David A Putnam

List of Publications by Citations

91 papers	5,048 citations	36 h-index	70 g-index
102 ext. papers	5,454 ext. citations	9.1 avg, IF	5.75 L-index

#	Paper	IF	Citations
91	Polymers for gene delivery across length scales. *Nature Materials*, **2006**, 5, 439-51	27	494
90	Polymer systems for gene delivery—Past, present, and future. *Progress in Polymer Science*, **2007**, 32, 799-837	29.6	369
89	Accelerated discovery of synthetic transfection vectors: parallel synthesis and screening of a degradable polymer library. *Journal of the American Chemical Society*, **2001**, 123, 8155-6	16.4	356
88	Biophysical and structural characterization of polyethylenimine-mediated siRNA delivery in vitro. *Pharmaceutical Research*, **2006**, 23, 1868-76	4.5	276
87	Biomaterial microarrays: rapid, microscale screening of polymer-cell interaction. *Biomaterials*, **2005**, 26, 4892-7	15.6	252
86	Poly(lactic acid)-poly(ethylene glycol) nanoparticles as new carriers for the delivery of plasmid DNA. *Journal of Controlled Release*, **2001**, 75, 211-24	11.7	252
85	Design of imidazole-containing endosomolytic biopolymers for gene delivery. *Biotechnology and Bioengineering*, **2000**, 67, 217-223	4.9	242
84	Molecularly engineered poly(ortho ester) microspheres for enhanced delivery of DNA vaccines. *Nature Materials*, **2004**, 3, 190-6	27	228
83	PLGA microspheres containing plasmid DNA: preservation of supercoiled DNA via cryopreparation and carbohydrate stabilization. *Journal of Pharmaceutical Sciences*, **1999**, 88, 126-30	3.9	198
82	Delivery of foreign antigens by engineered outer membrane vesicle vaccines. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 3099-104	11.5	188
81	Polymer-based gene delivery with low cytotoxicity by a unique balance of side-chain termini. *Proceedings of the National Academy of Sciences of the United States of America*, **2001**, 98, 1200-5	11.5	151
80	Poly(4-hydroxy-l-proline ester): Low-Temperature Polycondensation and Plasmid DNA Complexation. *Macromolecules*, **1999**, 32, 3658-3662	5.5	115
79	Engineered bacterial outer membrane vesicles with enhanced functionality. *Journal of Molecular Biology*, **2008**, 380, 51-66	6.5	112
78	Polyhistidine-PEG:DNA nanocomposites for gene delivery. *Biomaterials*, **2003**, 24, 4425-33	15.6	108
77	Outer membrane vesicles displaying engineered glycotopes elicit protective antibodies. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E3609-18	11.5	75
76	Aliphatic ionenes as gene delivery agents: elucidation of structure-function relationship through modification of charge density and polymer length. *Bioconjugate Chemistry*, **2002**, 13, 548-53	6.3	74
75	Designer outer membrane vesicles as immunomodulatory systems - Reprogramming bacteria for vaccine delivery. *Advanced Drug Delivery Reviews*, **2017**, 114, 132-142	18.5	71

74	Pathogen-like particles: biomimetic vaccine carriers engineered at the nanoscale. *Current Opinion in Biotechnology*, **2014**, 28, 51-8	11.4	68
73	Characterizing the structure/function parameter space of hydrocarbon-conjugated branched polyethylenimine for DNA delivery in vitro. *Journal of Controlled Release*, **2006**, 116, 227-37	11.7	67
72	Structure-function relationships of gene delivery vectors in a limited polycation library. *Journal of Controlled Release*, **2005**, 103, 273-83	11.7	62
71	Microbial biosynthesis of designer outer membrane vesicles. *Current Opinion in Biotechnology*, **2014** , 29, 76-84	11.4	60
70	Recombinant M2e outer membrane vesicle vaccines protect against lethal influenza A challenge in BALB/c mice. *Vaccine*, **2016**, 34, 1252-8	4.1	58
69	Synthetic Biomaterials from Metabolically Derived Synthons. *Chemical Reviews*, **2016**, 116, 2664-704	68.1	55
68	Safe Recombinant Outer Membrane Vesicles that Display M2e Elicit Heterologous Influenza Protection. *Molecular Therapy*, **2017**, 25, 989-1002	11.7	53
67	Competitive reactions in solutions of poly-L-histidine, calf thymus DNA, and synthetic polyanions: determining the binding constants of polyelectrolytes. *Journal of the American Chemical Society*, **2003**, 125, 13693-9	16.4	53
66	Overcoming limiting side reactions associated with an NHS-activated precursor of polymethacrylamide-based polymers. *Bioconjugate Chemistry*, **2007**, 18, 970-82	6.3	52
65	Determination of P-glycoprotein inhibition by excipients and their combinations using an integrated high-throughput process. *Journal of Pharmaceutical Sciences*, **2004**, 93, 2755-67	3.9	48
64	Immunization with outer membrane vesicles displaying conserved surface polysaccharide antigen elicits broadly antimicrobial antibodies. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E3106-E3115	11.5	47
63	Concepts, technologies, and practices for drug delivery past the blood-brain barrier to the central nervous system. *Journal of Controlled Release*, **2016**, 240, 251-266	11.7	46
62	Design of an injectable synthetic and biodegradable surgical biomaterial. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 11014-9	11.5	45
61	Combinatorial evaluation of cations, pH-sensitive and hydrophobic moieties for polymeric vector design. *Molecular Therapy*, **2009**, 17, 480-90	11.7	44
60	Enantioselective release of 5-fluorouracil from N-(2-hydroxypropyl)methacrylamide-based copolymers via lysosomal enzymes. *Bioconjugate Chemistry*, **1995**, 6, 483-92	6.3	44
59	A functionalizable biomaterial based on dihydroxyacetone, an intermediate of glucose metabolism. *Biomacromolecules*, **2006**, 7, 3239-44	6.9	40
58	Enhancement of a human immunodeficiency virus env DNA vaccine using a novel polycationic nanoparticle formulation. *Immunology Letters*, **2003**, 90, 67-70	4.1	40
57	High Molecular Weight Poly(methacrylic acid) with Narrow Polydispersity by RAFT Polymerization. *Macromolecules*, **2009**, 42, 1494-1499	5.5	36

