

Pieter Cullis

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126
papers

24,460
citations

66
h-index

135
g-index

135
ext. papers

27,778
ext. citations

9
avg, IF

7.26
L-index

#	Paper	IF	Citations
126	Drug delivery systems: entering the mainstream. <i>Science</i> , 2004 , 303, 1818-22	33.3	3515
125	Liposomal drug delivery systems: from concept to clinical applications. <i>Advanced Drug Delivery Reviews</i> , 2013 , 65, 36-48	18.5	2898
124	Production of large unilamellar vesicles by a rapid extrusion procedure: characterization of size distribution, trapped volume and ability to maintain a membrane potential. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1985 , 812, 55-65	3.8	1644
123	Lipid polymorphism and the functional roles of lipids in biological membranes. <i>BBA - Biomembranes</i> , 1979 , 559, 399-420		1501
122	Vesicles of variable sizes produced by a rapid extrusion procedure. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1986 , 858, 161-8	3.8	1395
121	Rational design of cationic lipids for siRNA delivery. <i>Nature Biotechnology</i> , 2010 , 28, 172-6	44.5	1059
120	Maximizing the potency of siRNA lipid nanoparticles for hepatic gene silencing in vivo. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 8529-33	16.4	570
119	On the mechanism whereby cationic lipids promote intracellular delivery of polynucleic acids. <i>Gene Therapy</i> , 2001 , 8, 1188-96	4	402
118	The polymorphic phase behaviour of phosphatidylethanolamines of natural and synthetic origin. A 31P NMR study. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1978 , 513, 31-42	3.8	366
117	The Onpattro story and the clinical translation of nanomedicines containing nucleic acid-based drugs. <i>Nature Nanotechnology</i> , 2019 , 14, 1084-1087	28.7	339
116	Lipid Nanoparticle Systems for Enabling Gene Therapies. <i>Molecular Therapy</i> , 2017 , 25, 1467-1475	11.7	332
115	Microfluidic Synthesis of Highly Potent Limit-size Lipid Nanoparticles for In Vivo Delivery of siRNA. <i>Molecular Therapy - Nucleic Acids</i> , 2012 , 1, e37	10.7	313
114	Association of blood proteins with large unilamellar liposomes in vivo. Relation to circulation lifetimes. <i>Journal of Biological Chemistry</i> , 1992 , 267, 18759-65	5.4	307
113	Interactions of liposomes and lipid-based carrier systems with blood proteins: Relation to clearance behaviour in vivo. <i>Advanced Drug Delivery Reviews</i> , 1998 , 32, 3-17	18.5	299
112	Uptake of adriamycin into large unilamellar vesicles in response to a pH gradient. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1986 , 857, 123-6	3.8	285
111	Lipid polymorphism and the roles of lipids in membranes. <i>Chemistry and Physics of Lipids</i> , 1986 , 40, 127-44	3.7	281
110	Effects of fusogenic agent on membrane structure of erythrocyte ghosts and the mechanism of membrane fusion. <i>Nature</i> , 1978 , 271, 672-4	50.4	278

