Kevin H Gardner

List of Publications by Year
in descending order

117 papers	10,547 citations	31976 53 h-index	32842 100 g-index
129 all docs	129 docs citations	129 times ranked	9493 citing authors

#	Article	IF	Citations
1	Structural Basis of a Phototropin Light Switch. Science, 2003, 301, 1541-1544.	12.6	708
2	THE USE OF2H,13C,15N MULTIDIMENSIONAL NMR GTO STUDY THE STRUCTURE AND DYNAMICS OF PROTEINS. Annual Review of Biophysics and Biomolecular Structure, 1998, 27, 357-406.	18.3	561
3	Targeting renal cell carcinoma with a HIF-2 antagonist. Nature, 2016, 539, 112-117.	27.8	521
4	A robust and cost-effective method for the production of Val, Leu, Ile (delta 1) methyl-protonated 15N-, 13C-, 2H-labeled proteins. Journal of Biomolecular NMR, 1999, 13, 369-374.	2.8	461
5	White Collar-1, a DNA Binding Transcription Factor and a Light Sensor. Science, 2002, 297, 840-843.	12.6	401
6	Evolutionary information for specifying a protein fold. Nature, 2005, 437, 512-518.	27.8	374
7	An optogenetic gene expression system with rapid activation and deactivation kinetics. Nature Chemical Biology, 2014, 10, 196-202.	8.0	317
8	Selective Methyl Group Protonation of Perdeuterated Proteins. Journal of Molecular Biology, 1996, 263, 627-636.	4.2	292
9	Disruption of the LOVâ^'JÎ± Helix Interaction Activates Phototropin Kinase Activityâ€. Biochemistry, 2004, 43, 16184-16192.	2.5	276
10	Production and Incorporation of15N,13C,2H (1H-Î´1 Methyl) Isoleucine into Proteins for Multidimensional NMR Studies. Journal of the American Chemical Society, 1997, 119, 7599-7600.	13.7	248
11	Artificial ligand binding within the HIF2Î± PAS-B domain of the HIF2 transcription factor. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 450-455.	7.1	248
12	Global Folds of Highly Deuterated, Methyl-Protonated Proteins by Multidimensional NMR. Biochemistry, 1997, 36, 1389-1401.	2.5	244
13	Allosteric inhibition of hypoxia inducible factor-2 with small molecules. Nature Chemical Biology, 2013, 9, 271-276.	8.0	234
14	Structural basis for PAS domain heterodimerization in the basic helix-loop-helix-PAS transcription factor hypoxia-inducible factor. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15504-15509.	7.1	211
15	Identification of small-molecule antagonists that inhibit an activator:coactivator interaction. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 17622-17627.	7.1	180
16	Rationally improving LOV domainâ€"based photoswitches. Nature Methods, 2010, 7, 623-626.	19.0	180
17	Blue-Light Receptors for Optogenetics. Chemical Reviews, 2018, 118, 10659-10709.	47.7	176
18	Structural basis of photosensitivity in a bacterial light-oxygen-voltage/helix-turn-helix (LOV-HTH) DNA-binding protein. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9449-9454.	7.1	164

