

Curriculum Vitae

JANE HOYT BUCKNER, M.D.
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Personal Data

Place of birth: Minneapolis, Minnesota, USA

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

1987-1989 Resident, Internal Medicine, University of Minnesota, Minneapolis, MN
1990-1991 Fellow, Rheumatology, University of Minnesota, Minneapolis, MN
1991-1994 Fellow, Rheumatology, University of Washington, Seattle, WA

Faculty Positions Held

1995-1999 Acting Instructor/Senior Fellow, University of Washington, Seattle, WA
1999-2005 Assistant Member, Benaroya Research Institute, Seattle, WA
2001-2008 Clinical Assistant Professor, University of Washington, Seattle, WA
2005-2009 Associate Member, Benaroya Research Institute, Seattle, WA
2005-present Director, Translational Research Core Benaroya Research Institute at Virginia Mason, Seattle, WA
2005-2020 Director, Translational Research program Benaroya Research Institute at Virginia Mason, Seattle, WA
2008-2014 Clinical Associate Professor of Medicine, Department of Medicine, Division of Rheumatology, University of WA, Seattle, WA
2010-present Member, Benaroya Research Institute, Seattle, WA
2012-2016 Associate Director, Benaroya Research Institute, Seattle, WA
2014-present Affiliate Professor, Department of Medicine, Division of Rheumatology, University of Washington, Seattle, WA
2016-present President, Benaroya Research Institute, Seattle, WA
2017-present Affiliate Professor, Department of Immunology, University of Washington, Seattle, WA
2019-present Affiliate Faculty, UW Medicine Diabetes Institute, Seattle, WA
2019-present Partner, Allen Institute of Immunology

Hospital Positions

1990-1991 Chief Resident, Internal Medicine, Minneapolis Veteran's Hospital, Minneapolis, MN
1991-Present Washington State Medical License
1999-Present Rheumatologist, Virginia Mason Medical Center, Seattle, Washington
Board Certifications: American Board of Internal Medicine, Subspecialty in Rheumatology

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
2016	Jingle Bell Run Medical Honoree
2020	Puget Sound Business Journal Women of Influence Award

Leadership Positions

National Institutes of Health, USA

2011-2017	Chair, NIAID Cooperative Study Group for Autoimmune Disease Prevention
2018	Co-Chair for NIAID Special Emphasis Panel for Investigator Initiated Program Projects
2021-present	NIH/NIAMS Board of Scientific Counselors

Federation of Clinical Immunology Societies (FOCIS)

2011-2015	Member, FOCIS Board of Directors
2012-2015	Director, FOCIS Educational Committee
2012-2014	Co-Chair, FOCIS Abstract Review Committee
2016-2017	Co-Chair, FOCIS Abstract Review Committee
2016-present	Co-Director, FOCIS Center of Excellence Seattle
2018	Co-Chair, FOCIS2018 Annual Meeting Scientific Program Committee
2019	Co-Chair, FOCIS2019 Annual Meeting Scientific Program Committee
2021-2023	Member, FOCIS Board of Directors

Scientific Advisor Positions

2014-present	Type 1 Diabetes TrialNet Science Advisor
2018-present	Member, Scientific Advisory Board, La Jolla Institute for Allergy and Immunology
2020-present	Gentibio Scientific Advisory Board
2020-present	Hotspot Therapeutics Translational Strategy Advisory Committee
2020-present	BMS Immunology Scientific Advisory Council
2021-present	Oklahoma Medical Research Foundation

Committee Service

2011-2015	AAI Clinical Immunology Committee
2014	FOCIS2014 Annual Meeting Scientific Program Committee
2018-2019	FOCIS Abstract Review Committee
2020-present	BMS Early AMPLE Publication Steering Committee

Editorial Activities

2011-2015	The Journal of Immunology Section Editor
2016-present	Science Immunology Scientific Advisory Board
2016-present	UpToDate Section Editor General Rheumatology and Related Topics
2021-present	Ad hoc reviewer for Arthritis and Rheumatology, Diabetes, Journal of Clinical Investigation, Journal of Experimental Medicine, The Journal of Immunology, Nature Medicine, Science Immunology, Science Translational Medicine

Grant Review Activities

Ad hoc reviewer for NIH Standing Study Sections and Special Emphasis Panels, JDRF, Lupus Research Institute, Arthritis Foundation Fellowship Awards, Wellcome Trust, Rheumatoid Arthritis Innovative Research Grants.

