

Donald M Engelman

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94 papers	11,900 citations	50 h-index	98 g-index
98 ext. papers	12,766 ext. citations	9 avg, IF	6.46 L-index

#	Paper	IF	Citations
94	A transmembrane helix dimer: structure and implications. <i>Science</i> , 1997 , 276, 131-3	33.3	893
93	The GxxxG motif: a framework for transmembrane helix-helix association. <i>Journal of Molecular Biology</i> , 2000 , 296, 911-9	6.5	797
92	Lipid bilayer thickness varies linearly with acyl chain length in fluid phosphatidylcholine vesicles. <i>Journal of Molecular Biology</i> , 1983 , 166, 211-7	6.5	695
91	Membranes are more mosaic than fluid. <i>Nature</i> , 2005 , 438, 578-80	50.4	693
90	MicroRNA silencing for cancer therapy targeted to the tumour microenvironment. <i>Nature</i> , 2015 , 518, 107-10	50.4	591
89	Helical membrane protein folding, stability, and evolution. <i>Annual Review of Biochemistry</i> , 2000 , 69, 881-922	20.2	546
88	Statistical analysis of amino acid patterns in transmembrane helices: the GxxxG motif occurs frequently and in association with beta-branched residues at neighboring positions. <i>Journal of Molecular Biology</i> , 2000 , 296, 921-36	6.5	529
87	Sequence specificity in the dimerization of transmembrane alpha-helices. <i>Biochemistry</i> , 1992 , 31, 12719-35	3.5	482
86	OncomiR or Tumor Suppressor? The Duplicity of MicroRNAs in Cancer. <i>Cancer Research</i> , 2016 , 76, 3666-70	10.1	428
85	A dimerization motif for transmembrane alpha-helices. <i>Nature Structural Biology</i> , 1994 , 1, 157-63		278
84	Refolding of bacteriorhodopsin in lipid bilayers. A thermodynamically controlled two-stage process. <i>Journal of Molecular Biology</i> , 1987 , 198, 655-76	6.5	269
83	Membrane protein folding: beyond the two stage model. <i>FEBS Letters</i> , 2003 , 555, 122-5	3.8	244
82	Mechanism and uses of a membrane peptide that targets tumors and other acidic tissues in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 7893-8	11.5	228
81	The effect of point mutations on the free energy of transmembrane alpha-helix dimerization. <i>Journal of Molecular Biology</i> , 1997 , 272, 266-75	6.5	223
80	Interhelical hydrogen bonding drives strong interactions in membrane proteins. <i>Nature Structural Biology</i> , 2000 , 7, 154-60		212
79	Spontaneous, pH-dependent membrane insertion of a transbilayer alpha-helix. <i>Biochemistry</i> , 1997 , 36, 15177-92	3.2	204
78	Protein area occupancy at the center of the red blood cell membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 2848-52	11.5	196

