Gerard C L Wong

List of Publications by Year
in descending order

78 papers	5,606 citations	101543 36 h-index	85541 71 g-index
80 all docs	80 docs citations	80 times ranked	7487 citing authors

#	Article	IF	Citations
1	Arginineâ€rich cellâ€penetrating peptides. FEBS Letters, 2010, 584, 1806-1813.	2.8	433
2	Living in the matrix: assembly and control of Vibrio cholerae biofilms. Nature Reviews Microbiology, 2015, 13, 255-268.	28.6	342
3	Psl trails guide exploration and microcolony formation in Pseudomonas aeruginosa biofilms. Nature, 2013, 497, 388-391.	27.8	308
4	Translocation of HIV TAT peptide and analogues induced by multiplexed membrane and cytoskeletal interactions. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16883-16888.	7.1	287
5	Externalized histone H4 orchestrates chronic inflammation by inducing lytic cell death. Nature, 2019, 569, 236-240.	27.8	268
6	A Role for Neuronal Alpha-Synuclein in Gastrointestinal Immunity. Journal of Innate Immunity, 2017, 9, 456-463.	3.8	211
7	A Hierarchical Cascade of Second Messengers Regulates Pseudomonas aeruginosa Surface Behaviors. MBio, 2015, 6, .	4.1	182
8	Criterion for Amino Acid Composition of Defensins and Antimicrobial Peptides Based on Geometry of Membrane Destabilization. Journal of the American Chemical Society, 2011, 133, 6720-6727.	13.7	181
9	Silver nanoparticles boost charge-extraction efficiency in <i>Shewanella</i> microbial fuel cells. Science, 2021, 373, 1336-1340.	12.6	171
10	Bacteria Use Type IV Pili to Walk Upright and Detach from Surfaces. Science, 2010, 330, 197-197.	12.6	168
11	Helical antimicrobial polypeptides with radial amphiphilicity. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13155-13160.	7.1	166
12	Vibrio cholerae use pili and flagella synergistically to effect motility switching and conditional surface attachment. Nature Communications, 2014, 5, 4913.	12.8	165
13	How Bacteria Use Type IV Pili Machinery on Surfaces. Trends in Microbiology, 2015, 23, 775-788.	7.7	165
14	Antimicrobial peptides and induced membrane curvature: Geometry, coordination chemistry, and molecular engineering. Current Opinion in Solid State and Materials Science, 2013, 17, 151-163.	11.5	148
15	Mapping membrane activity in undiscovered peptide sequence space using machine learning. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13588-13593.	7.1	137
16	Multigenerational memory and adaptive adhesion in early bacterial biofilm communities. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4471-4476.	7.1	132
17	C-di-GMP Regulates Motile to Sessile Transition by Modulating MshA Pili Biogenesis and Near-Surface Motility Behavior in Vibrio cholerae. PLoS Pathogens, 2015, 11, e1005068.	4.7	108
18	Mechanism of a prototypical synthetic membrane-active antimicrobial: Efficient hole-punching via interaction with negative intrinsic curvature lipids. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20595-20600.	7.1	107

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19	Engineering Persister-Specific Antibiotics with Synergistic Antimicrobial Functions. ACS Nano, 2014, 8, 8786-8793.	14.6	99
20	What can machine learning do for antimicrobial peptides, and what can antimicrobial peptides do for machine learning?. Interface Focus, 2017, 7, 20160153.	3.0	98
21	CXCL4 assembles DNA into liquid crystalline complexes to amplify TLR9-mediated interferon-Î± production in systemic sclerosis. Nature Communications, 2019, 10, 1731.	12.8	90
22	Bacterial amyloid curli acts as a carrier for DNA to elicit an autoimmune response via TLR2 and TLR9. PLoS Pathogens, 2017, 13, e1006315.	4.7	82
23	S100A12 Is Part of the Antimicrobial Network against Mycobacterium leprae in Human Macrophages. PLoS Pathogens, 2016, 12, e1005705.	4.7	77
24	Liquid-crystalline ordering of antimicrobial peptideâ€"DNA complexes controls TLR9 activation. Nature Materials, 2015, 14, 696-700.	27.5	75
25	c-di-GMP modulates type IV MSHA pilus retraction and surface attachment in Vibrio cholerae. Nature Communications, 2020, 11, 1549.	12.8	70
26	Modulation of toll-like receptor signaling by antimicrobial peptides. Seminars in Cell and Developmental Biology, 2019, 88, 173-184.	5.0	69
27	Molecular Basis for Nanoscopic Membrane Curvature Generation from Quantum Mechanical Models and Synthetic Transporter Sequences. Journal of the American Chemical Society, 2012, 134, 19207-19216.	13.7	64
28	Machine learning-enabled discovery and design of membrane-active peptides. Bioorganic and Medicinal Chemistry, 2018, 26, 2708-2718.	3.0	60
29	Cathelicidin promotes inflammation by enabling binding of self-RNA to cell surface scavenger receptors. Scientific Reports, 2018, 8, 4032.	3.3	58
30	Viral fusion protein transmembrane domain adopts Î²-strand structure to facilitate membrane topological changes for virusâ€"cell fusion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10926-10931.	7.1	54
31	Helical antimicrobial peptides assemble into protofibril scaffolds that present ordered dsDNA to TLR9. Nature Communications, 2019, 10, 1012.	12.8	53
32	Functional Specialization in <i>Vibrio cholerae</i> Diguanylate Cyclases: Distinct Modes of Motility Suppression and c-di-GMP Production. MBio, 2019, 10, .	4.1	51
33	Divalent Metal Ion Triggered Activity of a Synthetic Antimicrobial in Cardiolipin Membranes. Journal of the American Chemical Society, 2009, 131, 15102-15103.	13.7	48
34	Direct Antimicrobial Activity of IFN-Î². Journal of Immunology, 2017, 198, 4036-4045.	0.8	48
35	Prototypical pacemaker neurons interact with the resident microbiota. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17854-17863.	7.1	47
36	Social Cooperativity of Bacteria during Reversible Surface Attachment in Young Biofilms: a Quantitative Comparison of Pseudomonas aeruginosa PA14 and PAO1. MBio, 2020, 11, .	4.1	47

