William C Wimley

List of Publications by Year
in descending order

106	13,154	41258 49	30010 103
papers	citations	h-index	g-index

109	109	109	11737
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	MEMBRANE PROTEIN FOLDING AND STABILITY: Physical Principles. Annual Review of Biophysics and Biomolecular Structure, 1999, 28, 319-365.	18.3	1,595
2	Experimentally determined hydrophobicity scale for proteins at membrane interfaces. Nature Structural and Molecular Biology, 1996, 3, 842-848.	3.6	1,525
3	The Preference of Tryptophan for Membrane Interfacesâ€. Biochemistry, 1998, 37, 14713-14718.	1.2	899
4	Describing the Mechanism of Antimicrobial Peptide Action with the Interfacial Activity Model. ACS Chemical Biology, 2010, 5, 905-917.	1.6	786
5	Solvation Energies of Amino Acid Side Chains and Backbone in a Family of Hostâ^'Guest Pentapeptides. Biochemistry, 1996, 35, 5109-5124.	1.2	534
6	Hydrophobic interactions of peptides with membrane interfaces. BBA - Biomembranes, 1998, 1376, 339-352.	7.9	482
7	Antimicrobial Peptides: Successes, Challenges and Unanswered Questions. Journal of Membrane Biology, 2011, 239, 27-34.	1.0	406
8	The versatile Î²-barrel membrane protein. Current Opinion in Structural Biology, 2003, 13, 404-411.	2.6	395
9	Structure, function, and membrane integration of defensins. Current Opinion in Structural Biology, 1995, 5, 521-527.	2.6	392
10	Interactions between human defensins and lipid bilayers: Evidence for formation of multimeric pores. Protein Science, 1994, 3, 1362-1373.	3.1	349
11	Broad-Spectrum Antimicrobial Peptides by Rational Combinatorial Design and High-Throughput Screening: The Importance of Interfacial Activity. Journal of the American Chemical Society, 2009, 131, 7609-7617.	6.6	262
12	Mechanism Matters: A Taxonomy of Cell Penetrating Peptides. Trends in Biochemical Sciences, 2015, 40, 749-764.	3.7	258
13	[4] Protein folding in membranes: Determining energetics of peptide-bilayer interactions. Methods in Enzymology, 1998, 295, 62-87.	0.4	233
14	Membrane partitioning: Distinguishing bilayer effects from the hydrophobic effect. Biochemistry, 1993, 32, 6307-6312.	1.2	209
15	Toward genomic identification of Î²-barrel membrane proteins: Composition and architecture of known structures. Protein Science, 2009, 11, 301-312.	3.1	199
16	An amphipathic Î±-helix at a membrane interface: a structural study using a novel X-ray diffraction method 1 1Edited by D. C. Rees. Journal of Molecular Biology, 1999, 290, 99-117.	2.0	196
17	Folding of Î²-sheet membrane proteins: a hydrophobic hexapeptide model. Journal of Molecular Biology, 1998, 277, 1091-1110.	2.0	195
18	The ERBB4/HER4 Intracellular Domain 4ICD Is a BH3-Only Protein Promoting Apoptosis of Breast Cancer Cells. Cancer Research, 2006, 66, 6412-6420.	0.4	189

