# Omer Dushek

List of Publications by Year
in descending order

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

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Mechanisms for T cell receptor triggering. Nature Reviews Immunology, 2011, 11, 47-55. | 22.7 | 388 |
| 2 | The Membrane Skeleton Controls Diffusion Dynamics and Signaling through the B Cell Receptor. Immunity, 2010, 32, 187-199. | 14.3 | 314 |
| 3 | Constitutively Active Lck Kinase in T Cells Drives Antigen Receptor Signal Transduction. Immunity, 2010, 32, 766-777. | 14.3 | 300 |
| 4 | 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 |
| 5 | Dependence of T Cell Antigen Recognition on T Cell Receptor-Peptide MHC Confinement Time. Immunity, 2010, 32, 163-174. | 14.3 | 214 |
| 6 | <scp>PD</scp> â€Ł1 blockade enhances response of pancreatic ductal adenocarcinoma to radiotherapy. EMBO Molecular Medicine, 2017, 9, 167-180. | 6.9 | 172 |
| 7 | Phenotypic models of T cell activation. Nature Reviews Immunology, 2014, 14, 619-629. | 22.7 | 135 |
| 8 | 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 |
| 9 | 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 |
| 10 | A <scp>THEMIS</scp> : <scp>SHP</scp> 1 complex promotes Tâ€cell survival. EMBO Journal, 2015, 34, 393-409. | 7.8 | 84 |
| 11 | 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 |
| 12 | Nonâ€catalytic tyrosineâ€phosphorylated receptors. Immunological Reviews, 2012, 250, 258-276. | 6.0 | 74 |
| 13 | Antigen Potency and Maximal Efficacy Reveal a Mechanism of Efficient T Cell Activation. Science Signaling, 2011, 4, ra39. | 3.6 | 71 |
| 14 | 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 |
| 15 | Kinetics and Mechanics of Two-Dimensional Interactions between T Cell Receptors and Different Activating Ligands. Biophysical Journal, 2012, 102, 248-257. | 0.5 | 68 |
| 16 | Mechanical Modulation of Receptor-Ligand Interactions at Cell-Cell Interfaces. Biophysical Journal, 2012, 102, 1265-1273. | 0.5 | 68 |
| 17 | A Role for Rebinding in Rapid and Reliable T Cell Responses to Antigen. PLoS Computational Biology, 2009, 5, e1000578. | 3.2 | 63 |
| 18 | SpyAvidin Hubs Enable Precise and Ultrastable Orthogonal Nanoassembly. Journal of the American Chemical Society, 2014, 136, 12355-12363. | 13.7 | 62 |

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|---|---|---|---|
| 19 | An induced rebinding model of antigen discrimination. Trends in Immunology, 2014, 35, 153-158. | 6.8 | 61 |
| 20 | 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 |
| 21 | Engineering AvidCARs for combinatorial antigen recognition and reversible control of CAR function. Nature Communications, 2020, 11, 4166. | 12.8 | 53 |
| 22 | The discriminatory power of the T cell receptor. ELife, 2021, 10, . | 6.0 | 52 |
| 23 | 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 |
| 24 | Ultrasensitivity in Multisite Phosphorylation of Membrane-Anchored Proteins. Biophysical Journal, 2011, 100, 1189-1197. | 0.5 | 49 |
| 25 | Molecular mechanisms of T cell sensitivity to antigen. Immunological Reviews, 2018, 285, 194-205. | 6.0 | 47 |
| 26 | Dynamic regulation of CD28 conformation and signaling by charged lipids and ions. Nature Structural and Molecular Biology, 2017, 24, 1081-1092. | 8.2 | 46 |
| 27 | Systems Model of T Cell Receptor Proximal Signaling Reveals Emergent Ultrasensitivity. PLoS Computational Biology, 2013, 9, e1003004. | 3.2 | 44 |
| 28 | Membrane Ultrastructure and T Cell Activation. Frontiers in Immunology, 2018, 9, 2152. | 4.8 | 42 |
| 29 | Effects of Intracellular Calcium and Actin Cytoskeleton on TCR Mobility Measured by Fluorescence Recovery. PLoS ONE, 2008, 3, e3913. | 2.5 | 41 |
| 30 | 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 |
| 31 | Analysis of Serial Engagement and Peptide-MHC Transport in T Cell Receptor Microclusters. Biophysical Journal, 2008, 94, 3447-3460. | 0.5 | 28 |
| 32 | 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 |
| 33 | Biophysical assay for tethered signaling reactions reveals tether-controlled activity for the phosphatase SHP-1. Science Advances, 2017, 3, e1601692. | 10.3 | 28 |
| 34 | Quantitative Phosphoproteome Analysis Unveils LAT as a Modulator of CD3Î¶ and ZAP-70 Tyrosine Phosphorylation. PLoS ONE, 2013, 8, e77423. | 2.5 | 27 |
| 35 | Human CD8+ T Cells Exhibit a Shared Antigen Threshold for Different Effector Responses. Journal of Immunology, 2020, 205, 1503-1512. | 0.8 | 24 |
| 36 | Multisite Phosphorylation Modulates the T Cell Receptor Î¶-Chain Potency but not the Switchlike Response. Biophysical Journal, 2016, 110, 1896-1906. | 0.5 | 23 |

