

# Roosmarijn E. Vandenbroucke

## List of Publications by Year in descending order

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121  
papers

9,043  
citations

43973

48  
h-index

45213

90  
g-index

129  
all docs

129  
docs citations

129  
times ranked

15713  
citing authors

#	ARTICLE	IF	CITATIONS
1	Is there new hope for therapeutic matrix metalloproteinase inhibition?. <i>Nature Reviews Drug Discovery</i> , 2014, 13, 904-927.	21.5	631
2	A single-cell atlas of mouse brain macrophages reveals unique transcriptional identities shaped by ontogeny and tissue environment. <i>Nature Neuroscience</i> , 2019, 22, 1021-1035.	7.1	603
3	The Use of Inhibitors to Study Endocytic Pathways of Gene Carriers: Optimization and Pitfalls. <i>Molecular Therapy</i> , 2010, 18, 561-569.	3.7	578
4	Nanobodies as therapeutics: big opportunities for small antibodies. <i>Drug Discovery Today</i> , 2016, 21, 1076-1113.	3.2	335
5	Intracellularly Degradable Polyelectrolyte Microcapsules. <i>Advanced Materials</i> , 2006, 18, 1005-1009.	11.1	313
6	Endothelial LRP1 transports amyloid- $\beta$ 1 $\beta$ 42 across the blood-brain barrier. <i>Journal of Clinical Investigation</i> , 2015, 126, 123-136.	3.9	299
7	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.	3.7	289
8	Single-cell profiling of myeloid cells in glioblastoma across species and disease stage reveals macrophage competition and specialization. <i>Nature Neuroscience</i> , 2021, 24, 595-610.	7.1	288
9	Identification of a novel mechanism of blood-brain communication during peripheral inflammation via choroid plexus-derived extracellular vesicles. <i>EMBO Molecular Medicine</i> , 2016, 8, 1162-1183.	3.3	259
10	Biological membranes in EV biogenesis, stability, uptake, and cargo transfer: an ISEV position paper arising from the ISEV membranes and EVs workshop. <i>Journal of Extracellular Vesicles</i> , 2019, 8, 1684862.	5.5	177
11	Ultrasound-Responsive Polymer-Coated Microbubbles That Bind and Protect DNA. <i>Langmuir</i> , 2006, 22, 7273-7278.	1.6	169
12	The power of imaging to understand extracellular vesicle biology in vivo. <i>Nature Methods</i> , 2021, 18, 1013-1026.	9.0	163
13	Passenger Mutations Confound Interpretation of All Genetically Modified Congenic Mice. <i>Immunity</i> , 2015, 43, 200-209.	6.6	156
14	Friends or Foes: Matrix Metalloproteinases and Their Multifaceted Roles in Neurodegenerative Diseases. <i>Mediators of Inflammation</i> , 2015, 2015, 1-27.	1.4	154
15	A20 critically controls microglia activation and inhibits inflammasome-dependent neuroinflammation. <i>Nature Communications</i> , 2018, 9, 2036.	5.8	152
16	An inflammatory triangle in psoriasis: TNF, type I IFNs and IL-17. <i>Cytokine and Growth Factor Reviews</i> , 2015, 26, 25-33.	3.2	149
17	Amyloid $\beta$ Oligomers Disrupt Blood-CSF Barrier Integrity by Activating Matrix Metalloproteinases. <i>Journal of Neuroscience</i> , 2015, 35, 12766-12778.	1.7	140
18	Biodegradable Dextran Nanogels for RNA Interference: Focusing on Endosomal Escape and Intracellular siRNA Delivery. <i>Advanced Functional Materials</i> , 2009, 19, 1406-1415.	7.8	134

