Pieter Cullis

List of Publications by Year
in descending order

132 papers	31,790 citations	10986 71 h-index	12272 133 g-index
135 all docs	135 docs citations	135 times ranked	25228 citing authors

#	Article	IF	Citations
1	Improved Liver Delivery of Primaquine by Phospholipid-Free Small Unilamellar Vesicles with Reduced Hemolytic Toxicity. Molecular Pharmaceutics, 2022, 19, 1778-1785.	4.6	3
2	Suppression of fibrin(ogen)-driven pathologies in diseaseÂmodels through controlled knockdown byÂlipidÂnanoparticle delivery of siRNA. Blood, 2022, 139, 1302-1311.	1.4	9
3	Role of drug delivery technologies in the success of COVID-19 vaccines: a perspective. Drug Delivery and Translational Research, 2022, 12, 2581-2588.	5.8	17
4	Anionic Lipid Nanoparticles Preferentially Deliver mRNA to the Hepatic Reticuloendothelial System. Advanced Materials, 2022, 34, e2201095.	21.0	66
5	Exciting Times for Lipid Nanoparticles: How Canadian Discoveries Are Enabling Gene Therapies. Molecular Pharmaceutics, 2022, 19, 1663-1668.	4.6	11
6	Synthesis and Characterization of Hybrid Lipid Nanoparticles Containing Gold Nanoparticles and a Weak Base Drug. Langmuir, 2022, 38, 7858-7866.	3.5	3
7	Lipid nanoparticle-mediated silencing of osteogenic suppressor GNAS leads to osteogenic differentiation of mesenchymal stem cells inÂvivo. Molecular Therapy, 2022, 30, 3034-3051.	8.2	10
8	Lipid nanoparticles to silence androgen receptor variants for prostate cancer therapy. Journal of Controlled Release, 2022, 349, 174-183.	9.9	10
9	PIAS1 modulates striatal transcription, DNA damage repair, and SUMOylation with relevance to Huntingtonâ€™s disease. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	28
10	Protective Effect of Edaravone against Cationic Lipid-Mediated Oxidative Stress and Apoptosis. Biological and Pharmaceutical Bulletin, 2021, 44, 144-149.	1.4	14
11	Density Matching Multi-wavelength Analytical Ultracentrifugation to Measure Drug Loading of Lipid Nanoparticle Formulations. ACS Nano, 2021, 15, 5068-5076.	14.6	21
12	Optimized Photoactivatable Lipid Nanoparticles Enable Red Light Triggered Drug Release. Small, 2021, 17, e2008198.	10.0	36
13	The current landscape of nucleic acid therapeutics. Nature Nanotechnology, 2021, 16, 630-643.	31.5	578
14	Altering the intra-liver distribution of phospholipid-free small unilamellar vesicles using temperature-dependent size-tunability. Journal of Controlled Release, 2021, 333, 151-161.	9.9	8
15	Modular Lipid Nanoparticle Platform Technology for siRNA and Lipophilic Prodrug Delivery. Small, 2021, 17, e2103025.	10.0	29
16	FAM13A as potential therapeutic target in modulating TGF-Î²-induced airway tissue remodeling in COPD. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2021, 321, L377-L391.	2.9	7
17	Characterization of Lipid Nanoparticles Containing Ionizable Cationic Lipids Using Design-of-Experiments Approach. Langmuir, 2021, 37, 1120-1128.	3.5	50
18	Simultaneous, Single-Particle Measurements of Size and Loading Give Insights into the Structure of Drug-Delivery Nanoparticles. ACS Nano, 2021, 15, 19244-19255.	14.6	23

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19	Characterization of a liposomal copper(II)-quercetin formulation suitable for parenteral use. Drug Delivery and Translational Research, 2020, 10, 202-215.	5.8	22
20	Coating of PLA-nanoparticles with cyclic, arginine-rich cell penetrating peptides enables oral delivery of liraglutide. Nanomedicine: Nanotechnology, Biology, and Medicine, 2020, 24, 102132.	3.3	38
