M Neal Waxham

List of Publications by Year
in descending order

95 papers	6,277 citations	53751 45 h-index	71651 76 g-index
98 all docs	98 docs citations	98 times ranked	6194 citing authors

#	Article	IF	Citations
1	An essential role for postsynaptic calmodulin and protein kinase activity in long-term potentiation. Nature, 1989, 340, 554-557.	13.7	1,079
2	Ca2+/Calmodulin-dependent Protein Kinases. Cellular and Molecular Life Sciences, 2008, 65, 2637-2657.	2.4	311
3	Calmodulin and Munc13 Form a Ca2+ Sensor/Effector Complex that Controls Short-Term Synaptic Plasticity. Cell, 2004, 118, 389-401.	13.5	256
4	Comparative Analyses of the Three-dimensional Structures and Enzymatic Properties of Î±, Î², Î³, and Î´ Isoforms of Ca2+-Calmodulin-dependent Protein Kinase II. Journal of Biological Chemistry, 2004, 279, 12484-12494.	1.6	159
5	Three-dimensional Reconstructions of Calcium/Calmodulin-dependent (CaM) Kinase IIÎ± and Truncated CaM Kinase IIÎ± Reveal a Unique Organization for Its Structural Core and Functional Domains. Journal of Biological Chemistry, 2000, 275, 14354-14359.	1.6	153
6	A Mechanism for Ca2+/Calmodulin-Dependent Protein Kinase II Clustering at Synaptic and Nonsynaptic Sites Based on Self-Association. Journal of Neuroscience, 2005, 25, 6971-6983.	1.7	148
7	Ischemia-Induced Translocation of Ca2+/Calmodulin-Dependent Protein Kinase II: Potential Role in Neuronal Damage. Journal of Neurochemistry, 1992, 58, 1743-1753.	2.1	134
8	Neuronal Activity Increases the Phosphorylation of the Transcription Factor cAMP Response Element-binding Protein (CREB) in Rat Hippocampus and Cortex. Journal of Biological Chemistry, 1996, 271, 14214-14220.	1.6	127
9	Intracellular calmodulin availability accessed with two-photon cross-correlation. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 105-110.	3.3	123
10	Interaction of the Flt-1 Tyrosine Kinase Receptor with the p85 Subunit of Phosphatidylinositol 3-Kinase. Journal of Biological Chemistry, 1995, 270, 20254-20257.	1.6	117
11	Altered Mitochondrial Dynamics and TBI Pathophysiology. Frontiers in Systems Neuroscience, 2016, 10, 29.	1.2	117
12	Two-Photon Cross-Correlation Analysis of Intracellular Reactions with Variable Stoichiometry. Biophysical Journal, 2005, 88, 4319-4336.	0.2	115
13	Conformational changes of calmodulin upon Ca ²⁺ binding studied with a microfluidic mixer. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 542-547.	3.3	113
14	Sequence Similarities Between Human Immunodeficiency Virus gp41 and Paramyxovirus Fusion Proteins. AIDS Research and Human Retroviruses, 1987, 3, 245-252.	0.5	101
15	Visualization of the type III secretion mediated Salmonellaâ€“host cell interface using cryo-electron tomography. ELife, 2018, 7, .	2.8	100
16	A New Role for IQ Motif Proteins in Regulating Calmodulin Function. Journal of Biological Chemistry, 2003, 278, 49667-49670.	1.6	98
17	Ischemia-Induced Neuronal Damage: A Role for Calcium/Calmodulin-Dependent Protein Kinase II. Journal of Cerebral Blood Flow and Metabolism, 1996, 16, 1-6.	2.4	97
18	Macromolecular Crowding and Size Effects on Probe Microviscosity. Biophysical Journal, 2008, 95, 5362-5373.	0.2	89

