

# M Neal Waxham

## List of Publications by Citations

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95  
papers

5,231  
citations

41  
h-index

71  
g-index

98  
ext. papers

5,766  
ext. citations

6.2  
avg, IF

5.38  
L-index

#	Paper	IF	Citations
95	An essential role for postsynaptic calmodulin and protein kinase activity in long-term potentiation. <i>Nature</i> , <b>1989</b> , 340, 554-7	50.4	1014
94	Ca(2+)/calmodulin-dependent protein kinases. <i>Cellular and Molecular Life Sciences</i> , <b>2008</b> , 65, 2637-57	10.3	223
93	Calmodulin and Munc13 form a Ca <sup>2+</sup> sensor/effector complex that controls short-term synaptic plasticity. <i>Cell</i> , <b>2004</b> , 118, 389-401	56.2	207
92	Comparative analyses of the three-dimensional structures and enzymatic properties of alpha, beta, gamma and delta isoforms of Ca <sup>2+</sup> -calmodulin-dependent protein kinase II. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 12484-94	5.4	140
91	Three-dimensional reconstructions of calcium/calmodulin-dependent (CaM) kinase IIalpha and truncated CaM kinase IIalpha reveal a unique organization for its structural core and functional domains. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 14354-9	5.4	136
90	Ischemia-induced translocation of Ca <sup>2+</sup> /calmodulin-dependent protein kinase II: potential role in neuronal damage. <i>Journal of Neurochemistry</i> , <b>1992</b> , 58, 1743-53	6	129
89	A mechanism for Ca <sup>2+</sup> /calmodulin-dependent protein kinase II clustering at synaptic and nonsynaptic sites based on self-association. <i>Journal of Neuroscience</i> , <b>2005</b> , 25, 6971-83	6.6	125
88	Intracellular calmodulin availability accessed with two-photon cross-correlation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 105-10	11.5	116
87	Neuronal activity increases the phosphorylation of the transcription factor cAMP response element-binding protein (CREB) in rat hippocampus and cortex. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 14214-20	5.4	107
86	Interaction of the Flt-1 tyrosine kinase receptor with the p85 subunit of phosphatidylinositol 3-kinase. Mapping of a novel site involved in binding. <i>Journal of Biological Chemistry</i> , <b>1995</b> , 270, 20254-7	5.4	103
85	Two-photon cross-correlation analysis of intracellular reactions with variable stoichiometry. <i>Biophysical Journal</i> , <b>2005</b> , 88, 4319-36	2.9	101
84	Conformational changes of calmodulin upon Ca <sup>2+</sup> binding studied with a microfluidic mixer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 542-7	11.5	93
83	Ischemia-induced neuronal damage: a role for calcium/calmodulin-dependent protein kinase II. <i>Journal of Cerebral Blood Flow and Metabolism</i> , <b>1996</b> , 16, 1-6	7.3	89
82	A new role for IQ motif proteins in regulating calmodulin function. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 49667-70	5.4	86
81	Altered Mitochondrial Dynamics and TBI Pathophysiology. <i>Frontiers in Systems Neuroscience</i> , <b>2016</b> , 10, 29	3.5	82
80	Interactions of FLT-1 and KDR with phospholipase C gamma: identification of the phosphotyrosine binding sites. <i>Biochemical and Biophysical Research Communications</i> , <b>1997</b> , 240, 635-9	3.4	79
79	Active site-directed inhibition of Ca <sup>2+</sup> /calmodulin-dependent protein kinase type II by a bifunctional calmodulin-binding peptide. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1988</b> , 85, 4991-5	11.5	79

