Omer Dushek

List of Publications by Year
in descending order

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59 papers	3,700 citations	159585 30 h-index	149698 56 g-index
84 all docs	84 docs citations	84 times ranked	4519 citing authors

#	Article	IF	Citations
1	Fluctuations in T cell receptor and pMHC interactions regulate T cell activation. Journal of the Royal Society Interface, 2022, 19, 20210589.	3.4	4
2	Dephosphorylation accelerates the dissociation of ZAP70 from the T cell receptor. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	6
3	Missense variants in human ACE2 strongly affect binding to SARS-CoV-2 Spike providing a mechanism for ACE2 mediated genetic risk in Covid-19: A case study in affinity predictions of interface variants. PLoS Computational Biology, 2022, 18, e1009922.	3.2	9
4	T-cell trans-synaptic vesicles are distinct and carry greater effector content than constitutive extracellular vesicles. Nature Communications, 2022, 13, .	12.8	18
5	Mathematical Modelling of T Cell Activation. , 2021, , 223-240.		2
6	Perfect adaptation of CD8 ⁺ T cell responses to constant antigen input over a wide range of affinities is overcome by costimulation. Science Signaling, 2021, 14, eaay9363.	3.6	19
7	Intrinsic Disorder in the T Cell Receptor Creates Cooperativity and Controls ZAP70 Binding. Biophysical Journal, 2021, 120, 379-392.	0.5	8
8	The discriminatory power of the T cell receptor. ELife, 2021, 10, .	6.0	52
9	Determination of the molecular reach of the protein tyrosine phosphatase SHP-1. Biophysical Journal, 2021, 120, 2054-2066.	0.5	10
10	Allosteric activation of TÂcell antigen receptor signaling by quaternary structure relaxation. Cell Reports, 2021, 36, 109375.	6.4	23
11	Effects of common mutations in the SARS-CoV-2 Spike RBD and its ligand, the human ACE2 receptor on binding affinity and kinetics. ELife, 2021, 10, .	6.0	267
12	Quantitative contributions of TNF receptor superfamily members to CD8 ⁺ Tâ€cell responses. Molecular Systems Biology, 2021, 17, e10560.	7.2	7
13	Human CD8+ T Cells Exhibit a Shared Antigen Threshold for Different Effector Responses. Journal of Immunology, 2020, 205, 1503-1512.	0.8	24
14	Engineering AvidCARs for combinatorial antigen recognition and reversible control of CAR function. Nature Communications, 2020, 11, 4166.	12.8	53
15	Molecular flexibility of <scp>DNA</scp> as a key determinant of <scp>RAD</scp> 51 recruitment. EMBO Journal, 2020, 39, e103002.	7.8	13
16	TCRâ€“pMHC kinetics under force in a cell-free system show no intrinsic catch bond, but a minimal encounter duration before binding. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16943-16948.	7.1	69
17	The Influence of Molecular Reach and Diffusivity onÂthe Efficacy of Membrane-Confined Reactions. Biophysical Journal, 2019, 117, 1189-1201.	0.5	10
18	A cell topography-based mechanism for ligand discrimination by the T cell receptor. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14002-14010.	7.1	60

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19	MHC binding affects the dynamics of different T-cell receptors in different ways. PLoS Computational Biology, 2019, 15, e1007338.	3.2	13
20	A tissue-like platform for studying engineered quiescent human T-cellsâ€™ interactions with dendritic cells. ELife, 2019, 8, .	6.0	14
21	Comparison of T Cell Activities Mediated by Human TCRs and CARs That Use the Same Recognition Domains. Journal of Immunology, 2018, 200, 1088-1100.	0.8	119
22	CD8 helps TCR catch slippery self pMHC. Nature Immunology, 2018, 19, 1280-1281.	14.5	2
23	Membrane Ultrastructure and T Cell Activation. Frontiers in Immunology, 2018, 9, 2152.	4.8	42
24	Molecular mechanisms of T cell sensitivity to antigen. Immunological Reviews, 2018, 285, 194-205.	6.0	47
25	Biophysical assay for tethered signaling reactions reveals tether-controlled activity for the phosphatase SHP-1. Science Advances, 2017, 3, e1601692.	10.3	28
26	<scp>PD</scp> â€Ł1 blockade enhances response of pancreatic ductal adenocarcinoma to radiotherapy. EMBO Molecular Medicine, 2017, 9, 167-180.	6.9	172
27	Dynamic regulation of CD28 conformation and signaling by charged lipids and ions. Nature Structural and Molecular Biology, 2017, 24, 1081-1092.	8.2	46
28	Remarkably low affinity of CD4/peptide-major histocompatibility complex class II protein interactions. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5682-5687.	7.1	51
29	Architecture of a minimal signaling pathway explains the T-cell response to a 1 million-fold variation in antigen affinity and dose. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E6630-E6638.	7.1	79
30	Homodimerization of the Lymph Vessel Endothelial Receptor LYVE-1 through a Redox-labile Disulfide Is Critical for Hyaluronan Binding in Lymphatic Endothelium. Journal of Biological Chemistry, 2016, 291, 25004-25018.	3.4	28
31	The contribution of major histocompatibility complex contacts to the affinity and kinetics of T cell receptor binding. Scientific Reports, 2016, 6, 35326.	3.3	18
32	Multisite Phosphorylation Modulates the T Cell Receptor Î¶-Chain Potency but not the Switchlike Response. Biophysical Journal, 2016, 110, 1896-1906.	0.5	23
33	Costimulation of IL-2 Production through CD28 Is Dependent on the Size of Its Ligand. Journal of Immunology, 2015, 195, 5432-5439.	0.8	12
34	A <scp>THEMIS</scp> : <scp>SHP</scp> 1 complex promotes Tâ€cell survival. EMBO Journal, 2015, 34, 393-409.	7.8	84
35	An induced rebinding model of antigen discrimination. Trends in Immunology, 2014, 35, 153-158.	6.8	61
36	Biosensor Architectures for High-Fidelity Reporting of Cellular Signaling. Biophysical Journal, 2014, 107, 773-782.	0.5	5