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19	Peptides in lipid bilayers: structural and thermodynamic basis for partitioning and folding. Current Opinion in Structural Biology, 1994, 4, 79-86.	2.6	182
20	Spontaneous Membrane-Translocating Peptides by Orthogonal High-Throughput Screening. Journal of the American Chemical Society, 2011, 133, 8995-9004.	6.6	173
21	Mechanistic Landscape of Membrane-Permeabilizing Peptides. Chemical Reviews, 2019, 119, 6040-6085.	23.0	173
22	Designing Transmembrane Î±-Helices That Insert Spontaneouslyâ€. Biochemistry, 2000, 39, 4432-4442.	1.2	137
23	Identification and Characterization of the Putative Fusion Peptide of the Severe Acute Respiratory Syndrome-Associated Coronavirus Spike Protein. Journal of Virology, 2005, 79, 7195-7206.	1.5	126
24	Biomolecular Engineering by Combinatorial Design and High-Throughput Screening: Small, Soluble Peptides That Permeabilize Membranes. Journal of the American Chemical Society, 2008, 130, 9849-9858.	6.6	125
25	Peptide entry inhibitors of enveloped viruses: The importance of interfacial hydrophobicity. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2180-2197.	1.4	120
26	Exchange and flip-flop of dimyristoyl phosphatidylcholine in liquid-crystalline, gel and two-component, two-phase large unilamellar vesicles. Biochemistry, 1990, 29, 1296-1303.	1.2	116
27	A Look at Arginine in Membranes. Journal of Membrane Biology, 2011, 239, 49-56.	1.0	107
28	Anticancer and chemosensitizing abilities of cycloviolacin O2 from <i>Viola odorata</i> and psyle cyclotides from <i>Psychotria leptothyrsa</i>. Biopolymers, 2010, 94, 617-625.	1.2	95
29	Gain-of-Function Analogues of the Pore-Forming Peptide Melittin Selected by Orthogonal High-Throughput Screening. Journal of the American Chemical Society, 2012, 134, 12732-12741.	6.6	86
30	Determining the Membrane Topology of Peptides by Fluorescence Quenching. Biochemistry, 2000, 39, 161-170.	1.2	80
31	Simulation-Guided Rational <i>de Novo</i> Design of a Small Pore-Forming Antimicrobial Peptide. Journal of the American Chemical Society, 2019, 141, 4839-4848.	6.6	80
32	Host Cell Interactions Are a Significant Barrier to the Clinical Utility of Peptide Antibiotics. ACS Chemical Biology, 2016, 11, 3391-3399.	1.6	78
33	Transbilayer and interbilayer phospholipid exchange in dimyristoylphosphatidylcholine/dimyristoylphosphatidylethanolamine large unilamellar vesicles. Biochemistry, 1991, 30, 1702-1709.	1.2	76
34	Î²-Sheet Pore-Forming Peptides Selected from a Rational Combinatorial Library:â€‰ Mechanism of Pore Formation in Lipid Vesicles and Activity in Biological Membranes. Biochemistry, 2007, 46, 12124-12139.	1.2	72
35	Release of Dengue Virus Genome Induced by a Peptide Inhibitor. PLoS ONE, 2012, 7, e50995.	1.1	71
36	Rational combinatorial design of pore-forming Â-sheet peptides. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 10511-10515.	3.3	66

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37	Inhibition of severe acute respiratory syndrome-associated coronavirus (SARS-CoV) infectivity by peptides analogous to the viral spike protein. Virus Research, 2006, 120, 146-155.	1.1	66
38	Antimicrobial peptides are degraded by the cytosolic proteases of human erythrocytes. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 2319-2326.	1.4	65
39	Synthetic molecular evolution of hybrid cell penetrating peptides. Nature Communications, 2018, 9, 2568.	5.8	65
40	HCV Infection Selectively Impairs Type I but Not Type III IFN Signaling. American Journal of Pathology, 2014, 184, 214-229.	1.9	63
41	pH-Triggered, Macromolecule-Sized Poration of Lipid Bilayers by Synthetically Evolved Peptides. Journal of the American Chemical Society, 2017, 139, 937-945.	6.6	61
42	Highly Efficient Macromolecule-Sized Poration of Lipid Bilayers by a Synthetically Evolved Peptide. Journal of the American Chemical Society, 2014, 136, 4724-4731.	6.6	59
43	The Aromatic Domain of the Coronavirus Class I Viral Fusion Protein Induces Membrane Permeabilization:Â Putative Role during Viral Entryâ€. Biochemistry, 2005, 44, 947-958.	1.2	58
44	Determining the mechanism of membrane permeabilizing peptides: Identification of potent, equilibrium pore-formers. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 1625-1632.	1.4	57
45	[23] Mechanism of leakage of contents of membrane vesicles determined by fluorescence requenching. Methods in Enzymology, 1997, 278, 474-486.	0.4	56
46	Highâ€throughput discovery of broadâ€spectrum peptide antibiotics. FASEB Journal, 2010, 24, 3232-3238.	0.2	56
47	pH Dependence of Microbe Sterilization by Cationic Antimicrobial Peptides. Antimicrobial Agents and Chemotherapy, 2013, 57, 3312-3320.	1.4	53
48	Conformational Fine-Tuning of Pore-Forming Peptide Potency and Selectivity. Journal of the American Chemical Society, 2015, 137, 16144-16152.	6.6	53
49	A highly accurate statistical approach for the prediction of transmembrane Î²-barrels. Bioinformatics, 2010, 26, 1965-1974.	1.8	52
50	Direct Cytosolic Delivery of Polar Cargo to Cells by Spontaneous Membrane-translocating Peptides. Journal of Biological Chemistry, 2013, 288, 29974-29986.	1.6	52
51	Folding of Î²-sheets in membranes: specificity and promiscuity in peptide model systems. Journal of Molecular Biology, 2001, 309, 975-988.	2.0	51
52	The electrical response of bilayers to the bee venom toxin melittin: Evidence for transient bilayer permeabilization. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 1357-1364.	1.4	50
53	Pituitary adenylate cyclase-activating polypeptide is a potent broad-spectrum antimicrobial peptide: Structure-activity relationships. Peptides, 2018, 104, 35-40.	1.2	48
54	Characterization of antimicrobial peptide activity by electrochemical impedance spectroscopy. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 2430-2436.	1.4	46