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19	Treatment of TNF mediated diseases by selective inhibition of soluble TNF or TNFR1. Cytokine and Growth Factor Reviews, 2011, 22, 311-319.	3.2	130
20	Into rather unexplored terrain—transcellular transport across the blood—brain barrier. Glia, 2016, 64, 1097-1123.	2.5	118
21	Ultrasound assisted siRNA delivery using PEG-siPlex loaded microbubbles. Journal of Controlled Release, 2008, 126, 265-273.	4.8	115
22	Matrix metalloproteinase 13 modulates intestinal epithelial barrier integrity in inflammatory diseases by activating TNF. EMBO Molecular Medicine, 2013, 5, 1000-1016.	3.3	114
23	Comparing exosome-like vesicles with liposomes for the functional cellular delivery of small RNAs. Journal of Controlled Release, 2016, 232, 51-61.	4.8	112
24	Maintaining the silence: reflections on long-term RNAi. Drug Discovery Today, 2008, 13, 917-931.	3.2	106
25	A therapeutic role for matrix metalloproteinase inhibitors in lung diseases?. European Respiratory Journal, 2011, 38, 1200-1214.	3.1	105
26	mRNA-Lipoplex loaded microbubble contrast agents for ultrasound-assisted transfection of dendritic cells. Biomaterials, 2011, 32, 9128-9135.	5.7	97
27	A New Venue of TNF Targeting. International Journal of Molecular Sciences, 2018, 19, 1442.	1.8	96
28	Treatment of Intestinal Fibrosis in Experimental Inflammatory Bowel Disease by the Pleiotropic Actions of a Local Rho Kinase Inhibitor. Gastroenterology, 2017, 153, 1054-1067.	0.6	94
29	Matrix Metalloprotease 8-Dependent Extracellular Matrix Cleavage at the Blood-CSF Barrier Contributes to Lethality during Systemic Inflammatory Diseases. Journal of Neuroscience, 2012, 32, 9805-9816.	1.7	91
30	Pro-inflammatory effects of matrix metalloproteinase 7 in acute inflammation. Mucosal Immunology, 2014, 7, 579-588.	2.7	89
31	Matrix metalloproteinases as drug targets in ischemia/reperfusion injury. Drug Discovery Today, 2011, 16, 762-78.	3.2	88
32	Ultrasound Exposure of Lipoplex Loaded Microbubbles Facilitates Direct Cytoplasmic Entry of the Lipoplexes. Molecular Pharmaceutics, 2009, 6, 457-467.	2.3	83
33	Matrix metalloproteinase8 has a central role in inflammatory disorders and cancer progression. Cytokine and Growth Factor Reviews, 2011, 22, 73-81.	3.2	83
34	Mouse models of ageing and their relevance to disease. Mechanisms of Ageing and Development, 2016, 160, 41-53.	2.2	82
35	Caloric restriction: beneficial effects on brain aging and Alzheimer's disease. Mammalian Genome, 2016, 27, 300-319.	1.0	82
36	Counteracting the effects of TNF receptor1 has therapeutic potential in Alzheimer's disease. EMBO Molecular Medicine, 2018, 10, .	3.3	81