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|---|---|---|---|
| 37 | Allosteric activation of TÂcell antigen receptor signaling by quaternary structure relaxation. Cell Reports, 2021, 36, 109375. | 6.4 | 23 |
| 38 | Perfect adaptation of CD8 <sup>+</sup> 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 |
| 39 | Analysis of membrane-localized binding kinetics with FRAP. European Biophysics Journal, 2008, 37, 627-638. | 2.2 | 18 |
| 40 | 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 |
| 41 | T-cell trans-synaptic vesicles are distinct and carry greater effector content than constitutive extracellular vesicles. Nature Communications, 2022, 13, . | 12.8 | 18 |
| 42 | A tissue-like platform for studying engineered quiescent human T-cellsâ€™ interactions with dendritic cells. ELife, 2019, 8, . | 6.0 | 14 |
| 43 | MHC binding affects the dynamics of different T-cell receptors in different ways. PLoS Computational Biology, 2019, 15, e1007338. | 3.2 | 13 |
| 44 | Molecular flexibility of <scp>DNA</scp> as a key determinant of <scp>RAD</scp> 51 recruitment. EMBO Journal, 2020, 39, e103002. | 7.8 | 13 |
| 45 | 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 |
| 46 | Improving parameter estimation for cell surface FRAP data. Journal of Proteomics, 2008, 70, 1224-1231. | 2.4 | 11 |
| 47 | Elementary Steps in T Cell Receptor Triggering. Frontiers in Immunology, 2011, 2, 91. | 4.8 | 10 |
| 48 | The Influence of Molecular Reach and Diffusivity onÂthe Efficacy of Membrane-Confined Reactions. Biophysical Journal, 2019, 117, 1189-1201. | 0.5 | 10 |
| 49 | Determination of the molecular reach of the protein tyrosine phosphatase SHP-1. Biophysical Journal, 2021, 120, 2054-2066. | 0.5 | 10 |
| 50 | 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 |
| 51 | Intrinsic Disorder in the T Cell Receptor Creates Cooperativity and Controls ZAP70 Binding. Biophysical Journal, 2021, 120, 379-392. | 0.5 | 8 |
| 52 | Quantitative contributions of TNF receptor superfamily members to CD8 <sup>+</sup> Tâ€cell responses. Molecular Systems Biology, 2021, 17, e10560. | 7.2 | 7 |
| 53 | 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 |
| 54 | Biosensor Architectures for High-Fidelity Reporting of Cellular Signaling. Biophysical Journal, 2014, 107, 773-782. | 0.5 | 5 |

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|---|---|---|---|
| 55 | Fluctuations in T cell receptor and pMHC interactions regulate T cell activation. Journal of the Royal Society Interface, 2022, 19, 20210589. | 3.4 | 4 |
| 56 | 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 |
| 57 | CD8 helps TCR catch slippery self pMHC. Nature Immunology, 2018, 19, 1280-1281. | 14.5 | 2 |
| 58 | Mathematical Modelling of T Cell Activation. , 2021, , 223-240. | | 2 |
| 59 | Measuring Compressional Resistance in Large Surface Molecules. Biophysical Journal, 2014, 106, 235a. | 0.5 | 0 |