21	The Biomolecular Corona of Lipid Nanoparticles for Gene Therapy. Bioconjugate Chemistry, 2020, 31, 2046-2059.	3.6	120
22	Spontaneous, solvent-free entrapment of siRNA within lipid nanoparticles. Nanoscale, 2020, 12, 23959-23966.	5.6	36
23	Deep Phenotyping by Mass Cytometry and Single-Cell RNA-Sequencing Reveals LYN-Regulated Signaling Profiles Underlying Monocyte Subset Heterogeneity and Lifespan. Circulation Research, 2020, 126, e61-e79.	4.5	21
24	Lipid nanoparticle technology for therapeutic gene regulation in the liver. Advanced Drug Delivery Reviews, 2020, 159, 344-363.	13.7	187
25	Structural Properties of Inverted Hexagonal Phase: A Hybrid Computational and Experimental Approach. Langmuir, 2020, 36, 6668-6680.	3.5	9
26	Sustained depletion of FXIII-A by inducing acquired FXIII-B deficiency. Blood, 2020, 136, 2946-2954.	1.4	17
27	Robust Microfluidic Technology and New Lipid Composition for Fabrication of Curcumin-Loaded Liposomes: Effect on the Anticancer Activity and Safety of Cisplatin. Molecular Pharmaceutics, 2019, 16, 3957-3967.	4.6	44
28	Lipid Nanoparticle Technology for Clinical Translation of siRNA Therapeutics. Accounts of Chemical Research, 2019, 52, 2435-2444.	15.6	270
29	Ionizable amino lipid interactions with POPC: implications for lipid nanoparticle function. Nanoscale, 2019, 11, 14141-14146.	5.6	46
30	Phospholipidâ€Free Small Unilamellar Vesicles for Drug Targeting to Cells in the Liver. Small, 2019, 15, 1901782.	10.0	12
31	Lipid nanoparticle-mediated siRNA delivery for safe targeting of human CML in vivo. Annals of Hematology, 2019, 98, 1905-1918.	1.8	61
32	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. Cancer Nanotechnology, 2019, 10, .	3.7	21
33	Fusion-dependent formation of lipid nanoparticles containing macromolecular payloads. Nanoscale, 2019, 11, 9023-9031.	5.6	85
34	Lipid-Based DNA Therapeutics: Hallmarks of Non-Viral Gene Delivery. ACS Nano, 2019, 13, 3754-3782.	14.6	220
35	The Onpattro story and the clinical translation of nanomedicines containing nucleic acid-based drugs. Nature Nanotechnology, 2019, 14, 1084-1087.	31.5	814
36	On the role of helper lipids in lipid nanoparticle formulations of siRNA. Nanoscale, 2019, 11, 21733-21739.	5.6	176

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37	Systemic study of solvent-assisted active loading of gambogic acid into liposomes and its formulation optimization for improved delivery. Biomaterials, 2018, 166, 13-26.	11.4	60
38	Ca_V3.2 drives sustained burstâ€firing, which is critical for absence seizure propagation in reticular thalamic neurons. Epilepsia, 2018, 59, 778-791.	5.1	36
39	Lipid Nanoparticles Enabling Gene Therapies: From Concepts to Clinical Utility. Nucleic Acid Therapeutics, 2018, 28, 146-157.	3.6	335
40	On the Formation and Morphology of Lipid Nanoparticles Containing Ionizable Cationic Lipids and siRNA. ACS Nano, 2018, 12, 4787-4795.	14.6	319
41	Stateâ€ofâ€theâ€Art Design and Rapidâ€Mixing Production Techniques of Lipid Nanoparticles for Nucleic Acid Delivery. Small Methods, 2018, 2, 1700375.	8.6	165
42	Dexamethasone prodrugs as potent suppressors of the immunostimulatory effects of lipid nanoparticle formulations of nucleic acids. Journal of Controlled Release, 2018, 286, 46-54.	9.9	42
43	Lipid Nanoparticle Systems for Enabling Gene Therapies. Molecular Therapy, 2017, 25, 1467-1475.	8.2	632
44	Lipid nanoparticle delivery of glucagon receptor siRNA improves glucose homeostasis in mouse models of diabetes. Molecular Metabolism, 2017, 6, 1161-1172.	6.5	20
