

Niek N Sanders

List of Publications by Year in descending order

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110
papers

8,164
citations

53794

45
h-index

49909

87
g-index

115
all docs

115
docs citations

115
times ranked

10206
citing authors

#	ARTICLE	IF	CITATIONS
1	The Use of Inhibitors to Study Endocytic Pathways of Gene Carriers: Optimization and Pitfalls. <i>Molecular Therapy</i> , 2010, 18, 561-569.	8.2	578
2	Release mechanisms for polyelectrolyte capsules. <i>Chemical Society Reviews</i> , 2007, 36, 636-649.	38.1	467
3	N1-methylpseudouridine-incorporated mRNA outperforms pseudouridine-incorporated mRNA by providing enhanced protein expression and reduced immunogenicity in mammalian cell lines and mice. <i>Journal of Controlled Release</i> , 2015, 217, 337-344.	9.9	365
4	Intracellularly Degradable Polyelectrolyte Microcapsules. <i>Advanced Materials</i> , 2006, 18, 1005-1009.	21.0	313
5	The Internalization Route Resulting in Successful Gene Expression Depends on both Cell Line and Polyethylenimine Polyplex Type. <i>Molecular Therapy</i> , 2006, 14, 745-753.	8.2	289
6	Design and Evaluation of Doxorubicin-containing Microbubbles for Ultrasound-triggered Doxorubicin Delivery: Cytotoxicity and Mechanisms Involved. <i>Molecular Therapy</i> , 2010, 18, 101-108.	8.2	275
7	Three-Dimensional Fluorescence Recovery after Photobleaching with the Confocal Scanning Laser Microscope. <i>Biophysical Journal</i> , 2003, 85, 2240-2252.	0.5	265
8	Drug loaded microbubble design for ultrasound triggered delivery. <i>Soft Matter</i> , 2009, 5, 2161.	2.7	212
9	Extracellular barriers in respiratory gene therapy. <i>Advanced Drug Delivery Reviews</i> , 2009, 61, 115-127.	13.7	199
10	mRNA as gene therapeutic: How to control protein expression. <i>Journal of Controlled Release</i> , 2011, 150, 238-247.	9.9	195
11	Liposome based systems for systemic siRNA delivery: Stability in blood sets the requirements for optimal carrier design. <i>Journal of Controlled Release</i> , 2012, 158, 362-370.	9.9	175
12	Stability of siRNA polyplexes from poly(ethylenimine) and poly(ethylenimine)-g-poly(ethylene glycol) under in vivo conditions: Effects on pharmacokinetics and biodistribution measured by Fluorescence Fluctuation Spectroscopy and Single Photon Emission Computed Tomography (SPECT) imaging. <i>Journal of Controlled Release</i> , 2009, 138, 148-159.	9.9	173
13	Vitreous: A Barrier to Nonviral Ocular Gene Therapy. , 2005, 46, 3553.		169
14	Ultrasound-Responsive Polymer-Coated Microbubbles That Bind and Protect DNA. <i>Langmuir</i> , 2006, 22, 7273-7278.	3.5	169
15	Self-assembled liposome-loaded microbubbles: The missing link for safe and efficient ultrasound triggered drug-delivery. <i>Journal of Controlled Release</i> , 2011, 152, 249-256.	9.9	151
16	Sizing Nanomatter in Biological Fluids by Fluorescence Single Particle Tracking. <i>Nano Letters</i> , 2010, 10, 4435-4442.	9.1	144
17	Recent progress in West Nile virus diagnosis and vaccination. <i>Veterinary Research</i> , 2012, 43, 16.	3.0	125
18	Nanoparticle-€Conjugate TLR7/8 Agonist Localized Immunotherapy Provokes Safe Antitumoral Responses. <i>Advanced Materials</i> , 2018, 30, e1803397.	21.0	120