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19	Solution NMR spectroscopy beyond 25 kDa. Current Opinion in Structural Biology, 1997, 7, 722-731.	5.7	162
20	PAS Domain-Mediated WC-1/WC-2 Interaction Is Essential for Maintaining the Steady-State Level of WC-1 and the Function of Both Proteins in Circadian Clock and Light Responses of Neurospora. Molecular and Cellular Biology, 2002, 22, 517-524.	2.3	160
21	Structure of a bacterial BLUF photoreceptor: Insights into blue light-mediated signal transduction. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12350-12355.	7.1	155
22	Tripping the Light Fantastic: Blue-Light Photoreceptors as Examples of Environmentally Modulated Proteinâ˘'Protein Interactions. Biochemistry, 2011, 50, 4-16.	2.5	144
23	Solution NMR Studies of a 42 KDaEscherichiaColiMaltose Binding Protein/Î²-Cyclodextrin Complex:Â Chemical Shift Assignments and Analysis. Journal of the American Chemical Society, 1998, 120, 11738-11748.	13.7	142
24	Structure and Interactions of PAS Kinase N-Terminal PAS Domain. Structure, 2002, 10, 1349-1361.	3.3	140
25	Estimation of the available free energy in a LOV2-JÎ± photoswitch. Nature Chemical Biology, 2008, 4, 491-497.	8.0	132
26	Assignment of 15N, 13CÎ±, 13CÎ², and HN Resonances in an 15N,13C,2H Labeled 64 kDa Trp Repressorâ˘'Operator Complex Using Triple-Resonance NMR Spectroscopy and 2H-Decoupling. Journal of the American Chemical Society, 1996, 118, 6570-6579.	13.7	131
27	On the acquisition and analysis of microscale thermophoresis data. Analytical Biochemistry, 2016, 496, 79-93.	2.4	130
28	Functional and topological diversity of LOV domain photoreceptors. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1442-51.	7.1	125
29	Structural Basis of ARNT PAS-B Dimerization: Use of a Common Beta-sheet Interface for Hetero- and Homodimerization. Journal of Molecular Biology, 2005, 353, 664-677.	4.2	122
30	Molecular basis for peptidoglycan recognition by a bactericidal lectin. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7722-7727.	7.1	121
31	Principles of Ligand Binding within a Completely Buried Cavity in HIF2Î± PAS-B. Journal of the American Chemical Society, 2009, 131, 17647-17654.	13.7	102
32	Development of Inhibitors of the PAS-B Domain of the HIF-2Î± Transcription Factor. Journal of Medicinal Chemistry, 2013, 56, 1739-1747.	6.4	101
33	Novel metal-binding proteins by design. Nature Structural and Molecular Biology, 1995, 2, 368-373.	8.2	100
34	A Conserved Glutamine Plays a Central Role in LOV Domain Signal Transmission and Its Duration. Biochemistry, 2008, 47, 13842-13849.	2.5	99
35	PAS kinase: An evolutionarily conserved PAS domain-regulated serine/threonine kinase. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 8991-8996.	7.1	98
36	Signaling mechanisms of LOV domains: new insights from molecular dynamics studies. Photochemical and Photobiological Sciences, 2013, 12, 1158-1170.	2.9	97

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37	Regulation of Nuclear Import/Export of Carbohydrate Response Element-binding Protein (ChREBP). Journal of Biological Chemistry, 2008, 283, 24899-24908.	3.4	87
38	An NMR Experiment for Measuring Methylâ˘'Methyl NOEs in13C-Labeled Proteins with High Resolution. Journal of the American Chemical Society, 1998, 120, 7617-7625.	13.7	86
39	Conformational Changes in a Photosensory LOV Domain Monitored by Time-Resolved NMR Spectroscopy. Journal of the American Chemical Society, 2004, 126, 3390-3391.	13.7	86
40	An (H)C(CO)NH-TOCSY pulse scheme for sequential assignment of protonated methyl groups in otherwise deuterated 15N, 13C-labeled proteins. Journal of Biomolecular NMR, 1996, 8, 351-356.	2.8	85
41	Regulation of C-type Lectin Antimicrobial Activity by a Flexible N-terminal Prosegment. Journal of Biological Chemistry, 2009, 284, 4881-4888.	3.4	84
42	Full-length structure of a monomeric histidine kinase reveals basis for sensory regulation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17839-17844.	7.1	80
43	Blue Light-Induced Dimerization of a Bacterial LOVâ€"HTH DNA-Binding Protein. Biochemistry, 2013, 52, 6653-6661.	2.5	75
44	Ligand modulation of sidechain dynamics in a wild-type human GPCR. ELife, 2017, 6, .	6.0	75
45	Functions of the Per/ARNT/Sim Domains of the Hypoxia-inducible Factor. Journal of Biological Chemistry, 2005, 280, 36047-36054.	3.4	72
46	Structure and Insight into Blue Light-Induced Changes in the BlrP1 BLUF Domain[,]. Biochemistry, 2009, 48, 2620-2629.	2.5	72
47	TAEL: A zebrafish-optimized optogenetic gene expression system with fine spatial and temporal control. Development (Cambridge), 2017, 144, 345-355.	2.5	67
48	Effectors of animal and plant pathogens use a common domain to bind host phosphoinositides. Nature Communications, 2013, 4, 2973.	12.8	62
49	Structure of the binuclear metal-binding site in the GAL4 transcription factor. Biochemistry, 1991, 30, 11292-11302.	2.5	61
50	The plug domain of FepA, a TonB-dependent transport protein from Escherichia coli, binds its siderophore in the absence of the transmembrane barrel domain. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 10676-10681.	7.1	59
51	Changes at the KinA PAS-A Dimerization Interface Influence Histidine Kinase Function[,]. Biochemistry, 2008, 47, 4051-4064.	2.5	59
52	Identification of Natural and Artificial DNA Substrates for Light-Activated LOVâ€"HTH Transcription Factor EL222. Biochemistry, 2012, 51, 10024-10034.	2.5	59
53	Isoform-Selective and Stereoselective Inhibition of Hypoxia Inducible Factor-2. Journal of Medicinal Chemistry, 2015, 58, 5930-5941.	6.4	59
54	Coactivators necessary for transcriptional output of the hypoxia inducible factor, HIF, are directly recruited by ARNT PAS-B. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 7739-7744.	7.1	58

