Marina A Dobrovolskaia

List of Publications by Year
in descending order

118 papers	13,316 citations	50273 46 h-index	22161 113 g-index
124 all docs	124 docs citations	124 times ranked	17549 citing authors

#	Article	IF	Citations
1	Nanoparticle interaction with plasma proteins as it relates to particle biodistribution, biocompatibility and therapeutic efficacy. Advanced Drug Delivery Reviews, 2009, 61, 428-437.	13.7	1,566
2	Immunological properties of engineered nanomaterials. Nature Nanotechnology, 2007, 2, 469-478.	31.5	1,560
3	Preclinical Studies To Understand Nanoparticle Interaction with the Immune System and Its Potential Effects on Nanoparticle Biodistribution. Molecular Pharmaceutics, 2008, 5, 487-495.	4.6	870
4	Minireview: Nanoparticles and the Immune System. Endocrinology, 2010, 151, 458-465.	2.8	769
5	Interaction of colloidal gold nanoparticles with human blood: effects on particle size and analysis of plasma protein binding profiles. Nanomedicine: Nanotechnology, Biology, and Medicine, 2009, 5, 106-117.	3.3	592
6	Method for Analysis of Nanoparticle Hemolytic Properties in Vitro. Nano Letters, 2008, 8, 2180-2187.	9.1	557
7	Toll receptors, CD14, and macrophage activation and deactivation by LPS. Microbes and Infection, 2002, 4, 903-914.	1.9	485
8	Evaluation of nanoparticle immunotoxicity. Nature Nanotechnology, 2009, 4, 411-414.	31.5	345
9	Characterization of nanoparticles for therapeutics. Nanomedicine, 2007, 2, 789-803.	3.3	323
10	Induction of In Vitro Reprogramming by Toll-Like Receptor (TLR)2 and TLR4 Agonists in Murine Macrophages: Effects of TLR â€œHomotoleranceâ€•Versus â€œHeterotoleranceâ€•on NF-ÎºB Signaling Pathway Components. Journal of Immunology, 2003, 170, 508-519.	0.8	291
11	Current understanding of interactions between nanoparticles and the immune system. Toxicology and Applied Pharmacology, 2016, 299, 78-89.	2.8	236
12	Understanding the correlation between in vitro and in vivo immunotoxicity tests for nanomedicines. Journal of Controlled Release, 2013, 172, 456-466.	9.9	235
13	Common pitfalls in nanotechnology: lessons learned from NCI's Nanotechnology Characterization Laboratory. Integrative Biology (United Kingdom), 2013, 5, 66-73.	1.3	213
14	Identification and Avoidance of Potential Artifacts and Misinterpretations in Nanomaterial Ecotoxicity Measurements. Environmental Science & Technology, 2014, 48, 4226-4246.	10.0	209
15	Radioactive gold nanoparticles in cancer therapy: therapeutic efficacy studies of GA-198AuNP nanoconstruct in prostate tumorâ€“bearing mice. Nanomedicine: Nanotechnology, Biology, and Medicine, 2010, 6, 201-209.	3.3	198
16	Nanoparticle Size and Surface Charge Determine Effects of PAMAM Dendrimers on Human Platelets <i>in Vitro</i>. Molecular Pharmaceutics, 2012, 9, 382-393.	4.6	191
17	Design and self-assembly of siRNA-functionalized RNA nanoparticles for use in automated nanomedicine. Nature Protocols, 2011, 6, 2022-2034.	12.0	177
18	Nanoparticles and the blood coagulation system. Part II: safety concerns. Nanomedicine, 2013, 8, 969-981.	3.3	167

