Gerald L Hazelbauer

List of Publications by Year
in descending order

54 papers	4,065 citations	218677 26 h-index	161849 54 g-index
54 all docs	54 docs citations	54 times ranked	2017 citing authors

#	Article	IF	Citations
1	Concerted Differential Changes of Helical Dynamics and Packing upon Ligand Occupancy in a Bacterial Chemoreceptor. ACS Chemical Biology, 2021, 16, 2472-2480.	3.4	3
2	A Selective Tether Recruits Activated Response Regulator CheB to Its Chemoreceptor Substrate. MBio, 2021, 12, e0310621.	4.1	4
3	Methyltransferase CheR binds to its chemoreceptor substrates independent of their signaling conformation yet modifies them differentially. Protein Science, 2020, 29, 443-454.	7.6	9
4	ATP Binding as a Key Target for Control of the Chemotaxis Kinase. Journal of Bacteriology, 2020, 202, .	2.2	8
5	Spatial Restrictions in Chemotaxis Signaling Arrays: A Role for Chemoreceptor Flexible Hinges across Bacterial Diversity. International Journal of Molecular Sciences, 2019, 20, 2989.	4.1	6
6	Flexible Hinges in Bacterial Chemoreceptors. Journal of Bacteriology, 2018, 200, .	2.2	19
7	A dual regulation mechanism of histidine kinase CheA identified by combining network-dynamics modeling and system-level input-output data. PLoS Computational Biology, 2018, 14, e1006305.	3.2	13
8	Signaling complexes control the chemotaxis kinase by altering its apparent rate constant of autophosphorylation. Protein Science, 2017, 26, 1535-1546.	7.6	17
9	Bacterial Chemoreceptor Dynamics: Helical Stability in the Cytoplasmic Domain Varies with Functional Segment and Adaptational Modification. Journal of Molecular Biology, 2016, 428, 3789-3804.	4.2	22
10	Differential backbone dynamics of companion helices in the extended helical coiledâ€coil domain of a bacterial chemoreceptor. Protein Science, 2015, 24, 1764-1776.	7.6	18
11	Signaling and sensory adaptation in Escherichia coli chemoreceptors: 2015 update. Trends in Microbiology, 2015, 23, 257-266.	7.7	317
12	Selective allosteric coupling in core chemotaxis signaling complexes. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15940-15945.	7.1	60
13	Adaptation by target remodelling. Nature, 2012, 484, 173-174.	27.8	4
14	Influence of Membrane Lipid Composition on a Transmembrane Bacterial Chemoreceptor. Journal of Biological Chemistry, 2012, 287, 41697-41705.	3.4	24
15	Bacterial Chemotaxis: The Early Years of Molecular Studies. Annual Review of Microbiology, 2012, 66, 285-303.	7.3	85
16	Chemotaxis kinase CheA is activated by three neighbouring chemoreceptor dimers as effectively as by receptor clusters. Molecular Microbiology, 2011, 79, 677-685.	2.5	38
17	Direct evidence that the carboxylâ€terminal sequence of a bacterial chemoreceptor is an unstructured linker and enzyme tether. Protein Science, 2011, 20, 1856-1866.	7.6	22
18	Core unit of chemotaxis signaling complexes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9390-9395.	7.1	136