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37	Phenotypic models of T cell activation. Nature Reviews Immunology, 2014, 14, 619-629.	22.7	135
38	SpyAvidin Hubs Enable Precise and Ultrastable Orthogonal Nanoassembly. Journal of the American Chemical Society, 2014, 136, 12355-12363.	13.7	62
39	Measuring Compressional Resistance in Large Surface Molecules. Biophysical Journal, 2014, 106, 235a.	0.5	0
40	Saposins modulate human invariant Natural Killer T cells self-reactivity and facilitate lipid exchange with CD1d molecules during antigen presentation. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E4753-61.	7.1	37
41	Systems Model of T Cell Receptor Proximal Signaling Reveals Emergent Ultrasensitivity. PLoS Computational Biology, 2013, 9, e1003004.	3.2	44
42	Quantitative Phosphoproteome Analysis Unveils LAT as a Modulator of CD3Î¶ and ZAP-70 Tyrosine Phosphorylation. PLoS ONE, 2013, 8, e77423.	2.5	27
43	Nonâ€catalytic tyrosineâ€phosphorylated receptors. Immunological Reviews, 2012, 250, 258-276.	6.0	74
44	Kinetics and Mechanics of Two-Dimensional Interactions between T Cell Receptors and Different Activating Ligands. Biophysical Journal, 2012, 102, 248-257.	0.5	68
45	Mechanical Modulation of Receptor-Ligand Interactions at Cell-Cell Interfaces. Biophysical Journal, 2012, 102, 1265-1273.	0.5	68
46	Ultrasensitivity in Multisite Phosphorylation of Membrane-Anchored Proteins. Biophysical Journal, 2011, 100, 1189-1197.	0.5	49
47	Mechanisms for T cell receptor triggering. Nature Reviews Immunology, 2011, 11, 47-55.	22.7	388
48	Antigen Potency and Maximal Efficacy Reveal a Mechanism of Efficient T Cell Activation. Science Signaling, 2011, 4, ra39.	3.6	71
49	Basic residues in the T-cell receptor Î¶ cytoplasmic domain mediate membrane association and modulate signaling. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19323-19328.	7.1	118
50	Elementary Steps in T Cell Receptor Triggering. Frontiers in Immunology, 2011, 2, 91.	4.8	10
51	Dependence of T Cell Antigen Recognition on T Cell Receptor-Peptide MHC Confinement Time. Immunity, 2010, 32, 163-174.	14.3	214
52	The Membrane Skeleton Controls Diffusion Dynamics and Signaling through the B Cell Receptor. Immunity, 2010, 32, 187-199.	14.3	314
53	Constitutively Active Lck Kinase in T Cells Drives Antigen Receptor Signal Transduction. Immunity, 2010, 32, 766-777.	14.3	300
54	A Role for Rebinding in Rapid and Reliable T Cell Responses to Antigen. PLoS Computational Biology, 2009, 5, e1000578.	3.2	63

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55	Analysis of membrane-localized binding kinetics with FRAP. European Biophysics Journal, 2008, 37, 627-638.	2.2	18
56	Analysis of Serial Engagement and Peptide-MHC Transport in T Cell Receptor Microclusters. Biophysical Journal, 2008, 94, 3447-3460.	0.5	28
57	Improving parameter estimation for cell surface FRAP data. Journal of Proteomics, 2008, 70, 1224-1231.	2.4	11
58	Effects of Intracellular Calcium and Actin Cytoskeleton on TCR Mobility Measured by Fluorescence Recovery. PLoS ONE, 2008, 3, e3913.	2.5	41
59	The fields of a moving point charge: a new derivation from Jefimenko's equations. European Journal of Physics, 2004, 25, 343-350.	0.6	3