haug M, Dannecker L, Schepp CP, Kwok WW, Wernet D, **Buckner JH**, Kalbacher H, Dannecker GE, Holzer U. The heat shock protein Hsp70 enhances antigen-specific proliferation of human CD4+ memory T cells. *Eur J Immunol.* 2005; 35:3163-72.
26. Lamoureux JL, **Buckner JH**, David CS, Bradley DS. Mice expressing HLA-DQ6alpha8beta transgenes develop polyarthritides spontaneously. *Arthritis Res Ther.* 2006; 8:R134.
27. Holzer U, Rieck M, **Buckner JH**. Lineage and signal strength determine the inhibitory effect of transforming growth factor β 1 (TGF β 1) on human antigen-specific Th1 and Th2 memory cells. *J Autoimmun.* 2006; 26:241-51, Epub 2006.
28. Ziegler SF, **Buckner JH**. Influence of FOXP3 on CD4+CD25+ regulatory T cells. *Expert Rev Clin Immunol* (July 2006), 2(4):639-647.
29. Onengut-Gumuscu S, **Buckner JH**, Concannon P. A haplotype-based analysis of the PTPN22 locus in type 1 diabetes. *Diabetes.* 2006; 55:2883-9.
30. Bollyky PL, Lord JD, Masewicz SA, Evanko SP, Rosenberg C, **Buckner JH**, Wight TN, Nepom GT. Cutting Edge: High molecular weight hyaluronan promotes the suppressive effects of CD4+CD25+ Regulatory T cells. *J Immunol.* 2007 Jul 15; 179(2):744-7.
31. Thielen BK, Klein KC, Walker LW, Rieck M, **Buckner JH**, Tomblinson GW, Lingappa JR. T cells contain an RNase-insensitive inhibitor of APOBEC3G deaminase activity. *PLoS Pathog.* 2007 Sept; 3(9):1-15. PMID:1993843.
32. Rieck M, Arechiga A, Onengut-Gumuscu S, Greenbaum C, Concannon P, **Buckner JH**. Genetic variation in PTPN22 corresponds to altered function of T and B lymphocytes. *J. Immunology* 2007 Oct 1; 179(7):4704-10. PMID: 17878369

33. Duan H, Fleming J, Pritchard DK, Amon LM, Xue J, Arnett HA, Chen G, Breen P, **Buckner JH**, Molitor JA, Elkon KB, Schwartz SM. Combined analysis of monocyte and lymphocyte messenger RNA expression with serum protein profiles in patients with scleroderma. *Arthritis Rheum.* 2008 May; 58(5):1465-74.
34. Long, SA and **Buckner, JH**. Combination of Rapamycin and IL-2 increases de novo induction of human CD4+CD25+FOXP3+ T cells. *J Autoimmun.* 2008 Jun; 30(4):293-302. PMID:2431984
35. Schneider A, Rieck M, Sanda S, Pihoker C, Greenbaum C, **Buckner JH**. The effector T cells of diabetic subjects are resistant to regulation via CD4+FOXP3+ Regulatory T cells. *J Immunol.* 2008 Nov 15; 181(10):7350-5. PMID:2597079
36. **Buckner JH**, Ziegler SZ. Functional analysis of FOXP3. *Ann N Y Acad Sci, Issue The Year in Immunology 2008, Nov;* 1143:151-169.
37. Long SA, Walker MR, Rieck M, James EA, Kwok WW, Sanda S, Pihoker C, Greenbaum C, Nepom GT, **Buckner JH**. Functional Islet-Specific Treg Can Be Generated from CD4+CD25- T cells of Healthy and Type 1 Diabetic Subjects. *Eur J Immunol.* 2009 Feb; 39(2):612-20. PMID:2743096
38. Arechiga A, Habib T, He Y, Zhang X, Zhang Z-Y, Funk A, **Buckner JH**. Cutting Edge: The PTPN22 allelic variant associated with autoimmunity impairs B cell signaling. *J Immunol.* 2009 Mar 15; 182(6):3343-7. PMID: 2797545
39. Feser M, Derber LA, Deane KD, Lezotte DC, Weisman MH, **Buckner JH**, Mikuls T, O'Dell J, Gregersen PK, Holers VM, Norris JM. Plasma 25, OH vitamin D levels are not associated with rheumatoid arthritis-related autoantibodies in individuals at elevated risk for Rheumatoid Arthritis. *J Rheumatol*, 2009 May; 36(5):943-6. PMID:2745328
40. Bollyky PL, Falk BA, Wu RP, **Buckner JH**, Wight TN, Nepom, GT. Intact extracellular matrix and the maintenance of immune tolerance: high molecular weight hyaluronan promotes persistence of induced CD4+CD25+ regulatory T cells. *J Leukoc Biol.* 2009 Sep; 86(3):567-72. PMID:2735281
41. Ziegler SF, **Buckner JH**. FOXP3 and the regulation of Treg/Th17 differentiation. *Microbes Infect.* 2009 Apr; 11(5):594-8. PMID:2728495
42. Bollyky PL, Falk BA, Long SA, Preisinger A, Braun KR, Wu RP, Evanko SP, **Buckner JH**, Wight TN, Nepom GT. CD44 costimulation promotes FoxP3+ regulatory T cell persistence and function via production of IL-2, IL-10, and TGF-beta. *J Immunol.* 2009 Aug 15; 183(4):2232-41. PMID:3057032
43. Compton N, **Buckner JH**, Harp KI, Raugi GJ. Polychondritis; eMedicine online book, 2009. <http://emedicine.medscape.com/article/331475-overview>.
44. Kolfenbach JR, Deane KD, Derber LA, O'Donnell C, Weisman MH, **Buckner JH**, Gersuk VH, Wei S, Mikuls TR, O'Dell J, Gregersen PK, Keating RM, Norris JM, Holers VM. A prospective approach to investigating the natural history of preclinical rheumatoid arthritis (RA) using first-degree relatives of probands with RA. *Arthritis Rheum.* 2009 Nov 30; 61(12):1735-42. PMID:2795101

45. Long SA, Cerosaletti K, Bollyky PL, Tatum M, Shilling H, Zhang S, Zhang Z, Pihoker C, Sanda S, Greenbaum C and **Buckner JH**. Defects in IL-2R signaling contribute to diminished maintenance of FOXP3 expression in CD4+CD25+ regulatory T cells of Type 1 diabetic subjects. *Diabetes*. 2010 Feb; 59(2):407-15. PMID:2809970
46. Isnardi I, Ng Y-S, Menard L, Meyers G, Saadoun D, Srdanovic I, Samuels J, Berman J, **Buckner JH**, Cunningham-Rundles C, Meffre E. Complement receptor 2/CD21 human- naive B cells contain mostly autoreactive unresponsive clones. *Blood*. 2010 Jun 17; 115(24):5026-36. PMID: 3373152
47. James EA, Moustakas AK, Bui J, Papadopoulos GK, Bondinas G, **Buckner JH**, Kwok WW. HLA-DR1001 presents “altered-self” peptides derived from joint-associated proteins by accepting citrulline in three of its binding pockets. *Arthritis Rheum*. 2010 Oct; 62(10):2909-18. PMID:2952065
48. **Buckner JH**. Mechanisms of impaired regulation by CD4+ CD25+ FOXP3+ regulatory T cells in human autoimmune diseases. *Nat Rev Immunol*. 2010 Dec; 10(12):849-59. PMID:3046807
49. Long SA, Cerosaletti K, Wan JY, Ho J-C, Tatum M, Wei S, Shilling HG, **Buckner JH**. An autoimmune-associated variant in PTPN2 reveals an impairment of IL-2R signaling in CD4+ T cells. *Genes Immun*. 2011 Mar; 12(2):116-25. PMID:3058680
50. **Schneider A, Buckner JH**. Assessment of suppressive capacity by human regulatory T cells using a reproducible, bi-directional CFSE-based in vitro assay. *Methods Mol Biol*. 2011; 707:233-41.
51. Schneider A, **Buckner JH**. Assessment of suppressive capacity by human regulatory T cells using a reproducible, bi-directional CFSE-based in vitro assay. Book chapter in *Regulatory T-Cells: Methods and Protocols*, Humana Press. 2011. Kassiotis George, Liston Adrian, editors. Book.
52. Snir O, Rieck M, Gebe J, Yue B, Rawlings C, Nepom G, Malmström V, **Buckner JH**. Identification and functional characterization of T cells reactive to citrullinated vimentin in HLA-DRB1*0401-positive humanized mice and Rheumatoid Arthritis patients. *Arthritis Rheum*. 2011 Oct; 3(10):2873-83. PMID:3174345
53. Wherrett DK, Bundy B, Becker DJ, DiMeglio LA, Gitelman SE, Goland R, Gottlieb PA, Greenbaum CJ, Herold KC, Marks JB, Monzavi R, Moran A, Orban T, Palmer JP, Raskin P, Rodriguez H, Schatz D, Wilson DM, Krischer JP, Skyler JS; Type 1 Diabetes TrialNet GAD Study Group. Antigen-based therapy with glutamic acid decarboxylase (GAD) vaccine in patients with recent-onset type 1 diabetes: a randomized double-blind trial. *Lancet*. 2011 Jul 23; 378(9788):319-27. PMID:3580128
54. Orban T, Bundy B, Becker DJ, DiMeglio LA, Gitelman SE, Goland R, Gottlieb PA, Greenbaum CJ, Marks JB, Monzavi R, Moran A, Raskin P, Rodriguez H, Russell WE, Schatz D, Wherrett D, Wilson DM, Krischer JP, Skyler JS; Type 1 Diabetes TrialNet Abatacept Study Group. Co-stimulation modulation with abatacept in patients with recent-onset type 1 diabetes: a randomised, double-blind, placebo-controlled trial. *Lancet*. 2011 Jul 30;378(9789):412-9 PMID:3462593
55. Menard L, Saadoun D, Isnardi I, Ng YS, Meyers G, Massad C, Price C, Abraham C, Motaghedi R, **Buckner JH**, Gregersen PK, Meffre E. The PTPN22 allele encoding an R620W variant interferes with the removal of developing autoreactive B cells in humans. *J Clin Invest*. 2011 Sep 1; 121(9):3635-44. PMID:3163953

56. Long SA, Rieck M, Tatum M, Bollyky PL, Wu RP, Mueller I, Ho JC, Shilling HG, **Buckner JH**. Low-dose antigen promotes induction of FOXP3 in human CD4+ T cells. *J Immunol*. 2011 Oct 1; 187(7):3511-20. PMID:3178710
57. Long SA and **Buckner JH**. CD4+FOXP3+ T Regulatory cells in human autoimmunity: more than a numbers game. *J Immunol*. 2011 Sep 1; 2061-6. PMID:3160735
58. **Buckner JH**. Polychondritis reference. Dec 2011. Medscape Online Reference.
59. Habib T, Funk A, Rieck M, Brahmandam A, Dai X, Panigrahi A, Prak E, Meyer-Bahlmburg A, Sanda S, Greenbaum C, Rawlings D, **Buckner JH**. Altered B cell homeostasis is associated with type I diabetes and carriers of the PTPN22 allelic variant. *J Immunol*. 2012 Jan 1; 188(1):487-96. In This Issue section of *J Immunol*. PMID:3670766
60. **Roep BO, Buckner JH**, Sawcer S, Toes R, Zipp F. The problems and promises of research into human immunology and autoimmune disease. *Nat Med*. 2012 Jan 6; 18(1):48-53. Commentary.
61. Snir O, Backlund J, Bostrom J, Andersson I, Kihlberg J, **Buckner JH**, Klareskog L, Holmdahl R. Multifunctional T cell reactivity with native and glycosylated type II collagen in rheumatoid arthritis. *Arthritis Rheum*. 2012 Aug. 64(8):2482-8. PMID:3387353
62. Long SA, Rieck M, Sanda S, Bollyky JB, Samuels PL, Goland R, Ahmann A, Rabinovitch A, Aggarwal S, Phippard D, Turka LA, Ehlers MR, Bianchine PJ, Boyle KD, Adah SA, Bluestone JA, Buckner J, Greenbaum CJ. Rapamycin/IL-2 combination therapy in patients with type 1 diabetes augments Treg yet transiently impairs beta cell function. *Diabetes*. 2012 Sep; 61(9):2340-8. PMID:3425404
63. Yu L, Boulware DC, Beam CA, Hutton JC, Wenzlau JM, Greenbaum CJ, Bingley PJ, Krischer JP, Sosenko JM, Skyler JS, Eisenbarth GS, Mahon JL, Type 1 Diabetes TrialNet Study Group. Zinc transporter-8 autoantibodies improve prediction of type 1 diabetes in relatives positive for the standard biochemical autoantibodies. *Diabetes Care*. 2012 Jun; 35(6):1213-8. PMID:3357246
64. Arnaud L, Devilliers H, Peng S, Mathian A, Costedoat-Chalumeau N, Buckner JH, Dagna L, Michet C, Aman S, Cervera R, Haroche J, Papo T, D’Cruz D, Arlet P, Zwerna J, Berlot A, Suzuki N, Harle JR, Moots R, Jayne D, Hachulla E, Marie I, Tanaka T, Lebovics R, Scott D, Kucharz E, Birchall M, Kong KO, Gorochoff G, Amoura Z. The Relapsing Polychondritis Disease Activity Index: development of a disease activity score for relapsing polychondritis. *Autoimmun Rev*. 2012 Dec; 12(2):204-9.
65. Nepom GT, **Buckner JH**. A functional framework for interpretation of genetic associations in T1D. *Curr Opin Immunol*. 2012 Oct; 24(5):516-21. PMID:4260931
66. Hughes-Austin JM, Deane KD, Derber LA, Kolfenbach JR, Zerbe GO, Sokolove J, Lahey LJ, Weisman MH, **Buckner JH**, Mikuls TR, O’Dell JR, Keating RM, Gregersen PK, Robinson WH, Holers VM, Norris JM. Multiple cytokines and chemokines are associated with rheumatoid arthritis-related autoimmunity in first-degree relatives without rheumatoid arthritis: Studies of the Aetiology of Rheumatoid Arthritis (SERA). *Ann Rheum Dis*. 2013 Jun; 72(6):901-7. PMID:3726193