Special National Responsibilities

2015-present Member, Brehm Coalition
2018 Participant, Helmsley Foundation Key Opinion Leaders Meeting

Special Local Responsibilities

2018-present Member, Seattle Children's Myositis Center of Excellence
2019-present Specimen Acquisition Network, Fred Hutchinson Cancer Research Center

Professional Organizations

American Association of Immunologists
American College of Physicians
American College of Rheumatology
Northwest Rheumatism Association
Federation of Clinical Immunology Societies (FOCIS)

Teaching Responsibilities

University of Washington, Seattle, USA

2013-2015 HUBIO 523 Introduction to Immunology
2017-present IMMUN 538 Immunological Based Diseases and Treatments
2017-present IMMUN 532 Intersect of Innate and Adaptive Immunity in Disease
2018-present University of Washington Medical Scientist Training Program Executive Committee
2020-present University of Washington Medical Scientist Training Program Admissions Committee

Federation of Clinical Immunology Societies (FOCIS)

2013-2015 Advanced Course in Basic and Clinical Immunology, Scottsdale, AZ
2014 Interventional Immunology Course, Chicago, IL

Trainees, Mentor

2001-2003	U. Holzer, MD	Current Position: Medical Staff, Tübingen University, Germany
2002-2006	M. Walker, PhD	Current Position: Project Leader, Therakos Corporation, Exton, PA
2005-2010	SA Long, PhD	Current Position: Research Associate Member, Benaroya Research Institute, Seattle, WA
2006-2008	A. Arechiga, PhD	Current Position: Technical Science Consultant, Miltenyi Biotec Inc, Auburn, CA
2006-2013	A. Schneider, MD	Current Position: Assistant Physician, Neurological Clinic and Clinical Neurophysiology, Central Clinic Augsburg
2008-2010	A. Snir, PhD	Current Position: Karolinska University Hospital Solna, Sweden
2011-2012	M. Turner, PhD	Current Position: Senior Medical Science Liaison, BMS, Seattle, WA
2010-2016	S. Gupta, PhD	Current Position: Scientist, Aptevo Therapeutics, Seattle, WA
2012-2018	E. Dam, PhD	Current Position: Scientist, Miltenyi Biotec, Seattle, WA
2012-2017	A. Long, PhD	Current Position: Sen. Research Associate, University of Bristol, UK
2012-2017	C. Hundhausen, PhD	Current Position: Scientist, University of Dusseldorf, Germany
2013-2017	H. Uchtenhagen, PhD	Current Position: Senior Scientist, Anocca AB, Sweden

CURRICULUM VITAE – Jane Hoyt Buckner, M.D.

2013-2020	E. Noss, MD, PhD	Current Position: Assistant Professor, University of Washington
2015-2018	C. Smarr, PhD	Current Position: Scientific Recruiter, Fred Hutch, Seattle, WA
2018-2019	J. Gorman, PhD	Current Position: Assistant Member, OMRF Arthritis and Clinical Immunology Research Program
2017-	B Jones, PhD	Current position: Postdoctoral fellow, BRI
2018-	J. Song, MD, PhD	Current Position: Postdoctoral fellow, BRI
2019-	K. Lambert, PhD	Current position: Postdoctoral fellow, BRI
2019-2021	W. Anderson, PhD	Current Position: Postdoctoral fellow, Seattle Children's Research Institute
2019-	S. Canny, MD, PhD	Current Position: Postdoctoral fellow, BRI
2019-	R. Pitner	Current Position: Graduate Student, University of Washington
2020-	M. Richter, MD	Current Position: Postdoctoral fellow, University of Washington
2020-	S. Baxter, MD, PhD	Current Position: Postdoctoral fellow, University of Washington
2020-	M. Maerz	Current Position: Graduate Student, University of Washington
2020-	S. Kim, MD	Current Position: Dept. of General Internal Medicine MD Anderson Cancer Center
2020-	N. Singh, MD, MSCI, FACP	Current Position: University of Washington
2021-	Eric Allenspach, MD, PhD	Current Position: Seattle Children's Research Institute

