

Peter S Kim

List of Publications by Year in descending order

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117
papers

15,368
citations

46984

47
h-index

22808

112
g-index

130
all docs

130
docs citations

130
times ranked

14592
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanisms of Viral Membrane Fusion and Its Inhibition. Annual Review of Biochemistry, 2001, 70, 777-810.	5.0	1,209
2	HIV Entry and Its Inhibition. Cell, 1998, 93, 681-684.	13.5	1,203
3	A spring-loaded mechanism for the conformational change of influenza hemagglutinin. Cell, 1993, 73, 823-832.	13.5	918
4	A trimeric structural domain of the HIV-1 transmembrane glycoprotein. Nature Structural and Molecular Biology, 1995, 2, 1075-1082.	3.6	694
5	MultiCoil: A program for predicting two- and three-stranded coiled coils. Protein Science, 1997, 6, 1179-1189.	3.1	667
6	Tests of the helix dipole model for stabilization of α -helices. Nature, 1987, 326, 563-567.	13.7	649
7	Measurement of the β -sheet-forming propensities of amino acids. Nature, 1994, 367, 660-663.	13.7	603
8	Crystal structure of an isoleucine-zipper trimer. Nature, 1994, 371, 80-83.	13.7	473
9	Inhibiting HIV-1 Entry. Cell, 1999, 99, 103-115.	13.5	459
10	Defining the features and duration of antibody responses to SARS-CoV-2 infection associated with disease severity and outcome. Science Immunology, 2020, 5, .	5.6	404
11	Context-dependent secondary structure formation of a designed protein sequence. Nature, 1996, 380, 730-734.	13.7	403
12	Protein Design of an HIV-1 Entry Inhibitor. Science, 2001, 291, 884-888.	6.0	396
13	Context is a major determinant of β -sheet propensity. Nature, 1994, 371, 264-267.	13.7	345
14	Molecular basis of familial hypercholesterolaemia from structure of LDL receptor module. Nature, 1997, 388, 691-693.	13.7	340
15	Retrovirus envelope domain at 1.7 Å... resolution. Nature Structural Biology, 1996, 3, 465-469.	9.7	328
16	NMR structure of the 35-residue villin headpiece subdomain. Nature Structural Biology, 1997, 4, 180-184.	9.7	294
17	A peptide model of a protein folding intermediate. Nature, 1988, 336, 42-48.	13.7	289
18	New-onset IgG autoantibodies in hospitalized patients with COVID-19. Nature Communications, 2021, 12, 5417.	5.8	286