67. Mikuls TR, Thiele GM, Deane KD, Payne JB, O'Dell JR, Yu F, Sayles H, Weisman MH, Gregersen PK, **Buckner JH**, Keating RM, Derber LA, Robinson WH, Holers VM, Norris JM. Porphyromonas gingivalis and disease-related autoantibodies in individuals at increased risk for rheumatoid arthritis. *Arthritis Rheum.* 2012 Nov; 64(11):3522-30. PMID: 3467347
68. Stone B, Rieck M, Rawlings CA, Kas A, Shendure J, Jones H, **Buckner JH**. Identification of novel HLA class II target epitopes for generation of donor-specific T regulatory cells. *Clin Immunol.* 2012 Nov; 145(2):153-60. No federal support. PMID: 23063892.
69. Schneider A, Long SA, Cerosaletti K, Ni CT, Samuels P, Kita M, **Buckner JH**. In active relapsing remitting multiple sclerosis, effector T cell resistance to adaptive Tregs involves IL-6-mediated signaling. *Sci Transl Med.* 2013 Jan 30; 5(170):170ra15.
70. Long SA, **Buckner JH**, Greenbaum CJ. IL-2 therapy in type 1 diabetes: "Trials" and tribulations. *Clin Immunol.* 2013 Dec; 149(3):324-31.
71. Bollyky J, Long SA, Fitch M, Bollyky P, Rieck M, Rogers R, Samuels P, **Buckner J**, Hellerstein M, Greenbaum C. Evaluation of in vivo T cell kinetics: use of heavy isotope labeling in type 1 diabetes. *Clin Exp Immunol.* 2013 Jun; 172(3):363-74. PMID:3646435
72. Dai X, James RG, Habib T, Singh S, Jackson S, Khim S, Moon RT, Liggitt D, Wolf-Yadlin A, **Buckner JH**, Rawlings DJ. A disease-associated PTPN22 variant promotes systemic autoimmunity in murine models. *J Clin Invest.* 2013 May 1; 123(5):2024-36. PMID:3638909
73. Cerosaletti, K, **Buckner, JH**. Protein Tyrosine Phosphatases and Type 1 Diabetes: Genetic and Functional Implications of PTPN2 and PTPN22. Review. *Rev Diabet Stud.* 2012 Winter; 9(4):188-200. PMID:3740690
74. Huang C, Martin S, Pflieger C, Du1 J, **Buckner JH**, Bluestone JA, Riley JL, Ziegler, SF. Cutting Edge: A Novel, Human-Specific Interacting Protein Couples FOXP3 to a Chromatin- Remodeling Complex that Contains KAP1/TRIM28. *J Immunol.* 2013 May 1; 190(9):4470-3. PMID:4197931
75. Long SA, **Buckner JH**. Intersection between genetic polymorphisms and immune deviation in Type 1 diabetes. *Curr Opin Endocrinol Diabetes Obes.* 2013 Aug; 20(4):285-91.
76. Gan RW, Deane KD, Zerbe GO, Demoruelle MK, Weisman MH, **Buckner JH**, Gregersen PK, Mikuls TR, O'Dell JR, Keating RM, Holers VM, Norris JM. Relationship between air pollution and positivity of RA-related autoantibodies in individuals without established RA: a report on SERA. *Ann Rheum Dis.* 2013 Dec; 72(12):2002-5. PMID:3818364
77. Young KA, Deane KD, Derber LA, Hughes-Austin JM, Wagner CA, Sokolove J, Weisman MH, **Buckner JH**, Mikuls TR, O'Dell JR, Keating RM, Gregersen PK, Robinson WH, Holers VM, Norris JM. Relatives without rheumatoid arthritis show reactivity to anti-citrullinated protein/peptide antibodies which are associated with arthritis-related traits: Studies of the etiology of rheumatoid arthritis. *Arthritis Rheum.* 2013 Aug; 65(8):1995-2004 PMID:3729718

78. Ahmed ST, Akirav E, Bradshaw E, **Buckner J**, McKinney E, Quintana FJ, Waldron-Lynch F, Nepom J. Immunological biomarkers: Catalysts for translational advances in autoimmune diabetes. *Clin Exp Immunol*. 2013 May; 172(2):178-85. PMID:3628321
79. Demoruelle MK, Parish MC, Derber LA, Kolfenbach JR, Hughes-Austin JM, Weisman MH, Gilliland W, Edison JD, **Buckner JH**, Mikuls TR, O'Dell JR, Keating RM, Gregersen PK, Norris JM, Holers VM, Deane KD. Performance of anti-cyclic citrullinated Peptide assays differs in subjects at increased risk of rheumatoid arthritis and subjects with established disease. *Arthritis Rheum*. 2013 Sep;65(9):2243-52. PMID:3776020
80. Diabetes Research in Children Network (DirecNet) Study Group; Type 1 Diabetes TrialNet Study Group, Buckingham BA, Beck RW, Ruedy KJ, Cheng P, Kollman C, Weinzimer SA, DiMeglio LA, Bremer AA, Slover R, Cantwell M. The effects of inpatient hybrid closed-loop therapy initiated within 1 week of type 1 diabetes diagnosis. *Diabetes Technol Ther*. 2013 May; 15(5):401-8. PMID:3643224
81. Moran A, Bundy B, Becker DJ, DiMeglio LA, Gitelman SE, Goland R, Greenbaum CJ, Herold KC, Marks JB, Raskin P, Sanda S, Schatz D, Wherrett DK, Wilson DM, Krischer JP, Skyler JS; Type 1 Diabetes TrialNet Canakinumab Study Group, Pickersgill L, de Koning E, Ziegler AG, Böehm B, Badenhoop K, Schloot N, Bak JF, Pozzilli P, Mauricio D, Donath MY, Castaño L, Wägner A, Lervang HH, Perrild H, Mandrup-Poulsen T; AIDA Study Group, Pociot F, Dinarello CA. Interleukin-1 antagonism in type 1 diabetes of recent onset: two multicentre, randomised, double-blind, placebo-controlled trials. *Lancet*. 2013 Jun 1; 381(9881):1905-15. PMID:3827771
82. Subramanian S, Turner MS, Ding Y, Goodspeed L, Wang S, **Buckner JH**, O'Brien K, Getz GS, Reardon CA, Chait A. Increased levels of invariant natural killer T lymphocytes worsen metabolic abnormalities and atherosclerosis in obese mice. *J Lipid Res*. 2013 Oct; 54(10):2831-41. PMID:3770095
83. Sosenko JM, Skyler JS, Palmer JP, Krischer JP, Yu L, Mahon J, Beam CA, Boulware DC, Rafkin L, Schatz D, Eisenbarth G; Type 1 Diabetes TrialNet Study Group; Diabetes Prevention Trial-Type 1 Study Group. The prediction of type 1 diabetes by multiple autoantibody levels and their incorporation into an autoantibody risk score in relatives of type 1 diabetic patients. *Diabetes Care*. 2013 Sep; 36(9):2615-20. PMID: 3747899
84. Cerosaletti K, Schneider A, Schwedhelm K, Frank I, Tatum M, Wei S, Whalen E, Greenbaum C, Kita M, **Buckner JH**, Long SA. Multiple autoimmune-associated variants confer decreased IL-2R signaling in CD4+CD25+ T cells of type 1 diabetic and multiple sclerosis patients. *PLoS One*. 2013 Dec; 8(12):e83811. PMID:3871703
85. Pieper J, Johansson S, Snir O, Linton L, Rieck M, **Buckner JH**, Winqvist O, van Vollenhoven R, Malmström V. Peripheral and site-specific CD4+ CD28null T cells from Rheumatoid Arthritis patients show distinct characteristics. *Scand J Immunol*. 2014 Feb; 79(2):149-55. PMID:4064710
86. Buckingham B, Beck RW, Ruedy KJ, Cheng P, Kollman C, Weinzimer SA, DiMeglio LA, Bremer AA, Slover R, Tamborlane WV; Diabetes Research in Children Network (DirecNet) Study Group; Type 1 Diabetes TrialNet Study Group. Effectiveness of early intensive therapy on β -cell preservation in type 1 diabetes. *Diabetes Care*. 2013 Dec; 36(12):4030-5. PMID:3836135

87. Mason MJ, Speake C, Gersuk VH, Nguyen QA, O'Brien KK, Odegard JM, **Buckner JH**, Greenbaum CJ, Chaussabel D, Nepom GT. Low HERV-K(C4) Copy Number is Associated with Type 1 diabetes. *Diabetes*. 2014 May; 63(5):1789-95. No federal support. PMID:24430436.
88. Sosenko JM, Skyler JS, Beam CA, Krischer JP, Greenbaum CJ, Mahon J, Rafkin LE, Matheson D, Herold KC, Palmer JP; Type 1 Diabetes TrialNet and Diabetes Prevention Trial–Type 1 Study Groups. Acceleration of the loss of the first-phase insulin response during the progression to type 1 diabetes in diabetes prevention trial-type 1 participants. *Diabetes*. 2013 Dec; 62(12):4179-83. PMID:3837047
89. James E, Rieck M, Pieper J, Gebe JA, Yue BB, Tatum M, Peda M, Sandin C, Klareskog L, Malmström V, **Buckner JH**. Citrulline specific Th1 cells are increased in rheumatoid arthritis and their frequency is influenced by disease duration and therapy. *Arthritis Rheumatol*. 2014 Jul; 66(7):1712-22. PMID:4248674
90. Mikacenic C, Schneider A, Radella F, **Buckner JH**, Wurfel, MM. Cutting Edge:Genetic Variation in TLR1 is associated with Pam3CSK4-induced effector T cell resistance to regulatory T cell suppression. *J Immunol*. 2014 Dec 15; 193(12):5786-90. PMID:4258445
91. Rosenzwajg M, Churlaud G, Mallone R, Six A, Dérian N, Chaara W, Lorenzon R, Long SA, **Buckner JH**, Afonso G, Pham HP, Hartemann A, Yu A, Pugliese A, Malek TR, Klatzmann D. Low-dose interleukin-2 fosters a dose-dependent regulatory T cell tuned milieu in T1D patients. *J Autoimmun*. 2015 Apr; 58:48-58. PMID:25634360
92. Rawlings, DJ, Dai, X. **Buckner, JH**. The role of PTPN22 risk variant in the development of autoimmunity: Finding common ground between mouse and human. *J Immunol*. 2015 Apr 1; 194(7):2977-2984. PMID:4369788
93. Sosenko JM, Skyler JS, DiMeglio LA, Beam CA, Krischer JP, Greenbaum CJ, Boulware D, Rafkin LE, Matheson D, Herold KC, Mahon J, Palmer JP; Type 1 Diabetes TrialNet Study Group; Diabetes Prevention Trial-Type 1 Study Group. A new approach for diagnosing type 1 diabetes in autoantibody-positive individuals based on prediction and natural history. *Diabetes Care*. 2015 Feb; 38(2):271-6. PMID:4302258
94. Sosenko JM, Skyler JS, Beam CA, Boulware D, Mahon JL, Krischer JP, Greenbaum CJ, Rafkin LE, Matheson D, Herold KC, Palmer JP; Type 1 Diabetes TrialNet and Diabetes Prevention Trial–Type 1 Study Groups. The development and utility of a novel scale that quantifies the glycemic progression toward type 1 diabetes over 6 months. *Diabetes Care*. 2015 May; 38(5):940-2. PMID:4407750
95. Gan RW, Young KA, Zerbe GO, Demoruelle MK, Weisman MH, **Buckner JH**, Gregersen PK, Mikuls TR, O'Dell JR, Keating RM, Clare-Salzler MJ, Deane KD, Holers VM, Norris JM. Lower omega-3 fatty acids are associated with the presence of anti-cyclic citrullinated peptide autoantibodies in a population at risk for future rheumatoid arthritis: a nested case-control study. *Rheumatology (Oxford)*. 2016 Feb; 55(2):367-76. PMID:5009416
96. Bluestone JA, **Buckner JH**, Fitch M, Gitelman SE, Gupta S, Hellerstein MK, Herold KC, Lares A, Lee MR, Li K, Liu W, Long SA, Masiello LM, Nguyen V, Putnam AL, Rieck M, Sayre PH, Tang Q. Type 1 diabetes immunotherapy using polyclonal regulatory T cells. *Sci Transl Med*. 2015 Nov 25; 7(315):315ra189. PMID:4729454