77	Computational searching and mutagenesis suggest a structure for the pentameric transmembrane domain of phospholamban. <i>Nature Structural and Molecular Biology</i> , 1995 , 2, 154-62	17.6	186
76	Computational analysis of membrane proteins: the largest class of drug targets. <i>Drug Discovery Today</i> , 2009 , 14, 1130-5	8.8	183
75	Translocation of molecules into cells by pH-dependent insertion of a transmembrane helix. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 6460-5	11.5	179
74	Specificity and promiscuity in membrane helix interactions. <i>Quarterly Reviews of Biophysics</i> , 1994 , 27, 157-218	7	168
73	Bacteriorhodopsin can be refolded from two independently stable transmembrane helices and the complementary five-helix fragment. <i>Biochemistry</i> , 1992 , 31, 6144-51	3.2	149
72	A monomeric membrane peptide that lives in three worlds: in solution, attached to, and inserted across lipid bilayers. <i>Biophysical Journal</i> , 2007 , 93, 2363-72	2.9	148
71	Improved prediction for the structure of the dimeric transmembrane domain of glycophorin A obtained through global searching. <i>Proteins: Structure, Function and Bioinformatics</i> , 1996 , 26, 257-61	4.2	141
70	Family of pH (low) insertion peptides for tumor targeting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 5834-9	11.5	139
69	A novel technology for the imaging of acidic prostate tumors by positron emission tomography. <i>Cancer Research</i> , 2009 , 69, 4510-6	10.1	138
68	Energetics of peptide (pHLIP) binding to and folding across a lipid bilayer membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 15340-5	11.5	137
67	Probe for the measurement of cell surface pH in vivo and ex vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 8177-81	11.5	126
66	pHLIP peptide targets nanogold particles to tumors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 465-70	11.5	121
65	Molecular mechanism for the interaction of phospholipid with cholesterol. <i>Nature: New Biology</i> , 1972 , 237, 42-4		115
64	pH (low) insertion peptide (pHLIP) inserts across a lipid bilayer as a helix and exits by a different path. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 4081-6	11.5	110
63	pH-(low)-insertion-peptide (pHLIP) translocation of membrane impermeable phalloidin toxin inhibits cancer cell proliferation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 20246-50	11.5	105
62	The affinity of GXXXG motifs in transmembrane helix-helix interactions is modulated by long-range communication. <i>Journal of Biological Chemistry</i> , 2004 , 279, 16591-7	5.4	97
61	pH-sensitive membrane peptides (pHLIPs) as a novel class of delivery agents. <i>Molecular Membrane Biology</i> , 2010 , 27, 341-52	3.4	94
60	Measuring tumor aggressiveness and targeting metastatic lesions with fluorescent pHLIP. <i>Molecular Imaging and Biology</i> , 2011 , 13, 1146-56	3.8	77

59	Dimerization of the p185neu transmembrane domain is necessary but not sufficient for transformation. <i>Oncogene</i> , 1997 , 14, 687-96	9.2	70
58	Bilayer interactions of pHLP, a peptide that can deliver drugs and target tumors. <i>Biophysical Journal</i> , 2008 , 95, 225-35	2.9	65
57	Structural perspectives of phospholamban, a helical transmembrane pentamer. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 1997 , 26, 157-79		64
56	Targeting diseased tissues by pHLP insertion at low cell surface pH. <i>Frontiers in Physiology</i> , 2014 , 5, 97	4.6	63
55	Peptides of pHLP family for targeted intracellular and extracellular delivery of cargo molecules to tumors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E2811-E2818	11.5	61
54	Applications of pHLP Technology for Cancer Imaging and Therapy. <i>Trends in Biotechnology</i> , 2017 , 35, 653-664	15.1	57
53	Membrane physical properties influence transmembrane helix formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 14422-7	11.5	55
52	Computational analysis of membrane proteins: genomic occurrence, structure prediction and helix interactions. <i>Quarterly Reviews of Biophysics</i> , 2004 , 37, 121-46	7	55
51	pHLP-mediated translocation of membrane-impermeable molecules into cells. <i>Chemistry and Biology</i> , 2009 , 16, 754-62		54
50	The stability of transmembrane helix interactions measured in a biological membrane. <i>Journal of Molecular Biology</i> , 2006 , 358, 1221-8	6.5	54
49	Design of single-layer beta-sheets without a hydrophobic core. <i>Nature</i> , 2000 , 403, 456-60	50.4	54
48	Selection and characterization of small random transmembrane proteins that bind and activate the platelet-derived growth factor beta receptor. <i>Journal of Molecular Biology</i> , 2004 , 338, 907-20	6.5	53
47	In vivo pH imaging with (99m)Tc-pHLP. <i>Molecular Imaging and Biology</i> , 2012 , 14, 725-34	3.8	52
46	Inelastic neutron scattering analysis of hexokinase dynamics and its modification on binding of glucose. <i>Nature</i> , 1982 , 300, 84-6	50.4	51
45	Computation and mutagenesis suggest a right-handed structure for the synaptobrevin transmembrane dimer. <i>Proteins: Structure, Function and Bioinformatics</i> , 2001 , 45, 313-7	4.2	50
44	Targeting acidity in diseased tissues: mechanism and applications of the membrane-inserting peptide, pHLP. <i>Archives of Biochemistry and Biophysics</i> , 2015 , 565, 40-8	4.1	49
43	pH (low) insertion peptide (pHLP) targets ischemic myocardium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 82-6	11.5	49
42	Tuning the insertion properties of pHLP. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2010 , 1798, 1041-6	3.6	49