78	Macromolecular crowding and size effects on probe microviscosity. <i>Biophysical Journal</i> , <b>2008</b> , 95, 5362-73.	7.9	78
77	Sequence similarities between human immunodeficiency virus gp41 and paramyxovirus fusion proteins. <i>AIDS Research and Human Retroviruses</i> , <b>1987</b> , 3, 245-52	1.6	77
76	RC3/Neurogranin and Ca <sup>2+</sup> /calmodulin-dependent protein kinase II produce opposing effects on the affinity of calmodulin for calcium. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 39374-82	5.4	75
75	A peptide model for calmodulin trapping by calcium/calmodulin-dependent protein kinase II. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 29619-23	5.4	75
74	Multiple diffusion mechanisms due to nanostructuring in crowded environments. <i>Biophysical Journal</i> , <b>2007</b> , 92, 313-22	2.9	67
73	Remodeling of the postsynaptic plasma membrane during neural development. <i>Molecular Biology of the Cell</i> , <b>2016</b> , 27, 3480-3489	3.5	65
72	Kinetics of calmodulin binding to calcineurin. <i>Biochemical and Biophysical Research Communications</i> , <b>2005</b> , 334, 674-80	3.4	63
71	Visualization of the type III secretion mediated -host cell interface using cryo-electron tomography. <i>ELife</i> , <b>2018</b> , 7,	8.9	62
70	Skeletal muscle Ca <sup>2+</sup> -independent kinase activity increases during either hypertrophy or running. <i>Journal of Applied Physiology</i> , <b>2000</b> , 88, 352-8	3.7	58
69	Identification of domains essential for the assembly of calcium/calmodulin-dependent protein kinase II holoenzymes. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 31555-64	5.4	56
68	A mechanism for calmodulin (CaM) trapping by CaM-kinase II defined by a family of CaM-binding peptides. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 17579-84	5.4	56
67	{beta}CaMKII regulates actin assembly and structure. <i>Journal of Biological Chemistry</i> , <b>2009</b> , 284, 9770-80.	5.4	55
66	Inactivation and self-association of Ca <sup>2+</sup> /calmodulin-dependent protein kinase II during autophosphorylation. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 8800-8	5.4	52
65	The effect of macromolecular crowding, ionic strength and calcium binding on calmodulin dynamics. <i>PLoS Computational Biology</i> , <b>2011</b> , 7, e1002114	5	51
64	Calcium-calmodulin-dependent protein kinase II isoforms differentially impact the dynamics and structure of the actin cytoskeleton. <i>Biochemistry</i> , <b>2013</b> , 52, 1198-207	3.2	50
63	Spatiotemporal Analysis of K-Ras Plasma Membrane Interactions Reveals Multiple High Order Homo-oligomeric Complexes. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 13466-13475	16.4	49
62	Modulation of calmodulin plasticity by the effect of macromolecular crowding. <i>Journal of Molecular Biology</i> , <b>2009</b> , 391, 933-43	6.5	49
61	Skeletal muscle CaMKII enriches in nuclei and phosphorylates myogenic factor SRF at multiple sites. <i>Biochemical and Biophysical Research Communications</i> , <b>2000</b> , 270, 488-94	3.4	49

60	Calcium/calmodulin-dependent protein kinase II regulates hippocampal synaptic transmission. <i>Brain Research</i> , <b>1993</b> , 609, 1-8	3.7	46
59	Domain Stability in Biomimetic Membranes Driven by Lipid Polyunsaturation. <i>Journal of Physical Chemistry B</i> , <b>2016</b> , 120, 11930-11941	3.4	45
58	Calcium/calmodulin-dependent protein kinase II activity in focal ischemia with reperfusion in rats. <i>Stroke</i> , <b>1994</b> , 25, 466-73	6.7	45
57	Interplay between the gamma isoform of PKC and calcineurin in regulation of vulnerability to focal cerebral ischemia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , <b>2000</b> , 20, 343-9	7.3	44
56	Neurogranin controls the spatiotemporal pattern of postsynaptic Ca <sup>2+</sup> /CaM signaling. <i>Biophysical Journal</i> , <b>2007</b> , 93, 3848-59	2.9	42
55	Protein recognition and selection through conformational and mutually induced fit. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 20545-50	11.5	41
54	Neurogranin alters the structure and calcium binding properties of calmodulin. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 14644-55	5.4	41
53	Ca <sup>2+</sup> /calmodulin kinase II translocates in a hippocampal slice model of ischemia. <i>Journal of Neurochemistry</i> , <b>1995</b> , 64, 2147-56	6	39
52	Sequence determination of the mumps virus HN gene. <i>Virology</i> , <b>1988</b> , 164, 318-25	3.6	39
51	On the Mechanism of Bilayer Separation by Extrusion, or Why Your LUVs Are Not Really Unilamellar. <i>Biophysical Journal</i> , <b>2019</b> , 117, 1381-1386	2.9	37
50	Spatial diffusivity and availability of intracellular calmodulin. <i>Biophysical Journal</i> , <b>2008</b> , 95, 6002-15	2.9	37
49	Light scattering and transmission electron microscopy studies reveal a mechanism for calcium/calmodulin-dependent protein kinase II self-association. <i>Journal of Neurochemistry</i> , <b>2001</b> , 76, 1364-75	6	37
48	Structure and composition of the postsynaptic density during development. <i>Journal of Comparative Neurology</i> , <b>2010</b> , 518, 4243-60	3.4	36
47	Direct label-free imaging of nanodomains in biomimetic and biological membranes by cryogenic electron microscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 19943-19952	11.5	35
46	Ca <sup>2+</sup> /calmodulin-dependent protein kinase II is phosphorylated by protein kinase C in vitro. <i>Biochemistry</i> , <b>1993</b> , 32, 2923-30	3.2	34
45	The impacts of geometry and binding on CaMKII diffusion and retention in dendritic spines. <i>Journal of Computational Neuroscience</i> , <b>2011</b> , 31, 1-12	1.4	33
44	Cellular dynamic simulator: an event driven molecular simulation environment for cellular physiology. <i>Neuroinformatics</i> , <b>2010</b> , 8, 63-82	3.2	31
43	Role of the N- and C-lobes of calmodulin in the activation of Ca(2+)/calmodulin-dependent protein kinase II. <i>Biochemistry</i> , <b>2008</b> , 47, 10587-99	3.2	31