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19	To PEGylate or not to PEGylate: Immunological properties of nanomedicineâ€™s most popular component, polyethylene glycol and its alternatives. Advanced Drug Delivery Reviews, 2022, 180, 114079.	13.7	163
20	Understanding the immunogenicity and antigenicity of nanomaterials: Past, present and future. Toxicology and Applied Pharmacology, 2016, 299, 70-77.	2.8	152
21	A high capacity polymeric micelle of paclitaxel: Implication of high dose drug therapy to safety and inÂvivo anti-cancer activity. Biomaterials, 2016, 101, 296-309.	11.4	151
22	On the issue of transparency and reproducibility in nanomedicine. Nature Nanotechnology, 2019, 14, 629-635.	31.5	149
23	Pre-clinical immunotoxicity studies of nanotechnology-formulated drugs: Challenges, considerations and strategy. Journal of Controlled Release, 2015, 220, 571-583.	9.9	147
24	Nanoparticles for cancer imaging: The good, the bad, and the promise. Nano Today, 2013, 8, 454-460.	11.9	140
25	Subchronic and chronic toxicity evaluation of inorganic nanoparticles for delivery applications. Advanced Drug Delivery Reviews, 2019, 144, 112-132.	13.7	140
26	Protein corona composition does not accurately predict hematocompatibility of colloidal gold nanoparticles. Nanomedicine: Nanotechnology, Biology, and Medicine, 2014, 10, 1453-1463.	3.3	134
27	Roadmap and strategy for overcoming infusion reactions to nanomedicines. Nature Nanotechnology, 2018, 13, 1100-1108.	31.5	130
28	Immunological effects of iron oxide nanoparticles and iron-based complex drug formulations: Therapeutic benefits, toxicity, mechanistic insights, and translational considerations. Nanomedicine: Nanotechnology, Biology, and Medicine, 2018, 14, 977-990.	3.3	105
29	Triggering of RNA Interference with RNAâ€"RNA, RNAâ€"DNA, and DNAâ€"RNA Nanoparticles. ACS Nano, 2015, 9, 251-259.	14.6	100
30	Structure and Composition Define Immunorecognition of Nucleic Acid Nanoparticles. Nano Letters, 2018, 18, 4309-4321.	9.1	100
31	Inflammation and Cancer: When NF-κB Amalgamates the Perilous Partnership. Current Cancer Drug Targets, 2005, 5, 325-344.	1.6	90
32	Nanoparticles and the blood coagulation system. Part I: benefits of nanotechnology. Nanomedicine, 2013, 8, 773-784.	3.3	90
33	Ambiguities in applying traditional <i>Limulus</i> Amebocyte Lysate tests to quantify endotoxin in nanoparticle formulations. Nanomedicine, 2010, 5, 555-562.	3.3	88
34	Macrophage scavenger receptor A mediates the uptake of gold colloids by macrophages <i>in vitro</i>. Nanomedicine, 2011, 6, 1175-1188.	3.3	88
35	Understanding the Role of Anti-PEG Antibodies in the Complement Activation by Doxil in Vitro. Molecules, 2018, 23, 1700.	3.8	83
36	Applying lessons learned from nanomedicines to understand rare hypersensitivity reactions to mRNA-based SARS-CoV-2 vaccines. Nature Nanotechnology, 2022, 17, 337-346.	31.5	74

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37	Functionally-interdependent shape-switching nanoparticles with controllable properties. Nucleic Acids Research, 2017, 45, gkx008.	14.5	71
38	Opportunities, Barriers, and a Strategy for Overcoming Translational Challenges to Therapeutic Nucleic Acid Nanotechnology. ACS Nano, 2020, 14, 9221-9227.	14.6	67
39	RNAâ€“DNA fibers and polygons with controlled immunorecognition activate RNAi, FRET and transcriptional regulation of NF-ÎºB in human cells. Nucleic Acids Research, 2019, 47, 1350-1361.	14.5	64
40	One-year chronic toxicity evaluation of single dose intravenously administered silica nanoparticles in mice and their Ex vivo human hemocompatibility. Journal of Controlled Release, 2020, 324, 471-481.	9.9	64
41	Dendrimer-induced leukocyte procoagulant activity depends on particle size and surface charge. Nanomedicine, 2012, 7, 245-256.	3.3	59
42	Genotoxicity of amorphous silica nanoparticles: Status and prospects. Nanomedicine: Nanotechnology, Biology, and Medicine, 2019, 16, 106-125.	3.3	59
43	RNA Fibers as Optimized Nanoscaffolds for siRNA Coordination and Reduced Immunological Recognition. Advanced Functional Materials, 2018, 28, 1805959.	14.9	57
44	Programmable Nucleic Acid Based Polygons with Controlled Neuroimmunomodulatory Properties for Predictive QSAR Modeling. Small, 2017, 13, 1701255.	10.0	53
45	Biological Assessment of Triazine Dendrimer: Toxicological Profiles, Solution Behavior, Biodistribution, Drug Release and Efficacy in a PEGylated, Paclitaxel Construct. Molecular Pharmaceutics, 2010, 7, 993-1006.	4.6	50
46	Detection and Quantitative Evaluation of Endotoxin Contamination in Nanoparticle Formulations by LAL-Based Assays. Methods in Molecular Biology, 2011, 697, 121-130.	0.9	47
47	Choice of method for endotoxin detection depends on nanoformulation. Nanomedicine, 2014, 9, 1847-1856.	3.3	46
48	Quantitative characterization of quantum dotâ€labeled lambda phage for <i>Escherichia coli</i> detection. Biotechnology and Bioengineering, 2009, 104, 1059-1067.	3.3	44
49	Toll-Like Receptor-Mediated Recognition of Nucleic Acid Nanoparticles (NANPs) in Human Primary Blood Cells. Molecules, 2019, 24, 1094.	3.8	44
50	Addressing barriers to effective cancer immunotherapy with nanotechnology: achievements, challenges, and roadmap to the next generation of nanoimmunotherapeutics. Advanced Drug Delivery Reviews, 2019, 141, 3-22.	13.7	44
51	Animal models for analysis of immunological responses to nanomaterials: Challenges and considerations. Advanced Drug Delivery Reviews, 2018, 136-137, 82-96.	13.7	43
52	Nanoparticle Effects on Human Platelets in Vitro: A Comparison between PAMAM and Triazine Dendrimers. Molecules, 2016, 21, 428.	3.8	42
53	Method for Analysis of Nanoparticle Hemolytic Properties In Vitro. Methods in Molecular Biology, 2011, 697, 215-224.	0.9	40
54	Strategy for selecting nanotechnology carriers to overcome immunological and hematological toxicities challenging clinical translation of nucleic acid-based therapeutics. Expert Opinion on Drug Delivery, 2015, 12, 1163-1175.	5.0	39