41	Thrombopoietin receptor activation: transmembrane helix dimerization, rotation, and allosteric modulation. <i>FASEB Journal</i> , 2011 , 25, 2234-44	0.9	49
40	Roles of carboxyl groups in the transmembrane insertion of peptides. <i>Journal of Molecular Biology</i> , 2011 , 413, 359-71	6.5	47
39	Modulation of the pHLIP transmembrane helix insertion pathway. <i>Biophysical Journal</i> , 2012 , 102, 1846-55.	5.9	44
38	PET Imaging of Extracellular pH in Tumors with (64)Cu- and (18)F-Labeled pHLIP Peptides: A Structure-Activity Optimization Study. <i>Bioconjugate Chemistry</i> , 2016 , 27, 2014-23	6.3	43
37	Transmembrane homodimerization of receptor-like protein tyrosine phosphatases. <i>FEBS Letters</i> , 2005 , 579, 3855-8	3.8	43
36	Surface point mutations that significantly alter the structure and stability of a protein's denatured state. <i>Protein Science</i> , 1996 , 5, 2009-19	6.3	42
35	The pH low insertion peptide pHLIP Variant 3 as a novel marker of acidic malignant lesions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 9710-5	11.5	40
34	Membranes Do Not Tell Proteins How To Fold. <i>Biochemistry</i> , 2016 , 55, 5-18	3.2	39
33	Tuning a polar molecule for selective cytoplasmic delivery by a pH (Low) insertion peptide. <i>Biochemistry</i> , 2011 , 50, 10215-22	3.2	36
32	Construction and genetic selection of small transmembrane proteins that activate the human erythropoietin receptor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 3447-52	11.5	35
31	Targeted imaging of urothelium carcinoma in human bladders by an ICG pHLIP peptide ex vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 11829-11834	11.5	35
30	Understanding the pharmacological properties of a metabolic PET tracer in prostate cancer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 7254-9	11.5	34
29	Aspartate embedding depth affects pHLIP's insertion pKa. <i>Biochemistry</i> , 2013 , 52, 4595-604	3.2	34
28	Targeting acidic diseased tissue: New technology based on use of the pH (Low) Insertion Peptide (pHLIP) 2009 , 27, 34-37		34
27	Multistep denaturation of <i>Borrelia burgdorferi</i> OspA, a protein containing a single-layer beta-sheet. <i>Biochemistry</i> , 1999 , 38, 4757-67	3.2	33
26	Leucine side-chain rotamers in a glycophorin A transmembrane peptide as revealed by three-bond carbon-carbon couplings and ¹³ C chemical shifts. <i>Journal of Biomolecular NMR</i> , 1996 , 7, 256-60	3	30
25	pHLIP-FIRE, a cell insertion-triggered fluorescent probe for imaging tumors demonstrates targeted cargo delivery in vivo. <i>ACS Chemical Biology</i> , 2014 , 9, 2545-53	4.9	28
24	Biologically active LIL proteins built with minimal chemical diversity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E4717-25	11.5	26