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37	The Impact of Systemic Inflammation on Alzheimer's Disease Pathology. <i>Frontiers in Immunology</i> , 2021, 12, 796867.	2.2	79
38	Line FRAP with the Confocal Laser Scanning Microscope for Diffusion Measurements in Small Regions of 3-D Samples. <i>Biophysical Journal</i> , 2007, 92, 2172-2183.	0.2	77
39	The choroid plexus-cerebrospinal fluid interface in Alzheimer's disease: more than just a barrier. <i>Neural Regeneration Research</i> , 2016, 11, 534.	1.6	74
40	A new angle on blood-CNS interfaces: A role for connexins?. <i>FEBS Letters</i> , 2014, 588, 1259-1270.	1.3	72
41	Safe TNF-based antitumor therapy following p55TNFR reduction in intestinal epithelium. <i>Journal of Clinical Investigation</i> , 2013, 123, 2590-2603.	3.9	64
42	Cellular entry pathway and gene transfer capacity of TAT-modified lipoplexes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 571-579.	1.4	63
43	Generation and Characterization of Small Single Domain Antibodies Inhibiting Human Tumor Necrosis Factor Receptor 1. <i>Journal of Biological Chemistry</i> , 2015, 290, 4022-4037.	1.6	63
44	Astrocyte-targeted gene delivery of interleukin 2 specifically increases brain-resident regulatory T cell numbers and protects against pathological neuroinflammation. <i>Nature Immunology</i> , 2022, 23, 878-891.	7.0	59
45	Prolonged gene silencing in hepatoma cells and primary hepatocytes after small interfering RNA delivery with biodegradable poly( $\beta$ -amino esters). <i>Journal of Gene Medicine</i> , 2008, 10, 783-794.	1.4	58
46	Tauroursodeoxycholic acid inhibits experimental colitis by preventing early intestinal epithelial cell death. <i>Laboratory Investigation</i> , 2014, 94, 1419-1430.	1.7	54
47	Clinical implications of leukocyte infiltration at the choroid plexus in (neuro)inflammatory disorders. <i>Drug Discovery Today</i> , 2015, 20, 928-941.	3.2	52
48	Choroid plexus-derived miR-204 regulates the number of quiescent neural stem cells in the adult brain. <i>EMBO Journal</i> , 2019, 38, e100481.	3.5	52
49	Glucocorticoid receptor dimers control intestinal STAT1 and TNF-induced inflammation in mice. <i>Journal of Clinical Investigation</i> , 2018, 128, 3265-3279.	3.9	52
50	Dextran Microgels for Time-Controlled Delivery of siRNA. <i>Advanced Functional Materials</i> , 2008, 18, 993-1001.	7.8	50
51	Glucocorticoid-induced microRNA-511 protects against TNF by downregulating TNFR1. <i>EMBO Molecular Medicine</i> , 2015, 7, 1004-1017.	3.3	47
52	TNFR1 inhibition with a Nanobody protects against EAE development in mice. <i>Scientific Reports</i> , 2017, 7, 13646.	1.6	46
53	New strategies for nucleic acid delivery to conquer cellular and nuclear membranes. <i>Journal of Controlled Release</i> , 2008, 132, 279-288.	4.8	45
54	Monitoring ALS1 and ALS3 Gene Expression During In Vitro <i>Candida albicans</i> Biofilm Formation Under Continuous Flow Conditions. <i>Mycopathologia</i> , 2009, 167, 9-17.	1.3	43