97. Ge Y, Onengut-Gumuscu S, Quinlan AR, Mackey AJ, Wright JA, **Buckner JH**, Habib T, Rich SS, Concannon P. Targeted deep sequencing in multiple-affected sibships of European ancestry identifies rare deleterious variants in PTPN22 that confer risk for type 1 diabetes. *Diabetes*. 2016 Mar; 65(3):794-802. PMID:4764149
98. Hamerman JA, Pottle J, Ni M, He Y, Zhang ZY, **Buckner JH**. Negative regulation of TLR signaling in myeloid cells-implications for autoimmune diseases. *Immunol Rev*. 2016 Jan; 269(1):212-27. PMID:4703580
99. Roan F, Stoklasek TA, Whalen E, Molitor JA, Bluestone JA, **Buckner JH**, Ziegler SF. CD4+ group 1 innate lymphoid cells (ILC) form a functionally distinct ILC subset that is increased in systemic sclerosis. *J Immunol*. 2016 Mar 1; 196(5):2051-62. PMID:4761490
100. Sparks JA, Chang SC, Deane KD, Gan RW, Demoruelle MK, Feser ML, Moss L, **Buckner JH**, Keating RM, Costenbader KH, Gregersen PK, Weisman MH, Mikuls TR, O'Dell JR, Holers VM, Norris JM, Karlson EW. Associations of smoking and age with inflammatory joint signs among first-degree relatives without rheumatoid arthritis. *Arthritis Rheumatol*. 2016 Aug; 68(8): 1828-38. PMID:5103164
101. **Buckner JH**, Nepom GT. Obstacles and opportunities for targeting the effector T cell response in type 1 diabetes. *J Autoimmun*. 2016 Jul; 71:44-50. PMID:4903876
102. Jackson SW, Jacobs HM, Arkatkar T, Dam EM, Scharping NE, Kolhatkar NS, Hou B, **Buckner JH**, Rawlings DJ. B cell IFN- γ receptor signaling promotes autoimmune germinal centers via cell-intrinsic induction of BCL-6. *J Exp Med* 2016 may 2; 213(5): 733-50. PMID:4854732
103. Karthikeyan K, Barker K, Tang Y, Kahn P, Wiktor P, Brunner A, Knabben V, Takulapalli B, **Buckner J**, Nepom G, LaBaer J, Qiu J. A contra capture protein array platform for studying post-translationally modified auto-antigenomes. *Mol Cell Proteomics* 2016 Jul; 15(7):2324-37. PMID:4937507
104. Gan RW, Demoruelle MK, Deane KD, Weisman MH, **Buckner JH**, Gregersen PK, Mikuls TR, O'Dell JR, Keating RM, Fingerlin TE, Zerbe GO, Clare-Salzler MJ, Holers VM, Norris JM. Omega-3 fatty acids are associated with a lower prevalence of autoantibodies in shared epitope-positive subjects at risk for rheumatoid arthritis. *Ann Rheum Dis*. 2017 Jan;76(1):147-152. PMID:5371398.
105. Hundhausen C, Roth A, Whalen E, Chen J, Schneider A, Long SA, Wei S, Rawlings R, Kinsman M, Evanko SP, Wight TN, Greenbaum CJ, Cerosaletti K, **Buckner JH**. Enhanced T cell responses to IL-6 in type 1 diabetes are associated with early clinical disease and increased IL-6 receptor expression. *Sci Transl Med*. 2016 Sep 14;8(356):356ra119. PMID:5125295
106. Uchtenhagen H, Rims C, Blahnik G, Chow IT, Kwok WW, **Buckner JH**, James EA. Efficient ex vivo analysis of CD4+ T-cell responses using combinatorial HLA-class II tetramer staining. *Nat Commun*. 2016 Aug 30;7:12614. PMID:5013714
107. Johnson MC, Pierson ER, Spieker AJ, Nielsen AS, Posso S, Kita M, **Buckner JH**, Goverman JM. Distinct T Cell Signatures Define Subsets of Multiple Sclerosis Patients. *Neurol Neuroimmunol Neuroinflamm*. 2016 Aug 23;3(5):e278. PMID:4996538

108. Gerstner C, Dubnovitsky A, Sandin C, Kozhukh G, Uchtenhagen H, James EA, Rönnelid J, Ytterberg AJ, Pieper J, Reed E, Tandre C, Rieck M, Zubarev RA, Rönnblom L, Sandalova T, **Buckner JH**, Achour A, Malmström V. Functional and Structural Characterization of a Novel HLA-DRB1*04:01-Restricted α -Enolase T Cell Epitope in Rheumatoid Arthritis. *Front Immunol*. 2016 Nov 14; 7:494. PMID:5108039
109. Dam EM, Habib T, Chen J, Funk A, Glukhova V, Davis-Pickett M, Wei S, James R, **Buckner JH**, Cerosaletti K. The BANK1 SLE-risk variants are associated with alterations in peripheral B cell signaling and development in humans. *Clin Immunol*. 2016 Dec;173:171-180. PMID:5148640
110. Carmona-Rivera C, Carlucci PM, Moore E, Lingampalli N, Uchtenhagen H, James E, Liu Y, Bicker KL, Wahamaa H, Hoffmann V, Catrina AI, Thompson PR, **Buckner JH**, Robinson WH, Fox DA, Kaplan MJ. Synovial fibroblast-neutrophil interactions promote pathogenic adaptive immunity in rheumatoid arthritis. *Sci Immunol*. 2017 Apr;2(10). pii: eaag3358. PMID:5479641
111. Gorman JA, Hundhausen C, Errett JS, Stone AE, Allenspach EJ, Ge Y, Arkatkar T, Clough C, Dai X, Khim S, Pestal K, Liggitt D, Cerosaletti K, Stetson DB, James RG, Oukka M, Concannon P, Gale M Jr, **Buckner JH**, Rawlings DJ. The A946T variant of the RNA sensor IFIH1 mediates an interferon program that limits viral infection but increases the risk for autoimmunity. *Nat Immunol*. 2017 Jul;18(7):744-752. PMID: PMC5697900
112. Bosi E, Boulware DC, Becker DJ, **Buckner JH**, Geyer S, Gottlieb PA, Henderson C, Kinderman A, Sosenko JM, Steck AK, Bingley PJ; Type 1 Diabetes TrialNet Study Group. Impact of age and antibody type on progression from single to multiple autoantibodies in type 1 diabetes relatives. *J Clin Endocrinol Metab*. 2017 Aug 1;102(8):2881-2886. doi: 10.1210/jc.2017-00569. PMID: PMC5546870
113. Long AE, Tatum M, Mikacenic C, **Buckner JH**. A novel and rapid method to quantify Treg mediated suppression of CD4 T cells. *J Immunol Methods*. 2017 Oct;449:15-22. doi: 10.1016/j.jim.2017.06.009. PMID: PMC5573621
114. Schwedhelm K, Thorpe J, Murray SA, Gavin M, Speake C, Greenbaum C, Cerosaletti K, **Buckner J**, Long SA. Attenuated IL-2R signaling in CD4 memory T cells of T1D subjects is intrinsic and dependent on activation state. *Clin Immunol*. 2017 Aug;181:67-74. PMID: PMC5564451
115. Battaglia M, Anderson MS, **Buckner JH**, Geyer SM, Gottlieb PA, Kay TWH, Lernmark Å, Muller S, Pugliese A, Roep BO, Greenbaum CJ, Peakman M. Understanding and preventing type 1 diabetes through the unique working model of TrialNet. *Diabetologia*. 2017 Nov;60(11):2139-2147. doi: 10.1007/s00125-017-4384-2. PMID: PMC5838353
116. Metzler G, Dai X, Thouvenel CD, Khim S, Habib T, **Buckner JH**, Rawlings DJ. The Autoimmune Risk Variant PTPN22 C1858T Alters B Cell Tolerance at Discrete Checkpoints and Differentially Shapes the Naive Repertoire *J Immunol*. 2017 Oct 1;199(7):2249-2260. doi: 10.4049/jimmunol.170060. PMID: 28801357
117. Arkatkar T, Du SW, Jacobs HM, Dam EM, Hou B, **Buckner JH**, Rawlings DJ, Jackson SW. B cell-derived IL-6 initiates spontaneous germinal center formation during systemic autoimmunity.

J Exp Med. 2017 Nov 6;214(11):3207-3217. doi: 10.1084/jem.20170580. PMCID: PMC5679179

118. Eken A, Duhon R, Singh AK, Fry M, **Buckner JH**, Kita M, Bettelli E, Oukka M. S1P1 deletion differentially affects TH17 and Regulatory T cells. *Sci Rep*. 2017 Oct 10;7(1):12905. doi: 10.1038/s41598-017-13376-2. PMCID: PMC5635040
119. **Buckner JH**, Greenbaum CJ. Stacking the Deck: Studies of Patients with Multiple Autoimmune Diseases Propelled Our Understanding of Type 1 Diabetes as an Autoimmune Disease. *J Immunol*. 2017 Nov 1;199(9):3011-3013. doi: 10.4049/jimmunol.1701299. No abstract available. PMID: 29061711.
120. Lord JD, Alice Long S, Shows DM, Thorpe J, Schwedhelm K, Chen J, Kita M, **Buckner JH**. Circulating integrin alpha4/beta7+ lymphocytes targeted by vedolizumab have a pro-inflammatory phenotype. *Clin Immunol*. 2018 Aug;193:24-32. doi: 10.1016/j.clim.2018.05.006. PMID: 29842945
121. Greenbaum CJ, Speake C, Krischer J, **Buckner J**, Gottlieb PA, Schatz DA, Herold KC, Atkinson MA. Strength in Numbers: Opportunities for Enhancing the Development of Effective Treatments for Type 1 Diabetes-The TrialNet Experience. *Diabetes*. 2018 Jul;67(7):1216-1225. doi: 10.2337/db18-0065. Epub 2018 May 16 PMID: 29769238
122. Pieper J, Dubnovitsky A, Gerstner C, James EA, Rieck M, Kozhukh G, Tandre K, Pellegrino S, Gebe JA, Rönnblom L, Sandalova T, Kwok WW, Klareskog L, **Buckner JH**, Achour A, Malmström V. Memory T cells specific to citrullinated α -enolase are enriched in the rheumatic joint. *J Autoimmun*. 2018 May 28. pii: S0896-8411(18)30128-8. doi: 10.1016/j.jaut.2018.04.004. [Epub ahead of print]

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Abstracts

1. **Buckner JH**, Kantor KB, Herzenberg LA, Merrill CE, Hillson JL. The newly emerging B cell repertoire in the adult. *Arthritis and Rheum* 1993 36:S200.
2. **Buckner JH**, Kantor KB, Herzenberg LA, Merrill CE, Hillson JL. Antibody repertoire expressed by adult pre-B cells. *J Immunol* 1993 150:259A.
3. **Buckner JH**, Kantor KB, Herzenberg LA, Merrill CE, Hillson JL. Human adult CD5-positive B cells express a unique repertoire that differs from both conventional B cells and fetal B cells. *Arthritis and Rheum* 1994 37:S322.
4. **Buckner JH**, Nepom B, Nepom GT, Kwok WW. pH plays a critical role in HLA DQ allele-specific binding. *Arthritis and Rheum* 1995 38:S254.
5. **Buckner JH**. Evaluation of the immune response to collagen in patients with relapsing polychondritis. *Arthritis and Rheum* 1997 40:S268 #1423.