42	Neuronal protection and preservation of calcium/calmodulin-dependent protein kinase II and protein kinase C activity by dextrorphan treatment in global ischemia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , <b>1993</b> , 13, 550-7	7.3	29
41	Identification of amino acids involved in the sialidase activity of the mumps virus hemagglutinin-neuraminidase protein. <i>Virology</i> , <b>1988</b> , 167, 226-32	3.6	29
40	Acidic/IQ motif regulator of calmodulin. <i>Journal of Biological Chemistry</i> , <b>2008</b> , 283, 1401-1410	5.4	28
39	Morphology of mitochondria in spatially restricted axons revealed by cryo-electron tomography. <i>PLoS Biology</i> , <b>2018</b> , 16, e2006169	9.7	28
38	The endosome-associated protein Hrs is hexameric and controls cargo sorting as a "master molecule". <i>Structure</i> , <b>2006</b> , 14, 661-71	5.2	25
37	Down-regulation of protein kinase C blocks 5-HT-induced enhancement in Hermissenda B photoreceptors. <i>Neuroscience Letters</i> , <b>1991</b> , 121, 107-10	3.3	25
36	Lipidomic atlas of mammalian cell membranes reveals hierarchical variation induced by culture conditions, subcellular membranes, and cell lineages. <i>Soft Matter</i> , <b>2021</b> , 17, 288-297	3.6	25
35	Antibody response to the rubella virus structural proteins in infants with the congenital rubella syndrome. <i>Journal of Medical Virology</i> , <b>1986</b> , 19, 111-22	19.7	24
34	IQ-motif proteins influence intracellular free Ca <sup>2+</sup> in hippocampal neurons through their interactions with calmodulin. <i>Journal of Neurophysiology</i> , <b>2008</b> , 99, 264-76	3.2	23
33	Precisely tunable engineering of sub-30 nm monodisperse oligonucleotide nanoparticles. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 234-40	16.4	22
32	Activity of Ca <sup>2+</sup> /calmodulin-dependent protein kinase II following ischemia: a comparison between CA1 and dentate gyrus in a hippocampal slice model. <i>Journal of Neurochemistry</i> , <b>1994</b> , 63, 2217-24	6	22
31	Dissecting cooperative calmodulin binding to CaM kinase II: a detailed stochastic model. <i>Journal of Computational Neuroscience</i> , <b>2009</b> , 27, 621-38	1.4	21
30	Lobe specific Ca <sup>2+</sup> -calmodulin nano-domain in neuronal spines: a single molecule level analysis. <i>PLoS Computational Biology</i> , <b>2010</b> , 6, e1000987	5	18
29	CaM-kinase II dephosphorylates Thr(286) by a reversal of the autophosphorylation reaction. <i>Biochemical and Biophysical Research Communications</i> , <b>2001</b> , 282, 773-80	3.4	18
28	Quantifying translational mobility in neurons: comparison between current optical techniques. <i>Journal of Neuroscience</i> , <b>2010</b> , 30, 16409-16	6.6	17
27	Assemblies of calcium/calmodulin-dependent kinase II with actin and their dynamic regulation by calmodulin in dendritic spines. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 18937-18942	11.5	17
26	Conformational frustration in calmodulin-target recognition. <i>Journal of Molecular Recognition</i> , <b>2015</b> , 28, 74-86	2.6	16
25	Complete reversal of run-down in rabbit cardiac Ca <sup>2+</sup> channels by patch-clamping in <i>Xenopus</i> oocytes; partial reversal by protein kinase A. <i>Pflugers Archiv European Journal of Physiology</i> , <b>1999</b> , 437, 888-94	4.6	15