45	Design of lipid nanoparticles for in vitro and in vivo delivery of plasmid DNA. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 1377-1387.	3.3	122
46	Rapid synthesis of lipid nanoparticles containing hydrophobic inorganic nanoparticles. Nanoscale, 2017, 9, 13600-13609.	5.6	46
47	Production of limit size nanoliposomal systems with potential utility as ultra-small drug delivery agents. Journal of Liposome Research, 2016, 26, 1-7.	3.3	27
48	Introducing pharmacogenetic testing with clinical decision support into primary care: a feasibility study. CMAJ Open, 2016, 4, E528-E534.	2.4	25
49	A Glu-urea-Lys Ligand-conjugated Lipid Nanoparticle/siRNA System Inhibits Androgen Receptor Expression In Vivo. Molecular Therapy - Nucleic Acids, 2016, 5, e348.	5.1	35
50	Influence of particle size on the in vivo potency of lipid nanoparticle formulations of siRNA. Journal of Controlled Release, 2016, 235, 236-244.	9.9	204
51	Lipid Nanoparticle Delivery of siRNA to Osteocytes Leads to Effective Silencing of SOST and Inhibition of Sclerostin In Vivo. Molecular Therapy - Nucleic Acids, 2016, 5, e363.	5.1	38
52	The Niemann-Pick C1 Inhibitor NP3.47 Enhances Gene Silencing Potency of Lipid Nanoparticles Containing siRNA. Molecular Therapy, 2016, 24, 2100-2108.	8.2	38
53	Systemic Gene Silencing in Primary T Lymphocytes Using Targeted Lipid Nanoparticles. ACS Nano, 2015, 9, 6706-6716.	14.6	146
54	Microfluidic Mixing: A General Method for Encapsulating Macromolecules in Lipid Nanoparticle Systems. Journal of Physical Chemistry B, 2015, 119, 8698-8706.	2.6	203

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55	The Cellular Mechanisms of Neuronal Swelling Underlying Cytotoxic Edema. Cell, 2015, 161, 610-621.	28.9	197
56	siRNA Lipid Nanoparticle Potently Silences Clusterin and Delays Progression When Combined with Androgen Receptor Cotargeting in Enzalutamide-Resistant Prostate Cancer. Clinical Cancer Research, 2015, 21, 4845-4855.	7.0	60
57	Lipid Nanoparticles for Short Interfering RNA Delivery. Advances in Genetics, 2014, 88, 71-110.	1.8	109
58	Lipid nanoparticle delivery systems for siRNA-based therapeutics. Drug Delivery and Translational Research, 2014, 4, 74-83.	5.8	141
59	Development of lipid nanoparticle formulations of siRNA for hepatocyte gene silencing following subcutaneous administration. Journal of Controlled Release, 2014, 196, 106-112.	9.9	108
60	Biodegradable Lipids Enabling Rapidly Eliminated Lipid Nanoparticles for Systemic Delivery of RNAi Therapeutics. Molecular Therapy, 2013, 21, 1570-1578.	8.2	392
61	Liposomal drug delivery systems: From concept to clinical applications. Advanced Drug Delivery Reviews, 2013, 65, 36-48.	13.7	3,565
62	Small molecule ligands for enhanced intracellular delivery of lipid nanoparticle formulations of siRNA. Nanomedicine: Nanotechnology, Biology, and Medicine, 2013, 9, 665-674.	3.3	34
63	Influence of cationic lipid composition on uptake and intracellular processing of lipid nanoparticle formulations of siRNA. Nanomedicine: Nanotechnology, Biology, and Medicine, 2013, 9, 233-246.	3.3	67
64	Lipid Nanoparticle Delivery of siRNA to Silence Neuronal Gene Expression in the Brain. Molecular Therapy - Nucleic Acids, 2013, 2, e136.	5.1	127
65	Influence of Polyethylene Glycol Lipid Desorption Rates on Pharmacokinetics and Pharmacodynamics of siRNA Lipid Nanoparticles. Molecular Therapy - Nucleic Acids, 2013, 2, e139.	5.1	241
66	Advances in Lipid Nanoparticles for siRNA Delivery. Pharmaceutics, 2013, 5, 498-507.	4.5	169