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55	Applications and evolution of melittin, the quintessential membrane active peptide. Biochemical Pharmacology, 2021, 193, 114769.	2.0	45
56	Synthetic molecular evolution of host cell-compatible, antimicrobial peptides effective against drug-resistant, biofilm-forming bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8437-8448.	3.3	43
57	A Membrane-Translocating Peptide Penetrates into Bilayers without Significant Bilayer Perturbations. Biophysical Journal, 2013, 104, 2419-2428.	0.2	42
58	Spontaneous Membrane Translocating Peptides: The Role of Leucine-Arginine Consensus Motifs. Biophysical Journal, 2017, 113, 835-846.	0.2	42
59	Potent Macromolecule-Sized Poration of Lipid Bilayers by the Macrolittins, A Synthetically Evolved Family of Pore-Forming Peptides. Journal of the American Chemical Society, 2018, 140, 6441-6447.	6.6	41
60	A High-Throughput Screen for Identifying Transmembrane Pore-Forming Peptides. Analytical Biochemistry, 2001, 293, 258-263.	1.1	40
61	The Cholesterol-dependent Cytolysin Membrane-binding Interface Discriminates Lipid Environments of Cholesterol to Support Î²-Barrel Pore Insertion. Journal of Biological Chemistry, 2015, 290, 17733-17744.	1.6	40
62	FGFR3 Heterodimerization in Achondroplasia, the Most Common Form of Human Dwarfism. Journal of Biological Chemistry, 2011, 286, 13272-13281.	1.6	38
63	Burkholderia thailandensis outer membrane vesicles exert antimicrobial activity against drug-resistant and competitor microbial species. Journal of Microbiology, 2020, 58, 550-562.	1.3	38
64	A lack of synergy between membrane-permeabilizing cationic antimicrobial peptides and conventional antibiotics. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 8-15.	1.4	37
65	An Outbreak of Ebola Virus Disease in the Lassa Fever Zone. Journal of Infectious Diseases, 2016, 214, S110-S121.	1.9	34
66	The Mechanism of Membrane Permeabilization by Peptides: Still an Enigma. Australian Journal of Chemistry, 2020, 73, 96.	0.5	34
67	Reversible Unfolding of Î²-Sheets in Membranes: A Calorimetric Study. Journal of Molecular Biology, 2004, 342, 703-711.	2.0	33
68	Viroporin potential of the lentivirus lytic peptide (LLP) domains of the HIV-1 gp41 protein. Virology Journal, 2007, 4, 123.	1.4	33
69	How Does Melittin Permeabilize Membranes?. Biophysical Journal, 2018, 114, 251-253.	0.2	30
70	Mechanism of Action of Peptides That Cause the pH-Triggered Macromolecular Poration of Lipid Bilayers. Journal of the American Chemical Society, 2019, 141, 6706-6718.	6.6	30
71	A Highly Charged Voltageâ€Sensor Helix Spontaneously Translocates across Membranes. Angewandte Chemie - International Edition, 2012, 51, 7150-7153.	7.2	28
72	Synthetic Molecular Evolution of Pore-Forming Peptides by Iterative Combinatorial Library Screening. ACS Chemical Biology, 2013, 8, 823-831.	1.6	27