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55	The effect of aging on brain barriers and the consequences for Alzheimer's disease development. <i>Mammalian Genome</i> , 2016, 27, 407-420.	1.0	43
56	Microglial activation arises after aggregation of phosphorylated-tau in a neuron-specific P301S tauopathy mouse model. <i>Neurobiology of Aging</i> , 2020, 89, 89-98.	1.5	43
57	The tremendous biomedical potential of bacterial extracellular vesicles. <i>Trends in Biotechnology</i> , 2022, 40, 1173-1194.	4.9	42
58	Amelioration of systemic inflammation via the display of two different decoy protein receptors on extracellular vesicles. <i>Nature Biomedical Engineering</i> , 2021, 5, 1084-1098.	11.6	41
59	TNFR1-induced lethal inflammation is mediated by goblet and Paneth cell dysfunction. <i>Mucosal Immunology</i> , 2015, 8, 828-840.	2.7	40
60	Dual Inhibition of TNFR1 and IFNAR1 in Imiquimod-Induced Psoriasiform Skin Inflammation in Mice. <i>Journal of Immunology</i> , 2015, 194, 5094-5102.	0.4	40
61	Immunogenicity and Protection Efficacy of a Naked Self-Replicating mRNA-Based Zika Virus Vaccine. <i>Vaccines</i> , 2019, 7, 96.	2.1	40
62	Nuclear accumulation of plasmid DNA can be enhanced by non-selective gating of the nuclear pore. <i>Nucleic Acids Research</i> , 2007, 35, e86.	6.5	37
63	Extracellular Vesicles in Alzheimer's and Parkinson's Disease: Small Entities with Large Consequences. <i>Cells</i> , 2020, 9, 2485.	1.8	36
64	E-Cadherin Regulates Human Nanos1, which Interacts with p120ctn and Induces Tumor Cell Migration and Invasion. <i>Cancer Research</i> , 2006, 66, 10007-10015.	0.4	31
65	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.	2.4	31
66	Polyelectrolyte LbL microcapsules versus PLGA microparticles for immunization with a protein antigen. <i>Journal of Controlled Release</i> , 2012, 158, 233-239.	4.8	30
67	Importance of extracellular vesicle secretion at the blood-cerebrospinal fluid interface in the pathogenesis of Alzheimer's disease. <i>Acta Neuropathologica Communications</i> , 2021, 9, 143.	2.4	30
68	Therapeutic implications of the choroid plexus-cerebrospinal fluid interface in neuropsychiatric disorders. <i>Brain, Behavior, and Immunity</i> , 2015, 50, 1-13.	2.0	29
69	Topical imiquimod yields systemic effects due to unintended oral uptake. <i>Scientific Reports</i> , 2016, 6, 20134.	1.6	29
70	MMP-3 Deficiency Alleviates Endotoxin-Induced Acute Inflammation in the Posterior Eye Segment. <i>International Journal of Molecular Sciences</i> , 2016, 17, 1825.	1.8	28
71	The choroid plexus epithelium as a novel player in the stomach-brain axis during <i>Helicobacter</i> infection. <i>Brain, Behavior, and Immunity</i> , 2018, 69, 35-47.	2.0	28
72	The first MMP in sepsis. <i>EMBO Molecular Medicine</i> , 2011, 3, 367-369.	3.3	26

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73	Low-grade peripheral inflammation affects brain pathology in the AppNL-G-Fmouse model of Alzheimer's disease. <i>Acta Neuropathologica Communications</i> , 2021, 9, 163.	2.4	26
74	An acute phase protein ready to go therapeutic for sepsis. <i>EMBO Molecular Medicine</i> , 2014, 6, 2-3.	3.3	25
75	Intracellular drug delivery in <i>Leishmania</i> -infected macrophages: Evaluation of saponin-loaded PLGA nanoparticles. <i>Journal of Drug Targeting</i> , 2012, 20, 142-154.	2.1	24
76	Overexpression of Gilz Protects Mice Against Lethal Septic Peritonitis. <i>Shock</i> , 2019, 52, 208-214.	1.0	24
77	Blocking connexin43 hemichannels protects mice against tumour necrosis factor-induced inflammatory shock. <i>Scientific Reports</i> , 2019, 9, 16623.	1.6	24
78	Extracellular Vesicles: A Double-Edged Sword in Sepsis. <i>Pharmaceuticals</i> , 2021, 14, 829.	1.7	24
79	Sizing nanomaterials in bio-fluids by cFRAP enables protein aggregation measurements and diagnosis of bio-barrier permeability. <i>Nature Communications</i> , 2016, 7, 12982.	5.8	23
80	Development and Validation of a Small Single-domain Antibody That Effectively Inhibits Matrix Metalloproteinase 8. <i>Molecular Therapy</i> , 2016, 24, 890-902.	3.7	23
81	A Hidden Epithelial Barrier in the Brain with a Central Role in Regulating Brain Homeostasis. Implications for Aging. <i>Annals of the American Thoracic Society</i> , 2016, 13, S407-S410.	1.5	22
82	The neurogliovascular unit in hepatic encephalopathy. <i>JHEP Reports</i> , 2021, 3, 100352.	2.6	22
83	Can Ultrasound Solve the Transport Barrier of the Neural Retina?. <i>Pharmaceutical Research</i> , 2008, 25, 2657-2665.	1.7	19
84	Transient Hepatic Overexpression of Insulin-Like Growth Factor 2 Induces Free Cholesterol and Lipid Droplet Formation. <i>Frontiers in Physiology</i> , 2016, 7, 147.	1.3	19
85	Helicobacter and the Potential Role in Neurological Disorders: There Is More Than Helicobacter pylori. <i>Frontiers in Immunology</i> , 2020, 11, 584165.	2.2	19
86	High-precision isotopic analysis of Mg and Ca in biological samples using multi-collector ICP-mass spectrometry after their sequential chromatographic isolation – Application to the characterization of the body distribution of Mg and Ca isotopes in mice. <i>Analytica Chimica Acta</i> , 2020, 1130, 137-145.	2.6	18
87	Decreased TNF Levels and Improved Retinal Ganglion Cell Survival in MMP-2 Null Mice Suggest a Role for MMP-2 as TNF Sheddase. <i>Mediators of Inflammation</i> , 2015, 2015, 1-13.	1.4	17
88	Mice Overexpressing $\beta$ -1,4-Galactosyltransferase I Are Resistant to TNF-Induced Inflammation and DSS-Induced Colitis. <i>PLoS ONE</i> , 2013, 8, e79883.	1.1	16
89	A Study of Cecal Ligation and Puncture-Induced Sepsis in Tissue-Specific Tumor Necrosis Factor Receptor 1-Deficient Mice. <i>Frontiers in Immunology</i> , 2019, 10, 2574.	2.2	16
90	Special delEVery: Extracellular Vesicles as Promising Delivery Platform to the Brain. <i>Biomedicines</i> , 2021, 9, 1734.	1.4	16