109	Efficient encapsulation of antisense oligonucleotides in lipid vesicles using ionizable aminolipids: formation of novel small multilamellar vesicle structures. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2001 , 1510, 152-66	3.8	270
108	X-ray diffraction study of the polymorphic behavior of N-methylated dioleoylphosphatidylethanolamine. <i>Biochemistry</i> , 1988 , 27, 2853-66	3.2	265
107	Stabilized plasmid-lipid particles: construction and characterization. <i>Gene Therapy</i> , 1999 , 6, 271-81	4	249
106	Influence of vesicle size, lipid composition, and drug-to-lipid ratio on the biological activity of liposomal doxorubicin in mice. <i>Cancer Research</i> , 1989 , 49, 5922-30	10.1	246
105	The role of surface charge in the activation of the classical and alternative pathways of complement by liposomes. <i>Journal of Immunology</i> , 1991 , 146, 4234-41	5.3	243
104	Lipid polymorphism: the molecular basis of nonbilayer phases. <i>Annual Review of Biophysics and Biophysical Chemistry</i> , 1985 , 14, 211-38		242
103	Biodegradable lipids enabling rapidly eliminated lipid nanoparticles for systemic delivery of RNAi therapeutics. <i>Molecular Therapy</i> , 2013 , 21, 1570-8	11.7	234
102	Developments in liposomal drug delivery systems. <i>Expert Opinion on Biological Therapy</i> , 2001 , 1, 923-47	5.4	225
101	The accumulation of drugs within large unilamellar vesicles exhibiting a proton gradient: a survey. <i>Chemistry and Physics of Lipids</i> , 1990 , 53, 37-46	3.7	211
100	Roles of lipid polymorphism in intracellular delivery. <i>Advanced Drug Delivery Reviews</i> , 2001 , 47, 139-48	18.5	201
99	Influence of cholesterol on the association of plasma proteins with liposomes. <i>Biochemistry</i> , 1996 , 35, 2521-5	3.2	199
98	Smoothed orientational order profile of lipid bilayers by 2H-nuclear magnetic resonance. <i>Biophysical Journal</i> , 1989 , 56, 1037-41	2.9	199
97	Lipid Nanoparticles Enabling Gene Therapies: From Concepts to Clinical Utility. <i>Nucleic Acid Therapeutics</i> , 2018 , 28, 146-157	4.8	195
96	Characterization of liposomal systems containing doxorubicin entrapped in response to pH gradients. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1990 , 1025, 143-51	3.8	193
95	Bottom-up design and synthesis of limit size lipid nanoparticle systems with aqueous and triglyceride cores using millisecond microfluidic mixing. <i>Langmuir</i> , 2012 , 28, 3633-40	4	189
94	Poly(ethylene glycol)-lipid conjugates regulate the calcium-induced fusion of liposomes composed of phosphatidylethanolamine and phosphatidylserine. <i>Biochemistry</i> , 1996 , 35, 2618-24	3.2	177
93	Spontaneous entrapment of polynucleotides upon electrostatic interaction with ethanol-destabilized cationic liposomes. <i>Biophysical Journal</i> , 2001 , 80, 2310-26	2.9	172
92	³¹ P NMR studies of unsonicated aqueous dispersions of neutral and acidic phospholipids. Effects of phase transitions, p2H and divalent cations on the motion in the phosphate region of the polar headgroup. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1976 , 436, 523-40	3.8	163