6. **Buckner JH**, Kleeman-Fischer D, Wu J: Matrilin-1 as an autoantigen in relapsing polychondritis. *Arthritis and Rheum* 1999 42:S109 #229
7. **Bucker JH**, Terato K, Reife RA, Wu J: The immune response to cartilage proteins in patients with relapsing polychondritis. *Arthritis and Rheum* 1999 42:S321 #1500.
8. **Buckner JH**, Blom I, Van Landeghen M, Nepom GT: Allele specific differences in binding affinity to clip influence peptide selection. *The FASEB Journal* April 2000 14(6):151.13
9. **Buckner JH**, Tsaknaridis L, Reife R, Terato K: IgG Subclass Distribution of Antibodies Against Type II Collagen in Patients with Relapsing Polychondritis and Rheumatoid Arthritis. *Arthritis and Rheum* 2001 44:S9 #131.
10. **Buckner JH**, Kwok WW, Van Landeghen M, Tsaknaridis L: T Cells Specific to the Type II Collagen (261-273) Peptides Are Present in a Patient with Relapsing Polychondritis. *Arthritis and Rheum* 2001 44:S9 #438.
11. Holzer U, Nepom GT, **Buckner JH**. Differential antigen sensitivity and costimulatory requirements in human TH1 and TH2 Antigen Specific CD4+ T cells with similar TCR avidity. *Keystone Symposia* 2003.
12. Holzer U, Van Landeghen M, Wang T, **Buckner JH**. Effect of Transforming growth factor β 1 (TGF- β 1) on Human Antigen-specific Th1 and Th2 Memory cells. *Federation of Clinical Immunology Societies (FOCIS) meeting Paris* 2003.
13. **Buckner JH**, Van Landeghen M, Rieck M, Gebe J, Nepom G. DRB1*0401/*0404 Heterozygosity Enhances Activation of T cells. *Arthritis and Rheumatism*, 2003 Volume 48, number 9(supplement) S285.
14. Walker M, Van Landeghen M, Gersuk V, Ziegler SF, **Buckner JH**. Human CD4+CD25+ T regulatory cells can be induced upon activation of CD4+CD25- T cells in vitro. *Arthritis Rheum*, 2003 Volume 48, number 9 (supplement) S611.
15. Walker M, Ziegler SF, Kasprovicz D, Nepom GT, **Buckner JH**. Induction of Antigen-Specific CD4+CD25+ Regulatory T Cells from Human CD4+CD25- Cells. *Federation of Clinical Immunology Societies Annual Meeting, Montreal, Quebec*, 2004.
16. Walker M, Kasprovicz D, Gersuk V, **Buckner JH**, Ziegler SF. Induction of FoxP3 and Acquisition of T Regulatory Activity by Stimulated Human CD4+CD25- T Cells. *Keystone Symposium: Regulatory T Cells, Banff, Alberta*, 2004.
17. Walker MR, Carson BD, Ziegler SF, Nepom GT, **Buckner JH**. De Novo Generation of Antigen-Specific CD4+CD25+ Regulatory T Cells from Human CD4+CD25- Cells. *Federation of Clinical Immunology Societies Annual Meeting, Boston, MA* 2005.

18. Walker MR, Carson BD, Ziegler SF, **Buckner JH**. The Lifecycle Of In Vitro Generated CD4+CD25+FoxP3+ Human TR: Generation, Expansion, and Persistence. Federation of Clinical Immunology Societies Annual Meeting, Boston MA, 2005.
19. Walker MR, Carson BD, Ziegler SF, Nepom GT, **Buckner JH**. Tissue Specific CD4+CD25+FoxP3+ Regulatory T cells: Generation, Isolation and Expansion. American College of Rheumatology Annual Meeting, San Diego, CA, 2005.
20. Walker MR, Carson BD, Ziegler SF, Nepom GT, and **Buckner JH** Generation of Autoantigen-Specific CD4+CD25+ Regulatory T cells From Human CD4+CD25- Cells. Keystone Symposium: Regulatory T cells, Breckenridge, CO, 2006.
21. Long SA, Walker M, Van Landeghen M and **Buckner JH**. Induction of CD4⁺CD25⁺FoxP3⁺ Regulatory T Cells: Requirement for Gamma Chain Cytokines. Poster presentation, Human Immunology Keystone Conference, Big Sky, MO, 2006.
22. Walker MR, Carson BD, Ziegler SF, Nepom GT, and **Buckner JH**. Induction of Autoantigen-Specific CD4+CD25+ Regulatory T Cells in Vitro. Federation of Clinical Immunology Societies Annual Meeting, San Francisco, CA, 2006.
23. Rieck M., Onengut-Gumuscu S., Gorman J., Greenbaum C., Concannon P., **Buckner J**. Alteration in T cell activation profiles and lymphocyte phenotypes are functional correlates of the 1858 C to T mutation of PTPN22. Clin Immunol. 2006 Vol 119: S18
24. Rieck M, Nelson A, Gorman J, Onengut-Gumuscu S, Pihoker C, Greenbaum C, Concannon P, **Buckner JH**. A Decrease in Memory B Cells is Associated with PTPN22 1858T in Healthy Subjects whereas Memory B Cells are Decreased in Autoimmunity Irrespective of PTPN22 Genotype. Presented Annual ACR meeting 2006
25. Rieck M, Onengut-Gumuscu S, Gorman J, Greenbaum C, Concannon P, **Buckner JH**. Variation in PTPN22 Corresponds to Altered Lymphocyte Memory Profile and Function. Presented Annual ACR meeting 2006
26. Rieck M, Arechiga A, Pihoker C, Greenbaum C, **Buckner JH**. Perturbations in the Function and Composition of the B Cell Compartment are Present in Type 1 Diabetes. J. Clin Immunol. 2007 Vol 123: S26
27. Rieck M, Arechiga A, Onengut-Gumuscu S, Concannon P, **Buckner JH**. In Healthy Subjects a Decrease in Memory B Cell Frequency and Activation is Associated with PTPN22 1858T Variant. J. Clin Immunol. 2007 Vol 123: S125
28. Long SA, Van Landeghen M., **Buckner, JH**. Rapamycin Promotes Induction of CD4+FoxP3+ T cells that Proliferate in Response to Common Gamma Chain Cytokines. Oral presentation, Federation of Clinical Immunology Societies (FOCIS) conference, San Diego, CA, 2007.
29. Arechiga AF, **Buckner JH**. Genetic Variation in PTPN22 Corresponds to Altered Signaling in B Lymphocytes. American Association of Immunologists meeting, Miami, FL, 2007.

30. Long SA, Schneider A, Bollyky P, Greenbaum C and **Buckner JH**. IL-2 Enhances FOXP3 Expression in Treg of Healthy but Not Diabetic Subjects. Poster presentation, Immune tolerance Keystone Conference, Keystone, CO, 2008.
31. Long SA, Shilling H, Stevens A, Pihoker C, Greenbaum C, and **Buckner JH**. IL-2 Treatment Enhances Expression of FOXP3 in Lupus but not Diabetic Subjects. Federation of Clinical Immunology Societies (FOCIS) conference, Boston, MA, 2008.
32. Schneider A, Greenbaum C, Pihoker C, and **Buckner J**. Effector T cells of T1D Subjects are Resistant to Suppression by adaptive Tregs. Poster presentation Federation of Clinical Immunology Societies (FOCIS) conference, Boston, MA, 2008.
33. Shilling HG, Wei S, Onengut-Gumuscu S, Leighty WW, Concannon P, and **Buckner JH**. The *PTPN22* 1858C/T Functional Polymorphism is Associated with Relapsing Polychondritis. Abstract, Federation of Clinical Immunology Societies (FOCIS) conference, Boston, MA, 2008.
34. Long SA, Bollyky P, Cerosaletti K, Shilling H, Pihoker C, Sanda S, Greenbaum C and **Buckner JH**. Diminished IL-2 Responsiveness and FOXP3 Expression in T1D Subjects Revealed by a Disease-Associated Variant of PTPN2. Poster presentation, 96th annual meeting of The American Association of Immunologists (AAI) conference Seattle, WA, 2009.
35. Schneider A, Kita M, Long SA, **Buckner J**. Persistence of FOXP3 Expression is Impaired in RR-MS Tregs. Poster presentation, 96th annual meeting of The American Association of Immunologists (AAI) conference Seattle, WA, 2009.
36. Habib T, Arechiga AF, Funk A, He Y, Zhang X, Zhang Z-Y, **Buckner JH**. The PTPN22 Allelic Variant Associated with Autoimmunity Impairs B Cell Signaling. Poster presentation, 96th annual meeting of The American Association of Immunologists (AAI) conference Seattle, WA, 2009.
37. Long SA, Schneider A, Rieck M, Greenbaum C, **Buckner JH**. Mechanisms of impaired regulation in T1D. Presented at 4th International conference on Autoimmunity 2009.
38. Bollyky J, Sanda S, **Buckner J**, Fitch M, Rieck M, Hellerstein M, Greenbaum C. Measurement of T cell subset kinetics, including T regulatory cells, in vivo in humans in autoimmune diseases using stable isotope labeling. Presented at ADA 2009.
39. Snir O, Rieck M, Klareskog L, **Buckner JH**, Malmström V. Identification of T cells reactive with citrullinated-vimentin in HLA-DRB1*0401 humanized mice and rheumatoid arthritis patients. Presented at Karolinska Institutet 2009
40. Long SA, Cerosaletti K, Shilling H, Zhang S, Zhang Z-Y, Pihoker C, Greenbaum C, **Buckner J**. Multiple alterations in IL-2R signaling contribute to decreased response to IL-2 in CD4⁺ T cells of T1D subjects as revealed by genotype/phenotype analysis. Poster presentation, Tolerance and Autoimmunity Keystone Symposium, Taos, NM, 2010.
41. Habib T, Funk A, Rieck M, Brahmandam A, Greenbaum C, Sanda S, Rawlings D, **Buckner J**. Blunted BCR Signaling, a Source of Lost Tolerance in Autoimmunity. Oral presentation, Tolerance and Autoimmunity Keystone Symposium, Taos, NM, 2010.

42. Habib T, Funk A, Rieck M, **Buckner JH**. The PTPN22 allelic variant 1858T is associated with multiple alterations in TCR signaling and function. Poster presentation, Tolerance and Autoimmunity Keystone Symposium, Taos, NM, 2010.
43. Schneider A, Long SA, Kita M, **Buckner J**. FOXP3 persistence and common γ -chain cytokine signaling are impaired in RR-MS Tregs. Poster presentation, Tolerance and Autoimmunity Keystone Symposium, Taos, NM, 2010.
44. Cerosaletti K, Long SA, Ho JC, Wan JY, **Buckner JH**. Association of non-coding SNPs in the autoimmune susceptibility gene PTPN2 with diminished PTPN2 expression. Oral presentation. FOCIS, Boston, MA, 2010.
45. Long SA, Cerosaletti K, Shilling H, Bollyky P, Rawlings D, Sanda S, **Buckner JH**. A T1D-associated variant of PTPN2 correlates with decreased IL-2/IL-15 responsiveness, reduced FOXP3 expression and impaired CD8 T cell differentiation. FOCIS Poster presentation, Boston, MA, 2010.
46. Gebe JA; Yue BB; Rieck M; Preisinger A; James E; Rawlings CA; Stone B; **Buckner J**; Nepom GT. Autoantigen T Cell Immune Responses Observed in the DR0401/DR0404 MHC-generated T Cell Repertoire that are Absent in the Homozygous DR0401 or DR0404 Restricted T Cell Repertoire.; *J. Clin Immunol.* 2010 Vol 135:S122
47. Long SA, Schneider A, Cerosaletti K, Greenbaum C, Sanda S, Kita M, **Buckner JH**. Variants in CD25 and PTPN2 are linked to reduced IL-2R signaling and reveal cell-type specific disease phenotypes. Oral presentation. FOCIS, Boston MA, 2010.
48. Habib T, Funk A, Rieck M, Brahmandam A, Dai X, Panigrahi AK, Luning Prak ET, Meyer-Bahlburg A, Sanda S, Greenbaum C, Rawlings DJ, and **Buckner JH**. PTPN22 Modulates B cell Tolerance in Human Autoimmunity. Oral presentation. Keystone Symposium, Whistler, British Columbia, Canada, 2011
49. **Buckner JH**. Genotype-phenotype analyses reveal disease mechanisms that underlie human autoimmunity. Oral presentation. 50th Midwinter Conference of Immunologists, Asilomar, Pacific Grove, CA, 2011.
50. Schneider A, Long SA, Posso S, Kita M, **Buckner JH**. Teff cells are resistant to Treg-mediated suppression in active, but not in inactive multiple sclerosis. Oral presentation. FOCIS, Washington DC, 2011.
51. Bollyky P, Phil D, Long SA, Wu RP, **Buckner JH**, Cerosaletti K, Nepom GT. CD44 signals through the STAT5 pathway and can substitute for IL-2. Oral presentation. FOCIS, Washington DC. 2011.
52. Habib T, Funk A, Rieck M, Brahmandam A, Dai X, Panigrahi AK, Luning Prak ET, Meyer-Bahlburg A, Sanda S, Greenbaum C, Cerosaletti K, Rawlings DJ, **Buckner JH**. Altered B cell homeostasis is associated with Type I diabetes and carriers of the PTPN22 allelic variant. Oral presentation. FOCIS. Washington DC, 2011.