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19	A fast and sensitive method for measuring the integrity of siRNA-carrier complexes in full human serum. <i>Journal of Controlled Release</i> , 2008, 126, 67-76.	9.9	119
20	Ultrasound assisted siRNA delivery using PEG-siPlex loaded microbubbles. <i>Journal of Controlled Release</i> , 2008, 126, 265-273.	9.9	115
21	Maintaining the silence: reflections on long-term RNAi. <i>Drug Discovery Today</i> , 2008, 13, 917-931.	6.4	106
22	Influence of plasmid DNA topology on the transfection properties of DOTAP/DOPE lipoplexes. <i>Journal of Controlled Release</i> , 2006, 115, 335-343.	9.9	101
23	Lipid-mediated gene delivery to the skin. <i>European Journal of Pharmaceutical Sciences</i> , 2011, 43, 199-211.	4.0	92
24	Monitoring the disassembly of siRNA polyplexes in serum is crucial for predicting their biological efficacy. <i>Journal of Controlled Release</i> , 2010, 141, 38-41.	9.9	91
25	A nanobody targeting the F-actin capping protein CapG restrains breast cancer metastasis. <i>Breast Cancer Research</i> , 2013, 15, R116.	5.0	91
26	mRNA therapeutics deliver a hopeful message. <i>Nano Today</i> , 2018, 23, 16-39.	11.9	90
27	Nucleic acid delivery: Where material sciences and bio-sciences meet. <i>Materials Science and Engineering Reports</i> , 2007, 58, 117-161.	31.8	88
28	Type I Interferons Interfere with the Capacity of mRNA Lipoplex Vaccines to Elicit Cytolytic T Cell Responses. <i>Molecular Therapy</i> , 2016, 24, 2012-2020.	8.2	88
29	Ultrasound Exposure of Lipoplex Loaded Microbubbles Facilitates Direct Cytoplasmic Entry of the Lipoplexes. <i>Molecular Pharmaceutics</i> , 2009, 6, 457-467.	4.6	83
30	Flexible Nanosomes (SECosomes) Enable Efficient siRNA Delivery in Cultured Primary Skin Cells and in the Viable Epidermis of Ex Vivo Human Skin. <i>Advanced Functional Materials</i> , 2010, 20, 4077-4090.	14.9	79
31	Sensitive Spectroscopic Detection of Large and Denatured Protein Aggregates in Solution by Use of the Fluorescent Dye Nile Red. <i>Journal of Fluorescence</i> , 2007, 17, 181-192.	2.5	67
32	Cellular entry pathway and gene transfer capacity of TAT-modified lipoplexes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 571-579.	2.6	63
33	The Physical Properties of Biogels and their Permeability for Macromolecular Drugs and Colloidal Drug Carriers. <i>Journal of Pharmaceutical Sciences</i> , 2000, 89, 835-849.	3.3	61
34	Strategies for controlling the innate immune activity of conventional and self-amplifying mRNA therapeutics: Getting the message across. <i>Advanced Drug Delivery Reviews</i> , 2021, 176, 113900.	13.7	59
35	Prolonged gene silencing in hepatoma cells and primary hepatocytes after small interfering RNA delivery with biodegradable poly(ϵ -amino esters). <i>Journal of Gene Medicine</i> , 2008, 10, 783-794.	2.8	58
36	Wanted and unwanted properties of surface PEGylated nucleic acid nanoparticles in ocular gene transfer. <i>Journal of Controlled Release</i> , 2007, 122, 226-235.	9.9	57