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55	FerahemeÂ® suppresses immune function of human T lymphocytes through mitochondrial damage and mitoROS production. Toxicology and Applied Pharmacology, 2018, 350, 52-63.	2.8	39
56	Immunological and hematological toxicities challenging clinical translation of nucleic acid-based therapeutics. Expert Opinion on Biological Therapy, 2015, 15, 1023-1048.	3.1	38
57	Updated Method for In Vitro Analysis of Nanoparticle Hemolytic Properties. Methods in Molecular Biology, 2018, 1682, 91-102.	0.9	36
58	Use of human peripheral blood mononuclear cells to define immunological properties of nucleic acid nanoparticles. Nature Protocols, 2020, 15, 3678-3698.	12.0	36
59	Sterilization of Silver Nanoparticles Using Standard Gamma Irradiation Procedure Affects Particle Integrity and Biocompatibility. Journal of Nanomedicine & Nanotechnology, 2011, S5, 001.	1.1	35
60	Dynamic Behavior of RNA Nanoparticles Analyzed by AFM on a Mica/Air Interface. Langmuir, 2018, 34, 15099-15108.	3.5	35
61	Anticoagulants Influence the Performance of In Vitro Assays Intended for Characterization of Nanotechnology-Based Formulations. Molecules, 2018, 23, 12.	3.8	34
62	Dendrimers Effects on the Immune System: Insights into Toxicity and Therapeutic Utility. Current Pharmaceutical Design, 2017, 23, 3134-3141.	1.9	34
63	Method for In Vitro Analysis of Nanoparticle Thrombogenic Properties. Methods in Molecular Biology, 2011, 697, 225-235.	0.9	32
64	Bridging communities in the field of nanomedicine. Regulatory Toxicology and Pharmacology, 2019, 106, 187-196.	2.7	32
65	Opportunities and challenges for the clinical translation of structured <scp>DNA</scp> assemblies as gene therapeutic delivery and vaccine vectors. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2021, 13, e1657.	6.1	31
66	Critical review of nucleic acid nanotechnology to identify gaps and inform a strategy for accelerated clinical translation. Advanced Drug Delivery Reviews, 2022, 181, 114081.	13.7	31
67	Qualitative Analysis of Total Complement Activation by Nanoparticles. Methods in Molecular Biology, 2011, 697, 237-245.	0.9	30
68	Analysis of Complement Activation by Nanoparticles. Methods in Molecular Biology, 2018, 1682, 149-160.	0.9	27
69	Induction of Cytokines by Nucleic Acid Nanoparticles (NANPs) Depends on the Type of Delivery Carrier. Molecules, 2021, 26, 652.	3.8	26
70	Chemical Modification of CRISPR gRNAs Eliminate type I Interferon Responses in Human Peripheral Blood Mononuclear Cells. Journal of Cytokine Biology, 2018, 03, .	1.5	24
71	Nucleic Acid Nanoparticles at a Crossroads of Vaccines and Immunotherapies. Molecules, 2019, 24, 4620.	3.8	23
72	Challenges in the development of nanoparticleâ€based imaging agents: Characterization and biology. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2021, 13, e1665.	6.1	23