53. Long SA, Rieck M, Sanda S, Bollyky J, Goland R, Bianchine P, Phippard D, Ehlers M, Greenbaum C, **Buckner JH**. Rapamycin plus IL-2 combination therapy in subjects enhances IL-2 responsiveness in CD25+ Treg, but also NK and effector T cells. FOCIS Washington DC, 2011.
54. Rieck M, Snir O, Gebe JA, Yue BB, Rawlings CA, Nepom G, Malmström V, **Buckner JH**. Identification and characterization of T cells reactive to citrullinated vimentin in HLA-DRB1*0401 humanized mice, healthy controls, and rheumatoid arthritis patients. FOCIS. Washington DC 2011.
55. Habib T, Funk A, Rieck M, Brahmandam A, Dai X, Panigrahi AK, Luning-Prak ET, Meyer-Bahlburg A, Sanda S, Greenbaum C, Cerosaletti K, Rawlings DJ, **Buckner JH**. Altered B cell homeostasis is associated with T1D and carriers of the PTPN22 allelic variant. Presented at Keystone Symposium: B cells 2011.
56. **Buckner, JH**. Common Mechanisms of Failed Regulation in Autoimmunity. Japanese Society of Immunology Meeting. Oral Presentation. Chiba, Japan 2011.
57. Pieper J, **Buckner JH**, Rieck M, James EA, Sandin C, Malmström V. Alpha-enolase specific T cells in rheumatoid arthritis. EWRR 2012.
58. Bollyky J, Long SA, Fitch M, Bollyky P, Rieck M, Rogers R, Samuels P, Sanda S, **Buckner JH**, Hellerstein M, Greenbaum C. Increased in vivo Turnover of CD4+ Memory T Cells in Humans with Type 1 Diabetes. FOCIS, Vancouver BC 2012.
59. James EA, Rieck M, Moustakas A, Papadopoulos G, **Buckner JH**, Kwok EA. DRB4 and its Associated HLA-DR4 Proteins Present Complementary Sets of Citrullinated Self-Peptides Generating a Self-Reactive T Cell Repertoire. FOCIS, Vancouver BC 2012.
60. Habib T, Funk A, Chen J, Wei S, **Buckner JH**, Cerosaletti K. SLE susceptibility alleles of BLK and BANK1 are associated with altered expression and changes in B cell homeostasis and function. Oral presentation. FOCIS, Vancouver BC 2012.
61. **Buckner JH**, Long SA, Gupta S, Schneider A, Samuels P. The challenge of developing antigen specific Treg therapy in T1D. Oral presentation. Twelfth International Conference on the Immunology of Diabetes, IDS, Victoria, BC 2012.
62. Schneider A, Long SA, Cerosaletti K, Samuels P, Kita M, **Buckner JH**. Effector T Cell Resistance in Active RRMS Involves IL-6 Mediated Signaling. Oral presentation. FOCIS, Vancouver BC 2012.
63. Turner, MS, Habib T, Rieck M, Funk A, **Buckner JH**. Functional Consequences in T Lymphocytes of the Autoimmunity-Associated 1858T Allelic Variant of PTPN22. Oral presentation. FOCIS, Vancouver 2012.
64. Gupta S, Samuels P, Long SA, **Buckner JH**. Ex vivo expanded human regulatory T cells are highly potent Tregs but may be short-lived. FOCIS, Vancouver 2012.
65. Rieck M, James EA, Pieper J, Sandin C, Klareskog L, Malmstrom V, **Buckner JH**. Direct ex vivo Detection of CD4 T Cells Specific for Citrullinated Antigens in RA Patients. FOCIS, Vancouver 2012.

66. Lord J, Chen J, Cerosaletti, K, **Buckner J**. Genotype, Immunophenotype, and Cytokine Signaling in Crohn's Disease. Crohn's & Colitis Foundation's National Clinical & Research Conference 2012. Hollywood, Florida
67. Pieper J, Rieck M, James EA, Sandin C, Klareskog L, **Buckner JH**, Malmström V. HLA class II tetramer detection of α -enolase specific T cells in rheumatoid arthritis. ECI-2012 Glasgow.
68. **Buckner JH**, Schneider A, Rieck M, Samuels P, Long SA. Mechanisms of failed Treg mediated suppression in human autoimmunity. Oral presentation. Immunotherapy Conference, Havana, Cuba, 2012.
69. **Buckner, JH**. T Cell Deregulation in Human T1DM. Keystone, Whistler BC, 2013.
70. Habib, T, Funk,A, Chen, J, Wei, S, Samuelson, E, **Buckner, JH** and Cerosaletti, K. SLE Susceptibility Alleles of BLK and BANK1 are Associated with Altered Expression and Changes in B Cell Homeostasis, Keystone, Whistler BC, 2013.
71. Turner,MS, Habib,T, Rieck,M, Funk, A, Anderson,W, Puri, KD, **Buckner, JH**. Enhanced PI3K/Akt-mediated survival of memory Th1 cells in type-1 diabetics and healthy controls carrying the autoimmunity-associated 1858T allelic variant of PTPN22. American Association of Immunology, Honolulu, HI 2013
72. Samuels, P, Long, A, Mason,M, Tatum, M, Greenbaum,C,**Buckner, JH**. Global alterations in CD4 T cell responses precede development of T1D. FOCIS, Boston, MA 2013.
73. Gupta, S, Tatum, M, Samuels, P, Long, SA, **Buckner, JH**. Ex vivo expanded T1D regulatory T-cells exhibit an unstable FOXP3+ phenotype. FOCIS, Boston, MA 2013.
74. Tatum, M., Greenbaum, C., **Buckner, JH**, Long, S. A. Strong Stimulation Can Rescue Impaired IL-2R Signaling in CD4 T Cells of T1D Subjects FOCIS, Boston, MA 2013
75. Pieper J, Rieck M, James EA, Sandin C, Klareskog L, **Buckner JH**, Malmström V. Direct ex vivo HLA class II tetramer detection of α -enolase specific T cells in the blood and synovial fluid of rheumatoid arthritis patients. MASIR 2013.
76. James, E., Rieck, M., Pieper, J, Gebe J., Yue, B., Tatum M., Sandin, C., Klareskog, L., Malmström, V. **Buckner JH**. Citrulline Specific CD4₊ T Cells Exhibit a Th1 Memory Phenotype In Rheumatoid Arthritis Subjects and Their Ex Vivo Frequency Is Influenced By Both Disease Duration and Biologic Therapy. ACR San Diego, CA 2013
77. Gan, R.W., Young, K.A., Zerbe, G.O., Demoruelle, M. K., Weisman, M. H., **Buckner, JH**, Gregersen, P. K. Omega-3 Supplement Use Is Associated With A Reduced Risk Of Anti-Cyclic Citrullinated Protein Positivity In A Population Without Rheumatoid Arthritis, But At Risk For Future Disease.
78. Sandin C, Gerstner C, James EA, Rieck M, Uchtenhagen H, Achour A, **Buckner JH**, Sandalova T, Malmström V. Differences in T cell responses towards the RA-associated autoantigen alpha-enolase when restricted by HLA-DRB1*0401 versus *0101 and *0404. ACR, San Diego, CA 2013

79. James EA, Rieck M, Pieper J, Gebe JA, Yue BB, Tatum M, Charlotta Sandin C, Klareskog L, Malmström V, **Buckner JH**. Citrullinated-antigen specific CD4+ T cells exhibit a Th1 memory phenotype in rheumatoid arthritis subjects and their ex vivo frequency is influenced by both disease duration and biologic therapy. Presented at ACR, San Diego, CA 2013
80. Boden E, **Buckner J**, James E, Lord J. Identification and Characterization of E.coli Outer Membrane Protein C (OmpC)-specific T Cells Using MHC Class II Tetramers. Presented at IBD 2013, Hollywood, FL
81. Sandin C, Gerstner C, Uchtenhagen H, James EA, Pieper J, Rieck M, Achour A, **Buckner JH**, Sandalova T, Malmström V. Differences in the Auto-Reactive T-Cell Pool when Restricted by the Highly Related Rheumatoid Arthritis Associated HLA-DRB1 Alleles *04:01, *04:04 and *01:01. FOCIS, Chicago, IL 2014.
82. Sandin C, Gerstner C, Uchtenhagen H, James EA, Pieper J, Rieck M, Achour A, **Buckner JH**, Sandalova T, Malmström V. Differences in the Auto-Reactive T-Cell Pool when Restricted by the Highly Related Rheumatoid Arthritis Associated HLA-DRB1 Alleles *04:01, *04:04 and *01:01. SCR 2014
83. Turner M, Anderson W, Habib T, Greenbaum C, **Buckner JH**. Selective Resistance of Effector Memory Th1 cells to apoptosis in Type 1 Diabetic Patients and Healthy Subjects who carry the PTPN22 Autoimmune Risk Allele. FOCIS, Chicago, IL 2014.
84. Sandin C, Gerstner C, James E, Uchtenhagen H, Pieper J, Rieck M, Achour A, **Buckner JH**, Sandalova T, Malmström, V. The shared epitope risk alleles HLA-DRB1*04:01, *01:01 and *04:04 differ significantly in their presentation of citrullinated α -enolase epitopes. FOCIS, Chicago, IL 2014.
85. Hundhausen C, Cerosaletti KM, Chen J, Schneider A, Wei S, Greenbaum CJ, and **Buckner JH**. Responsiveness to IL-6 is enhanced in T cells from patients with type 1 diabetes. FOCIS Chicago, 2014.
86. Habib, T, Brahmandam A, Funk A, Ng T, Greenbaum C, **Buckner JH**, Rawlings DJ. Diminished B Cell Receptor Signaling is Present in Ab+ First Degree Relatives that Progress to Type 1 Diabetes and is Improved in Subjects Responsive to Rituxan Therapy. FOCIS Chicago, 2014.
87. Alice Long, Peter Samuels, Anya Schneider, Christian Hundhausen, Karen Cerosaletti, **Jane H Buckner**. Human T Cell Checkpoints in Autoimmune Disease. Keystone Symposia, CO 2015.
88. Elizabeth Samuelson*, Tania Habib*, Andrew Funk, Janice Chen, Shan Wei, **Jane H. Buckner**, and Karen Cerosaletti. Autoimmune disease susceptibility alleles in the BANK1 gene are associated with altered B cell signaling and development in primary human B cells. Keystone Symposia, Banff, BC 2015
89. Katharine Schwedhelm, Karen Cerosaletti, Jerill Thorpe, Megan Tatum, Carla Greenbaum, **Jane Buckner** and S. Alice Long. Low IL-2 Response in Memory T cells of T1D subjects is dependent on Activation State. Keystone Symposia, Banff, BC 2015.