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73	Testing the limits of rational design by engineering pH sensitivity into membrane-active peptides. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 951-957.	1.4	27
74	Determining the Effects of Membrane-Interacting Peptides on Membrane Integrity. Methods in Molecular Biology, 2015, 1324, 89-106.	0.4	27
75	High-Throughput Selection of Transmembrane Sequences That Enhance Receptor Tyrosine Kinase Activation. Journal of Molecular Biology, 2011, 412, 43-54.	2.0	26
76	Ebola Virus Delta Peptide Is a Viroporin. Journal of Virology, 2017, 91, .	1.5	26
77	Interactions of Membrane Active Peptides with Planar Supported Bilayers: An Impedance Spectroscopy Study. Langmuir, 2012, 28, 6088-6096.	1.6	24
78	Toward the de novo design of antimicrobial peptides: Lack of correlation between peptide permeabilization of lipid vesicles and antimicrobial, cytolytic, or cytotoxic activity in living cells. Biopolymers, 2014, 102, 1-6.	1.2	24
79	Structural Plasticity in the Topology of the Membrane-Interacting Domain of HIV-1 gp41. Biophysical Journal, 2014, 106, 610-620.	0.2	22
80	TMBB-DB: a transmembrane Î²-barrel proteome database. Bioinformatics, 2012, 28, 2425-2430.	1.8	21
81	Crotonylation at serine 46 impairs p53 activity. Biochemical and Biophysical Research Communications, 2020, 524, 730-735.	1.0	19
82	The prediction and characterization of YshA, an unknown outer-membrane protein from Salmonella typhimurium. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 287-297.	1.4	18
83	The Membrane-Active Phytopeptide Cycloviolacin O2 Simultaneously Targets HIV-1-infected Cells and Infectious Viral Particles to Potentiate the Efficacy of Antiretroviral Drugs. Medicines (Basel,) Tj ETQq1 1 0.784314 rg BT /Overlock 10 Tf	0.7	18
84	Inhibition of Streptococcus mutans biofilms with bacterial-derived outer membrane vesicles. BMC Microbiology, 2021, 21, 234.	1.3	18
85	Broad-Spectrum Antiviral Entry Inhibition by Interfacially Active Peptides. Journal of Virology, 2020, 94, .	1.5	16
86	Protein Folding in Membranes: Insights from Neutron Diffraction Studies of a Membrane Î²-Sheet Oligomer. Biophysical Journal, 2008, 94, 492-505.	0.2	15
87	Inhibition of Arenavirus Infection by a Glycoprotein-Derived Peptide with a Novel Mechanism. Journal of Virology, 2014, 88, 8556-8564.	1.5	15
88	Application of Synthetic Molecular Evolution to the Discovery of Antimicrobial Peptides. Advances in Experimental Medicine and Biology, 2019, 1117, 241-255.	0.8	14
89	Tuning of a Membrane-Perforating Antimicrobial Peptide to Selectively Target Membranes of Different Lipid Composition. Journal of Membrane Biology, 2021, 254, 75-96.	1.0	13
90	pH-triggered pore-forming peptides with strong composition-dependent membrane selectivity. Biophysical Journal, 2021, 120, 618-630.	0.2	11

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91	Membrane-selective Nanoscale Pores in Liposomes by a Synthetically Evolved Peptide: Implications for Triggered Release. Nanoscale, 2021, 13, 12185-12197.	2.8	11
92	Energetics of Peptide and Protein Binding to Lipid Membranes. Advances in Experimental Medicine and Biology, 2010, 677, 14-23.	0.8	10
93	Pre-Operative Antisepsis Protocol Compliance and the Effect on Bacterial Load Reduction. Surgical Infections, 2016, 17, 32-37.	0.7	7
94	Integrated Design of a Membraneâ€Lytic Peptideâ€Based Intravenous Nanotherapeutic Suppresses Tripleâ€Negative Breast Cancer. Advanced Science, 2022, 9, e2105506.	5.6	7
95	Structural Plasticity in Self-Assembling Transmembrane Î²-Sheets. Biophysical Journal, 2011, 101, 828-836.	0.2	5
96	High glucose induces trafficking of prorenin receptor and stimulates profibrotic factors in the collecting duct. Scientific Reports, 2021, 11, 13815.	1.6	5
97	The Remarkable Innate Resistance of Burkholderia bacteria to Cationic Antimicrobial Peptides: Insights into the Mechanism of AMP Resistance. Journal of Membrane Biology, 2022, , 1.	1.0	5
98	Protein folding in membranes. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 925-926.	1.4	4
99	Rational Modulation of pH-Triggered Macromolecular Poration by Peptide Acylation and Dimerization. Journal of Physical Chemistry B, 2020, 124, 8835-8843.	1.2	3
100	Synthetic Molecular Evolution of Cell Penetrating Peptides. Methods in Molecular Biology, 2022, 2383, 73-89.	0.4	3
101	Ebola virus delta peptide is an enterotoxin. Cell Reports, 2022, 38, 110172.	2.9	3
102	Interfacially active peptides and proteins. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2139.	1.4	1
103	How We Came to Understand the â€œTumultuous Chemical Heterogeneityâ€• of the Lipid Bilayer Membrane. Journal of Membrane Biology, 2020, 253, 185-190.	1.0	0
104	Enhancing the Therapeutic Potential of an Anti-Leukemic Peptide.. Blood, 2005, 106, 245-245.	0.6	0
105	Novel Antiviral Agents: Design, Identification and Characterization of Interfacially Active Peptide Entry inhibitors. FASEB Journal, 2015, 29, 886.20.	0.2	0
106	Making the Membrane Disappear with Spontaneous Membrane Translocating Peptides. FASEB Journal, 2015, 29, 886.15.	0.2	0