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55	Solution Structure of a DNA Dodecamer Containing the Anti-Neoplastic Agent Arabinosylcytosine: Combined Use of NMR, Restrained Molecular Dynamics, and Full Relaxation Matrix Refinement. Biochemistry, 1994, 33, 11460-11475.	2.5	55
56	Identification and Biosynthesis of Cyclic Enterobacterial Common Antigen in Escherichia coli. Journal of Bacteriology, 2003, 185, 1995-2004.	2.2	53
57	Directly light-regulated binding of RGS-LOV photoreceptors to anionic membrane phospholipids. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E7720-E7727.	7.1	52
58	Coactivator recruitment: A new role for PAS domains in transcriptional regulation by the bHLHâ€PAS family. Journal of Cellular Physiology, 2010, 223, 553-557.	4.1	47
59	Structural Requirements for Key Residues and Auxiliary Portions of a BLUF Domain. Biochemistry, 2008, 47, 10271-10280.	2.5	46
60	Variations in Proteinâ€"Flavin Hydrogen Bonding in a Light, Oxygen, Voltage Domain Produce Non-Arrhenius Kinetics of Adduct Decay. Biochemistry, 2011, 50, 8771-8779.	2.5	45
61	Modulating LOV Domain Photodynamics with a Residue Alteration outside the Chromophore Binding Site. Biochemistry, 2011, 50, 2411-2423.	2.5	44
62	A Sensitive Pulse Scheme for Measuring the Backbone Dihedral Angle psi Based on Cross-correlation Between (13)C (alpha)- (1)Halpha Dipolar and Carbonyl Chemical Shift Anisotropy Relaxation Interactions. Journal of Biomolecular NMR, 1998, 11, 213-220.	2.8	43
63	Methyl labeling and TROSY NMR spectroscopy of proteins expressed in the eukaryote Pichia pastoris. Journal of Biomolecular NMR, 2015, 62, 239-245.	2.8	42
64	Mechanism of substrate specificity in Bacillus subtilis ResA, a thioredoxin-like protein involved in cytochrome c maturation. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4410-4415.	7.1	37
65	The Third Conformation of p38Î± MAP Kinase Observed in Phosphorylated p38Î± and in Solution. Structure, 2010, 18, 1571-1578.	3.3	37
66	Mutational and Structural Studies of the PixD BLUF Output Signal That Affects Light-Regulated Interactions with PixE. Biochemistry, 2011, 50, 6365-6375.	2.5	37
67	Regulating the ARNT/TACC3 Axis: Multiple Approaches to Manipulating Protein/Protein Interactions with Small Molecules. ACS Chemical Biology, 2013, 8, 626-635.	3.4	37
68	Hemerythrin-like Domain within F-box and Leucine-rich Repeat Protein 5 (FBXL5) Communicates Cellular Iron and Oxygen Availability by Distinct Mechanisms. Journal of Biological Chemistry, 2012, 287, 23710-23717.	3.4	35
69	Molecular Basis of Coiled Coil Coactivator Recruitment by the Aryl Hydrocarbon Receptor Nuclear Translocator (ARNT). Journal of Biological Chemistry, 2009, 284, 15184-15192.	3.4	32
70	Blue Light Regulated Two-Component Systems: Enzymatic and Functional Analyses of Light-Oxygen-Voltage (LOV)-Histidine Kinases and Downstream Response Regulators. Biochemistry, 2013, 52, 4656-4666.	2.5	32
71	On the use of Pichia pastoris for isotopic labeling of human GPCRs for NMR studies. Journal of Biomolecular NMR, 2018, 71, 203-211.	2.8	31
72	Solution structure of the Kluyveromyces lactis LAC9 Cd2Cys6 DNA-binding domain. Nature Structural Biology, 1995, 2, 898-905.	9.7	29