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19	Features of responding T cells in cancer and chronic infection. <i>Current Opinion in Immunology</i> , 2010, 22, 223-230.	2.4	263
20	A residue-specific NMR view of the non-cooperative unfolding of a molten globule. <i>Nature Structural Biology</i> , 1997, 4, 630-634.	9.7	236
21	Fibroblast-Specific Genetic Manipulation of p38 Mitogen-Activated Protein Kinase In Vivo Reveals Its Central Regulatory Role in Fibrosis. <i>Circulation</i> , 2017, 136, 549-561.	1.6	225
22	Human B Cell Clonal Expansion and Convergent Antibody Responses to SARS-CoV-2. <i>Cell Host and Microbe</i> , 2020, 28, 516-525.e5.	5.1	219
23	Structure of a Murine Leukemia Virus Receptor-Binding Glycoprotein at 2.0 Angstrom Resolution. <i>Science</i> , 1997, 277, 1662-1666.	6.0	213
24	Serine racemase: Activation by glutamate neurotransmission via glutamate receptor interacting protein and mediation of neuronal migration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 2105-2110.	3.3	200
25	Mechanisms of innate and adaptive immunity to the Pfizer-BioNTech BNT162b2 vaccine. <i>Nature Immunology</i> , 2022, 23, 543-555.	7.0	185
26	Bipartite structure of the α -lactalbumin molten globule. <i>Nature Structural and Molecular Biology</i> , 1995, 2, 281-286.	3.6	157
27	A Trimeric Structural Subdomain of the HIV-1 Transmembrane Glycoprotein. <i>Journal of Biomolecular Structure and Dynamics</i> , 1997, 15, 465-471.	2.0	154
28	A human monoclonal antibody neutralizes diverse HIV-1 isolates by binding a critical gp41 epitope. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 14759-14764.	3.3	136
29	Patterns of Gene Expression and a Transactivation Function Exhibited by the vGCR (ORF74) Chemokine Receptor Protein of Kaposi's Sarcoma-Associated Herpesvirus. <i>Journal of Virology</i> , 2002, 76, 3421-3439.	1.5	135
30	A Single Immunization with Spike-Functionalized Ferritin Vaccines Elicits Neutralizing Antibody Responses against SARS-CoV-2 in Mice. <i>ACS Central Science</i> , 2021, 7, 183-199.	5.3	134
31	Modeling human adaptive immune responses with tonsil organoids. <i>Nature Medicine</i> , 2021, 27, 125-135.	15.2	133
32	Formation of a native-like subdomain in a partially folded intermediate of bovine pancreatic trypsin inhibitor. <i>Protein Science</i> , 1994, 3, 1822-1832.	3.1	126
33	Buried Polar Residues in Coiled-Coil Interfaces. <i>Biochemistry</i> , 2001, 40, 6352-6360.	1.2	122
34	Alpha-lactalbumin forms a compact molten globule in the absence of disulfide bonds. <i>Nature Structural Biology</i> , 1999, 6, 948-952.	9.7	121
35	Protein folding and calcium binding defects arising from familial hypercholesterolemia mutations of the LDL receptor. <i>Nature Structural and Molecular Biology</i> , 1996, 3, 758-762.	3.6	114
36	Intermediates in the folding of the membrane protein bacteriorhodopsin. <i>Nature Structural and Molecular Biology</i> , 1995, 2, 139-143.	3.6	108

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37	Increased longevity evolves from grandmothering. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2012, 279, 4880-4884.	1.2	107
38	Altered Patterns of Cellular Gene Expression in Dermal Microvascular Endothelial Cells Infected with Kaposi's Sarcoma-Associated Herpesvirus. <i>Journal of Virology</i> , 2002, 76, 3395-3420.	1.5	106
39	Proline scanning mutagenesis of a molten globule reveals non-cooperative formation of a protein's overall topology. <i>Nature Structural and Molecular Biology</i> , 1996, 3, 682-687.	3.6	96
40	Crystal structure of GCN4-pIQI, a trimeric coiled coil with buried polar residues. <i>Journal of Molecular Biology</i> , 1998, 284, 859-865.	2.0	95
41	A kinetic explanation for the rearrangement pathway of BPTI folding. <i>Nature Structural and Molecular Biology</i> , 1995, 2, 1123-1130.	3.6	84
42	Dynamics and Potential Impact of the Immune Response to Chronic Myelogenous Leukemia. <i>PLoS Computational Biology</i> , 2008, 4, e1000095.	1.5	81
43	Antibody association with HER-2/neu targeted vaccine enhances CD8+ T cell responses in mice through Fc-mediated activation of DCs. <i>Journal of Clinical Investigation</i> , 2008, 118, 1700-1711.	3.9	74
44	Modeling regulation mechanisms in the immune system. <i>Journal of Theoretical Biology</i> , 2007, 246, 33-69.	0.8	68
45	Vaccination with peptide mimetics of the gp41 prehairpin fusion intermediate yields neutralizing antisera against HIV-1 isolates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 10655-10660.	3.3	65
46	Disulfide Determinants of Calcium-Induced Packing in β -Lactalbumin. <i>Biochemistry</i> , 1996, 35, 859-863.	1.2	63
47	Evolutionary velocity with protein language models predicts evolutionary dynamics of diverse proteins. <i>Cell Systems</i> , 2022, 13, 274-285.e6.	2.9	56
48	Grandmothering drives the evolution of longevity in a probabilistic model. <i>Journal of Theoretical Biology</i> , 2014, 353, 84-94.	0.8	50
49	A mathematical model for cell cycle-specific cancer virotherapy. <i>Journal of Biological Dynamics</i> , 2012, 6, 104-120.	0.8	49
50	An introduced parasitic fly may lead to local extinction of Darwin's finch populations. <i>Journal of Applied Ecology</i> , 2016, 53, 511-518.	1.9	49
51	Mathematical Modelling of the Interaction Between Cancer Cells and an Oncolytic Virus: Insights into the Effects of Treatment Protocols. <i>Bulletin of Mathematical Biology</i> , 2018, 80, 1615-1629.	0.9	49
52	Forcing matchings on square grids. <i>Discrete Mathematics</i> , 1998, 190, 287-294.	0.4	48
53	Hydrogel-Based Slow Release of a Receptor-Binding Domain Subunit Vaccine Elicits Neutralizing Antibody Responses Against SARS-CoV-2. <i>Advanced Materials</i> , 2021, 33, e2104362.	11.1	48
54	Rapid Formation of the Native 14-38 Disulfide Bond in the Early Stages of BPTI Folding. <i>Biochemistry</i> , 1996, 35, 16153-16164.	1.2	47