90. Hannes Uchtenhagen, Eddie A. James, Kim O'Brien, Lars Klareskog, Tomas Olsson, Vivianne Malmström, Vivian Gersuk, Peter S. Linsley, **Jane H. Buckner**. Transcriptome analysis of antigen-specific auto-reactive T-cells in rheumatoid arthritis. Keystone, CO 2015
91. Ian Frank, Duangchan Suwannasaen, Jerill Thorpe¹, Scott Presnell, Carla Greenbaum, **Jane Buckner**, Karen Cerosaletti, and S. Alice Long. Multidimensional Data Reveal Increased LAIR1 Expression in Heterogeneous Populations of Memory T Cells of T1D. FOCIS 2015, San Diego, CA
92. Christian Hundhausen, Alena Roth, Karen M. Cerosaletti, Carla Greenbaum, **Jane H. Buckner**. Mechanisms of enhanced T cell responses to IL-6 in type 1 diabetes. FOCIS 2015, San Diego, CA
93. Hannes Uchtenhagen, Cliff Rims, Gabriele Blahnik, **Jane H Buckner**, Eddie A James. Ex vivo Characterization of CD4 Responses Against the Seasonal Influenza Vaccine Using a Novel Multiplexed HLA Class II Tetramer Staining. FOCIS 2015, San Diego, CA
94. Elizabeth Samuelson, **Jane Buckner**. The IL-21 signaling pathway is enhanced in RA B cells and has the potential to alter development and cytokine production in RA B cells. ACR 2015, San Francisco, CA.
95. Elizabeth Dam, **Jane Buckner**. The IL-21 signaling pathway is enhanced in RA B cells and has the potential to alter development and cytokine production in RA B cells. AAI 2016, Seattle
96. Elizabeth Dam, **Jane Buckner**. The IL-21 Signaling Pathway is Enhanced in RA B Cells and has the Potential to Alter Development and Cytokine Production in RA B Cells. Cyto 2016, Seattle.
97. Tania Habib, Michael Turner, Warren Anderson, Andrew Funk, Mary Rieck, Kamal D. Puri, Carla Greenbaum, S. Alice Long, Megan Tatum, and **Jane H. Buckner**. Enhanced PI3K/AKT/mTOR responses are associated with resistance to activation-induced cell death and expansion of memory CD4⁺ T cells in T1D subjects and healthy carriers of the PTPN22 risk variant. AAI 2016, Seattle.
98. Hannes Uchtenhagen, Cliff Rims, Eddie A James, **Jane H Buckner**. Citrullinated Aggrecan Peptides as Targets of Auto-reactive CD4⁺ T-cells in Rheumatoid Arthritis. FOCIS 2016
99. Hannes Uchtenhagen, Cliff Rims, Eddie A James, **Jane H Buckner**. Citrullinated Aggrecan Peptides are targets of Auto-reactive CD4⁺ T-cells in Rheumatoid Arthritis, ACR 2016
100. Elizabeth M Dam, Alison C Maier, Anne M Hocking, Jeffrey Carlin, and **Jane H Buckner**. The transcription factor Specificity protein 1 up-regulates IL-21 receptor expression on B cells in rheumatoid arthritis leading to altered cytokine production and maturation, ACR 2017
101. Jing Song, Cliff Rims, David Arribas-Layton, Eddie A. James and **Jane H. Buckner**. Identification and Functional Characterization of T cell Reactive to Citrullinated Tenascin-C in HLA-DRB1*0401-Positive Rheumatoid Arthritis Patients, FOCIS 2017
102. Jing Song, Warren Anderson, David Rawlings and **Jane Buckner**. Editing of effector T cell activation pathways to model Teff resistance, FOCIS 2018

103. Kristina Harris, Daniel Campbell, Estelle Bettelli, Simon Glatigny, Barbara Hollbacher, Samantha Motley, Cathy Tan, Christian Hundhausen, **Jane Buckner**, Dawn Smilek, Samia Khoury, Tielin Qin, Gerald Nepom, Laurence Turka. Abatacept Selectively Modulates CD4+ Treg, Tfh, and CD38-expressing T Cells in the Periphery of Patients with Relapsing-Remitting Multiple Sclerosis, FOCIS 2018
104. Richard James, Emma Suchland, Elizabeth Dam, Iana Meitlis, **Jane Buckner**, Karen Cerosaletti, David Rawlings The SLE-associated Gene BANK1 Inhibits Macroautophagy and Restricts Plasma Cell Differentiation and Immunoglobulin Production by Human B Cells, FOCIS 2018
105. Valerie Wall, Virginia Muir, Jerill Thorpe, Katharine Schwedhelm, **Jane Buckner**, Cate Speake, Carla Greenbaum, Peter Linsley, Alice Long. KLRG1+TIGIT+ CD8 T Cells are a Hyporesponsive Cell Type Varying in Quantity across Individuals and Disease Conditions, FOCIS 2018
106. Cate Speake, Christian Hundhausen, Samuel O. Skinner, Henry T. Bahnson, Karen Cerosaletti, Alice Long, **Jane Buckner**, Carla Greenbaum. A Single Dose of Siltuximab can Transiently Modify T-effector Resistance to Suppression in T1D, FOCIS 2018
107. Alice Long, Scott Presnell, Karen Cerosaletti, Jerill Thorpe, Katharine Schwedhelm, Cate Speake, Carla Greenbaum, **Jane Buckner**. Combined Features of T and B Cells Define Distinct Immunotypes of Adult T1D Subjects, FOCIS 2018
108. Tania Habib, Peter Samuels, Archana Brahmandam, Megan Tatum, Andrew Funk, Karen Cerosaletti, Michael Mason, Elizabeth Whalen, Carla Greenbaum, Alice Long, **Jane Buckner**, David Rawlings. Dynamic Functional Phenotypes of B- and T helper-cells from Autoantibody-positive First Degree Relatives Mark Distinct Stages of Type I Diabetes (T1D) Progression, FOCIS 2018

Invited Lectures / Invited Conference Participant

2001 Western Regional ACR Meeting, Seattle, WA

2003 University of North Dakota- Guest Lecture Dept. of Immunology

2004 Autoimmune Biomarkers Symposium- Long Island, NY

2005 FOCIS Meeting, Boston, MA

Seattle Lupus Symposium, Seattle WA

Keynote Speaker at Arthritis: Arthritis Discoveries -Shoreline, Seattle

University of Michigan Rheumatology Grand Rounds, Ann Arbor, MI

2006 Western Chapter of the American Federation for Medical Research, Carmel, CA

Seattle Sweden Diabetes Awareness Day, Seattle, WA

Sunset Club Lecture Series Invited Speaker, Seattle, WA

Pat's Fund Breakfast: Keynote Speaker, Seattle, WA

Virginia Mason Grand rounds, Virginia Mason Medical Center, Seattle, WA

2007 FOCIS Oral Presentation, San Diego, CA

Pat's Fund Dinner: Keynote Speaker, Seattle, WA

The Evergreen Chapter of Scleroderma Foundation, Seattle, WA

Alliance for Lupus Research: Keynote Speaker, Seattle, WA

Association of Women in Science, AWIS Seattle Chapter, Seattle, WA

2008 University of Oslo, Norway

Pat's Fund, First Annual Seattle Autoimmunity Day, Seattle, WA

FOCIS (Federation of Clinical Immunological Societies), Boston, MA

FOCIS Concurrent Thematic Symposium, Boston, MA

Rheumatology Update for Primary Care Physicians,
Virginia Mason Medical Center, Seattle

ASHI (American Society for Histocompatibility and Immunogenetics) 34th Annual
Meeting Toronto, Ontario, Canada

2009 University of Washington Rheumatology Grand Rounds, Seattle, WA

University of Minnesota, Dept of Immunology, Minneapolis, MN

University of Kentucky, Lexington, KY

The Arthritis Foundation, Pacific Northwest Chapter, Shoreline, WA

University of Oxford, 14th EASD Oxford Workshop, Oxford, United Kingdom

Juvenile Diabetes Research Foundation Center meeting, Harvard University, Boston, MA

Teleconference lecture

For "Current Topics in Histocompatibility and Transplantation," an annual series of interactive web-based lectures, moderated by Dr. Sandra Rosen-Bronson, who is actively involved in the leadership of the American Society of Histocompatibility and Immunogenetics (ASHI)

4th International Conference on Autoimmunity: Mechanisms & Novel Treatments, Crete, Greece

2010 Tolerance and Autoimmunity Keystone Symposium, Taos, NM

Levine Symposium, Las Vegas, NV

97th annual meeting of The American Association of Immunologists, Baltimore, MD

FOCIS 2010 (Federation of Clinical Immunological Societies), Boston, MA
Presenter for the Network of Consortia session
and Symposia presentation, FOCIS 2010, Boston, MA

American Diabetes Association 70th Annual Scientific Sessions, Orlando, FL

Pat's Fund, Redmond, WA

University of California, San Francisco, and Genentech, San Francisco, CA

Amgen, Seattle, WA

Benaroya Research Institute Symposium, Seattle, WA

2011 50th Midwinter Conference of Immunologists, Asilomar, Pacific Grove, CA

Keystone Symposium Whistler, British Columbia, Canada

University District Rotary Club, Seattle, WA

Herrenhausen Symposium, Munich, Germany

University of Massachusetts Medical School, Department of Pathology, Worcester, MA

University of North Carolina Department of Rheumatology, Allergy and Immunology Ground
Rounds, Chapel Hill, NC

Annual Scientific Meeting of the American College of Rheumatology, Chicago, IL

International Symposium of the 2011 Annual Meeting of Japanese Society for Immunology
Chiba, Japan

2012 University of Washington Poll Scholar Symposium, Seattle, WA

Pfizer, Inc., San Francisco, CA

Deeley Research Centre, Victoria, British Columbia, Canada

Seattle Children's Research Institute
Center for Immunity and Immunotherapies at SCRI, Annual Retreat

Amgen

Immunity and the Beta Cell strategic planning workshop, NIDDK and the Beta Cell Biology Consortium (BCBC, Washington, DC

Karolinska Institutet, Stockholm, Sweden

Allied Health Advocates Auto Immunity Day, Seattle, WA

Twelfth International Conference on the Immunology of Diabetes, Victoria, British Columbia, Canada

Immune Tolerance Network Symposium, Vancouver, British Columbia, Canada

Symposium on Autoimmune Disease Regulation, Copenhagen, Denmark

Novo Nordisk, Copenhagen, Denmark

Immunotherapy 2012, Havana, Cuba

2013 FOCIS Advanced Course in Basic and Clinical Immunology, Scottsdale, AZ

TEDDY Immune Markers Workshop, Bethesda, MD

Keystone Symposium, Whistler, BC, Canada

American Association of Immunologists, Honolulu, HI

The Jackson Laboratory, Bar Harbor, ME

ACR/ARHP Meeting, San Diego, CA

Columbia University, Columbia Center for Translational Immunology, New York, NY

Seattle City Club's 2013 Health Care Series, Seattle, WA
Panel Participant "Health Care Reform in Puget Sound"

2014 Novo Nordisk, Seattle, WA

FOCIS Advanced Course in Immunology, Scottsdale, AZ

T1D Exchange Biobank Workshop, Tampa, FL

Northwest Rheumatism Meeting, Seattle, WA

"Be the Cure" Tolerance Workshop, Sigtuna, Sweden

2014 American College of Rheumatology, Seattle, WA

FOCIS Interventional Immunology Course, Chicago, IL

FOCIS Advanced Course in Immunology, Boston, MA

UMC Utrecht Eijkman Lecture, Schipol, Amsterdam

Visiting Professor, University of Colorado, Denver, CO

NIH, Grand Rounds, Bethesda, MD

2015 Keystone Symposium, Keystone, CO

FOCIS Advanced Course in Immunology, Scottsdale, AZ

University of Texas Distinguished Speaker Series, Houston, TX

Yale Human and Translational Immunology Seminar Series, New Haven, CT

American Association of Immunologists, New Orleans, LA
Major Symposium: Roots & Mechanisms of Human Autoimmunity

A3 Presentation, Seattle, WA

UCSF Diabetes Symposium, San Francisco, CA

Frontiers in Diabetes Research, Naomi Berrie Diabetes Center of Columbia University

2016 University of Pittsburgh, Department of Immunology, Pittsburgh, PA

University of Pittsburgh Rheumatology Grand Rounds, Pittsburgh, PA

Joslin Lecture Series, Harvard University, Boston, MA

LaJolla Institute for Allergy and Immunology, LaJolla, CA

“Be The Cure” Tolerance Workshop, Sigtuna, Sweden

Cyto 2016, Seattle, WA

FOCIS 2016, Boston, MA

CIID Symposium: Innate Immunity in Health and Disease, Seattle, WA

Meydenbauer Yacht Club, Seattle WA

JDRF Type One Nation Summit, Seattle, WA

Illuminations, Seattle WA

Gilead, Seattle, WA

ACR Meeting, Washington DC

University of Alabama, Birmingham, AL

2017 IDS Meeting, San Francisco, CA

Norin Scientific Retreat, Oslo, Norway

University of Washington Poll Scholar Symposium, Seattle, WA

World Trade Center, Seattle, WA

University of Minnesota, Minneapolis, MN

Brehm Coalition, Seattle, WA

Sunset Club, Seattle, WA

Young Professionals Network, Seattle, WA

American Diabetes Association, San Diego, CA

Howard Hughes Medical Institute, Seattle WA

Mirabella, Seattle, WA

2017 FASEB Conference on Autoimmunity, Saxton's River, VT

International Forum for RA, Stockholm, Sweden

RA Collaboration Summit, LaJolla, CA

Washington Chapter of the International Womens Forum, Seattle, WA

ACR, San Diego, CA

2018 Allen Institute Immunology Workshop, San Diego, CA

University of Florida, Gainesville, FL

irAE Advisory Group Meeting, San Francisco, CA

AMLI and ASHI Symposium, San Francisco, CA

Key Opinion Leaders Meeting, San Francisco, WA

UW Immunology Retreat, Fort Worden, WA

Immunology of Diabetes Society Congress, London

Current Research Support

1R21AR073508-01 (Buckner, JH)

05/01/2018-04/30/2020

NIH/NIAMS

Exploring novel disease mechanisms in RA linked to HLA class II risk

The goal of this study is to test the hypothesis that the HLA DRB1*04 and *1001 alleles associated with increased risk of RA promote alterations in T cell fate and function that contribute to the development and progression of RA, independent of antigen specificity.

