Brian D Evavold

List of Publications by Year
in descending order

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59 papers	4,488 citations	159358 30 h-index	133063 59 g-index
60 all docs	60 docs citations	60 times ranked	4588 citing authors

#	Article	IF	Citations
1	Induction of T-cell anergy by altered T-cell-receptor ligand on live antigen-presenting cells. Nature, 1993, 363, 156-159.	13.7	592
2	Accumulation of Dynamic Catch Bonds between TCR and Agonist Peptide-MHC Triggers T Cell Signaling. Cell, 2014, 157, 357-368.	13.5	487
3	The kinetics of two-dimensional TCR and pMHC interactions determine T-cell responsiveness. Nature, 2010, 464, 932-936.	13.7	451
4	DNA-based nanoparticle tension sensors reveal that T-cell receptors transmit defined pN forces to their antigens for enhanced fidelity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5610-5615.	3.3	256
5	Isolation of a Structural Mechanism for Uncoupling T Cell Receptor Signaling from Peptide-MHC Binding. Cell, 2018, 174, 672-687.e27.	13.5	229
6	Differential IL-2 expression defines developmental fates of follicular versus nonfollicular helper T cells. Science, 2018, 361, .	6.0	173
7	Two-Stage Cooperative T Cell Receptor-Peptide Major Histocompatibility Complex-CD8 Trimolecular Interactions Amplify Antigen Discrimination. Immunity, 2011, 34, 13-23.	6.6	172
8	High prevalence of low affinity peptideâ€“MHC II tetramerâ€“negative effectors during polyclonal CD4+ T cell responses. Journal of Experimental Medicine, 2011, 208, 81-90.	4.2	150
9	Estimating the Diversity, Completeness, and Cross-Reactivity of the T Cell Repertoire. Frontiers in Immunology, 2013, 4, 485.	2.2	150
10	A TCR mechanotransduction signaling loop induces negative selection in the thymus. Nature Immunology, 2018, 19, 1379-1390.	7.0	112
11	Mechano-regulation of Peptide-MHC Class I Conformations Determines TCR Antigen Recognition. Molecular Cell, 2019, 73, 1015-1027.e7.	4.5	95
12	Force-Regulated In Situ TCRâ€“Peptide-Bound MHC Class II Kinetics Determine Functions of CD4+ T Cells. Journal of Immunology, 2015, 195, 3557-3564.	0.4	92
13	Kinetics of MHC-CD8 Interaction at the T Cell Membrane. Journal of Immunology, 2007, 179, 7653-7662.	0.4	90
14	Self-reactive human CD4 T cell clones form unusual immunological synapses. Journal of Experimental Medicine, 2012, 209, 335-352.	4.2	77
15	Cutting Edge: Resident Memory CD8 T Cells Express High-Affinity TCRs. Journal of Immunology, 2015, 195, 3520-3524.	0.4	77
16	Lower Affinity T Cells are Critical Components and Active Participants of the Immune Response. Frontiers in Immunology, 2015, 6, 468.	2.2	71
17	Insights from in situ analysis of TCRâ€“<scp>pMHC</scp> recognition: response of an interaction network. Immunological Reviews, 2013, 251, 49-64.	2.8	66
18	Ratiometric Tension Probes for Mapping Receptor Forces and Clustering at Intermembrane Junctions. Nano Letters, 2016, 16, 4552-4559.	4.5	65

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19	Low-affinity CD4+ T cells are major responders in the primary immune response. Nature Communications, 2016, 7, 13848.	5.8	63
20	Accumulation of Serial Forces on TCR and CD8 Frequently Applied by Agonist Antigenic Peptides Embedded in MHC Molecules Triggers Calcium in T Cells. Journal of Immunology, 2014, 193, 68-76.	0.4	60
21	Persistence of Peptide-induced CD4+ T cell Anergy In Vitro. Journal of Experimental Medicine, 1998, 187, 89-96.	4.2	54
22	Canonical T cell receptor docking on peptideâ€“MHC is essential for T cell signaling. Science, 2021, 372, .	6.0	53
23	Tuning T cell receptor sensitivity through catch bond engineering. Science, 2022, 376, eabl5282.	6.0	53
24	Loss of IFN-Î³ Enables the Expansion of Autoreactive CD4+ T Cells to Induce Experimental Autoimmune Encephalomyelitis by a Nonencephalitogenic Myelin Variant Antigen. Journal of Immunology, 2008, 180, 4451-4457.	0.4	48
25	IL-21 from high-affinity CD4 T cells drives differentiation of brain-resident CD8 T cells during persistent viral infection. Science Immunology, 2020, 5, .	5.6	43
26	Low-Affinity Memory CD8+ T Cells Mediate Robust Heterologous Immunity. Journal of Immunology, 2016, 196, 2838-2846.	0.4	41
27	Regulation of Polyclonal T Cell Responses by an MHC Anchor-Substituted Variant of Myelin Oligodendrocyte Glycoprotein 35-55. Journal of Immunology, 2003, 171, 1247-1254.	0.4	38
28	Low 2-Dimensional CD4 T Cell Receptor Affinity for Myelin Sets in Motion Delayed Response Kinetics. PLoS ONE, 2012, 7, e32562.	1.1	36
29	The magnitude of LFA-1/ICAM-1 forces fine-tune TCR-triggered T cell activation. Science Advances, 2022, 8, eabg4485.	4.7	36
30	TCR Affinity and Tolerance Mechanisms Converge To Shape T Cell Diabetogenic Potential. Journal of Immunology, 2014, 193, 571-579.	0.4	35
31	Targeted loss of SHP1 in murine thymocytes dampens TCR signaling late in selection. European Journal of Immunology, 2016, 46, 2103-2110.	1.6	35
32	PD-1 Dynamically Regulates Inflammation and Development of Brain-Resident Memory CD8 T Cells During Persistent Viral Encephalitis. Frontiers in Immunology, 2019, 10, 783.	2.2	33
33	Insights into T Cell Recognition of Antigen: Significance of Two-Dimensional Kinetic Parameters. Frontiers in Immunology, 2012, 3, 86.	2.2	31
34	Dual Molecular Mechanisms Govern Escape at Immunodominant HLA A2-Restricted HIV Epitope. Frontiers in Immunology, 2017, 8, 1503.	2.2	29
35	Pathogenic MOG-reactive CD8+ T cells require MOG-reactive CD4+ T cells for sustained CNS inflammation during chronic EAE. Journal of Neuroimmunology, 2009, 213, 60-68.	1.1	28
36	Mechanobiology of T Cell Activation: To Catch a Bond. Annual Review of Cell and Developmental Biology, 2021, 37, 65-87.	4.0	27

