

Robert C Macdonald

List of Publications by Year in descending order

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64
papers

5,024
citations

87723

38
h-index

110170

64
g-index

65
all docs

65
docs citations

65
times ranked

4099
citing authors

#	ARTICLE	IF	CITATIONS
1	Small-volume extrusion apparatus for preparation of large, unilamellar vesicles. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1991, 1061, 297-303.	1.4	1,362
2	Acoustically active liposomes for drug encapsulation and ultrasound-triggered release. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2004, 1665, 134-141.	1.4	225
3	Phospholipid exchange between bilayer membrane vesicles. <i>Biochemistry</i> , 1976, 15, 321-327.	1.2	180
4	Factors Governing the Assembly of Cationic Phospholipid-DNA Complexes. <i>Biophysical Journal</i> , 2000, 78, 1620-1633.	0.2	176
5	A simple procedure for the determination of the trapped volume of liposomes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1982, 691, 332-340.	1.4	174
6	An intracellular lamellar-nonlamellar phase transition rationalizes the superior performance of some cationic lipid transfection agents. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 14373-14378.	3.3	149
7	Physical and Biological Properties of Cationic Triesters of Phosphatidylcholine. <i>Biophysical Journal</i> , 1999, 77, 2612-2629.	0.2	131
8	Lipid Bilayer Vesicle Fusion: Intermediates Captured by High-Speed Microfluorescence Spectroscopy. <i>Biophysical Journal</i> , 2003, 85, 1585-1599.	0.2	121
9	Nitric Oxide-Loaded Echogenic Liposomes for Nitric Oxide Delivery and Inhibition of Intimal Hyperplasia. <i>Journal of the American College of Cardiology</i> , 2009, 54, 652-659.	1.2	108
10	Cubic Phases in Phosphatidylcholine-Cholesterol Mixtures: Cholesterol as Membrane "Fusogen". <i>Biophysical Journal</i> , 2006, 91, 2508-2516.	0.2	107
11	DNA Release from Lipoplexes by Anionic Lipids: Correlation with Lipid Mesomorphism, Interfacial Curvature, and Membrane Fusion. <i>Biophysical Journal</i> , 2004, 87, 1054-1064.	0.2	89
12	Hydrophobic Moiety of Cationic Lipids Strongly Modulates Their Transfection Activity. <i>Molecular Pharmaceutics</i> , 2009, 6, 951-958.	2.3	85
13	Improving ultrasound reflectivity and stability of echogenic liposomal dispersions for use as targeted ultrasound contrast agents. <i>Journal of Pharmaceutical Sciences</i> , 2001, 90, 1917-1926.	1.6	82
14	Physical correlates of the ultrasonic reflectivity of lipid dispersions suitable as diagnostic contrast agents. <i>Ultrasound in Medicine and Biology</i> , 2002, 28, 339-348.	0.7	82
15	O-ethylphosphatidylcholine: A metabolizable cationic phospholipid which is a serum-compatible DNA transfection agent. <i>Journal of Pharmaceutical Sciences</i> , 1999, 88, 896-904.	1.6	79
16	Destruction Thresholds of Echogenic Liposomes with Clinical Diagnostic Ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2007, 33, 797-809.	0.7	75
17	Diquaternary Ammonium Compounds as Transfection Agents. <i>Bioconjugate Chemistry</i> , 2001, 12, 258-263.	1.8	68
18	Lipid Phase Control of DNA Delivery. <i>Bioconjugate Chemistry</i> , 2005, 16, 1335-1339.	1.8	68