23	Electrostatic fasteners hold the T cell receptor-CD3 complex together. <i>Molecular Cell</i> , 2003 , 11, 5-6	17.6	26
22	Artificial transmembrane oncoproteins smaller than the bovine papillomavirus E5 protein redefine sequence requirements for activation of the platelet-derived growth factor beta receptor. <i>Journal of Virology</i> , 2009 , 83, 9773-85	6.6	24
21	Accurate analysis of tumor margins using a fluorescent pH Low Insertion Peptide (pHLIP). <i>International Journal of Molecular Sciences</i> , 2009 , 10, 3478-87	6.3	24
20	Bacteriorhodopsin reconstituted from two individual helices and the complementary five-helix fragment is photoactive. <i>Photochemistry and Photobiology</i> , 1992 , 56, 895-901	3.6	21
19	A solution SAXS study of <i>Borrelia burgdorferi</i> OspA, a protein containing a single-layer beta-sheet. <i>Protein Science</i> , 1998 , 7, 2681-3	6.3	19
18	Mapping the lipid-exposed surfaces of membrane proteins. <i>Nature Structural Biology</i> , 1996 , 3, 240-3		16
17	Bilayer Thickness and Curvature Influence Binding and Insertion of a pHLIP Peptide. <i>Biophysical Journal</i> , 2018 , 114, 2107-2115	2.9	15
16	Peptide targeting and imaging of damaged lung tissue in influenza-infected mice. <i>Future Microbiology</i> , 2013 , 8, 257-69	2.9	15
15	Two transmembrane dimers of the bovine papillomavirus E5 oncoprotein clamp the PDGF α receptor in an active dimeric conformation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E7262-E7271	11.5	13
14	Mapping pH at Cancer Cell Surfaces. <i>Molecular Imaging and Biology</i> , 2019 , 21, 1020-1025	3.8	10
13	Targeting Acidic Diseased Tissues by pH-Triggered Membrane-Associated Peptide Folding. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 335	5.8	10
12	Ku80-Targeted pH-Sensitive Peptide-PNA Conjugates Are Tumor Selective and Sensitize Cancer Cells to Ionizing Radiation. <i>Molecular Cancer Research</i> , 2020 , 18, 873-882	6.6	9
11	Tumor-Targeted, Cytoplasmic Delivery of Large, Polar Molecules Using a pH-Low Insertion Peptide. <i>Molecular Pharmaceutics</i> , 2020 , 17, 461-471	5.6	8
10	Models for the transmembrane region of the phospholamban pentamer: which is correct?. <i>Annals of the New York Academy of Sciences</i> , 1998 , 853, 178-85	6.5	7
9	X-ray and neutron small-angle scattering studies of the complex between protein S1 and the 30-S ribosomal subunit. <i>FEBS Journal</i> , 1978 , 85, 529-34		6
8	Mapping the homodimer interface of an optimized, artificial, transmembrane protein activator of the human erythropoietin receptor. <i>PLoS ONE</i> , 2014 , 9, e95593	3.7	6
7	pHLIP ICG for delineation of tumors and blood flow during fluorescence-guided surgery. <i>Scientific Reports</i> , 2020 , 10, 18356	4.9	5
6	Kinetics of pHLIP peptide insertion into and exit from a membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 12095-12100	11.5	3

5	Pharmacokinetic modeling reveals parameters that govern tumor targeting and delivery by a pH-Low Insertion Peptide (pHLIP). <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	3
4	Tumor-selective, antigen-independent delivery of a pH sensitive peptide-topoisomerase inhibitor conjugate suppresses tumor growth without systemic toxicity. <i>NAR Cancer</i> , 2021 , 3, zcab021	5.2	2
3	MicroRNA function can be reversed by altering target gene expression levels. <i>IScience</i> , 2021 , 24, 1032086.1	0	
2	ph-Triggered Transport of Molecules into Cells by Transmembrane Helix Insertion. <i>FASEB Journal</i> , 2006 , 20, A457	0.9	
1	Translocating cell-impermeable molecules through the plasma membrane of cancer cells. <i>FASEB Journal</i> , 2009 , 23, 796.7	0.9	