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73	Significantly Improved Resolution for NOE Correlations from Valine and Isoleucine (CÎ³2) Methyl Groups in15N,13C- and15N,13C,2H-Labeled Proteins. Journal of the American Chemical Society, 1998, 120, 4825-4831.	13.7	29
74	ARNT PAS-B has a fragile native state structure with an alternative Î²-sheet register nearby in sequence space. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2617-2622.	7.1	29
75	Unraveling the Mechanism of a LOV Domain Optogenetic Sensor: A Glutamine Lever Induces Unfolding of the JÎ± Helix. ACS Chemical Biology, 2020, 15, 2752-2765.	3.4	29
76	Enlightening molecular mechanisms through study of protein interactions. Journal of Molecular Cell Biology, 2012, 4, 270-283.	3.3	26
77	Coiled-coil Coactivators Play a Structural Role Mediating Interactions in Hypoxia-inducible Factor Heterodimerization. Journal of Biological Chemistry, 2015, 290, 7707-7721.	3.4	26
78	O Acetylation of the Enterobacterial Common Antigen Polysaccharide Is Catalyzed by the Product of the yiaH Gene of Escherichia coli K-12. Journal of Bacteriology, 2006, 188, 7542-7550.	2.2	23
79	Lighting the way: Recent insights into the structure and regulation of phototropin blue light receptors. Journal of Biological Chemistry, 2021, 296, 100594.	3.4	20
80	Subunit-specific backbone NMR assignments of a 64 kDa trp repressor/DNA complex: a role for N-terminal residues in tandem binding. Journal of Biomolecular NMR, 1998, 11, 307-318.	2.8	19
81	Identification and Optimization of Protein Domains for NMR Studies. Methods in Enzymology, 2005, 394, 3-16.	1.0	19
82	Insights into histidine kinase activation mechanisms from the monomeric blue light sensor EL346. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4963-4972.	7.1	19
83	Hypoxiaâ€Inducible Factors Per/ARNT/Sim Domains: Structure and Function. Methods in Enzymology, 2007, 435, 1-24.	1.0	18
84	Can You Hear Me Now? Regulating Transcriptional Activators by Phosphorylation. Science Signaling, 2005, 2005, pe44-pe44.	3.6	17
85	113Cd-1H hetero TOCSY: A method for determining metal?protein connectivities. Journal of Biomolecular NMR, 1994, 4, 761-774.	2.8	16
86	HeteroTOCSY-based experiments for measuring heteronuclear relaxation in nucleic acids and proteins. Journal of Biomolecular NMR, 1995, 6, 180-188.	2.8	15
87	Ligand-Induced Folding of a Two-Component Signaling Receiver Domain. Biochemistry, 2015, 54, 1353-1363.	2.5	15
88	Solution Structure of the WNK1 Autoinhibitory Domain, a WNK-Specific PF2 Domain. Journal of Molecular Biology, 2013, 425, 1245-1252.	4.2	13
89	Cyclic enterobacterial common antigen: Potential contaminant of bacterially expressed protein preparations. Journal of Biomolecular NMR, 2004, 29, 199-204.	2.8	12
90	Slow Transition between Two Î²-Strand Registers Is Dictated by Protein Unfolding. Journal of the American Chemical Society, 2009, 131, 11306-11307.	13.7	12