67	Microfluidic Synthesis of Highly Potent Limit-size Lipid Nanoparticles for In Vivo Delivery of siRNA. Molecular Therapy - Nucleic Acids, 2012, 1, e37.	5.1	445
68	Systemic RNAi-mediated Gene Silencing in Nonhuman Primate and Rodent Myeloid Cells. Molecular Therapy - Nucleic Acids, 2012, 1, e4.	5.1	112
69	Lipid Nanoparticles Containing siRNA Synthesized by Microfluidic Mixing Exhibit an Electron-Dense Nanostructured Core. Journal of Physical Chemistry C, 2012, 116, 18440-18450.	3.1	232
70	Bottom-Up Design and Synthesis of Limit Size Lipid Nanoparticle Systems with Aqueous and Triglyceride Cores Using Millisecond Microfluidic Mixing. Langmuir, 2012, 28, 3633-3640.	3.5	250
71	Lipid nanoparticle siRNA systems for silencing the androgen receptor in human prostate cancer in vivo. International Journal of Cancer, 2012, 131, E781-90.	5.1	73
72	Maximizing the Potency of siRNA Lipid Nanoparticles for Hepatic Gene Silencing Inâ€…Vivo**. Angewandte Chemie - International Edition, 2012, 51, 8529-8533.	13.8	843

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73	Development of high-concentration lipoplexes for in vivo gene function studies in vertebrate embryos. Developmental Dynamics, 2011, 240, 2108-2119.	1.8	12
74	Influence of Cationic Lipid Composition on Gene Silencing Properties of Lipid Nanoparticle Formulations of siRNA in Antigen-Presenting Cells. Molecular Therapy, 2011, 19, 2186-2200.	8.2	153
75	Development of a weak-base docetaxel derivative that can be loaded into lipid nanoparticles. Journal of Controlled Release, 2010, 144, 332-340.	9.9	78
76	Rational design of cationic lipids for siRNA delivery. Nature Biotechnology, 2010, 28, 172-176.	17.5	1,366
77	Influence of Drug-to-Lipid Ratio on Drug Release Properties and Liposome Integrity in Liposomal Doxorubicin Formulations. Journal of Liposome Research, 2008, 18, 145-157.	3.3	72
78	Effects of intravenous and subcutaneous administration on the pharmacokinetics, biodistribution, cellular uptake and immunostimulatory activity of CpG ODN encapsulated in liposomal nanoparticles. International Immunopharmacology, 2007, 7, 1064-1075.	3.8	65
79	Encapsulation in liposomal nanoparticles enhances the immunostimulatory, adjuvant and anti-tumor activity of subcutaneously administered CpG ODN. Cancer Immunology, Immunotherapy, 2007, 56, 1251-1264.	4.2	109
80	Therapeutically optimized rates of drug release can be achieved by varying the drug-to-lipid ratio in liposomal vincristine formulations. Biochimica Et Biophysica Acta - Biomembranes, 2006, 1758, 55-64.	2.6	118
81	Formation of drugâ€“arylsulfonate complexes inside liposomes: A novel approach to improve drug retention. Journal of Controlled Release, 2006, 110, 378-386.	9.9	58
82	â€œDiffusibleâ€PEGâ€Lipid Stabilized Plasmid Lipid Particlesâ€• Advances in Genetics, 2005, 53PA, 157-188.	1.8	25
83	Drug Delivery Systems: Entering the Mainstream. Science, 2004, 303, 1818-1822.	12.6	4,028
84	[3] Stabilized plasmid-lipid particles: A systemic gene therapy vector. Methods in Enzymology, 2002, 346, 36-71.	1.0	63
85	Developments in liposomal drug delivery systems. Expert Opinion on Biological Therapy, 2001, 1, 923-947.	3.1	272
86	Spontaneous Entrapment of Polynucleotides upon Electrostatic Interaction with Ethanol-Destabilized Cationic Liposomes. Biophysical Journal, 2001, 80, 2310-2326.	0.5	193
87	Efficient encapsulation of antisense oligonucleotides in lipid vesicles using ionizable aminolipids: formation of novel small multilamellar vesicle structures. Biochimica Et Biophysica Acta - Biomembranes, 2001, 1510, 152-166.	2.6	344