91	On the Formation and Morphology of Lipid Nanoparticles Containing Ionizable Cationic Lipids and siRNA. <i>ACS Nano</i> , 2018 , 12, 4787-4795	16.7	156
90	Lipid Nanoparticles Containing siRNA Synthesized by Microfluidic Mixing Exhibit an Electron-Dense Nanostructured Core. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 18440-18450	3.8	151
89	Influence of Polyethylene Glycol Lipid Desorption Rates on Pharmacokinetics and Pharmacodynamics of siRNA Lipid Nanoparticles. <i>Molecular Therapy - Nucleic Acids</i> , 2013 , 2, e139	10.7	146
88	Structural and fusogenic properties of cationic liposomes in the presence of plasmid DNA. <i>Biophysical Journal</i> , 1997 , 73, 2534-45	2.9	134
87	Stabilized plasmid-lipid particles for systemic gene therapy. <i>Gene Therapy</i> , 2000 , 7, 1867-74	4	133
86	Advances in Lipid Nanoparticles for siRNA Delivery. <i>Pharmaceutics</i> , 2013 , 5, 498-507	6.4	129
85	Lipid Nanoparticle Technology for Clinical Translation of siRNA Therapeutics. <i>Accounts of Chemical Research</i> , 2019 , 52, 2435-2444	24.3	125
84	The cellular mechanisms of neuronal swelling underlying cytotoxic edema. <i>Cell</i> , 2015 , 161, 610-621	56.2	124
83	Lipid-Based DNA Therapeutics: Hallmarks of Non-Viral Gene Delivery. <i>ACS Nano</i> , 2019 , 13, 3754-3782	16.7	122
82	Influence of particle size on the in vivo potency of lipid nanoparticle formulations of siRNA. <i>Journal of Controlled Release</i> , 2016 , 235, 236-244	11.7	121
81	Influence of cationic lipid composition on gene silencing properties of lipid nanoparticle formulations of siRNA in antigen-presenting cells. <i>Molecular Therapy</i> , 2011 , 19, 2186-200	11.7	120
80	Microfluidic Mixing: A General Method for Encapsulating Macromolecules in Lipid Nanoparticle Systems. <i>Journal of Physical Chemistry B</i> , 2015 , 119, 8698-706	3.4	114
79	Lateral diffusion rates of phosphatidylcholine in vesicle membranes: effects of cholesterol and hydrocarbon phase transitions. <i>FEBS Letters</i> , 1976 , 70, 223-8	3.8	112
78	Separation of large unilamellar liposomes from blood components by a spin column procedure: towards identifying plasma proteins which mediate liposome clearance in vivo. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1991 , 1070, 215-22	3.8	110
77	Systemic Gene Silencing in Primary T Lymphocytes Using Targeted Lipid Nanoparticles. <i>ACS Nano</i> , 2015 , 9, 6706-16	16.7	106
76	The current landscape of nucleic acid therapeutics. <i>Nature Nanotechnology</i> , 2021 , 16, 630-643	28.7	104
75	Lipid nanoparticle delivery systems for siRNA-based therapeutics. <i>Drug Delivery and Translational Research</i> , 2014 , 4, 74-83	6.2	103
74	Therapeutically optimized rates of drug release can be achieved by varying the drug-to-lipid ratio in liposomal vincristine formulations. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2006 , 1758, 55-64	3.8	103

73	Systemic RNAi-mediated Gene Silencing in Nonhuman Primate and Rodent Myeloid Cells. <i>Molecular Therapy - Nucleic Acids</i> , 2012 , 1, e4	10.7	100
72	Liposomal vincristine which exhibits increased drug retention and increased circulation longevity cures mice bearing P388 tumors. <i>Cancer Research</i> , 1994 , 54, 2830-3	10.1	99
71	Encapsulation in liposomal nanoparticles enhances the immunostimulatory, adjuvant and anti-tumor activity of subcutaneously administered CpG ODN. <i>Cancer Immunology, Immunotherapy</i> , 2007 , 56, 1251-64	7.4	93
70	Anomalous solubility behavior of the antibiotic ciprofloxacin encapsulated in liposomes: a 1H-NMR study. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1998 , 1374, 9-20	3.8	91
69	Modulation of membrane fusion by asymmetric transbilayer distributions of amino lipids. <i>Biochemistry</i> , 1994 , 33, 12573-80	3.2	90
68	Lipid Nanoparticle Delivery of siRNA to Silence Neuronal Gene Expression in the Brain. <i>Molecular Therapy - Nucleic Acids</i> , 2013 , 2, e136	10.7	87
67	The bilayer stabilizing role of sphingomyelin in the presence of cholesterol: a 31P NMR study. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1980 , 597, 533-42	3.8	84
66	Lipid-based systems for the intracellular delivery of genetic drugs. <i>Molecular Membrane Biology</i> , 1999 , 16, 129-40	3.4	76
65	State-of-the-Art Design and Rapid-Mixing Production Techniques of Lipid Nanoparticles for Nucleic Acid Delivery. <i>Small Methods</i> , 2018 , 2, 1700375	12.8	74
64	Development of lipid nanoparticle formulations of siRNA for hepatocyte gene silencing following subcutaneous administration. <i>Journal of Controlled Release</i> , 2014 , 196, 106-12	11.7	74
63	Lipid nanoparticles for short interfering RNA delivery. <i>Advances in Genetics</i> , 2014 , 88, 71-110	3.3	72
62	On the role of helper lipids in lipid nanoparticle formulations of siRNA. <i>Nanoscale</i> , 2019 , 11, 21733-21739	7.7	69
61	Development of a weak-base docetaxel derivative that can be loaded into lipid nanoparticles. <i>Journal of Controlled Release</i> , 2010 , 144, 332-40	11.7	67
60	Acyl chain orientational order in the hexagonal HII phase of phospholipid-water dispersions. <i>Biophysical Journal</i> , 1988 , 54, 689-94	2.9	65
59	Optimization of the retention properties of vincristine in liposomal systems. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1993 , 1152, 253-8	3.8	64
58	Lipid nanoparticle technology for therapeutic gene regulation in the liver. <i>Advanced Drug Delivery Reviews</i> , 2020 , 159, 344-363	18.5	63
57	Influence of drug-to-lipid ratio on drug release properties and liposome integrity in liposomal doxorubicin formulations. <i>Journal of Liposome Research</i> , 2008 , 18, 145-57	6.1	58
56	Design of lipid nanoparticles for in vitro and in vivo delivery of plasmid DNA. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2017 , 13, 1377-1387	6	56