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91	Basis of Mutual Domain Inhibition in a Bacterial Response Regulator. Cell Chemical Biology, 2016, 23, 945-954.	5.2	12
92	Cosolvent-induced transformation of a death domain tertiary structure. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 11151-11156.	7.1	11
93	Volume and compressibility differences between protein conformations revealed by high-pressure NMR. Biophysical Journal, 2021, 120, 924-935.	0.5	10
94	Designing Single-Component Optogenetic Membrane Recruitment Systems: The Rho-Family GTPase Signaling Toolbox. ACS Synthetic Biology, 2022, 11, 515-521.	3.8	10
95	1H, 13C and 15N chemical shift assignments of the N-terminal PAS domain of mNPAS2. Journal of Biomolecular NMR, 2001, 21, 383-384.	2.8	9
96	TAEL 2.0: An Improved Optogenetic Expression System for Zebrafish. Zebrafish, 2021, 18, 20-28.	1.1	9
97	Isotopic Labeling of Eukaryotic Membrane Proteins for NMR Studies of Interactions and Dynamics. Methods in Enzymology, 2019, 614, 37-65.	1.0	8
98	A LOVely view of blue light photosensing. Nature Chemical Biology, 2007, 3, 372-374.	8.0	7
99	How Plants See the Invisible. Science, 2012, 335, 1451-1452.	12.6	6
100	In support of the BMRB. Nature Structural and Molecular Biology, 2012, 19, 854-860.	8.2	6
101	Computational Repacking of HIF-2Î± Cavity Replaces Water-Based Stabilized Core. Structure, 2016, 24, 1918-1927.	3.3	6
102	Internet conferences in NMR spectroscopy. Progress in Nuclear Magnetic Resonance Spectroscopy, 1997, 31, 107-117.	7.5	4
103	The Three Rs of Transcription: Recruit, Retain, and Recycle. Molecular Cell, 2010, 40, 855-858.	9.7	4
104	1021 Preparation and analysis of penicilloic acid and penilloic acid using high resolution nuclear magnetic resonance. Journal of Allergy and Clinical Immunology, 2000, 105, S346.	2.9	2
105	Multidimensional 2H-Based NMR Methods for Resonance Assignment, Structure Determination, and The Study of Protein Dynamics. , 2002, , 27-74.		2
106	Transcription factor TFIIIA stimulates DNA supercoiling promoted by a fractionated cell-free extract from Xenopus laevis. FEBS Journal, 1990, 192, 311-320.	0.2	1
107	Fragile protein folds: sequence and environmental factors affecting the equilibrium of two interconverting, stably folded protein conformations. Magnetic Resonance, 2021, 2, 63-76.	1.9	1
108	Two steps, one ligand: How PPARÎ³ binds small-molecule agonists. Structure, 2021, 29, 935-936.	3.3	1

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109	Zinc as a structural and folding element of proteins which interact with DNA. Journal of Inorganic Biochemistry, 1997, 67, 342.	3.5	0
110	The Use of ³¹P Relaxation Experiments to Probe the Effects of Nucleoside Analogs on DNA Dynamics. Phosphorus, Sulfur and Silicon and the Related Elements, 1999, 144, 301-304.	1.6	0
111	Molecular biophysics at UT Southwestern Medical Center: Strength through breadth. Biopolymers, 2008, 89, 244-247.	2.4	0
112	A tribute to Lewis E Kay on his 50th birthday. Journal of Biomolecular NMR, 2011, 51, 3-4.	2.8	0
113	Shining light on the alphaproteobacterial general stress response. Molecular Microbiology, 2019, 112, 438-441.	2.5	0
114	Molecular basis of transcriptional coactivator recruitment by ARNT PAS domains. FASEB Journal, 2008, 22, 825.2.	0.5	0
115	Blue light photosensors: Examples of environmentallyâ€‘regulated protein/protein interactions. FASEB Journal, 2009, 23, 432.2.	0.5	0
116	Modulation of HIF-2 Function with Small Molecules: Did Nature Beat Us to It?. Blood, 2011, 118, SCI-39-SCI-39.	1.4	0
117	Converting Nature's Switches Into Scientists' Tools: How Biophysical Insights Lay The Foundation For Artificial Control Of Protein Activity. FASEB Journal, 2018, 32, 533.98.	0.5	0