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55	Modeling Protective Anti-Tumor Immunity via Preventative Cancer Vaccines Using a Hybrid Agent-based and Delay Differential Equation Approach. <i>PLoS Computational Biology</i> , 2012, 8, e1002742.	1.5	45
56	A high-affinity human PD-1/PD-L2 complex informs avenues for small-molecule immune checkpoint drug discovery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 24500-24506.	3.3	43
57	Grandmothering life histories and human pair bonding. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 11806-11811.	3.3	42
58	A Designed Protein with Packing between Left-Handed and Right-Handed Helices. <i>Biochemistry</i> , 2001, 40, 8981-8989.	1.2	40
59	A dynamical model of tumour immunotherapy. <i>Mathematical Biosciences</i> , 2014, 253, 50-62.	0.9	40
60	Modeling and Simulation of the Immune System as a Self-Regulating Network. <i>Methods in Enzymology</i> , 2009, 467, 79-109.	0.4	39
61	Quantitative impact of immunomodulation versus oncolysis with cytokine-expressing virus therapeutics. <i>Mathematical Biosciences and Engineering</i> , 2015, 12, 841-858.	1.0	39
62	Protect, modify, deprotect (PMD): A strategy for creating vaccines to elicit antibodies targeting a specific epitope. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 9947-9952.	3.3	38
63	Identification of HIV gp41-specific antibodies that mediate killing of infected cells. <i>PLoS Pathogens</i> , 2019, 15, e1007572.	2.1	35
64	Protein Dissection of the Antiparallel Coiled Coil from <i>Escherichia coli</i> Seryl tRNA Synthetase. <i>Biochemistry</i> , 1997, 36, 2544-2549.	1.2	34
65	Accuracy of serological testing for SARS-CoV-2 antibodies: First results of a large mixed-method evaluation study. <i>Allergy: European Journal of Allergy and Clinical Immunology</i> , 2021, 76, 853-865.	2.7	34
66	Post-transplantation dynamics of the immune response to chronic myelogenous leukemia. <i>Journal of Theoretical Biology</i> , 2005, 236, 39-59.	0.8	33
67	A PDE Model for Imatinib-Treated Chronic Myelogenous Leukemia. <i>Bulletin of Mathematical Biology</i> , 2008, 70, 1994-2016.	0.9	32
68	A third native one-disulphide intermediate in the folding of bovine pancreatic trypsin inhibitor. <i>Nature Structural Biology</i> , 1995, 2, 674-679.	9.7	31
69	Treatment strategies for combining immunostimulatory oncolytic virus therapeutics with dendritic cell injections. <i>Mathematical Biosciences and Engineering</i> , 2015, 12, 1237-1256.	1.0	28
70	Modeling Imatinib-Treated Chronic Myelogenous Leukemia: Reducing the Complexity of Agent-Based Models. <i>Bulletin of Mathematical Biology</i> , 2008, 70, 728-744.	0.9	27
71	Effect of Mature Blood-Stage Plasmodium Parasite Sequestration on Pathogen Biomass in Mathematical and <i>In Vivo</i> Models of Malaria. <i>Infection and Immunity</i> , 2014, 82, 212-220.	1.0	26
72	Modelling a Wolbachia Invasion Using a Slow-Fast Dispersal Reaction-Diffusion Approach. <i>Bulletin of Mathematical Biology</i> , 2013, 75, 1501-1523.	0.9	25