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37	Coupling of drug containing liposomes to microbubbles improves ultrasound triggered drug delivery in mice. <i>Journal of Controlled Release</i> , 2013, 172, 885-893.	9.9	55
38	In Situ Analysis of Single-Stranded and Duplex siRNA Integrity in Living Cells. <i>Biochemistry</i> , 2006, 45, 10614-10623.	2.5	53
39	Chlamydial Infection From Outside to Inside. <i>Frontiers in Microbiology</i> , 2019, 10, 2329.	3.5	53
40	Immune cells as tumor drug delivery vehicles. <i>Journal of Controlled Release</i> , 2020, 327, 70-87.	9.9	53
41	Small-molecule-based regulation of RNA-delivered circuits in mammalian cells. <i>Nature Chemical Biology</i> , 2018, 14, 1043-1050.	8.0	52
42	Potent and Prolonged Innate Immune Activation by Enzyme-Responsive Imidazoquinoline TLR7/8 Agonist Prodrug Vesicles. <i>Journal of the American Chemical Society</i> , 2020, 142, 12133-12139.	13.7	52
43	Elucidating the Encapsulation of Short Interfering RNA in PEGylated Cationic Liposomes. <i>Langmuir</i> , 2009, 25, 4886-4891.	3.5	51
44	Dextran Microgels for Timeâ€Controlled Delivery of siRNA. <i>Advanced Functional Materials</i> , 2008, 18, 993-1001.	14.9	50
45	Lymph-Node-Targeted Immune Activation by Engineered Block Copolymer Amphiphilesâ€TLR7/8 Agonist Conjugates. <i>Journal of the American Chemical Society</i> , 2018, 140, 14300-14307.	13.7	50
46	Anti-inflammatory signaling by mammary tumor cells mediates prometastatic macrophage polarization in an innovative intraductal mouse model for triple-negative breast cancer. <i>Journal of Experimental and Clinical Cancer Research</i> , 2018, 37, 191.	8.6	50
47	Innate immune response and programmed cell death following carrier-mediated delivery of unmodified mRNA to respiratory cells. <i>Journal of Controlled Release</i> , 2013, 167, 157-166.	9.9	47
48	New strategies for nucleic acid delivery to conquer cellular and nuclear membranes. <i>Journal of Controlled Release</i> , 2008, 132, 279-288.	9.9	45
49	Sterilizing Immunity against SARSâ€CoVâ€2 Infection in Mice by a Singleâ€Shot and Lipid Amphiphile Imidazoquinoline TLR7/8 Agonistâ€Adjuvanted Recombinant Spike Protein Vaccine**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 9467-9473.	13.8	45
50	Interactions between oligonucleotides and cationic polymers investigated by fluorescence correlation spectroscopy. <i>Pharmaceutical Research</i> , 2001, 18, 928-936.	3.5	44
51	Expression Kinetics and Innate Immune Response after Electroporation and LNP-Mediated Delivery of a Self-Amplifying mRNA in the Skin. <i>Molecular Therapy - Nucleic Acids</i> , 2019, 17, 867-878.	5.1	44
52	Physicochemical and Transfection Properties of Cationic Hydroxyethylcellulose/DNA Nanoparticles. <i>Biomacromolecules</i> , 2006, 7, 2856-2862.	5.4	43
53	Potent Lymphatic Translocation and Spatial Control Over Innate Immune Activation by Polymerâ€Lipid Amphiphile Conjugates of Smallâ€Molecule TLR7/8 Agonists. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 15390-15395.	13.8	43
54	Advanced fluorescence microscopy methods illuminate the transfection pathway of nucleic acid nanoparticles. <i>Journal of Controlled Release</i> , 2010, 148, 69-74.	9.9	42

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55	Role of magnesium in the failure of rhDNase therapy in patients with cystic fibrosis. <i>Thorax</i> , 2006, 61, 962-966.	5.6	41
56	Immunogenicity and Protection Efficacy of a Naked Self-Replicating mRNA-Based Zika Virus Vaccine. <i>Vaccines</i> , 2019, 7, 96.	4.4	40
57	Various ways to improve whole cancer cell vaccines. <i>Expert Review of Vaccines</i> , 2014, 13, 721-735.	4.4	39
58	Elucidating the Mechanisms Behind Sonoporation with Adeno-Associated Virus-Loaded Microbubbles. <i>Molecular Pharmaceutics</i> , 2011, 8, 2244-2251.	4.6	38
59	Nuclear accumulation of plasmid DNA can be enhanced by non-selective gating of the nuclear pore. <i>Nucleic Acids Research</i> , 2007, 35, e86.	14.5	37
60	Squaric Ester-Based, pH-Degradable Nanogels: Modular Nanocarriers for Safe, Systemic Administration of Toll-like Receptor 7/8 Agonistic Immune Modulators. <i>Journal of the American Chemical Society</i> , 2021, 143, 9872-9883.	13.7	36
61	Combination of interleukin-12 gene therapy, metronomic cyclophosphamide and DNA cancer vaccination directs all arms of the immune system towards tumor eradication. <i>Journal of Controlled Release</i> , 2014, 187, 175-182.	9.9	34
62	Non-Classical ProIL-1 β Activation during Mammary Gland Infection Is Pathogen-Dependent but Caspase-1 Independent. <i>PLoS ONE</i> , 2014, 9, e105680.	2.5	33
63	Synthetic biology devices and circuits for RNA-based "smart vaccines": a propositional review. <i>Expert Review of Vaccines</i> , 2015, 14, 313-331.	4.4	33
64	The Opposing Effect of Type I IFN on the T Cell Response by Non-modified mRNA-Lipoplex Vaccines Is Determined by the Route of Administration. <i>Molecular Therapy - Nucleic Acids</i> , 2020, 22, 373-381.	5.1	33
65	On the transport of lipoplexes through cystic fibrosis sputum. <i>Pharmaceutical Research</i> , 2002, 19, 451-456.	3.5	32
66	Vaccination of Mice Using the West Nile Virus E-Protein in a DNA Prime-Protein Boost Strategy Stimulates Cell-Mediated Immunity and Protects Mice against a Lethal Challenge. <i>PLoS ONE</i> , 2014, 9, e87837.	2.5	32
67	Mobility and stability of gene complexes in biogels. <i>Journal of Controlled Release</i> , 2003, 87, 117-129.	9.9	31
68	Connexin32 hemichannels contribute to the apoptotic-to-necrotic transition during Fas-mediated hepatocyte cell death. <i>Cellular and Molecular Life Sciences</i> , 2010, 67, 907-918.	5.4	31
69	Topical imiquimod yields systemic effects due to unintended oral uptake. <i>Scientific Reports</i> , 2016, 6, 20134.	3.3	29
70	Formulation and process development of (recombinant human) deoxyribonuclease I as a powder for inhalation. <i>Pharmaceutical Development and Technology</i> , 2009, 14, 358-368.	2.4	27
71	Comparison of In Vivo Optical Systems for Bioluminescence and Fluorescence Imaging. <i>Journal of Fluorescence</i> , 2013, 23, 909-920.	2.5	26
72	Vaccination of turkeys against <i>Chlamydophila psittaci</i> through optimised DNA formulation and administration. <i>Vaccine</i> , 2010, 28, 3095-3105.	3.8	25