56	Poly(carbonate-ester)s of dihydroxyacetone and lactic acid as potential biomaterials. *Biomacromolecules*, **2011**, 12, 977-86	6.9	34
55	Mechanistic insight into the TH1-biased immune response to recombinant subunit vaccines delivered by probiotic bacteria-derived outer membrane vesicles. *PLoS ONE*, **2014**, 9, e112802	3.7	33
54	Immunization with Outer Membrane Vesicles Displaying Designer Glycotopes Yields Class-Switched, Glycan-Specific Antibodies. *Cell Chemical Biology*, **2016**, 23, 655-65	8.2	32
53	Binding and lubrication of biomimetic boundary lubricants on articular cartilage. *Journal of Orthopaedic Research*, **2017**, 35, 548-557	3.8	32
52	An in-depth analysis of polymer-analogous conjugation using DMTMM. *Bioconjugate Chemistry*, **2011**, 22, 329-37	6.3	30
51	Diblock copolymers based on dihydroxyacetone and ethylene glycol: synthesis, characterization, and nanoparticle formulation. *Biomacromolecules*, **2006**, 7, 3245-51	6.9	30
50	Poly(carbonate□cetal)s from the Dimer Form of Dihydroxyacetone. *Macromolecules*, **2005**, 38, 5532-5537	5.5	27
49	Intracellularly biorecognizable derivatives of 5-fluorouracil. Implications for site-specific delivery in the human condition. *Biochemical Pharmacology*, **1996**, 52, 957-62	6	27
48	Materials in surgery: a review of biomaterials in postsurgical tissue adhesion and seroma prevention. *Tissue Engineering - Part B: Reviews*, **2008**, 14, 377-91	7.9	24
47	Boundary mode lubrication of articular cartilage with a biomimetic diblock copolymer. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 12437-12441	11.5	18
46	A single dose and long lasting vaccine against pandemic influenza through the controlled release of a heterospecies tandem M2 sequence embedded within detoxified bacterial outer membrane vesicles. *Vaccine*, **2017**, 35, 5373-5380	4.1	18
45	Protein release from dihydroxyacetone-based poly(carbonate ester) matrices. *Acta Biomaterialia*, **2013**, 9, 8245-53	10.8	17
44	Tunable Lubricin-mimetics for Boundary Lubrication of Cartilage. *Biotribology*, **2017**, 9, 18-23	2.3	16
43	Kinetic and efficacy analysis of RNA interference in stably and transiently expressing cell lines. *Molecular Pharmaceutics*, **2006**, 3, 601-13	5.6	16
42	Selective and Tunable Galectin Binding of Glycopolymers Synthesized by a Generalizable Conjugation Method. *Biomacromolecules*, **2019**, 20, 3704-3712	6.9	14
41	Enabling P-glycoprotein inhibition in multidrug resistant cancer through the reverse targeting of a quinidine-PEG conjugate. *Journal of Controlled Release*, **2020**, 317, 291-299	11.7	13
40	Synergistic Interactions of a Synthetic Lubricin-Mimetic with Fibronectin for Enhanced Wear Protection. *Frontiers in Bioengineering and Biotechnology*, **2017**, 5, 36	5.8	12
39	One-step synthesis, biodegradation and biocompatibility of polyesters based on the metabolic synthon, dihydroxyacetone. *Biomaterials*, **2016**, 98, 41-52	15.6	12