55	Effects of intravenous and subcutaneous administration on the pharmacokinetics, biodistribution, cellular uptake and immunostimulatory activity of CpG ODN encapsulated in liposomal nanoparticles. <i>International Immunopharmacology</i> , 2007 , 7, 1064-75	5.8	56
54	Stabilized plasmid-lipid particles: a systemic gene therapy vector. <i>Methods in Enzymology</i> , 2002 , 346, 36-71	1.7	56
53	Comparison of the orientational order of lipid chains in the L alpha and HII phases. <i>Biochemistry</i> , 1990 , 29, 8325-33	3.2	55
52	Formation of drug-arylsulfonate complexes inside liposomes: a novel approach to improve drug retention. <i>Journal of Controlled Release</i> , 2006 , 110, 378-386	11.7	54
51	Lipid nanoparticle siRNA systems for silencing the androgen receptor in human prostate cancer in vivo. <i>International Journal of Cancer</i> , 2012 , 131, E781-90	7.5	53
50	Correlation between lipid plane curvature and lipid chain order. <i>Biophysical Journal</i> , 1996 , 70, 2747-57	2.9	50
49	Influence of cationic lipid composition on uptake and intracellular processing of lipid nanoparticle formulations of siRNA. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2013 , 9, 233-46	6	48
48	siRNA Lipid Nanoparticle Potently Silences Clusterin and Delays Progression When Combined with Androgen Receptor Cotargeting in Enzalutamide-Resistant Prostate Cancer. <i>Clinical Cancer Research</i> , 2015 , 21, 4845-55	12.9	46
47	Fusion-dependent formation of lipid nanoparticles containing macromolecular payloads. <i>Nanoscale</i> , 2019 , 11, 9023-9031	7.7	43
46	pH-induced destabilization of lipid bilayers by a lipopeptide derived from influenza hemagglutinin. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1997 , 1324, 232-44	3.8	42
45	Maximizing the Potency of siRNA Lipid Nanoparticles for Hepatic Gene Silencing In Vivo**. <i>Angewandte Chemie</i> , 2012 , 124, 8657-8661	3.6	37
44	Systemic study of solvent-assisted active loading of gambogic acid into liposomes and its formulation optimization for improved delivery. <i>Biomaterials</i> , 2018 , 166, 13-26	15.6	32
43	Vincristine-induced dermal toxicity is significantly reduced when the drug is given in liposomes. <i>Cancer Chemotherapy and Pharmacology</i> , 1996 , 37, 351-5	3.5	32
42	Lipid nanoparticle-mediated siRNA delivery for safe targeting of human CML in vivo. <i>Annals of Hematology</i> , 2019 , 98, 1905-1918	3	31
41	Rapid synthesis of lipid nanoparticles containing hydrophobic inorganic nanoparticles. <i>Nanoscale</i> , 2017 , 9, 13600-13609	7.7	30
40	The Biomolecular Corona of Lipid Nanoparticles for Gene Therapy. <i>Bioconjugate Chemistry</i> , 2020 , 31, 2046-2059	6.3	30
39	Lipid Nanoparticle Delivery of siRNA to Osteocytes Leads to Effective Silencing of SOST and Inhibition of Sclerostin In Vivo. <i>Molecular Therapy - Nucleic Acids</i> , 2016 , 5, e363	10.7	29
38	Dexamethasone prodrugs as potent suppressors of the immunostimulatory effects of lipid nanoparticle formulations of nucleic acids. <i>Journal of Controlled Release</i> , 2018 , 286, 46-54	11.7	29