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73	Pan-Bcl-2 Inhibitor, GX15-070 (Obatoclox), Decreases Human T Regulatory Lymphocytes while Preserving Effector T Lymphocytes: A Rationale for Its Use in Combination Immunotherapy. <i>Journal of Immunology</i> , 2014, 192, 2622-2633.	0.4	25
74	Emergent Group Dynamics Governed by Regulatory Cells Produce a Robust Primary T Cell Response. <i>Bulletin of Mathematical Biology</i> , 2010, 72, 611-644.	0.9	23
75	Stability crossing boundaries of delay systems modeling immune dynamics in leukemia. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2010, 13, 129-156.	0.5	23
76	Combinatorial codons: A computer program to approximate amino acid probabilities with biased nucleotide usage. <i>Protein Science</i> , 1999, 8, 680-688.	3.1	21
77	A Theory of Immunodominance and Adaptive Regulation. <i>Bulletin of Mathematical Biology</i> , 2011, 73, 1645-1665.	0.9	20
78	Optimising Hydrogel Release Profiles for Viro-Immunotherapy Using Oncolytic Adenovirus Expressing IL-12 and GM-CSF with Immature Dendritic Cells. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2872.	1.3	20
79	Hydrogen exchange in BPTI variants that do not share a common disulfide bond. <i>Protein Science</i> , 1994, 3, 2226-2232.	3.1	19
80	Why does women's fertility end in mid-life? Grandmothering and age at last birth. <i>Journal of Theoretical Biology</i> , 2019, 461, 84-91.	0.8	19
81	Evolution of longevity, age at last birth and sexual conflict with grandmothering. <i>Journal of Theoretical Biology</i> , 2016, 393, 145-157.	0.8	18
82	Evolution of male strategies with sex-ratio-dependent pay-offs: connecting pair bonds with grandmothering. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017, 372, 20170041.	1.8	18
83	Stability Analysis of a Simplified Yet Complete Model for Chronic Myelogenous Leukemia. <i>Bulletin of Mathematical Biology</i> , 2010, 72, 1732-1759.	0.9	17
84	Hemolysis with rapid transfusion systems in the trauma setting. <i>Canadian Journal of Surgery</i> , 2004, 47, 295-7.	0.5	17
85	A reappraisal of grandmothering and natural selection. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2011, 278, 1936-1938.	1.2	16
86	The high-affinity immunoglobulin receptor Fc γ RI potentiates HIV-1 neutralization via antibodies against the gp41 N-heptad repeat. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	16
87	Neutralizing antibodies targeting the SARS-CoV-2 receptor binding domain isolated from a naïve human antibody library. <i>Protein Science</i> , 2021, 30, 716-727.	3.1	16
88	Strategic Treatment Interruptions During Imatinib Treatment of Chronic Myelogenous Leukemia. <i>Bulletin of Mathematical Biology</i> , 2011, 73, 1082-1100.	0.9	15
89	Further Mathematical Modelling of Mating Sex Ratios & Male Strategies with Special Relevance to Human Life History. <i>Bulletin of Mathematical Biology</i> , 2017, 79, 1907-1922.	0.9	11
90	The stabilizing effects of hydrophobic cores on peptide folding of bovine-pancreatic-trypsin-inhibitor folding-intermediate model. <i>FEBS Journal</i> , 1994, 223, 631-636.	0.2	9