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19	A Method to Co-Encapsulate Gas and Drugs in Liposomes for Ultrasound-Controlled Drug Delivery. <i>Ultrasound in Medicine and Biology</i> , 2008, 34, 1272-1280.	0.7	66
20	Improving ultrasound reflectivity and stability of echogenic liposomal dispersions for use as targeted ultrasound contrast agents. <i>Journal of Pharmaceutical Sciences</i> , 2001, 90, 1917-1926.	1.6	65
21	Fibrin targeting of tissue plasminogen activator-loaded echogenic liposomes. <i>Journal of Drug Targeting</i> , 2007, 15, 109-114.	2.1	63
22	Lipoplex formulation of superior efficacy exhibits high surface activity and fusogenicity, and readily releases DNA. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 375-386.	1.4	59
23	Thermodynamics of Cationic Lipid-DNA Complex Formation as Studied by Isothermal Titration Calorimetry. <i>Biophysical Journal</i> , 2002, 83, 556-565.	0.2	58
24	Electrostatic Control of Phospholipid Polymorphism. <i>Biophysical Journal</i> , 2000, 79, 3193-3200.	0.2	56
25	O-Alkyl dioleoylphosphatidylcholinium Compounds: The Effect of Varying Alkyl Chain Length on Their Physical Properties and in Vitro DNA Transfection Activity. <i>Bioconjugate Chemistry</i> , 2000, 11, 306-313.	1.8	54
26	Echogenic Liposome Compositions for Increased Retention of Ultrasound Reflectivity at Physiologic Temperature. <i>Journal of Pharmaceutical Sciences</i> , 2008, 97, 2242-2249.	1.6	54
27	Characterization of a fluorescence assay to monitor changes in the aqueous volume of lipid vesicles. <i>Analytical Biochemistry</i> , 1983, 134, 26-33.	1.1	52
28	High Temperature Stabilization of DNA in Complexes with Cationic Lipids. <i>Biophysical Journal</i> , 2002, 82, 264-273.	0.2	52
29	Transfection Activity of Binary Mixtures of Cationic O-Substituted Phosphatidylcholine Derivatives: The Hydrophobic Core Strongly Modulates Physical Properties and DNA Delivery Efficacy. <i>Biophysical Journal</i> , 2006, 91, 3692-3706.	0.2	52
30	Modulation of a membrane lipid lamellar to nonlamellar phase transition by cationic lipids: A measure for transfection efficiency. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2008, 1778, 2405-2412.	1.4	51
31	In vitro characterization of liposomes and Optison® by acoustic scattering at 3.5 MHz. <i>Ultrasound in Medicine and Biology</i> , 2004, 30, 181-190.	0.7	50
32	Mixtures of Cationic Lipid O-Ethylphosphatidylcholine with Membrane Lipids and DNA: Phase Diagrams. <i>Biophysical Journal</i> , 2003, 85, 2449-2465.	0.2	49
33	Lipoplex Thermodynamics: Determination of DNA-Cationic Lipid Interaction Energies. <i>Biophysical Journal</i> , 2003, 85, 3969-3978.	0.2	49
34	Fragmentation into small vesicles of dioleoylphosphatidylcholine bilayers during freezing and thawing. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1994, 1191, 362-370.	1.4	48
35	Effects of Microtubule-Depolymerizing Agents on the Transfection of Cultured Vascular Smooth Muscle Cells: Enhanced Expression with Free Drug and Especially with Drug-Gene Lipoplexes. <i>Molecular Therapy</i> , 2004, 9, 729-737.	3.7	46
36	Encapsulation of NF- κ B decoy oligonucleotides within echogenic liposomes and ultrasound-triggered release. <i>Journal of Controlled Release</i> , 2010, 141, 193-198.	4.8	45