2U01AI101981-06 (Holers, VM)

07/01/2018 – 06/30/23

Prevention Center U01: Early Targets for Antigen-Specific Tolerance Induction in Preclinical Rheumatoid Arthritis

NIH/NIAMS

This project proposes to identify the citrullinated epitopes to which pathogenic B and T cells respond identifying the mechanisms that underlie disease and design tolerance-inducing therapies.

Role: Project Principal Investigator

1R01AI132774-01 (Buckner, JH)

07/18/2017 – 06/30/2021

NIH/NIAMS

Mechanisms of IL-6 mediated T cell pathogenesis in autoimmunity

The IL-6 signaling pathway is dysregulated in autoimmunity in part through increased expression of the membrane bound IL-6R(mbIL-6R). The central hypothesis for the proposed studies is that elevated mbIL-6R expression leads to altered T cell fate and function resulting in pathogenic autoreactive T cells due to changes in the magnitude and balance of STAT1 and STAT3 phosphorylation.

1 DP3 DK111802-01 (Rawlings, DJ)

09/30/2016 – 06/30/2021

NIH/NIDDK

An integrated strategy to define the functional and synergistic impact of T1D causal variants

The focus of this project is that PTPN22R, TYK2NP, SH2B3R variants individually and in combination contribute to the development of pathogenic islet specific T cells in T1D; and that the impact of these variants is further amplified by an enhanced Interferon response, as seen with IFIH1R, resulting in increased risk for disease development.

Role: Co-PI

1 R01AR065952-01A1 (Hawkins)

07/01/2015 – 06/30/2020

NIH/NIAMS

Functional validation of Rheumatoid Arthritis-associated distal regulated regulatory SNP's.

This proposal is to functionally validate distal regulatory SNPs associated with rheumatoid arthritis.

2016PG-T1D039 (Rawlings)

12/01/2017 – 2/28/2019

Helmsley Foundation

Durable regulatory cell therapy of T1D using gene editing

Based upon our parallel existing expertise in T cell engineering and isolation of islet-specific T cells, and out preliminary dataset showing the capacity to efficiently edit the human FOXP3 locus, we predict that we will establish scalable methods to produce regulatory T-cell products directly amenable to clinical application.

Role: Co-PI

1 UM1 AI109565-01 (Nepom, G)

08/01/2014 – 01/31/2019

Immune Tolerance Network (ITN)

Dr. Buckner is Co-Protocol Chair of this trial with Dr. Carla Greenbaum. ITN Clinical Trial Protocol Chairs have overall responsibility for the conduct of the study, including oversight of all scientific, reporting, and financial matters. They will oversee recruitment activities, patient care management, and participate in monthly study teleconferences. Under the guidance of the ITN members, Protocol Chairs also interact with regulatory agencies, as needed, for matters regarding this clinical trial.

W81XWH-15-1-003 (Buckner, JH)

12/10/2014 – 12/03/2018

Department of Defense/USAMRAA

In Depth Analysis of Citrulline-specific CD4 T Cells in Rheumatoid Arthritis

The focus of this project is to test the hypothesis that cit-specific CD4 T cells present in RA patients exhibit a distinct cell surface phenotype and transcriptional signature that could be used to predict disease, response to therapy and identify novel therapeutic targets for the treatment of RA.

Role: Co-Investigator

1 DP3 DK104466-01 (Buckner, JH)

09/19/2014 – 08/31/2018

NIH/NIDDK

Investigating the role of IL-6 signaling in Teff resistance and T1D development

The focus of this project is enhanced responsiveness to IL-6 and or IL-21 predates the development of T1D and contributes to the development of Teff resistance. Additionally, we will examine the hypothesis that the combination of enhanced IL-6(pSTAT3) and blunted IL-2(pSTAT5) responses result in an increase in pathogenic CD4 T cells and impaired Treg development and function resulting in the progression to T1D.

5 U01 AI101990-05 (Buckner, JH)

07/01/2012 – 06/30/2018

NIH/NIAID

Defining the role of altered cytokine signaling pathways on autoimmunity

We pose the hypothesis that in autoimmune individuals, enhanced phosphorylation of STAT3 and diminished phosphorylation of STAT5 establish a functional program biasing immune responses towards a skewed, pro-autoimmune profile.

Award includes an administrative supplement in support of the Cooperative Study Group for Autoimmune Disease Prevention (CSGADP). The CSGADP goals is to halt the development of autoimmune disease prior to clinical onset by means other than global immunosuppression, the CSGADP will support collaborative projects, innovative pilot and feasibility projects, and development of reagents and resources. The Infrastructure and Opportunities Fund (IOF) of the CSGADP will facilitate the mission.

Completed Research Support

5U01 AI101990-05 (Buckner)

03/01/2017 – 04/01/2018

NIH/NIAID

CSGADP

This is a pilot study of the Cooperative Study Group for Autoimmune Diseases (CSGADP). The pilot study will test the hypothesis that the B cell fate decision are the outcome of an interaction between activating signals (BCR,CD40L, TLR and IL-21). The subsequent metabolic response and the epigenetic landscape of the responding cells, which will ultimately promote the development of autoreactive B cells with pathogenic features.

5 U01 AI101981-05 (Holers, VM)

09/01/2014 – 06/30/2017

NIH/NIAID

Holers U01: Early targets for antigen-specific tolerance induction in Preclinical Rheumatoid Arthritis

The focus of this project is to identify novel synovial T cell epitopes in Rheumatoid Arthritis (RA), and develop HLA class II tetramers to detect autoreactive T cells. The data generated from these studies will be vital in the development of tools to predict the development of RA and will also yield information that will assist in the development of treatments to prevent the development of RA.

Role: Project Principal Investigator

3 UH2 AR067681-03S1 (Holers, VM)

06/01/2016 – 05/31/2017

NIH/NIAMS

Detection of citrulline specific CD4 T cells in RA synovium

This is a nested study for the NIH Accelerating Medicines Partnership (AMP) Autoimmune Diseases of Rheumatoid Arthritis and Lupus. The primary goal of the study is to characterize citrulline (cit)-specific CD4 T cells in the synovium of subjects with RA. Specifically, we will determine the reequency, activation status, and lineage of T cells isolated from synovial tissue. We will also determine whether cit-specific T cells in the synovium are distinct from cit-specific T cells in the peripheral blood.

Role: Nested Study Principal Investigator

1 UC4 DK097835-01 (Krischer)

05/01/2015 – 02/28/2017

NIH/NIDDK

NIDDK T1D TrialNet Data Coordinating center/TrialNet Core Biomarkers and Mechanisms Panel

Members of the TrialNet Core BMP are charged with development and execution of a strategic plan for mechanistic and biomarkers research within trialNet towards it mission of Type 1 Diabetes prevention.

TEDDY Study (Krischer)

06/01/2016 – 05/31/2017

NIH/NIDDK

TEDDY Pilot Study: Assessing Responses to immune perturbation in the TEDDY Cohort

In this pilot study, we propose to determine if exaggerated responses to known immune stimuli-vaccines in early childhood reveal an inherent risk for the progression to the development of islet autoantibodies and ultimately type 1 diabetes. Specifically, we will determine the frequency, activation status, and lineage of T cells isolated from peripheral blood from subjects enrolled in TEDDY who have samples pre and 7-28 days post vaccination.

2-SRA-2014-150-Q-R (Bluestone, J)

06/01/2014 – 05/31/2016

JDRF

Collaborative Center for Treg Biology (JDRF-CCTB)

In this proposal we will assess the response of CD4 and CD8 T cells to IL-6 as measured by pSTAT3 using flow based analysis. Additional studies of the role of Treg resistance as it relates to enhanced IL-6 responses will also be performed using the in vitro CFSE based assay of suppression.

Role: Subcontract Principal Investigator

1 DP3 DK098217-01 (Greenbaum, C)

05/15/2013 – 04/30/2016

NIH/NIDDK

In vivo assessment of T cell kinetics in individuals at risk for Type 1 Diabetes

The goal of this project is to assess whether T cell kinetics may be used as a biomarker to predict T1D disease risk, progression of T1D, and response to T1D therapies.

Role: Co-Investigator

1 DP3 DK097672-01 (Buckner, JH)
NIH/NIDDK

09/15/2012 – 09/14/2016

Defining the functional impact of T1D genes in mouse and man: A Unified Strategy

This project proposes to define *how* alterations in immune function mediated by T1D genes contribute to disease pathology. To achieve this goal we propose a collaborative and integrated strategy in which we will identify and study causative genetic variants which are: 1) likely to impact important immune pathways, 2) amenable to dissection through the use of targeted homologous mutations in mice, and 3) common enough to allow robust studies in adequate numbers of healthy control and T1D subjects. We propose 3 specific areas of concentration: 1) Human Genetic Studies, 2) Murine models of human coding variants, and 3) Human Immune Phenotyping Studies, to be performed in tandem with information sharing between all aims to keep colleagues informed.

5 R01 AI083455-04 (Buckner, JH)
NIH/NIAID

08/15/2011 – 01/31/2016

Impact of the autoimmunity associated PTPN22 1858T

In this proposal we will address the hypothesis that the impaired T cell receptor signaling that results from the PTPN22 1858T variant shapes CD4 T cell function in a manner which favors the development of strong proinflammatory responses, which can contribute to the development of autoimmunity.

245284 (Buckner, J)
Alliance for Lupus Research

08/01/2012 – 07/31/2014

The Impact of Genetic Variants on B cell Development and Function in SLE

We hypothesize that the genetic variants in BLK and BANK1 differentially impact B cell signaling and development, leading to a failure of B cell tolerance induction which defines one of the mechanisms that contribute to B cell autoreactivity in SLE.

Role: Principal Investigator

N01-AI-15416 (Bluestone, J)
NIH/NIAID

02/01/2012 – 04/30/2014

The Collaborative Network for Clinical Research in Immune Tolerance: Protocol Chair (Greenbaum, C) Mechanistic Outcomes Committee, for which Drs. Greenbaum and Buckner serve as a protocol co-chairs for the Immune Tolerance Network (ITN).

Role: Subaward Co-Investigator

1DP3-DK085678-01 (Rich,S)
NIH/NIDDK

03/01/2012 – 06/30/2014

Expression and proteomic characterization of risk loci for type 1 diabetes

The goal of this project is to determine the how genotypes influence phenotypes and disease susceptibility specifically looking at risk alleles in the genes that encode proteins involved in antigen receptor and cytokine signaling including PTPN22.

Role: Principal Investigator

5 U01 DK061034-11 (Greenbaum, C)
NIH/NIDDK

09/30/2009 – 06/30/2014

Northwest Clinical Center for Type 1 Diabetes - TrialNet

This project is a nationwide, multi-center consortium to conduct type 1 diabetes clinical trials, including the Diabetes Prevention Trials Type-1 (DPT-1).

Role: Co-Investigator

1 RC4 DK090814-01 (Rawlings, D)
NIH/NIDDK

09/30/2010 – 08/31/2013

B cell function and phenotype as predictors of therapeutic response to rituximab in T1D

The Buckner lab will examine the B cell populations for their signaling characteristics upon activation utilizing flow cytometric analysis in the BRI Imaging core. Additionally, if snp typing is required, DNA will be isolated from the non-B cell population obtained and sent to the BRI Genotyping core for SNP analysis for PTPN22 1858T, and if appropriate other variants known to be involved in BCR signaling and associated with T1D.

Role: Project Principal Investigator

2087550 (Nepom, G)

07/14/2008 – 07/13/2013

Washington State Life Sciences Discovery Fund

Program for Autoimmune Disease Intervention

The aims of this program are to: 1. Develop and apply novel strategies for evaluating patients with diabetes, multiple sclerosis, and lupus, based on immunologic and genetic profiling; 2. Develop new biologically based therapeutics using our expertise in single chain fragment technologies and inhibitory monoclonal antibodies, specifically targeting a key step shared in common by multiple autoimmune disease pathways, dendritic cell-T cell interactions; and 3. Expand access to the Clinical Research Core program for patients with diabetes, multiple sclerosis, and lupus throughout Washington State, integrating research and treatment.

Role: Co-Investigator

4-2011-248 (Bluestone, J)

11/01/2010 – 10/31/2013

Juvenile Diabetes Research Foundation

JDRF Collaborative Center for Cell Therapy

Using a novel inter-institutional, interdisciplinary collaborative program to make substantial advances in the understanding of Tregs in humans and rapidly translate the basic science into clinical application.