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91	Treating cancerous cells with viruses: insights from a minimal model for oncolytic virotherapy. <i>Letters in Biomathematics</i> , 2018, 5, S117-S136.	0.3	9
92	Mathematical modelling of spatial sorting and evolution in a host-parasite system. <i>Journal of Theoretical Biology</i> , 2015, 380, 530-541.	0.8	8
93	Modelling the Evolution of Traits in a Two-Sex Population, with an Application to Grandmothering. <i>Bulletin of Mathematical Biology</i> , 2017, 79, 2132-2148.	0.9	8
94	Modelling heterogeneity in viral-tumour dynamics: The effects of gene-attenuation on viral characteristics. <i>Journal of Theoretical Biology</i> , 2018, 454, 41-52.	0.8	8
95	A Derivative of the D5 Monoclonal Antibody That Targets the gp41 N-Heptad Repeat of HIV-1 with Broad Tier-2-Neutralizing Activity. <i>Journal of Virology</i> , 2021, 95, e0235020.	1.5	8
96	Influence of a mortality trade-off on the spreading rate of cane toads fronts. <i>Communications in Partial Differential Equations</i> , 2018, 43, 1627-1671.	1.0	7
97	Modelling combined virotherapy and immunotherapy: strengthening the antitumour immune response mediated by IL-12 and GM-CSF expression. <i>Letters in Biomathematics</i> , 2018, 5, S99-S116.	0.3	7
98	Adult sex ratio as an index for male strategy in primates. <i>Theoretical Population Biology</i> , 2019, 126, 40-50.	0.5	7
99	T cell state transition produces an emergent change detector. <i>Journal of Theoretical Biology</i> , 2011, 275, 59-69.	0.8	6
100	A model of the effects of cancer cell motility and cellular adhesion properties on tumour-immune dynamics. <i>Mathematical Medicine and Biology</i> , 2017, 34, dqw004.	0.8	6
101	Potential utility of the pan-Bcl-2 inhibitor GX15070 (obatoclax) in cancer immunotherapy. <i>Oncotarget</i> , 2014, 3, e29351.	2.1	5
102	Modelling the Impact of Marine Reserves on a Population with Depensatory Dynamics. <i>Bulletin of Mathematical Biology</i> , 2014, 76, 2122-2143.	0.9	5
103	A Mathematical Model for the Macrophage Response to Respiratory Viral Infection in Normal and Asthmatic Conditions. <i>Bulletin of Mathematical Biology</i> , 2017, 79, 1979-1998.	0.9	5
104	Basic Principles in Modeling Adaptive Regulation and Immunodominance. <i>Lecture Notes on Mathematical Modelling in the Life Sciences</i> , 2013, , 33-57.	0.1	5
105	Chemically Modified Bacterial Sacculi as a Vaccine Microparticle Scaffold. <i>ACS Chemical Biology</i> , 2022, 17, 1184-1196.	1.6	5
106	Modelling tumour-immune dynamics, disease progression and treatment. <i>Letters in Biomathematics</i> , 2018, 5, S1-S5.	0.3	4
107	Why Males Compete Rather Than Care, with an Application to Supplying Collective Goods. <i>Bulletin of Mathematical Biology</i> , 2020, 82, 125.	0.9	4
108	Mini-Transplants for Chronic Myelogenous Leukemia: A Modeling Perspective. , 2007, , 3-20.		4

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109	Stability of a Gleevec and immune model with delays. , 2008, , .		3
110	Models of contrasting strategies of rhinovirus immune manipulation. Journal of Theoretical Biology, 2013, 327, 1-10.	0.8	3
111	A Cellular Automata and a Partial Differential Equation Model of Tumorâ€Immune Dynamics and Chemotaxis. Springer Proceedings in Mathematics and Statistics, 2014, , 21-46.	0.1	3
112	An Age-Structured Approach to Modelling Behavioural Variation Maintained by Life-History Trade-Offs. PLoS ONE, 2014, 9, e84774.	1.1	2
113	Mentoring Undergraduate Interdisciplinary Mathematics Research Students: Junior Faculty Experiences. Primus, 2017, 27, 352-369.	0.3	1
114	Differential Equation Techniques for Modeling a Cycle-Specific Oncolytic Virotherapeutic. Springer Proceedings in Mathematics and Statistics, 2014, , 253-275.	0.1	1
115	Biological circuit models of immune regulatory response: A decentralized control system. , 2011, , .		0
116	Control theory helps to resolve the measles paradox. Royal Society Open Science, 2021, 8, 201891.	1.1	0
117	Stability of travelling waves in a <i>Wolbachia&/i> invasion. Discrete and Continuous Dynamical Systems - Series B, 2018, 23, 609-628.	0.5	0