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19	Chemoreceptors in signalling complexes: shifted conformation and asymmetric coupling. Molecular Microbiology, 2010, 78, 1313-1323.	2.5	15
20	The Chemoreceptor Dimer Is the Unit of Conformational Coupling and Transmembrane Signaling. Journal of Bacteriology, 2010, 192, 1193-1200.	2.2	35
21	Bacterial chemoreceptors: providing enhanced features to two-component signaling. Current Opinion in Microbiology, 2010, 13, 124-132.	5.1	105
22	Molecular modeling of flexible armâ€mediated interactions between bacterial chemoreceptors and their modification enzyme. Protein Science, 2009, 18, 1702-1714.	7.6	14
23	Bacterial chemoreceptors: high-performance signaling in networked arrays. Trends in Biochemical Sciences, 2008, 33, 9-19.	7.5	571
24	Analyzing Transmembrane Chemoreceptors Using In Vivo Disulfide Formation Between Introduced Cysteines. Methods in Enzymology, 2007, 423, 299-316.	1.0	9
25	Using Nanodiscs to Create Waterâ€Soluble Transmembrane Chemoreceptors Inserted in Lipid Bilayers. Methods in Enzymology, 2007, 423, 317-335.	1.0	73
26	The carboxyl-terminal linker is important for chemoreceptor function. Molecular Microbiology, 2006, 60, 469-479.	2.5	30
27	Adaptational modification and ligand occupancy have opposite effects on positioning of the transmembrane signalling helix of a chemoreceptor. Molecular Microbiology, 2006, 61, 1081-1090.	2.5	32
28	Diagnostic cross-linking of paired cysteine pairs demonstrates homologous structures for two chemoreceptor domains with low sequence identity. Protein Science, 2006, 15, 94-101.	7.6	5
29	Similarities and Differences in Interactions of the Activity-Enhancing Chemoreceptor Pentapeptide with the Two Enzymes of Adaptational Modification. Journal of Bacteriology, 2006, 188, 5646-5649.	2.2	6
30	Nanodiscs separate chemoreceptor oligomeric states and reveal their signaling properties. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 11509-11514.	7.1	181
31	Clustering requires modified methyl-accepting sites in low-abundance but not high-abundance chemoreceptors of Escherichia coli. Molecular Microbiology, 2005, 56, 1078-1086.	2.5	28
32	Carboxyl-Terminal Extensions beyond the Conserved Pentapeptide Reduce Rates of Chemoreceptor Adaptational Modification. Journal of Bacteriology, 2005, 187, 5115-5121.	2.2	24
33	Myriad Molecules in Motion: Simulated Diffusion as a New Tool To Study Molecular Movement and Interaction in a Living Cell. Journal of Bacteriology, 2005, 187, 23-25.	2.2	6
34	Adaptational assistance in clusters of bacterial chemoreceptors. Molecular Microbiology, 2005, 56, 1617-1626.	2.5	92
35	Cellular Stoichiometry of the Components of the Chemotaxis Signaling Complex. Journal of Bacteriology, 2004, 186, 3687-3694.	2.2	231
36	Accessibility of introduced cysteines in chemoreceptor transmembrane helices reveals boundaries interior to bracketing charged residues. Protein Science, 2004, 13, 1466-1475.	7.6	22

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37	Allosteric Enhancement of Adaptational Demethylation by a Carboxyl-terminal Sequence on Chemoreceptors. Journal of Biological Chemistry, 2002, 277, 42151-42156.	3.4	23
38	Modeling the transmembrane domain of bacterial chemoreceptors. Protein Science, 2002, 11, 912-923.	7.6	25
39	Site-directed spin labeling of a bacterial chemoreceptor reveals a dynamic, loosely packed transmembrane domain. Protein Science, 2002, 11, 1472-1481.	7.6	13
40	Signalling substitutions in the periplasmic domain of chemoreceptor Trg induce or reduce helical sliding in the transmembrane domain. Molecular Microbiology, 2001, 40, 824-834.	2.5	19
41	Transmembrane signaling in bacterial chemoreceptors. Trends in Biochemical Sciences, 2001, 26, 257-265.	7.5	406
42	Location of the Receptor-interaction Site on CheB, the Methylesterase Response Regulator of Bacterial Chemotaxis. Journal of Biological Chemistry, 2001, 276, 32984-32989.	3.4	26
43	Enhanced Function Conferred on Low-Abundance Chemoreceptor Trg by a Methyltransferase-Docking Site. Journal of Bacteriology, 1999, 181, 3164-3171.	2.2	66
44	Comparison In Vitro of a High- and a Low-Abundance Chemoreceptor of <i>Escherichia coli</i> : Similar Kinase Activation but Different Methyl-Accepting Activities. Journal of Bacteriology, 1998, 180, 6713-6718.	2.2	60
45	Analysis of protein structure in intact cells: Crosslinking in vivo between introduced cysteines in the transmembrane domain of a bacterial chemoreceptor. Protein Science, 1997, 6, 315-322.	7.6	44
46	Quantitative approaches to utilizing mutational analysis and disulfide crosslinking for modeling a transmembrane domain. Protein Science, 1995, 4, 1100-1107.	7.6	19
47	Bacterial chemoreceptors. Current Opinion in Structural Biology, 1992, 2, 505-510.	5.7	51
48	Site-directed mutations altering methyl-accepting residues of a sensory transducer protein. Proteins: Structure, Function and Bioinformatics, 1988, 3, 102-112.	2.6	43
49	Methyl-accepting chemotaxis proteins are distributed in the membrane independently from basal ends of bacterial flagella. Biochimica Et Biophysica Acta - Biomembranes, 1982, 686, 19-26.	2.6	27
50	Parallel pathways for transduction of chemotactic signals in Escherichia coli. Nature, 1980, 283, 98-100.	27.8	83
51	Multiple methylation of methyl-accepting chemotaxis proteins during adaptation of E. coli to chemical stimuli. Cell, 1980, 20, 165-171.	28.9	139
52	Mutants in transmission of chemotactic signals from two independent receptors of E. coli. Cell, 1979, 16, 617-625.	28.9	110
53	Chemotaxis Toward Sugars in <i>Escherichia coli</i>. Journal of Bacteriology, 1973, 115, 824-847.	2.2	323
54	Role of the Galactose Binding Protein in Chemotaxis of Escherichia coli toward Galactose. Nature: New Biology, 1971, 230, 101-104.	4.5	304