

# David A Putnam

## List of Publications by Year in descending order

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82  
papers

5,889  
citations

87888

38  
h-index

74163

75  
g-index

102  
all docs

102  
docs citations

102  
times ranked

6804  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polymers for gene delivery across length scales. <i>Nature Materials</i> , 2006, 5, 439-451.	27.5	538
2	Polymer systems for gene delivery—Past, present, and future. <i>Progress in Polymer Science</i> , 2007, 32, 799-837.	24.7	399
3	Accelerated Discovery of Synthetic Transfection Vectors: Parallel Synthesis and Screening of a Degradable Polymer Library. <i>Journal of the American Chemical Society</i> , 2001, 123, 8155-8156.	13.7	390
4	Biophysical and Structural Characterization of Polyethylenimine-Mediated siRNA Delivery in Vitro. <i>Pharmaceutical Research</i> , 2006, 23, 1868-1876.	3.5	297
5	Poly(lactic acid)-poly(ethylene glycol) nanoparticles as new carriers for the delivery of plasmid DNA. <i>Journal of Controlled Release</i> , 2001, 75, 211-224.	9.9	281
6	Design of imidazole-containing endosomolytic biopolymers for gene delivery. <i>Biotechnology and Bioengineering</i> , 2000, 67, 217-223.	3.3	270
7	Biomaterial microarrays: rapid, microscale screening of polymer–cell interaction. <i>Biomaterials</i> , 2005, 26, 4892-4897.	11.4	267
8	Molecularly engineered poly(ortho ester) microspheres for enhanced delivery of DNA vaccines. <i>Nature Materials</i> , 2004, 3, 190-196.	27.5	261
9	Delivery of foreign antigens by engineered outer membrane vesicle vaccines. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 3099-3104.	7.1	241
10	PLGA microspheres containing plasmid DNA: Preservation of supercoiled DNA via cryopreparation and carbohydrate stabilization. <i>Journal of Pharmaceutical Sciences</i> , 1999, 88, 126-130.	3.3	226
11	Polymer-based gene delivery with low cytotoxicity by a unique balance of side-chain termini. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 1200-1205.	7.1	168
12	Engineered Bacterial Outer Membrane Vesicles with Enhanced Functionality. <i>Journal of Molecular Biology</i> , 2008, 380, 51-66.	4.2	142
13	Designer outer membrane vesicles as immunomodulatory systems—Reprogramming bacteria for vaccine delivery. <i>Advanced Drug Delivery Reviews</i> , 2017, 114, 132-142.	13.7	126
14	Poly(4-hydroxy-L-proline ester): Low-Temperature Polycondensation and Plasmid DNA Complexation. <i>Macromolecules</i> , 1999, 32, 3658-3662.	4.8	122
15	Polyhistidine–PEG:DNA nanocomposites for gene delivery. <i>Biomaterials</i> , 2003, 24, 4425-4433.	11.4	120
16	Outer membrane vesicles displaying engineered glycotopes elicit protective antibodies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E3609-18.	7.1	112
17	Recombinant M2e outer membrane vesicle vaccines protect against lethal influenza A challenge in BALB/c mice. <i>Vaccine</i> , 2016, 34, 1252-1258.	3.8	91
18	Pathogen-like particles: biomimetic vaccine carriers engineered at the nanoscale. <i>Current Opinion in Biotechnology</i> , 2014, 28, 51-58.	6.6	83

