Alexander L Klibanov

List of Publications by Citations

92 papers	7,596 citations	40 h-index	87 g-index
114 ext. papers	8,421 ext. citations	7.9 avg, IF	6.04 L-index

#	Paper	IF	Citations
92	Amphipathic polyethyleneglycols effectively prolong the circulation time of liposomes. *FEBS Letters*, **1990**, 268, 235-7	3.8	1570
91	Imaging tumor angiogenesis with contrast ultrasound and microbubbles targeted to alpha(v)beta3. *Circulation*, **2003**, 108, 336-41	16.7	400
90	Ultrasound assessment of inflammation and renal tissue injury with microbubbles targeted to P-selectin. *Circulation*, **2001**, 104, 2107-12	16.7	372
89	Microbubble contrast agents: targeted ultrasound imaging and ultrasound-assisted drug-delivery applications. *Investigative Radiology*, **2006**, 41, 354-62	10.1	306
88	Noninvasive ultrasound imaging of inflammation using microbubbles targeted to activated leukocytes. *Circulation*, **2000**, 102, 2745-50	16.7	261
87	Targeted delivery of gas-filled microspheres, contrast agents for ultrasound imaging. *Advanced Drug Delivery Reviews*, **1999**, 37, 139-157	18.5	234
86	Targeted tissue transfection with ultrasound destruction of plasmid-bearing cationic microbubbles. *Ultrasound in Medicine and Biology*, **2003**, 29, 1759-67	3.5	231
85	Ultrasound imaging of acute cardiac transplant rejection with microbubbles targeted to intercellular adhesion molecule-1. *Circulation*, **2003**, 108, 218-24	16.7	217
84	Microbubble persistence in the microcirculation during ischemia/reperfusion and inflammation is caused by integrin- and complement-mediated adherence to activated leukocytes. *Circulation*, **2000**, 101, 668-75	16.7	201
83	Ligand-carrying gas-filled microbubbles: ultrasound contrast agents for targeted molecular imaging. *Bioconjugate Chemistry*, **2005**, 16, 9-17	6.3	198
82	Binding and detachment dynamics of microbubbles targeted to P-selectin under controlled shear flow. *Journal of Controlled Release*, **2004**, 96, 473-82	11.7	182
81	Non-invasive delivery of stealth, brain-penetrating nanoparticles across the blood-brain barrier using MRI-guided focused ultrasound. *Journal of Controlled Release*, **2014**, 189, 123-132	11.7	177
80	Detection of individual microbubbles of ultrasound contrast agents: imaging of free-floating and targeted bubbles. *Investigative Radiology*, **2004**, 39, 187-95	10.1	156
79	Noninvasive imaging of myocardial reperfusion injury using leukocyte-targeted contrast echocardiography. *Circulation*, **2002**, 105, 1764-7	16.7	147
78	Therapeutic arteriogenesis by ultrasound-mediated VEGF165 plasmid gene delivery to chronically ischemic skeletal muscle. *Circulation Research*, **2007**, 101, 295-303	15.7	145
77	Ultrasound-triggered release of materials entrapped in microbubble-liposome constructs: a tool for targeted drug delivery. *Journal of Controlled Release*, **2010**, 148, 13-17	11.7	137
76	Methyl-CpG Binding Protein 2 Regulates Microglia and Macrophage Gene Expression in Response to Inflammatory Stimuli. *Immunity*, **2015**, 42, 679-91	32.3	125

75	Macrophages redirect phagocytosis by non-professional phagocytes and influence inflammation. *Nature*, **2016**, 539, 570-574	50.4	121
74	Optical observation of contrast agent destruction. *Applied Physics Letters*, **2000**, 77, 1056	3.4	113
73	Deformable gas-filled microbubbles targeted to P-selectin. *Journal of Controlled Release*, **2006**, 114, 288-99	11.7	110
72	Acoustic radiation force enhances targeted delivery of ultrasound contrast microbubbles: in vitro verification. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2005**, 52, 421-33	3.2	108
71	Influence of microbubble surface charge on capillary transit and myocardial contrast enhancement. *Journal of the American College of Cardiology*, **2002**, 40, 811-9	15.1	106
70	Ultrasound molecular imaging with targeted microbubble contrast agents. *Journal of Nuclear Cardiology*, **2007**, 14, 876-84	2.1	105
69	Targeted in vivo labeling of receptors for vascular endothelial growth factor: approach to identification of ischemic tissue. *Circulation*, **2003**, 108, 97-103	16.7	105
68	Targeted gene transfer to the brain via the delivery of brain-penetrating DNA nanoparticles with focused ultrasound. *Journal of Controlled Release*, **2016**, 223, 109-117	11.7	104
67	scVEGF microbubble ultrasound contrast agents: a novel probe for ultrasound molecular imaging of tumor angiogenesis. *Investigative Radiology*, **2010**, 45, 579-85	10.1	104
66	Enhanced targeting of ultrasound contrast agents using acoustic radiation force. *Ultrasound in Medicine and Biology*, **2007**, 33, 1132-9	3.5	102
65	Preparation of targeted microbubbles: ultrasound contrast agents for molecular imaging. *Medical and Biological Engineering and Computing*, **2009**, 47, 875-82	3.1	101
64	Targeting mucosal addressin cellular adhesion molecule (MAdCAM)-1 to noninvasively image experimental Crohn's disease. *Gastroenterology*, **2006**, 130, 8-16	13.3	92
63	Novel Focused Ultrasound Gene Therapy Approach Noninvasively Restores Dopaminergic Neuron Function in a Rat Parkinson's Disease Model. *Nano Letters*, **2017**, 17, 3533-3542	11.5	87
62	Microbubbles induce renal hemorrhage when exposed to diagnostic ultrasound in anesthetized rats. *Ultrasound in Medicine and Biology*, **2002**, 28, 1535-46	3.5	79
61	The Influence of Tiered Layers of Surface-Grafted Poly(ethylene glycol) on Receptor−Ligand-Mediated Adhesion between Phospholipid Monolayer-Stabilized Microbubbles and Coated Glass Beads. *Langmuir*, **2000**, 16, 2808-2817	4	78
60	MR-guided focused ultrasound surgery, present and future. *Medical Physics*, **2013**, 40, 080901	4.4	75
59	Nanobody-coupled microbubbles as novel molecular tracer. *Journal of Controlled Release*, **2012**, 158, 346-53	11.7	70
58	Microglial Cells Prevent Hemorrhage in Neonatal Focal Arterial Stroke. *Journal of Neuroscience*, **2016**, 36, 2881-93	6.6	59