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73	Induction of oxidative stress by TaxolÂ® vehicle Cremophor-EL triggers production of interleukin-8 by peripheral blood mononuclear cells through the mechanism not requiring de novo synthesis of mRNA. Nanomedicine: Nanotechnology, Biology, and Medicine, 2015, 11, 1925-1938.	3.3	22
74	Nanoparticle physicochemical properties determine the activation of intracellular complement. Nanomedicine: Nanotechnology, Biology, and Medicine, 2019, 17, 266-275.	3.3	22
75	Inhibition of phosphoinositol 3 kinase contributes to nanoparticle-mediated exaggeration of endotoxin-induced leukocyte procoagulant activity. Nanomedicine, 2014, 9, 1311-1326.	3.3	20
76	The International Society of RNA Nanotechnology and Nanomedicine (ISRNN): The Present and Future of the Burgeoning Field. ACS Nano, 2021, 15, 16957-16973.	14.6	19
77	Analysis of Pro-inflammatory Cytokine and Type II Interferon Induction by Nanoparticles. Methods in Molecular Biology, 2018, 1682, 173-187.	0.9	18
78	Acute physiological changes caused by complement activators and amphotericin B-containing liposomes in mice . International Journal of Nanomedicine, 2019, Volume 14, 1563-1573.	6.7	18
79	A Novel Gadolinium-Based Trimetasphere Metallofullerene for Application as a Magnetic Resonance Imaging Contrast Agent. Investigative Radiology, 2013, 48, 745-754.	6.2	17
80	Nanoparticles and the Blood Coagulation System. Frontiers in Nanobiomedical Research, 2016, , 261-302.	0.1	15
81	In Vitro Assessment of Nanoparticle Effects on Blood Coagulation. Methods in Molecular Biology, 2018, 1682, 103-124.	0.9	15
82	Mini-Factor H Modulates Complement-Dependent IL-6 and IL-10 Release in an Immune Cell Culture (PBMC) Model: Potential Benefits Against Cytokine Storm. Frontiers in Immunology, 2021, 12, 642860.	4.8	15
83	The Recognition of and Reactions to Nucleic Acid Nanoparticles by Human Immune Cells. Molecules, 2021, 26, 4231.	3.8	15
84	Ins and Outs in Environmental and Occupational Safety Studies of Asthma and Engineered Nanomaterials. ACS Nano, 2017, 11, 7565-7571.	14.6	14
85	Immunological Properties of Engineered Nanomaterials: An Introduction. Frontiers in Nanobiomedical Research, 2013, , 1-23.	0.1	13
86	Detection of Beta-Glucan Contamination in Nanotechnology-Based Formulations. Molecules, 2020, 25, 3367.	3.8	13
87	Anhydrous Nucleic Acid Nanoparticles for Storage and Handling at Broad Range of Temperatures. Small, 2022, 18, e2104814.	10.0	13
88	Self-assembled DNA/RNA nanoparticles as a new generation of therapeutic nucleic acids: immunological compatibility and other translational considerations. DNA and RNA Nanotechnology, 2016, 3, .	0.7	12
89	In Vitro and In Vivo Methods for Analysis of Nanoparticle Potential to Induce Delayed-Type Hypersensitivity Reactions. Methods in Molecular Biology, 2018, 1682, 197-210.	0.9	12
90	2021: an immunotherapy odyssey and the rise of nucleic acid nanotechnology. Nanomedicine, 2021, 16, 1635-1640.	3.3	12