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37	Roadmap on emerging concepts in the physical biology of bacterial biofilms: from surface sensing to community formation. Physical Biology, 2021, 18, 051501.	1.8	46
38	Functional Reciprocity of Amyloids and Antimicrobial Peptides: Rethinking the Role of Supramolecular Assembly in Host Defense, Immune Activation, and Inflammation. Frontiers in Immunology, 2020, 11, 1629.	4.8	44
39	Reciprocal c-di-GMP signaling: Incomplete flagellum biogenesis triggers c-di-GMP signaling pathways that promote biofilm formation. PLoS Genetics, 2020, 16, e1008703.	3.5	44
40	Unifying structural signature of eukaryotic Î±-helical host defense peptides. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6944-6953.	7.1	39
41	Effective Dynamics of Microorganisms That Interact with Their Own Trail. Physical Review Letters, 2016, 117, 038101.	7.8	32
42	Multicellular Self-Organization of <i>P. aeruginosa</i> due to Interactions with Secreted Trails. Physical Review Letters, 2016, 117, 178102.	7.8	31
43	Two interdependent mechanisms of antimicrobial activity allow for efficient killing in nylon-3-based polymeric mimics of innate immunity peptides. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2269-2279.	2.6	30
44	Crystallinity of Double-Stranded RNA-Antimicrobial Peptide Complexes Modulates Toll-Like Receptor 3-Mediated Inflammation. ACS Nano, 2017, 11, 12145-12155.	14.6	30
45	Molecular Motor Dnm1 Synergistically Induces Membrane Curvature To Facilitate Mitochondrial Fission. ACS Central Science, 2017, 3, 1156-1167.	11.3	29
46	Interaction between the type 4 pili machinery and a diguanylate cyclase fine-tune c-di-GMP levels during early biofilm formation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	29
47	Reinventing Cell Penetrating Peptides Using Glycosylated Methionine Sulfonium Ion Sequences. ACS Central Science, 2015, 1, 83-88.	11.3	27
48	PACAP is a pathogen-inducible resident antimicrobial neuropeptide affording rapid and contextual molecular host defense of the brain. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	26
49	Species-dependent hydrodynamics of flagellum-tethered bacteria in early biofilm development. Journal of the Royal Society Interface, 2016, 13, 20150966.	3.4	23
50	High-Speed â€œ4Dâ€•Computational Microscopy of Bacterial Surface Motility. ACS Nano, 2017, 11, 9340-9351.	14.6	23
51	Oxidation of Membrane Curvature-Regulating Phosphatidylethanolamine Lipid Results in Formation of Bilayer and Cubic Structures. Langmuir, 2016, 32, 2450-2457.	3.5	19
52	The Power of Touch: Type 4 Pili, the von Willebrand A Domain, and Surface Sensing by Pseudomonas aeruginosa. Journal of Bacteriology, 2022, 204, .	2.2	19
53	Interplay between type IV pili activity and exopolysaccharides secretion controls motility patterns in single cells of Myxococcus xanthus. Scientific Reports, 2016, 6, 17790.	3.3	18
54	A review of immune amplification via ligand clustering by self-assembled liquidâ€“crystalline DNA complexes. Advances in Colloid and Interface Science, 2016, 232, 17-24.	14.7	18