Research Funding: Active

R01AI132774

COVID Immunophenotyping Study

05/04/2020-06/30/2022

NIH/NIAID

Role: PI

R01 AI132774

Mechanisms of IL-6 mediated T cell pathogenesis in autoimmunity

07/01/2017-06/30/2022

NIH/NIAID

Role: PI

R01 CA231226

07/01/2019-06/30/2024

Defining the features of T cell response to tumor and self-antigens as predictors of response to checkpoint therapy

NIH/NCI

Role: Co- PI

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

Role: Co-PI

5 UM 1AI109565-05 (Krischer)

09/30/2015 – 06/30/2022

NIDDK T1D TrialNet Data Coordinating Center | TrialNet Core Biomarkers and Mechanisms Panel

NIH/NIDDK

Role: Co-PI

U01 DK128853 (Hawkins)

09/15/2020-06/30/2025

Three-dimensional conformation changes associated with T cell memory and autoimmunity

NIAID

Role: Co-PI

75N93019C00068 (Kwok)

09/30/2019-09/29/2024

Unmodified and Post Translationally Modified CD4+ and CD8+ T Cell Epitopes in Rheumatoid Arthritis

BAA-NIAID-DAIT-NIH

Role: Co-PI

The Leona M. and Harry B. Helmsley Charitable Trust (Rawlings, DJ)

11/07/2019 – 11/06/2022

Development of antigen-specific edTreg Therapy in T1D – Stage 3 Studies

Role: Co-PI

Bibliography

Manuscripts in Refereed Journals (n=133) and Book Chapters (n=2)

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 polycondritis. *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 polycondritis. *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.
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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.
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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
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Abstracts

128 total abstracts

Other

Invited Lectures

2003 University of North Dakota, Department of Immunology

2005 FOCIS 2005 Annual Meeting, Boston, MA

University of Michigan Rheumatology Grand Rounds, Ann Arbor, MI

2006 Virginia Mason Medical Center Grand Rounds, Seattle, WA

2007 FOCIS 2007 Annual Meeting, San Diego, CA

2008 University of Oslo, Norway

FOCIS 2008 Annual Meeting, Boston, MA

ASHI 34th Annual Meeting Toronto, Ontario, Canada

2009 University of Washington Rheumatology Grand Rounds, Seattle, WA

University of Minnesota, Department of Immunology, Minneapolis, MN

University of Kentucky, Lexington, KY

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

Juvenile Diabetes Research Foundation Center Annual Meeting, Boston, MA

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

2010 Keystone Symposia Meeting - Tolerance and Autoimmunity, Taos, NM

2010 Rachmiel Levine Diabetes and Obesity, Symposium, Las Vegas, NV

Immunology 2010 – AAI Annual Meeting, Baltimore, MD

FOCIS 2010 Annual Meeting, Boston, MA

American Diabetes Association Annual Scientific Sessions, Orlando, FL

University of California, San Francisco

Genentech, San Francisco, CA

Amgen, Seattle, WA

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

Keystone Symposia Meeting - B Cells: New Insights into Normal versus Dysregulated Function, Whistler, British Columbia, Canada

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

American College of Rheumatology Annual Meeting, Chicago, IL

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 Annual Retreat

Amgen, Seattle, WA

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

Karolinska Institutet, Stockholm, Sweden

12th 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 TEDDY Immune Markers Workshop, Bethesda, MD

Keystone Symposia Meeting - Immunopathology of Type 1 Diabetes, Whistler, BC, Canada

