

# Benjamin J Hackel

## List of Publications by Year in descending order

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73  
papers

2,783  
citations

236925

25  
h-index

189892

50  
g-index

78  
all docs

78  
docs citations

78  
times ranked

3190  
citing authors

#	ARTICLE	IF	CITATIONS
1	Engineered protein-small molecule conjugates empower selective enzyme inhibition. <i>Cell Chemical Biology</i> , 2022, 29, 328-338.e4.	5.2	8
2	Synthesis and Micellization of Bottlebrush Poloxamers. <i>ACS Macro Letters</i> , 2022, 11, 460-467.	4.8	7
3	Concentration Threshold for Membrane Protection by PEOâ€PPO Block Copolymers with Variable Molecular Architectures. <i>ACS Applied Polymer Materials</i> , 2022, 4, 3259-3269.	4.4	4
4	Extended yeast surface display linkers enhance the enrichment of ligands in direct mammalian cell selections. <i>Protein Engineering, Design and Selection</i> , 2021, 34, .	2.1	3
5	Anti-CD19 CAR T cells potently redirected to kill solid tumor cells. <i>PLoS ONE</i> , 2021, 16, e0247701.	2.5	14
6	High-throughput developability assays enable library-scale identification of producible protein scaffold variants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	18
7	A Platform for Deep Sequenceâ€Activity Mapping and Engineering Antimicrobial Peptides. <i>ACS Synthetic Biology</i> , 2021, 10, 2689-2704.	3.8	7
8	Noncompetitive Allosteric Antagonism of Death Receptor 5 by a Synthetic Affibody Ligand. <i>Biochemistry</i> , 2020, 59, 3856-3868.	2.5	5
9	Mining and Statistical Modeling of Natural and Variant Class IIa Bacteriocins Elucidate Activity and Selectivity Profiles across Species. <i>Applied and Environmental Microbiology</i> , 2020, 86, .	3.1	5
10	Influence of the Headgroup on the Interaction of Poly(ethylene oxide)-Poly(propylene oxide) Block Copolymers with Lipid Bilayers. <i>Journal of Physical Chemistry B</i> , 2020, 124, 2417-2424.	2.6	14
11	Computationally Aided Discovery of LysEFm5 Variants with Improved Catalytic Activity and Stability. <i>Applied and Environmental Microbiology</i> , 2020, 86, .	3.1	2
12	Spatial Distribution of PEOâ€PPOâ€PEO Block Copolymer and PEO Homopolymer in Lipid Bilayers. <i>Langmuir</i> , 2020, 36, 3393-3403.	3.5	14
13	Magnetic Bead-Immobilized Mammalian Cells Are Effective Targets to Enrich Ligand-Displaying Yeast. <i>ACS Combinatorial Science</i> , 2020, 22, 274-284.	3.8	7
14	Efficacy of Affibody-Based Ultrasound Molecular Imaging of Vascular B7-H3 for Breast Cancer Detection. <i>Clinical Cancer Research</i> , 2020, 26, 2140-2150.	7.0	23
15	Ligand Engineering via Yeast Surface Display and Adherent Cell Panning. <i>Methods in Molecular Biology</i> , 2020, 2070, 303-320.	0.9	3
16	Fine Epitope Mapping of the CD19 Extracellular Domain Promotes Design. <i>Biochemistry</i> , 2019, 58, 4869-4881.	2.5	29
17	Biophysical Characterization Platform Informs Protein Scaffold Evolvability. <i>ACS Combinatorial Science</i> , 2019, 21, 323-335.	3.8	14
18	Identification and elucidation of prolineâ€rich antimicrobial peptides with enhanced potency and delivery. <i>Biotechnology and Bioengineering</i> , 2019, 116, 2439-2450.	3.3	19