38	Effect of Lubricin Mimetics on the Inhibition of Osteoarthritis in a Rat Anterior Cruciate Ligament Transection Model. *American Journal of Sports Medicine*, **2020**, 48, 624-634	6.8	11
37	A mechanistic analysis of the quantitation of α-hydroxy ketones by the bicinchoninic acid assay. *Analytical Biochemistry*, **2012**, 430, 116-22	3.1	11
36	Polymers for siRNA Delivery: A Critical Assessment of Current Technology Prospects for Clinical Application. *ACS Biomaterials Science and Engineering*, **2016**, 2, 1837-1850	5.5	10
35	A rapidly resorbable hemostatic biomaterial based on dihydroxyacetone. *Journal of Biomedical Materials Research - Part A*, **2010**, 93, 776-82	5.4	10
34	Block Copolymer Micelles and Vesicles for Drug Delivery **2014**, 163-188		9
33	Design and development of effective siRNA delivery vehicles. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 3903-4	11.5	8
32	Induced fusion and aggregation of bacterial outer membrane vesicles: Experimental and theoretical analysis. *Journal of Colloid and Interface Science*, **2020**, 578, 522-532	9.3	7
31	A combinatorial library of bi-functional polymeric vectors for siRNA delivery in vitro. *Pharmaceutical Research*, **2013**, 30, 362-76	4.5	5
30	A Simple and Sensitive Method to Quantify Biodegradable Nanoparticle Biodistribution using Europium Chelates. *Scientific Reports*, **2015**, 5, 13177	4.9	5
29	Affinity-Based Drug Delivery **2014**, 429-452		5
28	Simple and economical high-throughput equilibrium dialysis system. *ACS Combinatorial Science*, **2009**, 11, 202-5		5
27	Insight into the Unexpectedly Rapid Degradation of Dihydroxyacetone-Based Hydrogels. *Macromolecular Chemistry and Physics*, **2016**, 217, 1917-1925	2.6	5
26	Synthesis and characterization of macromolecular rhodamine tethers and their interactions with P-glycoprotein. *Bioconjugate Chemistry*, **2014**, 25, 1462-9	6.3	4
25	Desensitizing mice to ovalbumin through subcutaneous microsphere immunotherapy (SMITH). *International Forum of Allergy and Rhinology*, **2011**, 1, 390-5	6.3	4
24	Influence of Block Length on Articular Cartilage Lubrication with a Diblock Bottle-Brush Copolymer. *ACS Applied Materials & Interfaces*, **2020**, 12, 330-337	9.5	4
23	Design of imidazole-containing endosomolytic biopolymers for gene delivery **2000**, 67, 217		4
22	Prolonged Release of Bioactive Model Proteins from Anionic Microgels Fabricated with a New Microemulsion Approach. *Pharmaceutical Research*, **2016**, 33, 879-92	4.5	3
21	Implantable Drug Delivery Systems **2014**, 189-225		3

20	Poly(acrylic acid) Undergoes Partial Esterification During RAFT Synthesis in Methanol and Interchain Disulfide Bridging Upon NaOH Treatment. *Macromolecular Chemistry and Physics*, **2012**, 213, 2536-2540	2.6	3
19	Beneficial Effects of Exercise on Subendothelial Matrix Stiffness are Short-Lived. *Journal of Biomechanical Engineering*, **2018**, 140,	2.1	2
18	Fundamentals of Drug Delivery **2014**, 1-28		2
17	The stochastic effect of polydispersity on polymeric DNA delivery vectors. *Journal of Applied Polymer Science*, **2018**, 135, 45965	2.9	1
16	Mucoadhesive Drug Delivery Systems **2014**, 319-342		1
15	Polymeric Nanoparticles **2014**, 117-161		1
14	Polymeric Microparticles **2014**, 85-116		1
13	A modular platform for on-demand vaccine self-assembly enabled by decoration of bacterial outer membrane vesicles with biotinylated antigens		1
12	Biological Nanoparticles in Vaccine Development.. *Frontiers in Bioengineering and Biotechnology*, **2022**, 10, 867119	5.8	1
11	Altered Biodistribution and Tissue Retention of Nanoparticles Targeted with P-Glycoprotein Substrates. *Regenerative Engineering and Translational Medicine*, **2019**, 5, 308-318	2.4	0
10	Transient phase behavior of an elastomeric biomaterial applied to abdominal laparotomy closure. *Acta Biomaterialia*, **2017**, 58, 413-420	10.8	
9	Polymeric Drug Delivery Systems in Tissue Engineering **2014**, 227-282		
8	Oral Controlled-Release Polymeric Drug Delivery Systems **2014**, 283-318		
7	Stimuli-Responsive Polymer Delivery Systems **2014**, 375-427		
6	Challenges of Drug Delivery **2014**, 29-54		
5	Enhanced Oral Drug Delivery through Metabolic Pathways **2014**, 343-373		
4	Polymer Drug Conjugates **2014**, 55-83		
3	LOW-DOSE RECOMBINANT VACCINE ANTIGEN DELIVERY BY ENGINEERED OUTER MEMBRANE VESICLES. *Nano LIFE*, **2013**, 03, 1342002	0.9	

2	A lipid mixing assay to accurately quantify the fusion of outer membrane vesicles. *Methods*, **2020**, 177, 74-79	4.6
1	Microparticle fabricated from a series of symmetrical lipids based on dihydroxyacetone form textured architectures. *Journal of Controlled Release*, **2021**, 330, 1071-1079	11.7