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91	Hematopoietic plakophilin $\beta$ regulates acute tissue-specific and systemic inflammation in mice. <i>European Journal of Immunology</i> , 2015, 45, 2898-2910.	1.6	14
92	With mouse age comes wisdom: A review and suggestions of relevant mouse models for age-related conditions. <i>Mechanisms of Ageing and Development</i> , 2016, 160, 54-68.	2.2	14
93	Antisense oligonucleotides against TNFR1 prevent toxicity of TNF/IFN $\gamma$ treatment in mouse tumor models. <i>International Journal of Cancer</i> , 2014, 135, 742-750.	2.3	13
94	Anti-Inflammatory Mesenchymal Stromal Cell-Derived Extracellular Vesicles Improve Pathology in Niemann-Pick C Disease. <i>Biomedicines</i> , 2021, 9, 1864.	1.4	13
95	Magnetic layer-by-layer coated particles for efficient MRI of dendritic cells and mesenchymal stem cells. <i>Nanomedicine</i> , 2014, 9, 1363-1376.	1.7	12
96	Choose your models wisely: How different murine bone marrow-derived dendritic cell protocols influence the success of nanoparticulate vaccines in vitro. <i>Journal of Controlled Release</i> , 2014, 195, 138-146.	4.8	12
97	Simultaneous Inhibition of Tumor Necrosis Factor Receptor 1 and Matrix Metalloproteinase 8 Completely Protects Against Acute Inflammation and Sepsis. <i>Critical Care Medicine</i> , 2018, 46, e67-e75.	0.4	12
98	Synthesis and Validation of a Hydroxypyronone-Based, Potent, and Specific Matrix Metalloproteinase-12 Inhibitor with Anti-Inflammatory Activity <i>In Vitro</i> and <i>In Vivo</i> . <i>Mediators of Inflammation</i> , 2015, 2015, 1-9.	1.4	11
99	Profiling of Extracellular Small RNAs Highlights a Strong Bias towards Non-Vesicular Secretion. <i>Cells</i> , 2021, 10, 1543.	1.8	11
100	Evaluation of Digitally Encoded Layer-by-Layer Coated Microparticles as Cell Carriers. <i>Advanced Functional Materials</i> , 2008, 18, 2716-2723.	7.8	10
101	The N-terminal p.(Ser38Cys) <i>TIMP3</i> mutation underlying Sorsby fundus dystrophy is a founder mutation disrupting an intramolecular disulfide bond. <i>Human Mutation</i> , 2019, 40, 539-551.	1.1	10
102	Fighting fire with fire: The immune system might be key in our fight against Alzheimer's disease. <i>Drug Discovery Today</i> , 2022, 27, 1261-1283.	3.2	10
103	Modulation of Dendritic Cells by Lipid Grafted Polyelectrolyte Microcapsules. <i>Advanced Functional Materials</i> , 2012, 22, 4236-4243.	7.8	9
104	Involvement of the Choroid Plexus in the Pathogenesis of Niemann-Pick Disease Type C. <i>Frontiers in Cellular Neuroscience</i> , 2021, 15, 757482.	1.8	9
105	Tightening the retinal glia limitans attenuates neuroinflammation after optic nerve injury. <i>Glia</i> , 2020, 68, 2643-2660.	2.5	8
106	Roles of the Choroid Plexus in Aging. <i>Physiology in Health and Disease</i> , 2020, , 209-232.	0.2	7
107	Determining differentially expressed miRNAs and validating miRNA-target relationships using the SPRET/Ei mouse strain. <i>Mammalian Genome</i> , 2015, 26, 94-107.	1.0	6
108	Interferons: A molecular switch between damage and repair in ageing and Alzheimer's disease. <i>Mechanisms of Ageing and Development</i> , 2019, 183, 111148.	2.2	6