24	Transient anomalous subdiffusion: effects of specific and nonspecific probe binding with actin gels. <i>Journal of Physical Chemistry B</i> , <b>2010</b> , 114, 959-72	3.4	13
23	The role of the Arp2/3 complex in shaping the dynamics and structures of branched actomyosin networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 10825-10831	11.5	12
22	Peak two-photon molecular brightness of fluorophores is a robust measure of quantum efficiency and photostability. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2006</b> , 23, 1420	1.7	12
21	Postembedding immunocytochemical localization of paramyxovirus antigens by light and electron microscopy. <i>Journal of Histochemistry and Cytochemistry</i> , <b>1982</b> , 30, 1313-9	3.4	11
20	Relative Cosolute Size Influences the Kinetics of Protein-Protein Interactions. <i>Biophysical Journal</i> , <b>2015</b> , 109, 510-20	2.9	10
19	Molecular Dynamics Ensemble Refinement of Intrinsically Disordered Peptides According to Deconvoluted Spectra from Circular Dichroism. <i>Biophysical Journal</i> , <b>2020</b> , 118, 1665-1678	2.9	10
18	Lessons in Protein Design from Combined Evolution and Conformational Dynamics. <i>Scientific Reports</i> , <b>2015</b> , 5, 14259	4.9	10
17	Electron tomographic structure and protein composition of isolated rat cerebellar, hippocampal and cortical postsynaptic densities. <i>Neuroscience</i> , <b>2015</b> , 304, 286-301	3.9	9
16	Domain contributions to signaling specificity differences between Ras-guanine nucleotide releasing factor (Ras-GRF) 1 and Ras-GRF2. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 16551-64	5.4	7
15	Electron cryotomography of postsynaptic densities during development reveals a mechanism of assembly. <i>Neuroscience</i> , <b>2012</b> , 212, 19-29	3.9	7
14	The ubiquitin ligase UBE4B regulates amyloid precursor protein ubiquitination, endosomal trafficking, and amyloid $\beta$ 2 generation and secretion. <i>Molecular and Cellular Neurosciences</i> , <b>2020</b> , 108, 103542	4.8	7
13	Novel phospho-switch function of delta-catenin in dendrite development. <i>Journal of Cell Biology</i> , <b>2020</b> , 219,	7.3	6
12	Loss of PTEN-induced kinase 1 (Pink1) reduces hippocampal tyrosine hydroxylase and impairs learning and memory. <i>Experimental Neurology</i> , <b>2020</b> , 323, 113081	5.7	6
11	Cytoskeletal-like Filaments of Ca-Calmodulin-Dependent Protein Kinase II Are Formed in a Regulated and Zn-Dependent Manner. <i>Biochemistry</i> , <b>2017</b> , 56, 2149-2160	3.2	4
10	Distinct mechanisms enable inward or outward budding from late endosomes/multivesicular bodies. <i>Experimental Cell Research</i> , <b>2018</b> , 372, 1-15	4.2	4
9	Exploring the F-actin/CPEB3 interaction and its possible role in the molecular mechanism of long-term memory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 22128-22134	11.5	4
8	Photounbinding of calmodulin from a family of CaM binding peptides. <i>PLoS ONE</i> , <b>2010</b> , 5, e14050	3.7	3
7	Neurotransmitter Receptors <b>2014</b> , 285-321		1

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- 5 Focal volume characterization using multiphoton fluorescence correlation spectroscopy (MP-FCS) **2004**, 5323, 146 1
- 4 A novel Monte Carlo simulation for molecular interactions and diffusion in postsynaptic spines. *Neurocomputing*, **2005**, 65-66, 595-602 5-4 1
- 3 Direct label-free imaging of nanodomains in biomimetic and biological membranes by cryogenic electron microscopy 1
- 2 Neurotransmitter Receptors **2013**, 163-187
- 1 Calmodulin, Models of **2022**, 670-673