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19	Immunization with outer membrane vesicles displaying conserved surface polysaccharide antigen elicits broadly antimicrobial antibodies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E3106-E3115.	7.1	81
20	Aliphatic Ionenes as Gene Delivery Agents: Elucidation of Structure-Function Relationship through Modification of Charge Density and Polymer Length. <i>Bioconjugate Chemistry</i> , 2002, 13, 548-553.	3.6	78
21	Safe Recombinant Outer Membrane Vesicles that Display M2e Elicit Heterologous Influenza Protection. <i>Molecular Therapy</i> , 2017, 25, 989-1002.	8.2	75
22	Microbial biosynthesis of designer outer membrane vesicles. <i>Current Opinion in Biotechnology</i> , 2014, 29, 76-84.	6.6	71
23	Characterizing the structure/function parameter space of hydrocarbon-conjugated branched polyethylenimine for DNA delivery in vitro. <i>Journal of Controlled Release</i> , 2006, 116, 227-237.	9.9	70
24	Structure-function relationships of gene delivery vectors in a limited polycation library. <i>Journal of Controlled Release</i> , 2005, 103, 273-283.	9.9	67
25	Concepts, technologies, and practices for drug delivery past the blood-brain barrier to the central nervous system. <i>Journal of Controlled Release</i> , 2016, 240, 251-266.	9.9	64
26	Synthetic Biomaterials from Metabolically Derived Synthons. <i>Chemical Reviews</i> , 2016, 116, 2664-2704.	47.7	61
27	Overcoming Limiting Side Reactions Associated with an NHS-Activated Precursor of Polymethacrylamide-Based Polymers. <i>Bioconjugate Chemistry</i> , 2007, 18, 970-982.	3.6	55
28	Design of an injectable synthetic and biodegradable surgical biomaterial. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 11014-11019.	7.1	55
29	Competitive Reactions in Solutions of Poly-L-histidine, Calf Thymus DNA, and Synthetic Polyanions: Determining the Binding Constants of Polyelectrolytes. <i>Journal of the American Chemical Society</i> , 2003, 125, 13693-13699.	13.7	54
30	Determination of P-glycoprotein inhibition by excipients and their combinations using an integrated high-throughput process. <i>Journal of Pharmaceutical Sciences</i> , 2004, 93, 2755-2767.	3.3	52
31	Enantioselective Release of 5-Fluorouracil from N-(2-Hydroxypropyl)methacrylamide-Based Copolymers via Lysosomal Enzymes. <i>Bioconjugate Chemistry</i> , 1995, 6, 483-492.	3.6	50
32	Combinatorial Evaluation of Cations, pH-sensitive and Hydrophobic Moieties for Polymeric Vector Design. <i>Molecular Therapy</i> , 2009, 17, 480-490.	8.2	49
33	Immunization with Outer Membrane Vesicles Displaying Designer Glycotopes Yields Class-Switched, Glycan-Specific Antibodies. <i>Cell Chemical Biology</i> , 2016, 23, 655-665.	5.2	48
34	A Functionalizable Biomaterial Based on Dihydroxyacetone, an Intermediate of Glucose Metabolism. <i>Biomacromolecules</i> , 2006, 7, 3239-3244.	5.4	45
35	An In-Depth Analysis of Polymer-Analogous Conjugation using DMTMM. <i>Bioconjugate Chemistry</i> , 2011, 22, 329-337.	3.6	43
36	Enhancement of a human immunodeficiency virus env DNA vaccine using a novel polycationic nanoparticle formulation. <i>Immunology Letters</i> , 2003, 90, 67-70.	2.5	41