88	On the mechanism whereby cationic lipids promote intracellular delivery of polynucleic acids. Gene Therapy, 2001, 8, 1188-1196.	4.5	508
89	Roles of lipid polymorphism in intracellular delivery. Advanced Drug Delivery Reviews, 2001, 47, 139-148.	13.7	231
90	Stabilized plasmid-lipid particles for systemic gene therapy. Gene Therapy, 2000, 7, 1867-1874.	4.5	144

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91	Commentary: Liposomes by Accident. Journal of Liposome Research, 2000, 10, ix-xxiv.	3.3	10
92	Stabilized plasmid-lipid particles: construction and characterization. Gene Therapy, 1999, 6, 271-281.	4.5	280
93	Lipid-based systems for the intracellular delivery of genetic drugs. Molecular Membrane Biology, 1999, 16, 129-140.	2.0	82
94	Endosome marker is fat not fiction. Nature, 1998, 392, 135-136.	27.8	17
95	Interactions of liposomes and lipid-based carrier systems with blood proteins: Relation to clearance behaviour in vivo. Advanced Drug Delivery Reviews, 1998, 32, 3-17.	13.7	344
96	Anomalous solubility behavior of the antibiotic ciprofloxacin encapsulated in liposomes: a 1H-NMR study. Biochimica Et Biophysica Acta - Biomembranes, 1998, 1374, 9-20.	2.6	106
97	Stabilization and Regulated Fusion of Liposomes Containing a Cationic Lipid Using Amphipathic Polyethyleneglycol Derivatives. Journal of Liposome Research, 1998, 8, 195-211.	3.3	16
98	Designing therapeutically optimized liposomal anticancer delivery systems: Lessons from conventional liposomes. , 1998, , 231-257.		8
99	Structural and fusogenic properties of cationic liposomes in the presence of plasmid DNA. Biophysical Journal, 1997, 73, 2534-2545.	0.5	139
100	pH-Induced destabilization of lipid bilayers by a lipopeptide derived from influenza hemagglutinin. Biochimica Et Biophysica Acta - Biomembranes, 1997, 1324, 232-244.	2.6	46
101	Poly(ethylene glycol)â^'Lipid Conjugates Regulate the Calcium-Induced Fusion of Liposomes Composed of Phosphatidylethanolamine and Phosphatidylserine. Biochemistry, 1996, 35, 2618-2624.	2.5	198
102	Correlation between lipid plane curvature and lipid chain order. Biophysical Journal, 1996, 70, 2747-2757.	0.5	56
103	Influence of Cholesterol on the Association of Plasma Proteins with Liposomes. Biochemistry, 1996, 35, 2521-2525.	2.5	231
104	Vincristine-induced dermal toxicity is significantly reduced when the drug is given in liposomes. Cancer Chemotherapy and Pharmacology, 1996, 37, 351-355.	2.3	39
105	A model approach for assessing liposome targetingin vivo. Drug Delivery, 1995, 2, 156-165.	5.7	6
106	Liposomes, dimitri papahadjopoulos, and us. Journal of Liposome Research, 1995, 5, 829-836.	3.3	1
107	A two-step targeting approach for delivery of doxorubicin-loaded liposomes to tumour cells in vivo. Cancer Chemotherapy and Pharmacology, 1995, 36, 91-101.	2.3	30
108	Ionophore-mediated loading of Ca2+into large unilamellar vesicles in response to transmembrane pH gradients. Molecular Membrane Biology, 1994, 11, 151-157.	2.0	17

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109	Modulation of Membrane Fusion by Asymmetric Transbilayer Distributions of Amino Lipids. Biochemistry, 1994, 33, 12573-12580.	2.5	110
110	Liposomal vincristine which exhibits increased drug retention and increased circulation longevity cures mice bearing P388 tumors. Cancer Research, 1994, 54, 2830-3.	0.9	106
111	Optimization of the retention properties of vincristine in liposomal systems. Biochimica Et Biophysica Acta - Biomembranes, 1993, 1152, 253-258.	2.6	67