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109	Effect of Endotoxemia Induced by Intraperitoneal Injection of Lipopolysaccharide on the Mg isotopic Composition of Biofluids and Tissues in Mice. <i>Frontiers in Medicine</i> , 2021, 8, 664666.	1.2	6
110	Choroid plexus tumor necrosis factor receptor 1: A new neuroinflammatory piece of the complex Alzheimer's disease puzzle. <i>Neural Regeneration Research</i> , 2019, 14, 1144.	1.6	6
111	Efficient analysis of mouse genome sequences reveal many nonsense variants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 5670-5675.	3.3	5
112	Quantifying the Average Number of Nucleic Acid Therapeutics per Nanocarrier by Single Particle Tracking Microscopy. <i>Molecular Pharmaceutics</i> , 2018, 15, 1142-1149.	2.3	3
113	Gastric <i>Helicobacter suis</i> Infection Partially Protects against Neurotoxicity in A 6-OHDA Parkinson's Disease Mouse Model. <i>International Journal of Molecular Sciences</i> , 2021, 22, 11328.	1.8	2
114	Comment on "Tumor necrosis factor- $\alpha$ plays a significant role in the Aldara-induced skin inflammation in mice". <i>British Journal of Dermatology</i> , 2016, 174, 1419-1419.	1.4	1
115	O4-1105: Endothelial-LRP1 Clears Major Amounts of Abeta 1-42 Across the Blood-Brain Barrier. <i>Alzheimer's and Dementia</i> , 2016, 12, P361.	0.4	0
116	P1-180: AN ULTRASTRUCTURAL STUDY OF THE MORPHOLOGICAL ALTERATIONS OF THE CHOROID PLEXUS EPITHELIUM IN ALZHEIMER'S DISEASE. <i>Alzheimer's and Dementia</i> , 2018, 14, P347.	0.4	0
117	S5-0104: SYSTEMIC INFLAMMATION SIGNALING TO THE BRAIN. <i>Alzheimer's and Dementia</i> , 2019, 15, .	0.4	0
118	Morphological alterations of the choroid plexus epithelium in Alzheimer's disease. <i>Alzheimer's and Dementia</i> , 2020, 16, e045752.	0.4	0
119	Choroid-plexus derived extracellular vesicles in Alzheimer's disease and Parkinson's disease: spreading the word. <i>Frontiers in Neuroscience</i> , 0, 13, .	1.4	0
120	Targeting neuroinflammation and the blood-cerebrospinal fluid barrier as a potential treatment for neurological disorders?. <i>Frontiers in Neuroscience</i> , 0, 13, .	1.4	0
121	Pathogen Invasion Reveals the Differential Plasticity and Fate of Resident and Recruited Brain Macrophages During the Onset and Resolution of Disease. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0