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19	Retargeting CD19 Chimeric Antigen Receptor T Cells via Engineered CD19-Fusion Proteins. <i>Molecular Pharmaceutics</i> , 2019, 16, 3544-3558.	4.6	29
20	Influence of Cholesterol and Bilayer Curvature on the Interaction of PPO-PEO Block Copolymers with Liposomes. <i>Langmuir</i> , 2019, 35, 7231-7241.	3.5	19
21	Affibody-Indocyanine Green Based Contrast Agent for Photoacoustic and Fluorescence Molecular Imaging of B7-H3 Expression in Breast Cancer. <i>Bioconjugate Chemistry</i> , 2019, 30, 1677-1689.	3.6	32
22	Cardiac Muscle Membrane Stabilization in Myocardial Reperfusion Injury. <i>JACC Basic To Translational Science</i> , 2019, 4, 275-287.	4.1	24
23	Validation and Stabilization of a Prophage Lysin of <i>Clostridium perfringens</i> by Using Yeast Surface Display and Coevolutionary Models. <i>Applied and Environmental Microbiology</i> , 2019, 85, .	3.1	16
24	Improved mutant function prediction via PACT: Protein Analysis and Classifier Toolkit. <i>Bioinformatics</i> , 2019, 35, 2707-2712.	4.1	18
25	Engineering an EGFR-binding Gp2 domain for increased hydrophilicity. <i>Biotechnology and Bioengineering</i> , 2019, 116, 526-535.	3.3	3
26	Cellular-Based Selections Aid Yeast-Display Discovery of Genuine Cell-Binding Ligands: Targeting Oncology Vascular Biomarker CD276. <i>ACS Combinatorial Science</i> , 2019, 21, 207-222.	3.8	17
27	Multivalent Ligand Binding to Cell Membrane Antigens: Defining the Interplay of Affinity, Valency, and Expression Density. <i>Journal of the American Chemical Society</i> , 2019, 141, 251-261.	13.7	59
28	Evaluation of affibody charge modification identified by synthetic consensus design in molecular PET imaging of epidermal growth factor receptor. <i>Molecular Systems Design and Engineering</i> , 2018, 3, 171-182.	3.4	8
29	Engineered Charge Redistribution of Gp2 Proteins through Guided Diversity for Improved PET Imaging of Epidermal Growth Factor Receptor. <i>Bioconjugate Chemistry</i> , 2018, 29, 1646-1658.	3.6	9
30	Engineering Reversible Cell-Cell Interactions with Lipid Anchored Prosthetic Receptors. <i>Bioconjugate Chemistry</i> , 2018, 29, 1291-1301.	3.6	19
31	Systematic mutagenesis of oncocin reveals enhanced activity and insights into the mechanisms of antimicrobial activity. <i>Molecular Systems Design and Engineering</i> , 2018, 3, 930-941.	3.4	12
32	Constrained Combinatorial Libraries of Gp2 Proteins Enhance Discovery of PD-L1 Binders. <i>ACS Combinatorial Science</i> , 2018, 20, 423-435.	3.8	16
33	Surface Plasmon Resonance Study of the Binding of PEO-PPO-PEO Triblock Copolymer and PEO Homopolymer to Supported Lipid Bilayers. <i>Langmuir</i> , 2018, 34, 6703-6712.	3.5	18
34	Multispecies activity screening of microcin J25 mutants yields antimicrobials with increased specificity toward pathogenic <i>Salmonella</i> species relative to human commensal <i>Escherichia coli</i> . <i>Biotechnology and Bioengineering</i> , 2018, 115, 2394-2404.	3.3	8
35	Poloxamer 188 does not Target Altered Ca <sup>2+</sup> Channels in Cardiomyocytes during Hypoxia/Reoxygenation Injury. <i>FASEB Journal</i> , 2018, 32, 698.7.	0.5	0
36	Discovery of Tumor Necrosis Factor Receptor Binders using Yeast Surface Display. <i>FASEB Journal</i> , 2018, 32, 798.18.	0.5	0