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37	Dissociation of peripheral T cell responses from thymocyte negative selection by weak agonists supports a spare receptor model of T cell activation. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4520-4525.	3.3	25
38	Understanding TCR affinity, antigen specificity, and cross-reactivity to improve TCR gene-modified T cells for cancer immunotherapy. Cancer Immunology, Immunotherapy, 2019, 68, 1881-1889.	2.0	25
39	Stepwise B-cell-dependent expansion of T helper clonotypes diversifies the T-cell response. Nature Communications, 2016, 7, 10281.	5.8	24
40	Conserved Region C Functions To Regulate PD-1 Expression and Subsequent CD8 T Cell Memory. Journal of Immunology, 2017, 198, 205-217.	0.4	24
41	2D Kinetic Analysis of TCR and CD8 Coreceptor for LCMV GP33 Epitopes. Frontiers in Immunology, 2018, 9, 2348.	2.2	24
42	MHC Variant Peptide-Mediated Anergy of Encephalitogenic T Cells Requires SHP-1. Journal of Immunology, 2008, 181, 6843-6849.	0.4	21
43	CD4 T Cell Affinity Diversity Is Equally Maintained during Acute and Chronic Infection. Journal of Immunology, 2018, 201, 19-30.	0.4	19
44	Monitoring the Dynamics of T Cell Clonal Diversity Using Recombinant Peptide:MHC Technology. Frontiers in Immunology, 2013, 4, 170.	2.2	17
45	CD45RB Status of CD8+ T Cell Memory Defines T Cell Receptor Affinity and Persistence. Cell Reports, 2020, 30, 1282-1291.e5.	2.9	17
46	Regulatory and T Effector Cells Have Overlapping Low to High Ranges in TCR Affinities for Self during Demyelinating Disease. Journal of Immunology, 2015, 195, 4162-4170.	0.4	15
47	Discriminative T cell recognition of cross-reactive islet-antigens is associated with HLA-DQ8 transdimerâ€“mediated autoimmune diabetes. Science Advances, 2019, 5, eaaw9336.	4.7	15
48	Targeting transcriptional coregulator OCA-B/Pou2af1 blocks activated autoreactive T cells in the pancreas and type 1 diabetes. Journal of Experimental Medicine, 2021, 218, .	4.2	15
49	MHC class II tetramers engineered for enhanced binding to CD4 improve detection of antigen-specific T cells. Nature Biotechnology, 2021, 39, 943-948.	9.4	14
50	Progression of Relapsing-Remitting Demyelinating Disease Does Not Require Increased TCR Affinity or Epitope Spread. Journal of Immunology, 2014, 193, 4429-4438.	0.4	13
51	A Hybrid Insulin Epitope Maintains High 2D Affinity for Diabetogenic T Cells in the Periphery. Diabetes, 2020, 69, 381-391.	0.3	12
52	Localized hydrogel delivery of dendritic cells for attenuation of multiple sclerosis in a murine model. Journal of Biomedical Materials Research - Part A, 2021, 109, 1247-1255.	2.1	11
53	Viral Escape Mutant Epitope Maintains TCR Affinity for Antigen yet Curtails CD8 T Cell Responses. PLoS ONE, 2016, 11, e0149582.	1.1	11
54	MHC Bias by T Cell Receptors: Genetic Evidence for MHC and TCR Coevolution. Trends in Immunology, 2017, 38, 2-4.	2.9	9

#	Article	IF	Citations
55	Identification of T cell clones without the need for sequencing. Journal of Immunological Methods, 2015, 424, 28-31.	0.6	7
56	A Critical Insulin TCR Contact Residue Selects High-Affinity and Pathogenic Insulin-Specific T Cells. Diabetes, 2020, 69, 392-400.	0.3	6
57	An Engineered T Cell Receptor Variant Realizes the Limits of Functional Binding Modes. Biochemistry, 2020, 59, 4163-4175.	1.2	6
58	NFM Cross-Reactivity to MOG Does Not Expand a Critical Threshold Level of High-Affinity T Cells Necessary for Onset of Demyelinating Disease. Journal of Immunology, 2017, 199, 2680-2691.	0.4	5
59	Relationship of 2D Affinity to T Cell Functional Outcomes. International Journal of Molecular Sciences, 2020, 21, 7969.	1.8	5