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73	Comparison of the Gene Transfer Efficiency of mRNA/GL67 and pDNA/GL67 Complexes in Respiratory Cells. <i>Molecular Pharmaceutics</i> , 2012, 9, 2136-2145.	4.6	25
74	Comparative Profiling of Metastatic 4T1- vs. Non-metastatic Py230-Based Mammary Tumors in an Intraductal Model for Triple-Negative Breast Cancer. <i>Frontiers in Immunology</i> , 2019, 10, 2928.	4.8	25
75	Comparison of the Expression Kinetics and Immunostimulatory Activity of Replicating mRNA, Nonreplicating mRNA, and pDNA after Intradermal Electroporation in Pigs. <i>Molecular Pharmaceutics</i> , 2018, 15, 377-384.	4.6	22
76	Mucolytic activity of bacterial and human chitinases. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2007, 1770, 839-846.	2.4	21
77	Aerosolized Non-viral Nucleic Acid Delivery in the Vaginal Tract of Pigs. <i>Pharmaceutical Research</i> , 2016, 33, 384-394.	3.5	20
78	Lipid-Polyglutamate Nanoparticle Vaccine Platform. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 6011-6022.	8.0	20
79	A dual-antigen self-amplifying RNA SARS-CoV-2 vaccine induces potent humoral and cellular immune responses and protects against SARS-CoV-2 variants through T _H cell-mediated immunity. <i>Molecular Therapy</i> , 2022, 30, 2968-2983.	8.2	20
80	Can Ultrasound Solve the Transport Barrier of the Neural Retina?. <i>Pharmaceutical Research</i> , 2008, 25, 2657-2665.	3.5	19
81	Coadministration of a Plasmid Encoding HIV-1 Gag Enhances the Efficacy of Cancer DNA Vaccines. <i>Molecular Therapy</i> , 2016, 24, 1686-1696.	8.2	18
82	Immunological, anti-angiogenic and clinical effects of intratumoral interleukin 12 electrogene therapy combined with metronomic cyclophosphamide in dogs with spontaneous cancer: A pilot study. <i>Cancer Letters</i> , 2017, 400, 205-218.	7.2	18
83	Immunogenicity and safety of xenogeneic vascular endothelial growth factor receptor-2 DNA vaccination in mice and dogs. <i>Oncotarget</i> , 2016, 7, 10905-10916.	1.8	18
84	Oral delivery of Escherichia coli persistently infected with M2e-displaying bacteriophages partially protects against influenza A virus. <i>Journal of Controlled Release</i> , 2017, 264, 55-65.	9.9	16
85	Enhancing Nucleic Acid Delivery with Ultrasound and Microbubbles. <i>Methods in Molecular Biology</i> , 2013, 948, 195-204.	0.9	15
86	Corticosteroids and cellulose purification improve, respectively, the in vivo translation and vaccination efficacy of sa-mRNAs. <i>Molecular Therapy</i> , 2021, 29, 1370-1381.	8.2	15
87	Tumor cell killing efficiency of doxorubicin loaded microbubbles after ultrasound exposure. <i>Journal of Controlled Release</i> , 2010, 148, e113-e114.	9.9	14
88	Recent progress in canine tumor vaccination: potential applications for human tumor vaccines. <i>Expert Review of Vaccines</i> , 2012, 11, 1375-1386.	4.4	14
89	Off-Target and Tumor-Specific Accumulation of Monocytes, Macrophages and Myeloid-Derived Suppressor Cells after Systemic Injection. <i>Neoplasia</i> , 2018, 20, 848-856.	5.3	14
90	Mucosal Vaccination Against Periodontal Disease: Current Status and Opportunities. <i>Frontiers in Immunology</i> , 2021, 12, 768397.	4.8	14