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37	High Molecular Weight Poly(methacrylic acid) with Narrow Polydispersity by RAFT Polymerization. <i>Macromolecules</i> , 2009, 42, 1494-1499.	4.8	39
38	Mechanistic Insight into the TH1-Biased Immune Response to Recombinant Subunit Vaccines Delivered by Probiotic Bacteria-Derived Outer Membrane Vesicles. <i>PLoS ONE</i> , 2014, 9, e112802.	2.5	39
39	Binding and lubrication of biomimetic boundary lubricants on articular cartilage. <i>Journal of Orthopaedic Research</i> , 2017, 35, 548-557.	2.3	38
40	Poly(carbonate-ester)s of Dihydroxyacetone and Lactic Acid as Potential Biomaterials. <i>Biomacromolecules</i> , 2011, 12, 977-986.	5.4	37
41	Diblock Copolymers Based on Dihydroxyacetone and Ethylene Glycol: Synthesis, Characterization, and Nanoparticle Formulation. <i>Biomacromolecules</i> , 2006, 7, 3245-3251.	5.4	34
42	Boundary mode lubrication of articular cartilage with a biomimetic diblock copolymer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 12437-12441.	7.1	31
43	Poly(carbonate acetal)s from the Dimer Form of Dihydroxyacetone. <i>Macromolecules</i> , 2005, 38, 5532-5537.	4.8	30
44	Intracellularly biorecognizable derivatives of 5-fluorouracil. <i>Biochemical Pharmacology</i> , 1996, 52, 957-962.	4.4	29
45	Materials in Surgery: A Review of Biomaterials in Postsurgical Tissue Adhesion and Seroma Prevention. <i>Tissue Engineering - Part B: Reviews</i> , 2008, 14, 377-391.	4.8	27
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. <i>Vaccine</i> , 2017, 35, 5373-5380.	3.8	26
47	Protein release from dihydroxyacetone-based poly(carbonate ester) matrices. <i>Acta Biomaterialia</i> , 2013, 9, 8245-8253.	8.3	20
48	Enabling P-glycoprotein inhibition in multidrug resistant cancer through the reverse targeting of a quinidine-PEG conjugate. <i>Journal of Controlled Release</i> , 2020, 317, 291-299.	9.9	20
49	Tunable Lubricin-mimetics for Boundary Lubrication of Cartilage. <i>Biotribology</i> , 2017, 9, 18-23.	1.9	19
50	Biological Nanoparticles in Vaccine Development. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 867119.	4.1	19
51	Selective and Tunable Galectin Binding of Glycopolymers Synthesized by a Generalizable Conjugation Method. <i>Biomacromolecules</i> , 2019, 20, 3704-3712.	5.4	18
52	Kinetic and Efficacy Analysis of RNA Interference in Stably and Transiently Expressing Cell Lines. <i>Molecular Pharmaceutics</i> , 2006, 3, 601-613.	4.6	17
53	Effect of Lubricin Mimetics on the Inhibition of Osteoarthritis in a Rat Anterior Cruciate Ligament Transection Model. <i>American Journal of Sports Medicine</i> , 2020, 48, 624-634.	4.2	17
54	Induced fusion and aggregation of bacterial outer membrane vesicles: Experimental and theoretical analysis. <i>Journal of Colloid and Interface Science</i> , 2020, 578, 522-532.	9.4	16