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91	In Vitro Analysis of Nanoparticle Uptake by Macrophages Using Chemiluminescence. Methods in Molecular Biology, 2011, 697, 255-261.	0.9	10
92	Considerations and Some Practical Solutions to Overcome Nanoparticle Interference with LAL Assays and to Avoid Endotoxin Contamination in Nanoformulations. Methods in Molecular Biology, 2018, 1682, 23-33.	0.9	10
93	Application of a Scavenger Receptor A1-Targeted Polymeric Prodrug Platform for Lymphatic Drug Delivery in HIV. Molecular Pharmaceutics, 2020, 17, 3794-3812.	4.6	9
94	Immunophenotyping: Analytical approaches and role in preclinical development of nanomedicines. Advanced Drug Delivery Reviews, 2022, 185, 114281.	13.7	9
95	Locking and Unlocking Thrombin Function Using Immunoquiescent Nucleic Acid Nanoparticles with Regulated Retention <i>In Vivo</i>. Nano Letters, 2022, 22, 5961-5972.	9.1	9
96	The potential utility of iron oxide nanoparticles for the treatment ofÂskin inflammation in a mouse model of psoriasis. Precision Nanomedicine, 2018, 2, 249-255.	0.8	8
97	Endotoxin and Engineered Nanomaterials. Frontiers in Nanobiomedical Research, 2013, , 77-115.	0.1	7
98	Interaction Between Nanoparticles and Plasma Proteins: Effects on Nanoparticle Biodistribution and Toxicity. , 2016, , 505-520.		7
99	Methods for Analysis of Nanoparticle Immunosuppressive Properties In Vitro and In Vivo. Methods in Molecular Biology, 2018, 1682, 161-172.	0.9	7
100	Innate Immunity Modulating Impurities and the Immunotoxicity of Nanobiotechnology-Based Drug Products. Molecules, 2021, 26, 7308.	3.8	7
101	An In Vitro Assessment of Immunostimulatory Responses to Ten Model Innate Immune Response Modulating Impurities (IIRMIs) and Peptide Drug Product, Teriparatide. Molecules, 2021, 26, 7461.	3.8	7
102	A novel cell-based system for the rapid quantitative evaluation of (anti)-inflammatory potential of test substances. Journal of Immunological Methods, 2003, 281, 51-63.	1.4	6
103	Analysis of Nanoparticle-Adjuvant Properties In Vivo. Methods in Molecular Biology, 2018, 1682, 189-195.	0.9	6
104	Interference of Metal Oxide Nanoparticles with Coagulation Cascade and Interaction with Blood Components. Particle and Particle Systems Characterization, 2019, 36, 1800547.	2.3	6
105	Detection of Endotoxin in Nano-formulations Using Limulus Amoebocyte Lysate (LAL) Assays. Journal of Visualized Experiments, 2019, , .	0.3	6
106	Endotoxin and Engineered Nanomaterials. Frontiers in Nanobiomedical Research, 2016, , 143-186.	0.1	5
107	In Vitro Assays for Monitoring Nanoparticle Interaction with Components of the Immune System. Frontiers in Nanobiomedical Research, 2013, , 581-638.	0.1	4
108	PEGylated Liposomal Methyl Prednisolone Succinate does not Induce Infusion Reactions in Patients: A Correlation Between in Vitro Immunological and in Vivo Clinical Studies. Molecules, 2020, 25, 558.	3.8	3

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109	<i>In Vitro</i> Assays for Monitoring Nanoparticle Interaction with Components of the Immune System. Frontiers in Nanobiomedical Research, 2016, , 223-280.	0.1	2
110	Understanding Nanoparticle Immunotoxicity to Develop Safe Medical Devices. , 2017, , 63-80.		2
111	Detection of Bacterial Contamination in Nanoparticle Formulations by Agar Plate Test. Methods in Molecular Biology, 2018, 1682, 19-22.	0.9	2
112	In Vitro Analysis of Nanoparticle Effects on the Zymosan Uptake by Phagocytic Cells. Methods in Molecular Biology, 2018, 1682, 125-133.	0.9	2
113	Plasma samples from mouse strains and humans demonstrate different susceptibilities to complement activation. Precision Nanomedicine, 2018, 1, 208-217.	0.8	2
114	Immunological Properties of Engineered Nanomaterials: An Introduction. Frontiers in Nanobiomedical Research, 2016, , 1-24.	0.1	1
115	Understanding the Correlation between in vitro and in vivo Immunotoxicity Tests for Engineered Nanomaterials. Frontiers in Nanobiomedical Research, 2016, , 317-344.	0.1	1
116	Understanding Endotoxin and Î²-Glucan Contamination in Nanotechnology-Based Drug Products. , 2019, , 481-496.		1
117	Protein Binding Case Study 1: Understanding Relationship between Protein Corona and Nanoparticle Toxicity. Frontiers in Nanobiomedical Research, 2016, , 23-52.	0.1	0
118	Editorial to â€œJourney into the immunological properties of engineered nanomaterials: There and back againâ€• Advanced Drug Delivery Reviews, 2022, 181, 114100.	13.7	0