112	Association of blood proteins with large unilamellar liposomes in vivo. Relation to circulation lifetimes. Journal of Biological Chemistry, 1992, 267, 18759-65.	3.4	338
113	Separation of large unilamellar liposomes from blood components by a spin column procedure: towards identifying plasma proteins which mediate liposome clearance in vivo. Biochimica Et Biophysica Acta - Biomembranes, 1991, 1070, 215-222.	2.6	121
114	The role of surface charge in the activation of the classical and alternative pathways of complement by liposomes. Journal of Immunology, 1991, 146, 4234-41.	0.8	251
115	The accumulation of drugs within large unilamellar vesicles exhibiting a proton gradient: a survey. Chemistry and Physics of Lipids, 1990, 53, 37-46.	3.2	231
116	Comparison of the orientational order of lipid chains in the L.alpha. and HII phases. Biochemistry, 1990, 29, 8325-8333.	2.5	62
117	Characterization of liposomal systems containing doxorubicin entrapped in response to pH gradients. Biochimica Et Biophysica Acta - Biomembranes, 1990, 1025, 143-151.	2.6	216
118	Smoothed orientational order profile of lipid bilayers by 2H-nuclear magnetic resonance. Biophysical Journal, 1989, 56, 1037-1041.	0.5	219
119	Influence of vesicle size, lipid composition, and drug-to-lipid ratio on the biological activity of liposomal doxorubicin in mice. Cancer Research, 1989, 49, 5922-30.	0.9	268
120	X-ray diffraction study of the polymorphic behavior of N-methylated dioleoylphosphatidylethanolamine. Biochemistry, 1988, 27, 2853-2866.	2.5	280
121	Acyl chain orientational order in the hexagonal HII phase of phospholipid-water dispersions. Biophysical Journal, 1988, 54, 689-694.	0.5	68
122	Uptake of adriamycin into large unilamellar vesicles in response to a pH gradient. Biochimica Et Biophysica Acta - Biomembranes, 1986, 857, 123-126.	2.6	319
123	Vesicles of variable sizes produced by a rapid extrusion procedure. Biochimica Et Biophysica Acta - Biomembranes, 1986, 858, 161-168.	2.6	1,535
124	Lipid polymorphism and the roles of lipids in membranes. Chemistry and Physics of Lipids, 1986, 40, 127-144.	3.2	321
125	Lipid Polymorphism:The Molecular Basis of Nonbilayer Phases. Annual Review of Biophysics and Biophysical Chemistry, 1985, 14, 211-238.	12.2	266
126	Production of large unilamellar vesicles by a rapid extrusion procedure. Characterization of size distribution, trapped volume and ability to maintain a membrane potential. Biochimica Et Biophysica Acta - Biomembranes, 1985, 812, 55-65.	2.6	1,845

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127	The bilayer stabilizing role of sphingomyelin in the presence of cholesterol. A 31P NMR study. Biochimica Et Biophysica Acta - Biomembranes, 1980, 597, 533-542.	2.6	93
128	Lipid polymorphism and the functional roles of lipids in biological membranes. BBA - Biomembranes, 1979, 559, 399-420.	8.0	1,711
129	Effects of fusogenic agent on membrane structure of erythrocyte ghosts and the mechanism of membrane fusion. Nature, 1978, 271, 672-674.	27.8	307
130	The polymorphic phase behaviour of phosphatidylethanolamines of natural and synthetic origin. A 31P NMR study. Biochimica Et Biophysica Acta - Biomembranes, 1978, 513, 31-42.	2.6	402
131	31P 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. Biochimica Et Biophysica Acta - Biomembranes, 1976, 436, 523-540.	2.6	184
132	Lateral diffusion rates of phosphatidylcholine in vesicle membranes: Eeffects of cholesterol and hydrocarbon phase transitions. FEBS Letters, 1976, 70, 223-228.	2.8	131