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55	A rapidly resorbable hemostatic biomaterial based on dihydroxyacetone. <i>Journal of Biomedical Materials Research - Part A</i> , 2010, 93A, 776-782.	4.0	15
56	One-step synthesis, biodegradation and biocompatibility of polyesters based on the metabolic synthon, dihydroxyacetone. <i>Biomaterials</i> , 2016, 98, 41-52.	11.4	14
57	Synergistic Interactions of a Synthetic Lubricin-Mimetic with Fibronectin for Enhanced Wear Protection. <i>Frontiers in Bioengineering and Biotechnology</i> , 2017, 5, 36.	4.1	13
58	Polymers for siRNA Delivery: A Critical Assessment of Current Technology Prospects for Clinical Application. <i>ACS Biomaterials Science and Engineering</i> , 2016, 2, 1837-1850.	5.2	12
59	A mechanistic analysis of the quantitation of $\alpha$ -hydroxy ketones by the bicinchoninic acid assay. <i>Analytical Biochemistry</i> , 2012, 430, 116-122.	2.4	11
60	A Simple and Sensitive Method to Quantify Biodegradable Nanoparticle Biodistribution using Europium Chelates. <i>Scientific Reports</i> , 2015, 5, 13177.	3.3	9
61	Design and development of effective siRNA delivery vehicles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3903-3904.	7.1	8
62	Prolonged Release of Bioactive Model Proteins from Anionic Microgels Fabricated with a New Microemulsion Approach. <i>Pharmaceutical Research</i> , 2016, 33, 879-892.	3.5	8
63	Influence of Block Length on Articular Cartilage Lubrication with a Diblock Bottle-Brush Copolymer. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 330-337.	8.0	8
64	Poly(acrylic acid) Undergoes Partial Esterification During RAFT Synthesis in Methanol and Interchain Disulfide Bridging Upon NaOH Treatment. <i>Macromolecular Chemistry and Physics</i> , 2012, 213, 2536-2540.	2.2	7
65	Beneficial Effects of Exercise on Subendothelial Matrix Stiffness Are Short-Lived. <i>Journal of Biomechanical Engineering</i> , 2018, 140, .	1.3	7
66	A Combinatorial Library of Bi-functional Polymeric Vectors for siRNA Delivery In Vitro. <i>Pharmaceutical Research</i> , 2013, 30, 362-376.	3.5	6
67	Simple and Economical High-Throughput Equilibrium Dialysis System. <i>ACS Combinatorial Science</i> , 2009, 11, 202-205.	3.3	5
68	Synthesis and Characterization of Macromolecular Rhodamine Tethers and Their Interactions with P-Glycoprotein. <i>Bioconjugate Chemistry</i> , 2014, 25, 1462-1469.	3.6	5
69	Insight into the Unexpectedly Rapid Degradation of Dihydroxyacetone-Based Hydrogels. <i>Macromolecular Chemistry and Physics</i> , 2016, 217, 1917-1925.	2.2	5
70	Desensitizing mice to ovalbumin through subcutaneous microsphere immunotherapy (SMITH). <i>International Forum of Allergy and Rhinology</i> , 2011, 1, 390-395.	2.8	4
71	A lipid mixing assay to accurately quantify the fusion of outer membrane vesicles. <i>Methods</i> , 2020, 177, 74-79.	3.8	4
72	Design of imidazole-containing endosomolytic biopolymers for gene delivery. <i>Biotechnology and Bioengineering</i> , 2000, 67, 217.	3.3	4

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73	Poly-dihydroacetate: A novel biodegradable bioadhesive for use in reconstructive surgery. Journal of the American College of Surgeons, 2008, 207, S64.	0.5	1
74	Transient phase behavior of an elastomeric biomaterial applied to abdominal laparotomy closure. Acta Biomaterialia, 2017, 58, 413-420.	8.3	1
75	The stochastic effect of polydispersity on polymeric DNA delivery vectors. Journal of Applied Polymer Science, 2018, 135, 45965.	2.6	1
76	Altered Biodistribution and Tissue Retention of Nanoparticles Targeted with P-Glycoprotein Substrates. Regenerative Engineering and Translational Medicine, 2019, 5, 308-318.	2.9	1
77	LOW-DOSE RECOMBINANT VACCINE ANTIGEN DELIVERY BY ENGINEERED OUTER MEMBRANE VESICLES. Nano LIFE, 2013, 03, 1342002.	0.9	0
78	Controlled release of proteins with gel microparticles. , 2014, , .		0
79	Microparticle fabricated from a series of symmetrical lipids based on dihydroxyacetone form textured architectures. Journal of Controlled Release, 2021, 330, 1071-1079.	9.9	0
80	“My First Sixty Years in Science” Journal of Controlled Release, 2021, 329, 1231-1233.	9.9	0
81	Intra-Articular Administration of a Synthetic Lubricin in Canine Stifles. Veterinary and Comparative Orthopaedics and Traumatology, 2021, , .	0.5	0
82	An amphiphilic polymer for the synthesis of diverse polymer libraries exemplified using conjugates with lower critical solution temperatures that span water's liquid state. Journal of Polymer Science, 0, , .	3.8	0