Role: Principal Investigator - Aim 3; Co-Investigator - Aim 2

Juvenile Diabetes Research Foundation (Nepom, G)

01/01/2008 – 5/31/2013

JDRF-BRI Center for Translational Research

This project addresses the hypothesis that B cell selection and maturation are defective in T1D resulting in a loss of B cell tolerance. In this grant we propose to examine the peripheral B cell compartment in T1D subjects and specifically examine the impact of PTPN221858T mutation on the development of B cell tolerance, examine the BCR signaling defects in T1D.

Role: Principal Investigator - Project 2; Co-Investigator - Project 1, Project 3 and Core A

N01-AI-15416 (Bluestone)

12/1/2010 – 07/31/2011

NIH/NIAID

IL-2 Rapa ITN Mechanistic Studies

The ongoing study of IL-2/rapamycin treatment in individuals with T1D is an opportunity to examine the in vivo impact of this therapy on the number and function of Treg.

Role: Project Principal Investigator

1 RC4 DK090796-01 (Buckner, J)

09/30/2010 – 08/31/2012

NIH/NIDDK

Understanding regulatory defects T1D: natural history and impact of therapy

In this grant we propose to examine samples obtained by TrialNet to assess when Teff resistance to Treg or impaired IL-2R signaling occurs during the course of disease from pre-clinical through clinical diagnosis and whether these defects predict subsequent disease course.

Role: Principal Investigator

5 U19 AI050864-10 (Eisenbarth, G)

09/01/2010 – 08/31/2012

NIH/NIAID

GSGADP Pilot: Defining common mechanisms of autoimmunity through genotype-phenotype analysis (Buckner, J)

We will test the hypothesis that phenotypes defined by genetic variants associated with autoimmunity define common mechanisms that underlie the diseases associated with that gene. Specifically we will: 1) examine the TCR and BCR signaling signatures and the composition of the B and T cell compartments of subjects with diseases associated with the PTPN22 variant: T1D, SLE, RPC compared to subjects with MS and IBD, diseases not associated with the PTPN22 variant. 2) We will characterize IL-2 signaling and the expression of FOXP3 in the presence and absence of IL-2 in subjects with diseases associated with variants in either CD25 or PTPN22: MS, T1D and IBD, compared to subjects with SLE, a disease not associated with genes in the IL-2R pathway.

Role: Pilot Principal Investigator

1 R56 AI083455-01A1 (Buckner, J)

09/01/2010 – 08/31/2012

NIH/NIAID

Impact of the autoimmunity associated PTPN22 1858T variant on the human immune response

In this proposal we will address the hypothesis that the impaired T cell receptor signaling that results from the PTPN22 1858T variant shapes CD4 T cell function in a manner which favors the development of strong proinflammatory responses, which can contribute to the development of autoimmunity.

W81XWH-10-1-0149 (Nepom, G)

04/01/2010 – 03/14/2012

DOD/CDMRP

Cytoprotection: immune and matrix modulation of tissue repair – Project 1-C

This interdisciplinary, targeted research program is designed to develop a selective anti-inflammatory strategy, which will become a valuable asset to the therapeutic approach to tissue replacement and healing. The anticipated outcome of Aim 1.C. is a set of validated molecular pathway targets for modifying Treg function in association with our engineered tissue implants.

Role: Co-Investigator Aim 1-C

5 U19 AI050864-10 (Eisenbarth, G)

12/01/2008 – 08/31/2011

NIH/NIAID

Virginia Mason/UCDHSC Autoimmune Prevention Center: Pilot funding

Citrullinated synovial antigens as T cell epitopes: developing a biomarker for RA

This grant is requested as supplemental funding to develop a new approach to identify and screen candidate citrulline peptides in order to examine T cell responses in RA synovial fluid.

Role: Pilot Principal Investigator

33-2008-398 (Buckner)

03/01/2008 – 08/31/2011

JDRF

Functional and Genetic Analysis of Shared Regulatory Defects in T1D and MS

The goals of this project are to: (1) localize the defects in regulation at the T_R : T_E interface, in both MS and T1D, then address the correlation between these defects and the presence of disease associated IL-2RA and IL-7R variants.

Role: Principal Investigator

5 R03 DA027013-02 (Buckner, J)
NIH/NIDA

09/30/2009 – 08/31/2011

Linking Genetic Variation in the PTPN2 Gene to Autoimmune Disease Susceptibility

In this grant we examine the hypothesis that genetic variants in the PTPN2 gene result in altered IL-2 signal transduction affecting differentiation and function of T cells, predisposing an individual to develop autoimmunity.

Role: Principal Investigator

138279 (Buckner)
Alliance for Lupus Research

08/01/2009 – 07/31/2011

The Impact of Genetic Variants on BCR Signal Transduction in SLE

In this proposal we will investigate the hypothesis that each of these genetic variants modulates BCR signaling and that these alterations in BCR signaling will reveal mechanisms by which B cell tolerance is lost in SLE.

Role: Principal Investigator

33-2008-398 (Buckner)
JDRF

03/01/2008 – 08/31/2011

Functional and Genetic Analysis of Shared Regulatory Defects in T1D and MS

The goals of this project are to: (1) localize the defects in regulation at the T_R : T_E interface, in both MS and T1D, then address the correlation between these defects and the presence of disease associated IL-2RA and IL-7R variants.

Role: Principal Investigator

U19 AI050864 (Eisenbarth/Buckner)
NIH/NIAID

12/01/2008 – 08/31/2009

Virginia Mason/UCDHSC Autoimmune Prevention Center: Pilot funding

Citrullinated synovial antigens as T cell epitopes: developing a biomarker for RA

The purpose of this pilot project is to identify autoreactive T cells and analyze their functional characteristics in individuals at risk for rheumatoid arthritis.

Role: Co-Investigator

128310247 (Buckner)
ROTRF-JDRF

12/01/2007 – 11/30/2010

Induction of Minor Histocompatibility Specific TR Cells as a Therapy of Transplant Rejection

The goal of this project is to examine whether donor-specific T-regulatory cells can be generated in subjects who have received a renal transplant from a living relative donor.

Role: PI

07882-01 (Buckner)
Alliance for Lupus Research

02/01/2007 – 01/31/2008

Induction of Regulatory T Cells for the Treatment of Lupus

This study examines whether regulatory T cells are impaired in subjects with lupus and investigates whether these cells can be enhanced with specific growth factors or compounds to use as a novel treatment for lupus patients.

Role: Principal Investigator

07890-01 (Buckner) 01/01/2007 – 12/31/2008

Becton, Dickinson & Company

T-reg Therapeutic Studies Collaboration

The goal of this work is to establish a protocol to produce islet specific T regulatory cells to be used in the development of adoptive cell therapy in the setting of new onset T1D and islet cell transplant.

Role: Principal Investigator

07877-01 (Kita) 10/01/2006 – 12/31/2007

The National Multiple Sclerosis Society, Greater WA Chapter

MS Research Translation Project

Improve access for regional MS patients to immunotherapy clinical trials and establish a sample registry and repository for blood specimens.

Role: Co-Investigator

5 U19 AI050864-10 (Eisenbarth, G) 09/15/2006 – 08/31/2012

NIH/NIAID

Virginia Mason/UCDHSC Autoimmune Prevention Center (Holers, Proj.1)

Rheumatoid Arthritis Biomarkers of Progression from Autoimmunity to Disease

The purpose of this project is to identify autoreactive T cells and analyze their functional characteristics in individuals at risk for rheumatoid arthritis.

Role: Co-Investigator

ERMS No.06054001 UID No. 000097010 (Allen) 01/01/2006 – 12/31/2009

Department of Defense

BRI Center for Inflammation and Tissue Repair

Translational Medicine Core

This supports the expansion of the Benaroya Research Institute Translational Core.

5 R01 DK072457-05 (Buckner, J) 09/01/2005 – 08/31/2011

NIH/NIDDK

Activation Induced Generation of Human T Cells

This proposal examines the mechanisms which lead to the de novo generation of TR from non regulatory cells, the fate of these cells and the character of the antigens to which these newly generated TR are specific.

Role: Principal Investigator

U19 AI50864 (Buckner) 09/01/2005 – 06/30/2006

Autoimmune Prevention Center

Pilot Project – Expansion of Human gTregs

Role: Principal Investigator

5 R01 AR037296 (Nepom, G) 08/08/2005 – 07/31/2011

NIH/NIAMS

HLA Susceptibility Genes in RA

The major goals of this project are to test three hypotheses: 1) Is the generation of autoreactive T cells biased by selection on disease associated HLA DR4 MHC ligands; 2) Does recognition of structurally similar disease associated MHC class II molecules impair the maturation of regulatory T cells and 3) Is the threshold for T cell activation during MHC-peptide recognition enhanced by synergistic interactions with other disease associated class II molecules?

Role: Co-Investigator

UCSF 4-2005-1168 (Bluestone)

08/01/2005 – 01/31/2011

Juvenile Diabetes Research Foundation

JDRF Collaborative Center for Cell Transfer Therapy

Generation of antigen-specific T regulatory cells from CD4+CD25- T cells using MHC Peptide Tetramers

The goal of this pilot project is to optimize conditions for the generation of islet specific TR and their expansion in vitro with the purpose of extending this work to cell based therapy.

Role: Co-Investigator

5 R01 AR051394 (Norris, J)

07/18/2005 – 06/30/2011

NIH/NIAMS

Virginia Mason/UCHSC APC Cooperative Study Group in Autoimmune Disease Prevention: RA-Related Autoantibodies in Healthy FDR of RA Patients (SERA)

This project aims to establish Benaroya Research Institute as a rheumatoid arthritis first degree relative study site.

Role: Co-Investigator

R01 AR051394 (Norris)

07/18/2005 – 06/30/2010

NIH/NIAMS

Virginia Mason/UCHSC APC Cooperative Study Group in Autoimmune Disease Prevention: RA-Related Autoantibodies in Healthy FDR of RA Patients (SERA)

This project aims to establish Benaroya Research Institute as a rheumatoid arthritis first degree relative study site.

Role: Co-Investigator

P01 DK053004 (Lernmark)

07/15/2005 – 06/30/2008

NIH/NIDDK

Immunogenetics of Human Diabetes

Project 1: CD4+ T Cell Profiles in Human T1D (Nepom)

The major goals of this project are to test the hypotheses that high avidity recognition of multiple islet epitopes correlates with disease progression or earlier disease onset and that diabetogenic T cells may persist in patients by becoming refractory to downregulation.

Role: Co-Investigator

1-2005-256 (Buckner)

02/01/2005 – 01/31/2008

Juvenile Diabetes Research Foundation

Generation of Regulatory T Cells to Islet Specific Antigens in T1DM

This grant examines the ability of individuals with T1D to generate GAD-specific regulatory T cells.

Role: Principal Investigator

2004-204 (Nepom)

01/01/2005 – 12/31/2007

The Dana Foundation

Regulatory T cells in Human Autoimmunity

The objective of this project is to examine whether autoimmune disease represents a breakdown in central or peripheral tolerance. Specific aims are to determine whether: 1. self-reactive T cells from patients with autoimmune disease are refractory to normal regulatory signals; 2. the ability to generate self-reactive T cells is defective in patients with autoimmune disease; 3. pathogenic T cells can be converted to antigen-specific regulatory cells through the ectopic expression of FoxP3.

Role: Principal Investigator (Project 2)

N01-AR-1-2256 (Gregerson)

10/01/2003 – 09/30/2007

NIH, NIAMS

Autoimmune Biomarkers Initiative

Subcontract to Benaroya Research Institute for Subject recruitment, sample analysis and sample handling as part of a study of patients with rheumatoid arthritis who are receiving anti-TNF therapy, in order to determine whether transcript array profiles predict response to therapy.

Role: Co-Investigator

U19 AI50864 (Eisenbarth)

06/01/2002 – 06/30/2004

Virginia Mason/UCHSC Autoimmune Prevention Center

Autoimmune Profiling in Relapsing Polychondritis

Role: Principal Investigator (for Pilot Project 1)

4-2001-433 (Nepom)

10/01/2001 – 12/31/2007

Juvenile Diabetes Research Foundation

BRI-JDRF Center for Translational Research:

Profiling of Islet Antigen-specific Immunity in IDDM

This grant works to establish a juvenile diabetes center for developing and applying molecular and genetic profiling techniques in the use of IDDM therapeutics.

Role: Co-Investigator

ACR Arthritis Investigator Award (Buckner)

01/01/2000 – 12/31/2004

Arthritis Foundation

Mechanisms of cartilage directed autoimmunity in relapsing polychondritis

Role: Principal Investigator