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19	Remodeling of the postsynaptic plasma membrane during neural development. Molecular Biology of the Cell, 2016, 27, 3480-3489.	0.9	89
20	Active site-directed inhibition of Ca2+/calmodulin-dependent protein kinase type II by a bifunctional calmodulin-binding peptide.. Proceedings of the National Academy of Sciences of the United States of America, 1988, 85, 4991-4995.	3.3	88
21	A Peptide Model for Calmodulin Trapping by Calcium/Calmodulin-dependent Protein Kinase II. Journal of Biological Chemistry, 1996, 271, 29619-29623.	1.6	87
22	Interactions of FLT-1 and KDR with Phospholipase C Î³: Identification of the Phosphotyrosine Binding Sites. Biochemical and Biophysical Research Communications, 1997, 240, 635-639.	1.0	86
23	RC3/Neurogranin and Ca2+/Calmodulin-dependent Protein Kinase II Produce Opposing Effects on the Affinity of Calmodulin for Calcium. Journal of Biological Chemistry, 2004, 279, 39374-39382.	1.6	84
24	Direct label-free imaging of nanodomains in biomimetic and biological membranes by cryogenic electron microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19943-19952.	3.3	81
25	Kinetics of calmodulin binding to calcineurin. Biochemical and Biophysical Research Communications, 2005, 334, 674-680.	1.0	78
26	Multiple Diffusion Mechanisms Due to Nanostructuring in Crowded Environments. Biophysical Journal, 2007, 92, 313-322.	0.2	76
27	Spatiotemporal Analysis of K-Ras Plasma Membrane Interactions Reveals Multiple High Order Homo-oligomeric Complexes. Journal of the American Chemical Society, 2017, 139, 13466-13475.	6.6	73
28	On the Mechanism of Bilayer Separation by Extrusion, or Why Your LUVs Are Not Really Unilamellar. Biophysical Journal, 2019, 117, 1381-1386.	0.2	72
29	Lipidomic atlas of mammalian cell membranes reveals hierarchical variation induced by culture conditions, subcellular membranes, and cell lineages. Soft Matter, 2021, 17, 288-297.	1.2	66
30	Calcium-Calmodulin-Dependent Protein Kinase II Isoforms Differentially Impact the Dynamics and Structure of the Actin Cytoskeleton. Biochemistry, 2013, 52, 1198-1207.	1.2	65
31	Identification of Domains Essential for the Assembly of Calcium/Calmodulin-dependent Protein Kinase II Holoenzymes. Journal of Biological Chemistry, 1998, 273, 31555-31564.	1.6	64
32	Inactivation and Self-association of Ca /Calmodulin-dependent Protein Kinase II during Autophosphorylation. Journal of Biological Chemistry, 1996, 271, 8800-8808.	1.6	63
33	A Mechanism for Calmodulin (CaM) Trapping by CaM-kinase II Defined by a Family of CaM-binding Peptides. Journal of Biological Chemistry, 1998, 273, 17579-17584.	1.6	62
34	Î²CaMKII Regulates Actin Assembly and Structure. Journal of Biological Chemistry, 2009, 284, 9770-9780.	1.6	62
35	Skeletal muscle Ca²⁺-independent kinase activity increases during either hypertrophy or running. Journal of Applied Physiology, 2000, 88, 352-358.	1.2	60
36	The Effect of Macromolecular Crowding, Ionic Strength and Calcium Binding on Calmodulin Dynamics. PLoS Computational Biology, 2011, 7, e1002114.	1.5	60