37	Robust Microfluidic Technology and New Lipid Composition for Fabrication of Curcumin-Loaded Liposomes: Effect on the Anticancer Activity and Safety of Cisplatin. <i>Molecular Pharmaceutics</i> , 2019 , 16, 3957-3967	5.6	28
36	Small molecule ligands for enhanced intracellular delivery of lipid nanoparticle formulations of siRNA. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2013 , 9, 665-74	6	28
35	The Niemann-Pick C1 Inhibitor NP3.47 Enhances Gene Silencing Potency of Lipid Nanoparticles Containing siRNA. <i>Molecular Therapy</i> , 2016 , 24, 2100-2108	11.7	27
34	Production of limit size nanoliposomal systems with potential utility as ultra-small drug delivery agents. <i>Journal of Liposome Research</i> , 2016 , 26, 96-102	6.1	25
33	Ionizable amino lipid interactions with POPC: implications for lipid nanoparticle function. <i>Nanoscale</i> , 2019 , 11, 14141-14146	7.7	23
32	A two-step targeting approach for delivery of doxorubicin-loaded liposomes to tumour cells in vivo. <i>Cancer Chemotherapy and Pharmacology</i> , 1995 , 36, 91-101	3.5	23
31	A Glu-urea-Lys Ligand-conjugated Lipid Nanoparticle/siRNA System Inhibits Androgen Receptor Expression In Vivo. <i>Molecular Therapy - Nucleic Acids</i> , 2016 , 5, e348	10.7	22
30	Ca ^{3.2} drives sustained burst-firing, which is critical for absence seizure propagation in reticular thalamic neurons. <i>Epilepsia</i> , 2018 , 59, 778-791	6.4	21
29	"Diffusible-PEG-Lipid Stabilized Plasmid Lipid Particles". <i>Advances in Genetics</i> , 2005 , 53PA, 157-188	3.3	21
28	Coating of PLA-nanoparticles with cyclic, arginine-rich cell penetrating peptides enables oral delivery of liraglutide. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2020 , 24, 102132	6	20
27	Spontaneous, solvent-free entrapment of siRNA within lipid nanoparticles. <i>Nanoscale</i> , 2020 , 12, 23959-23966	7.966	18
26	Stabilization and Regulated Fusion of Liposomes Containing a Cationic Lipid Using Amphipathic Polyethyleneglycol Derivatives. <i>Journal of Liposome Research</i> , 1998 , 8, 195-211	6.1	16
25	Ionophore-mediated loading of Ca ²⁺ into large unilamellar vesicles in response to transmembrane pH gradients. <i>Molecular Membrane Biology</i> , 1994 , 11, 151-7	3.4	16
24	Introducing pharmacogenetic testing with clinical decision support into primary care: a feasibility study. <i>CMAJ Open</i> , 2016 , 4, E528-E534	2.5	16
23	Characterization of Lipid Nanoparticles Containing Ionizable Cationic Lipids Using Design-of-Experiments Approach. <i>Langmuir</i> , 2021 , 37, 1120-1128	4	15
22	Lipid nanoparticle delivery of glucagon receptor siRNA improves glucose homeostasis in mouse models of diabetes. <i>Molecular Metabolism</i> , 2017 , 6, 1161-1172	8.8	12
21	Deep Phenotyping by Mass Cytometry and Single-Cell RNA-Sequencing Reveals LYN-Regulated Signaling Profiles Underlying Monocyte Subset Heterogeneity and Lifespan. <i>Circulation Research</i> , 2020 , 126, e61-e79	15.7	12
20	Use of a lipid nanoparticle system as a Trojan horse in delivery of gold nanoparticles to human breast cancer cells for improved outcomes in radiation therapy. <i>Cancer Nanotechnology</i> , 2019 , 10,	7.9	11