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37	Development and Implementation of a Protein-Protein Binding Experiment To Teach Intermolecular Interactions in High School or Undergraduate Classrooms. <i>Journal of Chemical Education</i> , 2017, 94, 367-374.	2.3	6
38	A Gradient of Sitewise Diversity Promotes Evolutionary Fitness for Binder Discovery in a Three-Helix Bundle Protein Scaffold. <i>Biochemistry</i> , 2017, 56, 1656-1671.	2.5	32
39	Targeting Insulin Receptor in Breast Cancer Using Small Engineered Protein Scaffolds. <i>Molecular Cancer Therapeutics</i> , 2017, 16, 1324-1334.	4.1	26
40	PEO-PPO Diblock Copolymers Protect Myoblasts from Hypo-Osmotic Stress In Vitro Dependent on Copolymer Size, Composition, and Architecture. <i>Biomacromolecules</i> , 2017, 18, 2090-2101.	5.4	23
41	Chemical End Group Modified Diblock Copolymers Elucidate Anchor and Chain Mechanism of Membrane Stabilization. <i>Molecular Pharmaceutics</i> , 2017, 14, 2333-2339.	4.6	28
42	Titratable Avidity Reduction Enhances Affinity Discrimination in Mammalian Cellular Selections of Yeast-Displayed Ligands. <i>ACS Combinatorial Science</i> , 2017, 19, 315-323.	3.8	29
43	Quantifying Binding of Ethylene Oxide-Propylene Oxide Block Copolymers with Lipid Bilayers. <i>Langmuir</i> , 2017, 33, 12624-12634.	3.5	31
44	Ultrasound Molecular Imaging of the Breast Cancer Neovasculature using Engineered Fibronectin Scaffold Ligands: A Novel Class of Targeted Contrast Ultrasound Agent. <i>Theranostics</i> , 2016, 6, 1740-1752.	10.0	38
45	ScaffoldSeq: Software for characterization of directed evolution populations. <i>Proteins: Structure, Function and Bioinformatics</i> , 2016, 84, 869-874.	2.6	6
46	Enterocin A mutants identified by saturation mutagenesis enhance potency towards vancomycin-resistant Enterococci. <i>Biotechnology and Bioengineering</i> , 2016, 113, 414-423.	3.3	7
47	Geometry and expression enhance enrichment of functional yeast-displayed ligands via cell panning. <i>Biotechnology and Bioengineering</i> , 2016, 113, 2328-2341.	3.3	32
48	PyMOL360: Multi-user gamepad control of molecular visualization software. <i>Journal of Computational Chemistry</i> , 2016, 37, 2667-2669.	3.3	11
49	<sup>64</sup> Cu-Labeled Gp2 Domain for PET Imaging of Epidermal Growth Factor Receptor. <i>Molecular Pharmaceutics</i> , 2016, 13, 3747-3755.	4.6	13
50	Synthetic and natural consensus design for engineering charge within an affibody targeting epidermal growth factor receptor. <i>Biotechnology and Bioengineering</i> , 2016, 113, 1628-1638.	3.3	7
51	Abstract 1881: Insulin receptor targeting in breast cancer through yeast surface display. <i>Cancer Research</i> , 2016, 76, 1881-1881.	0.9	1
52	A 45-Amino-Acid Scaffold Mined from the PDB for High-Affinity Ligand Engineering. <i>Chemistry and Biology</i> , 2015, 22, 946-956.	6.0	51
53	High-Throughput Ligand Discovery Reveals a Sitewise Gradient of Diversity in Broadly Evolved Hydrophilic Fibronectin Domains. <i>PLoS ONE</i> , 2015, 10, e0138956.	2.5	35
54	Directed Evolution of Brain-Derived Neurotrophic Factor for Improved Folding and Expression in <i>Saccharomyces cerevisiae</i> . <i>Applied and Environmental Microbiology</i> , 2014, 80, 5732-5742.	3.1	26