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37	Sequence determination of the mumps virus HN gene. Virology, 1988, 164, 318-325.	1.1	53
38	Skeletal Muscle CaMKII Enriches in Nuclei and Phosphorylates Myogenic Factor SRF at Multiple Sites. Biochemical and Biophysical Research Communications, 2000, 270, 488-494.	1.0	53
39	Modulation of Calmodulin Plasticity by the Effect of Macromolecular Crowding. Journal of Molecular Biology, 2009, 391, 933-943.	2.0	52
40	Domain Stability in Biomimetic Membranes Driven by Lipid Polyunsaturation. Journal of Physical Chemistry B, 2016, 120, 11930-11941.	1.2	52
41	Neurogranin Alters the Structure and Calcium Binding Properties of Calmodulin. Journal of Biological Chemistry, 2014, 289, 14644-14655.	1.6	51
42	Calcium/calmodulin-dependent protein kinase II activity in focal ischemia with reperfusion in rats.. Stroke, 1994, 25, 466-473.	1.0	50
43	Interplay Between the Gamma Isoform of PKC and Calcineurin in Regulation of Vulnerability to Focal Cerebral Ischemia. Journal of Cerebral Blood Flow and Metabolism, 2000, 20, 343-349.	2.4	50
44	Protein recognition and selection through conformational and mutually induced fit. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20545-20550.	3.3	50
45	Calcium/calmodulin-dependent protein kinase II regulates hippocampal synaptic transmission. Brain Research, 1993, 609, 1-8.	1.1	49
46	Light scattering and transmission electron microscopy studies reveal a mechanism for calcium/calmodulin-dependent protein kinase II self-association. Journal of Neurochemistry, 2001, 76, 1364-1375.	2.1	49
47	Neurogranin Controls the Spatiotemporal Pattern of Postsynaptic Ca2+/CaM Signaling. Biophysical Journal, 2007, 93, 3848-3859.	0.2	48
48	Ca²⁺/Calmodulin Kinase II Translocates in a Hippocampal Slice Model of Ischemia. Journal of Neurochemistry, 1995, 64, 2147-2152.	2.1	44
49	Morphology of mitochondria in spatially restricted axons revealed by cryo-electron tomography. PLoS Biology, 2018, 16, e2006169.	2.6	44
50	Spatial Diffusivity and Availability of Intracellular Calmodulin. Biophysical Journal, 2008, 95, 6002-6015.	0.2	43
51	Structure and composition of the postsynaptic density during development. Journal of Comparative Neurology, 2010, 518, 4243-4260.	0.9	42
52	The impacts of geometry and binding on CaMKII diffusion and retention in dendritic spines. Journal of Computational Neuroscience, 2011, 31, 1-12.	0.6	41
53	Role of the N- and C-Lobes of Calmodulin in the Activation of Ca²⁺/Calmodulin-Dependent Protein Kinase II. Biochemistry, 2008, 47, 10587-10599.	1.2	40
54	Calcium/calmodulin-dependent protein kinase II is phosphorylated by protein kinase C in vitro. Biochemistry, 1993, 32, 2923-2930.	1.2	38

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55	Identification of amino acids involved in the sialidase activity of the mumps virus hemagglutinin-neuraminadase protein. Virology, 1988, 167, 226-232.	1.1	37
56	Acidic/IQ Motif Regulator of Calmodulin. Journal of Biological Chemistry, 2008, 283, 1401-1410.	1.6	37
57	Antibody response to the rubella virus structural proteins in infants with the congenital rubella syndrome. Journal of Medical Virology, 1986, 19, 111-122.	2.5	34
58	Cellular Dynamic Simulator: An Event Driven Molecular Simulation Environment for Cellular Physiology. Neuroinformatics, 2010, 8, 63-82.	1.5	34
59	Neuronal Protection and Preservation of Calcium/Calmodulin-Dependent Protein Kinase II and Protein Kinase C Activity by Dextrorphan Treatment in Global Ischemia. Journal of Cerebral Blood Flow and Metabolism, 1993, 13, 550-557.	2.4	31
60	Assemblies of calcium/calmodulin-dependent kinase II with actin and their dynamic regulation by calmodulin in dendritic spines. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 18937-18942.	3.3	31
61	Down-regulation of protein kinase C blocks 5-HT-induced enhancement in Hermissenda B photoreceptors. Neuroscience Letters, 1991, 121, 107-110.	1.0	30
62	The Endosome-Associated Protein Hrs Is Hexameric and Controls Cargo Sorting as a â€œMaster Moleculeâ€ Structure, 2006, 14, 661-671.	1.6	27
63	IQ-Motif Proteins Influence Intracellular Free Ca²⁺in Hippocampal Neurons Through Their Interactions With Calmodulin. Journal of Neurophysiology, 2008, 99, 264-276.	0.9	27
64	Activity of Ca2+/Calmodulin-Dependent Protein Kinase II Following Ischemia: A Comparison Between CA1 and Dentate Gyrus in a Hippocampal Slice Model. Journal of Neurochemistry, 2002, 63, 2217-2224.	2.1	25
65	Precisely Tunable Engineering of Sub-30 nm Monodisperse Oligonucleotide Nanoparticles. Journal of the American Chemical Society, 2014, 136, 234-240.	6.6	25
66	The role of the Arp2/3 complex in shaping the dynamics and structures of branched actomyosin networks. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10825-10831.	3.3	22
67	Dissecting cooperative calmodulin binding to CaM kinase II: a detailed stochastic model. Journal of Computational Neuroscience, 2009, 27, 621-638.	0.6	21
68	Lobe Specific Ca2+-Calmodulin Nano-Domain in Neuronal Spines: A Single Molecule Level Analysis. PLoS Computational Biology, 2010, 6, e1000987.	1.5	21
69	Novel phospho-switch function of delta-catenin in dendrite development. Journal of Cell Biology, 2020, 219, .	2.3	20
70	Conformational frustration in calmodulinâ€“target recognition. Journal of Molecular Recognition, 2015, 28, 74-86.	1.1	19
71	CaM-Kinase II Dephosphorylates Thr286 by a Reversal of the Autophosphorylation Reaction. Biochemical and Biophysical Research Communications, 2001, 282, 773-780.	1.0	18
72	Quantifying Translational Mobility in Neurons: Comparison between Current Optical Techniques. Journal of Neuroscience, 2010, 30, 16409-16416.	1.7	18