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55	Machine learning antimicrobial peptide sequences: Some surprising variations on the theme of amphiphilic assembly. Current Opinion in Colloid and Interface Science, 2018, 38, 204-213.	7.4	18
56	Pentobra: A Potent Antibiotic with Multiple Layers of Selective Antimicrobial Mechanisms against Propionibacterium Acnes. Journal of Investigative Dermatology, 2015, 135, 1581-1589.	0.7	17
57	Highly Basic Clusters in the Herpes Simplex Virus 1 Nuclear Egress Complex Drive Membrane Budding by Inducing Lipid Ordering. MBio, 2021, 12, e0154821.	4.1	17
58	Enhanced activity of cyclic transporter sequences driven by phase behavior of peptideâ€"lipid complexes. Soft Matter, 2012, 8, 6430.	2.7	15
59	Force-Induced Changes of PilY1 Drive Surface Sensing by Pseudomonas aeruginosa. MBio, 2022, 13, e0375421.	4.1	15
60	Emergence of complex behavior in pili-based motility in early stages of P. aeruginosa surface adaptation. Scientific Reports, 2017, 7, 45467.	3.3	13
61	Discovery of Novel Type II Bacteriocins Using a New High-Dimensional Bioinformatic Algorithm. Frontiers in Immunology, 2020, 11, 1873.	4.8	13
62	Selective Promotion of Adhesion of <i>Shewanella oneidensis</i> on Mannose-Decorated Glycopolymer Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 35767-35781.	8.0	11
63	Clostridioides difficile Toxin A Remodels Membranes and Mediates DNA Entry Into Cells to Activate Toll-Like Receptor 9 Signaling. Gastroenterology, 2020, 159, 2181-2192.e1.	1.3	11
64	A Dynamic Network Formation Model for Understanding Bacterial Self-Organization Into Micro-Colonies. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2015, 1, 76-89.	2.1	9
65	What Can Pleiotropic Proteins in Innate Immunity Teach Us about Bioconjugation and Molecular Design?. Bioconjugate Chemistry, 2018, 29, 2127-2139.	3.6	8
66	Chemokine CCL28 Is a Potent Therapeutic Agent for Oropharyngeal Candidiasis. Antimicrobial Agents and Chemotherapy, 2020, 64, .	3.2	8
67	How do cyclic antibiotics with activity against Gram-negative bacteria permeate membranes? A machine learning informed experimental study. Biochimica Et Biophysica Acta - Biomembranes, 2020, 1862, 183302.	2.6	8
68	Sequence determinants in the cathelicidin LL-37 that promote inflammation via presentation of RNA to scavenger receptors. Journal of Biological Chemistry, 2021, 297, 100828.	3.4	8
69	Apolipoprotein Mimetic Peptide Inhibits Neutrophil-Driven Inflammatory Damage via Membrane Remodeling and Suppression of Cell Lysis. ACS Nano, 2021, 15, 15930-15939.	14.6	7
70	Switchable Membrane Remodeling and Antifungal Defense by Metamorphic Chemokine XCL1. ACS Infectious Diseases, 2020, 6, 1204-1213.	3.8	6
71	Histidineâ€Mediated Ion Specific Effects Enable Salt Tolerance of a Poreâ€Forming Marine Antimicrobial Peptide. Angewandte Chemie - International Edition, 2022, , .	13.8	6
72	Small-Angle X-ray Scattering Studies of Peptideâ€"Lipid Interactions Using the Mouse Paneth Cell Î±-Defensin Cryptdin-4. Methods in Enzymology, 2011, 492, 127-149.	1.0	5

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73	Nonmotile Subpopulations of <i>Pseudomonas aeruginosa</i> Repress Flagellar Motility in Motile Cells through a Type IV Pilus- and Pel-Dependent Mechanism. Journal of Bacteriology, 2022, 204, e0052821.	2.2	5
74	Three-dimensional architecture ofVibrio cholerabiofilms. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3711-3713.	7.1	4
75	Broadcasting of amplitude- and frequency-modulated c-di-GMP signals facilitates cooperative surface commitment in bacterial lineages. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	4
76	Correction for Zamorano-SÃ¡nchez et al., â€œFunctional Specialization in Vibrio cholerae Diguanylate Cyclases: Distinct Modes of Motility Suppression and c-di-GMP Productionâ€ MBio, 2020, 11, .	4.1	2
77	Erratum for Thorsen et al., â€œHighly Basic Clusters in the Herpes Simplex Virus 1 Nuclear Egress Complex Drive Membrane Budding by Inducing Lipid Orderingâ€ MBio, 2022, 13, e0367321.	4.1	0
78	Histidineâ€Mediated Ion Specific Effects Enable Salt Tolerance of a Poreâ€Forming Marine Antimicrobial Peptide. Angewandte Chemie, 0, , .	2.0	0