Immunology 2013 – AAI Annual Meeting, Honolulu, HI

The Jackson Laboratory, Bar Harbor, ME

American College of Rheumatology Annual Meeting, San Diego, CA

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

2014 Novo Nordisk, Seattle, WA

T1D Exchange Biobank Workshop, Tampa, FL

“Be the Cure” Tolerance Workshop, Sigtuna, Sweden

2014 American College of Rheumatology Annual Meeting, Seattle, WA

UMC Utrecht Eijkman Lecture, Schipol, Amsterdam

Visiting Professor, University of Colorado, Denver, CO

NIH, Grand Rounds, Bethesda, MD

2015 Keystone Symposia Meeting – Autoimmunity and Tolerance, Keystone, CO

University of Texas Distinguished Speaker Series, Houston, TX

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

Immunology 2015 – AAI Annual Meeting, New Orleans, LA

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

La Jolla Institute for Allergy and Immunology, La Jolla, CA

“Be The Cure” Tolerance Workshop, Sigtuna, Sweden

CYTO 2016, Seattle, WA

FOCIS 2016 Annual Meeting, Boston, MA

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

Gilead, Seattle, WA

American College of Rheumatology Annual 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

University of Minnesota, Minneapolis, MN

Brehm Coalition, Seattle, WA

American Diabetes Association Annual Scientific Sessions, San Diego, CA

Howard Hughes Medical Institute, Seattle WA

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

International Forum for RA, Stockholm, Sweden

RA Collaboration Summit, La Jolla, CA

American College of Rheumatology Annual Meeting, 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

University of Washington Immunology Retreat, Fort Worden, WA

Leaders Forum on Regulatory T cells in autoimmune disease, London

Immunology of Diabetes Society Congress, London, UK

Fourth Annual Colton Center Symposium, New York, NY

2019 2019 nPOD Annual Meeting, Hollywood, FL

IMMUNOLOGY 2019 (AAI Annual Meeting), San Diego, CA

American Diabetes Association 79th Scientific Sessions, San Francisco, CA

2019 ACR/ARP Annual Meeting, Atlanta, GA

National Psoriasis Foundation, Focus on Care Symposium, Seattle, WA

FOCIS 2019, Boston, MA

Cytokines 2019, Vienna, Austria

2020 Western Medical Research Conference, Carmel, CA

NIH-AACR Cancer, Autoimmunity and Immunology Conference (Virtual)

EULAR 2020 – Annual European Congress of Rheumatology (Virtual)

Virginia Mason Medical Center Grand Rounds, Seattle WA

JDRF Facebook Interview (Virtual)

National Public Radio (Virtual)

FOCIS 2020 (Virtual)

Committee for the Assessment of NIH Research on Autoimmune Diseases (Virtual)

eMAPS Fireside Chat (Virtual)

RCI Defining Treatment Paradigms Panel (Virtual)

2021 Penn Institute for Immunology Colloquium Series (Virtual)

MPM-Astellas Scientific Colloquium (Virtual)

Town Hall Seattle (Virtual)

Sunset Club (Virtual)

Northwest Rheumatism Conference (Virtual)

AIFI Speaker Series (Virtual)

World Vaccine Congress (Virtual)

FOCIS 2021 (Virtual)

2022 University of Washington, Cancer Vaccine Institute (Virtual)

Hospital for Special Surgery (Virtual)

Seattle Yacht Club

Virginia Mason Franciscan Health Grand Rounds, Seattle WA

World Vaccine Congress, Washington DC

Patents

Patent Number: US 8,053,235, Patent Title: Methods of Generating Antigen-Specific CD4+ CD25+ Regulatory T Cells, Compositions and Methods of Use

Date Issued: 11/8/2011

Patent Number: Germany, France, United Kingdom: 5825131.5 Patent Title: Methods of Generating Antigen-Specific CD4+ CD25+ Regulatory T Cells, Compositions and Methods of Use.

Date Issued: 4/10/2013

Patents Pending

PCT/US2020/039445 (June 24, 2020)

Title: ARTIFICIAL ANTIGEN-SPECIFIC IMMUNOREGULATORY T (AIRT) CELLS

Provisional Patent 140160.405P1(Nov 4, 2020)

Title:(cTNC) TENASCIN-C AUTOANTIGENIC EPITOPES IN RHEUMATOID ARTHRITIS

Licensing Agreements

GentiBio, Seattle Children's Research Institute and Benaroya Research Institute