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73	Molecular Dynamics Ensemble Refinement of Intrinsically Disordered Peptides According to Deconvoluted Spectra from Circular Dichroism. Biophysical Journal, 2020, 118, 1665-1678.	0.2	18
74	Complete reversal of run-down in rabbit cardiac Ca 2+ channels by patch-cramming in Xenopus oocytes; partial reversal by protein kinase A. Pflugers Archiv European Journal of Physiology, 1999, 437, 888-894.	1.3	16
75	The ubiquitin ligase UBE4B regulates amyloid precursor protein ubiquitination, endosomal trafficking, and amyloid Î²42 generation and secretion. Molecular and Cellular Neurosciences, 2020, 108, 103542.	1.0	16
76	Postembedding immunocytochemical localization of paramyxovirus antigens by light and electron microscopy.. Journal of Histochemistry and Cytochemistry, 1982, 30, 1313-1319.	1.3	15
77	Peak two-photon molecular brightness of fluorophores is a robust measure of quantum efficiency and photostability. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 1420.	0.9	13
78	Transient Anomalous Subdiffusion: Effects of Specific and Nonspecific Probe Binding with Actin Gels. Journal of Physical Chemistry B, 2010, 114, 959-972.	1.2	13
79	Lessons in Protein Design from Combined Evolution and Conformational Dynamics. Scientific Reports, 2015, 5, 14259.	1.6	13
80	Electron tomographic structure and protein composition of isolated rat cerebellar, hippocampal and cortical postsynaptic densities. Neuroscience, 2015, 304, 286-301.	1.1	13
81	Loss of PTEN-induced kinase 1 (Pink1) reduces hippocampal tyrosine hydroxylase and impairs learning and memory. Experimental Neurology, 2020, 323, 113081.	2.0	13
82	Domain Contributions to Signaling Specificity Differences Between Ras-Guanine Nucleotide Releasing Factor (Ras-GRF) 1 and Ras-GRF2. Journal of Biological Chemistry, 2014, 289, 16551-16564.	1.6	12
83	Relative Cosolute Size Influences the Kinetics of Protein-Protein Interactions. Biophysical Journal, 2015, 109, 510-520.	0.2	11
84	Exploring the F-actin/CPEB3 interaction and its possible role in the molecular mechanism of long-term memory. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 22128-22134.	3.3	11
85	Electron cryotomography of postsynaptic densities during development reveals a mechanism of assembly. Neuroscience, 2012, 212, 19-29.	1.1	10
86	Cytoskeletal-like Filaments of Ca²⁺-Calmodulin-Dependent Protein Kinase II Are Formed in a Regulated and Zn²⁺-Dependent Manner. Biochemistry, 2017, 56, 2149-2160.	1.2	7
87	Photounbinding of Calmodulin from a Family of CaM Binding Peptides. PLoS ONE, 2010, 5, e14050.	1.1	5
88	Distinct mechanisms enable inward or outward budding from late endosomes/multivesicular bodies. Experimental Cell Research, 2018, 372, 1-15.	1.2	4
89	Focal volume characterization using multiphoton fluorescence correlation spectroscopy (MP-FCS). , 2004, 5323, 146.		2
90	Neurotransmitter Receptors. , 2014, , 285-321.		2

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91	A novel Monte Carlo simulation for molecular interactions and diffusion in postsynaptic spines. Neurocomputing, 2005, 65-66, 595-602.	3.5	1
92	Molecular Mobility in Cells Examined with Optical Methods. , 2007, , 3-27.		1
93	Neurogranin provides a kinetic proof reading mechanism for decoding Ca2+signals that may govern the induction of synaptic plasticity. BMC Neuroscience, 2008, 9, .	0.8	0
94	Neurotransmitter Receptors. , 2013, , 163-187.		0
95	Calmodulin, Models of. , 2022, , 670-673.		0