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37	A Microplate Fluorimetric Assay for Transfection of the β -Galactosidase Reporter Gene. <i>Analytical Biochemistry</i> , 1998, 257, 234-237.	1.1	40
38	Development of Echogenic, Plasmid-Incorporated, Tissue-Targeted Cationic Liposomes that Can Be Used for Directed Gene Delivery. <i>Investigative Radiology</i> , 2000, 35, 732-738.	3.5	39
39	Cationic O-ethylphosphatidylcholines and their lipoplexes: phase behavior aspects, structural organization and morphology. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2003, 1613, 39-48.	1.4	37
40	Columnar DNA Superlattices in Lamellar o-Ethylphosphatidylcholine Lipoplexes: Mechanism of the Gel-Liquid Crystalline Lipid Phase Transition. <i>Nano Letters</i> , 2004, 4, 1475-1479.	4.5	36
41	Lipid transfer between cationic vesicles and lipid-DNA lipoplexes: Effect of serum. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2005, 1714, 63-70.	1.4	35
42	Natural lipid extracts and biomembrane-mimicking lipid compositions are disposed to form nonlamellar phases, and they release DNA from lipoplexes most efficiently. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 2373-2382.	1.4	35
43	Lipid mixing during freeze-thawing of liposomal membranes as monitored by fluorescence energy transfer. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1983, 735, 243-251.	1.4	34
44	Experimental method to correct fluorescence intensities for the inner filter effect. <i>Analyst, The</i> , 1993, 118, 913.	1.7	34
45	Cholesterol stabilizes hemifused phospholipid bilayer vesicles. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2001, 1511, 264-270.	1.4	33
46	Delivery of membrane-impermeant fluorescent probes into living neural cell populations by lipotransfer. <i>Neuroscience Letters</i> , 1996, 207, 17-20.	1.0	32
47	Relationship between Turbidity of Lipid Vesicle Suspensions and Particle Size. <i>Analytical Biochemistry</i> , 2001, 291, 158-162.	1.1	32
48	Novel Echogenic Drug-Immunoliposomes for Drug Delivery. <i>Investigative Radiology</i> , 2004, 39, 104-110.	3.5	30
49	Single Lipoplex Study of Cationic Lipoid-DNA, Self-Assembled Complexes. <i>Molecular Pharmaceutics</i> , 2007, 4, 962-974.	2.3	30
50	Cationic Phospholipids Forming Cubic Phases: Lipoplex Structure and Transfection Efficiency. <i>Molecular Pharmaceutics</i> , 2008, 5, 739-744.	2.3	30
51	Liposomes as ultrasound imaging contrast agents and as ultrasound-sensitive drug delivery agents. <i>Cellular and Molecular Biology Letters</i> , 2002, 7, 233-5.	2.7	29
52	Synergy in Lipofection by Cationic Lipid Mixtures: Superior Activity at the Gel-Liquid Crystalline Phase Transition. <i>Journal of Physical Chemistry B</i> , 2007, 111, 7786-7795.	1.2	25
53	Analysis of the structure and composition of individual lipoplex particles by flow fluorometry. <i>Analytical Biochemistry</i> , 2005, 341, 230-240.	1.1	21
54	Novel Polyamine-Dialkyl Phosphate Conjugates for Gene Carriers. Facile Synthetic Route via an Unprecedented Dialkyl Phosphate. <i>Bioconjugate Chemistry</i> , 2004, 15, 824-830.	1.8	20

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55	Surface Properties of Dioleoyl-sn-glycerol-3-ethylphosphocholine, a Cationic Phosphatidylcholine Transfection Agent, Alone and in Combination with Lipids or DNA. <i>Langmuir</i> , 2006, 22, 2770-2779.	1.6	20
56	Synthesis, Acoustic Stability, and Pharmacologic Activities of Papaverine-Loaded Echogenic Liposomes for Ultrasound Controlled Drug Delivery. <i>Journal of Liposome Research</i> , 2008, 18, 263-277.	1.5	20
57	Fluorescence studies of spectrin and its subunits. <i>Cytoskeleton</i> , 1994, 29, 72-81.	4.4	16
58	Nonlamellar Phases in Cationic Phospholipids, Relevance to Drug and Gene Delivery. <i>ACS Biomaterials Science and Engineering</i> , 2015, 1, 130-138.	2.6	16
59	Effects on Interactions of Oppositely Charged Phospholipid Vesicles of Covalent Attachment of Polyethylene Glycol Oligomers to Their Surfaces: Adhesion, Hemifusion, Full Fusion and "Endocytosis". <i>Journal of Membrane Biology</i> , 2008, 221, 97-106.	1.0	15
60	Synergistic Effect between Components of Mixtures of Cationic Amphipaths in Transfection of Primary Endothelial Cells. <i>Molecular Pharmaceutics</i> , 2007, 4, 615-623.	2.3	12
61	Novel fluorescent cationic phospholipid, O-4-naphthylimido-1-butyl-DOPC, exhibits unusual foam morphology, forms hexagonal and cubic phases in mixtures, and transfects DNA. <i>Chemistry and Physics of Lipids</i> , 2004, 129, 183-194.	1.5	10
62	Mechanisms of Membrane Fusion in Acidic Lipid-Cation Systems. , 1988, , 101-112.		8
63	Cationic phospholiposomes: efficient delivery vehicles of anticancer derivatives of ATP to multiple myeloma cells. <i>Journal of Liposome Research</i> , 2011, 21, 306-314.	1.5	2
64	A nonleak trough for monolayers at the air/water interface. <i>Review of Scientific Instruments</i> , 1994, 65, 500-502.	0.6	1