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55	Alternative Protein Scaffolds for Molecular Imaging and Therapy. , 2014, , 343-364.		2
56	Ligand Engineering Using Yeast Surface Display. Methods in Molecular Biology, 2014, 1163, 257-271.	0.9	1
57	Engineering Fibronectin-Based Binding Proteins by Yeast Surface Display. Methods in Enzymology, 2013, 523, 303-326.	1.0	47
58	A Novel Engineered Anti-CD20 Tracer Enables Early Time PET Imaging in a Humanized Transgenic Mouse Model of B-cell Non-Hodgkins Lymphoma. Clinical Cancer Research, 2013, 19, 6820-6829.	7.0	45
59	Alternative non-antibody protein scaffolds for molecular imaging of cancer. Current Opinion in Chemical Engineering, 2013, 2, 425-432.	7.8	57
60	<sup>18</sup> F-Fluorobenzoate- <sup>64</sup> Cu-Labeled Cystine Knot Peptides for PET Imaging of Integrin $\alpha_5\beta_1$ . Journal of Nuclear Medicine, 2013, 54, 1101-1105.	5.0	48
61	Epidermal growth factor receptor downregulation by small heterodimeric binding proteins. Protein Engineering, Design and Selection, 2012, 25, 47-57.	2.1	25
62	Use of <sup>64</sup> Cu-labeled Fibronectin Domain with EGFR-Overexpressing Tumor Xenograft: Molecular Imaging. Radiology, 2012, 263, 179-188.	7.3	53
63	Pharmacokinetically Stabilized Cystine Knot Peptides That Bind Alpha-v-Beta-6 Integrin with Single-Digit Nanomolar Affinities for Detection of Pancreatic Cancer. Clinical Cancer Research, 2012, 18, 839-849.	7.0	95
64	Designed hydrophilic and charge mutations of the fibronectin domain: towards tailored protein biodistribution. Protein Engineering, Design and Selection, 2012, 25, 639-648.	2.1	21
65	Convergent Potency of Internalized Gelonin Immunotoxins across Varied Cell Lines, Antigens, and Targeting Moieties. Journal of Biological Chemistry, 2011, 286, 4165-4172.	3.4	66
66	The full amino acid repertoire is superior to serine/tyrosine for selection of high affinity immunoglobulin G binders from the fibronectin scaffold. Protein Engineering, Design and Selection, 2010, 23, 211-219.	2.1	33
67	Stability and CDR Composition Biases Enrich Binder Functionality Landscapes. Journal of Molecular Biology, 2010, 401, 84-96.	4.2	76
68	Highly avid magnetic bead capture: An efficient selection method for de novo protein engineering utilizing yeast surface display. Biotechnology Progress, 2009, 25, 774-783.	2.6	77
69	Picomolar Affinity Fibronectin Domains Engineered Utilizing Loop Length Diversity, Recursive Mutagenesis, and Loop Shuffling. Journal of Molecular Biology, 2008, 381, 1238-1252.	4.2	148
70	Evolution of an Interloop Disulfide Bond in High-Affinity Antibody Mimics Based on Fibronectin Type III Domain and Selected by Yeast Surface Display: Molecular Convergence with Single-Domain Camelid and Shark Antibodies. Journal of Molecular Biology, 2007, 368, 1024-1041.	4.2	95
71	Isolating and engineering human antibodies using yeast surface display. Nature Protocols, 2006, 1, 755-768.	12.0	792
72	Production of Soluble and Active Transferrin Receptor-Targeting Single-Chain Antibody using Saccharomyces cerevisiae. Pharmaceutical Research, 2006, 23, 790-797.	3.5	61

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73	Fmoc-Based Synthesis of Peptide $\beta$ -Thioesters Using an Aryl Hydrazine Support. Journal of Organic Chemistry, 2004, 69, 4145-4151.	3.2	128