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91	Synergistic effects between natural histone mixtures and polyethylenimine in non-viral gene delivery in vitro. <i>International Journal of Pharmaceutics</i> , 2010, 400, 86-95.	5.2	13
92	Imidazoquinoline-Conjugated Degradable Coacervate Conjugate for Local Cancer Immunotherapy. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 4993-5000.	5.2	13
93	In Vivo Validation of a Reversible Small Molecule-Based Switch for Synthetic Self-Amplifying mRNA Regulation. <i>Molecular Therapy</i> , 2021, 29, 1164-1173.	8.2	13
94	Vaccine-Induced Protection of Rhesus Macaques against Plasma Viremia after Intradermal Infection with a European Lineage 1 Strain of West Nile Virus. <i>PLoS ONE</i> , 2014, 9, e112568.	2.5	13
95	On the biological activity of anti-ICAM-1 oligonucleotides complexed to non-viral carriers.. <i>Journal of Controlled Release</i> , 2004, 96, 207-219.	9.9	12
96	Chlamydia: what is on the outside does matter. <i>Critical Reviews in Microbiology</i> , 2020, 46, 100-119.	6.1	12
97	Improving the Repeatability and Efficacy of Intradermal Electroporated Self-Replicating mRNA. <i>Molecular Therapy - Nucleic Acids</i> , 2019, 17, 388-395.	5.1	11
98	Comparison of the Adipose and Luminal Mammary Gland Compartment as Orthotopic Inoculation Sites in a 4T1-Based Immunocompetent Preclinical Model for Triple-Negative Breast Cancer. <i>Journal of Mammary Gland Biology and Neoplasia</i> , 2016, 21, 113-122.	2.7	10
99	Ultrasound responsive doxorubicin-loaded microbubbles; towards an easy applicable drug delivery platform. <i>Journal of Controlled Release</i> , 2010, 148, e59-e60.	9.9	7
100	T Cell Epitope Mapping of the E-Protein of West Nile Virus in BALB/c Mice. <i>PLoS ONE</i> , 2014, 9, e115343.	2.5	7
101	Can dendritic cells improve whole cancer cell vaccines based on immunogenically killed cancer cells?. <i>Oncolmmunology</i> , 2015, 4, e1048413.	4.6	6
102	Amphiphile Polymer-Lipidkonjugate zur potenten lymphatischen Anreicherung von TLR7/8-Agonisten ermöglichen eine örtlich begrenzte Aktivierung des angeborenen Immunsystems. <i>Angewandte Chemie</i> , 2019, 131, 15535-15541.	2.0	5
103	Mononuclear but Not Polymorphonuclear Phagocyte Depletion Increases Circulation Times and Improves Mammary Tumor-Homing Efficiency of Donor Bone Marrow-Derived Monocytes. <i>Cancers</i> , 2019, 11, 1752.	3.7	5
104	Low-dose single-shot COVID-19 mRNA vaccines lie ahead. <i>Molecular Therapy</i> , 2021, 29, 1944-1945.	8.2	5
105	Sterilizing Immunity against SARS-CoV-2 Infection in Mice by a Single Shot and Lipid Amphiphile Imidazoquinoline TLR7/8 Agonist-Adjuvanted Recombinant Spike Protein Vaccine**. <i>Angewandte Chemie</i> , 2021, 133, 9553-9559.	2.0	4
106	Evaluation of a xenogeneic vascular endothelial growth factor-2 vaccine in two preclinical metastatic tumor models in mice. <i>Cancer Immunology, Immunotherapy</i> , 2017, 66, 1545-1555.	4.2	3
107	Adeno-associated virus loaded microbubbles as a tool for targeted gene delivery. <i>Journal of Controlled Release</i> , 2010, 148, e59.	9.9	2
108	Antibody-Mediated Targeting of Antigens to Intestinal Aminopeptidase N Elicits Gut IgA Responses in Pigs. <i>Frontiers in Immunology</i> , 2021, 12, 753371.	4.8	2

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109	Corticosteroids and mRNA Vaccines: A Word of Caution. <i>Molecular Therapy</i> , 2021, 29, 893-894.	8.2	1
110	Fluorescence single particle tracking for sizing of nanoparticles in undiluted biological fluids. , 2011, , .		0