19	Characterization of a liposomal copper(II)-quercetin formulation suitable for parenteral use. <i>Drug Delivery and Translational Research</i> , 2020 , 10, 202-215	6.2	10
18	Development of high-concentration lipoplexes for in vivo gene function studies in vertebrate embryos. <i>Developmental Dynamics</i> , 2011 , 240, 2108-19	2.9	9
17	Optimized Photoactivatable Lipid Nanoparticles Enable Red Light Triggered Drug Release. <i>Small</i> , 2021 , 17, e2008198	11	9
16	Commentary: Liposomes by Accident. <i>Journal of Liposome Research</i> , 2000 , 10, ix-xxiv	6.1	7
15	Phospholipid-Free Small Unilamellar Vesicles for Drug Targeting to Cells in the Liver. <i>Small</i> , 2019 , 15, e1901782	11	6
14	Designing therapeutically optimized liposomal anticancer delivery systems: Lessons from conventional liposomes 1998 , 231-257		6
13	A model approach for assessing liposome targeting in vivo. <i>Drug Delivery</i> , 1995 , 2, 156-165	7	6
12	Sustained depletion of FXIII-A by inducing acquired FXIII-B deficiency. <i>Blood</i> , 2020 , 136, 2946-2954	2.2	5
11	Modular Lipid Nanoparticle Platform Technology for siRNA and Lipophilic Prodrug Delivery. <i>Small</i> , 2021 , 17, e2103025	11	5
10	PIAS1 modulates striatal transcription, DNA damage repair, and SUMOylation with relevance to Huntington's disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	4
9	Protective Effect of Edaravone against Cationic Lipid-Mediated Oxidative Stress and Apoptosis. <i>Biological and Pharmaceutical Bulletin</i> , 2021 , 44, 144-149	2.3	3
8	Density Matching Multi-wavelength Analytical Ultracentrifugation to Measure Drug Loading of Lipid Nanoparticle Formulations. <i>ACS Nano</i> , 2021 , 15, 5068-5076	16.7	3
7	Anionic Lipid Nanoparticles Preferentially Deliver mRNA to the Hepatic Reticuloendothelial System.. <i>Advanced Materials</i> , 2022 , e2201095	24	3
6	Structural Properties of Inverted Hexagonal Phase: A Hybrid Computational and Experimental Approach. <i>Langmuir</i> , 2020 , 36, 6668-6680	4	2
5	Modular lipid nanoparticle platform technology for siRNA and lipophilic prodrug delivery		2
4	Altering the intra-liver distribution of phospholipid-free small unilamellar vesicles using temperature-dependent size-tunability. <i>Journal of Controlled Release</i> , 2021 , 333, 151-161	11.7	1
3	Liposomes, dimitri papahadjopoulos, and us. <i>Journal of Liposome Research</i> , 1995 , 5, 829-836	6.1	0
2	FAM13A as potential therapeutic target in modulating TGF- β -induced airway tissue remodeling in COPD. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2021 , 321, L377-L391	5.8	0

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