57	Targeting and ultrasound imaging of microbubble-based contrast agents. *Magnetic Resonance Materials in Physics, Biology, and Medicine*, **1999**, 8, 177-84	2.8	58
56	Ultrasound in Radiology: From Anatomic, Functional, Molecular Imaging to Drug Delivery and Image-Guided Therapy. *Investigative Radiology*, **2015**, 50, 657-70	10.1	52
55	Histamine induces microglia activation and dopaminergic neuronal toxicity via H1 receptor activation. *Journal of Neuroinflammation*, **2016**, 13, 137	10.1	52
54	Targeting of microbubbles: contrast agents for ultrasound molecular imaging. *Journal of Drug Targeting*, **2018**, 26, 420-434	5.4	50
53	Augmentation of brain tumor interstitial flow via focused ultrasound promotes brain-penetrating nanoparticle dispersion and transfection. *Science Advances*, **2020**, 6, eaay1344	14.3	43
52	Plectin-targeted liposomes enhance the therapeutic efficacy of a PARP inhibitor in the treatment of ovarian cancer. *Theranostics*, **2018**, 8, 2782-2798	12.1	40
51	Development of target-specific liposomes for delivering small molecule drugs after reperfused myocardial infarction. *Journal of Controlled Release*, **2015**, 220, 556-567	11.7	39
50	Oscillatory Dynamics and In Vivo Photoacoustic Imaging Performance of Plasmonic Nanoparticle-Coated Microbubbles. *Small*, **2015**, 11, 3066-77	11	37
49	Markedly enhanced skeletal muscle transfection achieved by the ultrasound-targeted delivery of non-viral gene nanocarriers with microbubbles. *Journal of Controlled Release*, **2012**, 162, 414-21	11.7	33
48	Therapy of prostate cancer using a novel cancer terminator virus and a small molecule BH-3 mimetic. *Oncotarget*, **2015**, 6, 10712-27	3.3	25
47	Sonoselective transfection of cerebral vasculature without blood-brain barrier disruption. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 5644-5654	11.5	24
46	High-resolution myocardial perfusion imaging in mice with high-frequency echocardiographic detection of a depot contrast agent. *Journal of the American Society of Echocardiography*, **2007**, 20, 136-43	5.8	23
45	Ultra-Low-Dose Ultrasound Molecular Imaging for the Detection of Angiogenesis in a Mouse Murine Tumor Model: How Little Can We See?. *Investigative Radiology*, **2016**, 51, 758-766	10.1	19
44	Synthesis and characterization of transiently stable albumin-coated microbubbles via a flow-focusing microfluidic device. *Ultrasound in Medicine and Biology*, **2014**, 40, 400-9	3.5	19
43	Formation of Microbubbles for Targeted Ultrasound Contrast Imaging: Practical Translation Considerations. *Langmuir*, **2019**, 35, 10034-10041	4	18
42	Co-administration of Microbubbles and Drugs in Ultrasound-Assisted Drug Delivery: Comparison with Drug-Carrying Particles. *Advances in Experimental Medicine and Biology*, **2016**, 880, 205-20	3.6	17
41	Localized in vivo model drug delivery with intravascular ultrasound and microbubbles. *Ultrasound in Medicine and Biology*, **2014**, 40, 2458-67	3.5	16
40	Intravascular ultrasound catheter to enhance microbubble-based drug delivery via acoustic radiation force. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2012**, 59, 2156-66	3.2	15

39	Muscle-derived extracellular superoxide dismutase inhibits endothelial activation and protects against multiple organ dysfunction syndrome in mice. *Free Radical Biology and Medicine*, **2017**, 113, 212-223	7.8	14
38	Ultrasound-based measurement of molecular marker concentration in large blood vessels: a feasibility study. *Ultrasound in Medicine and Biology*, **2015**, 41, 222-34	3.5	14
37	Synthesis and Testing of Modular Dual-Modality Nanoparticles for Magnetic Resonance and Multispectral Photoacoustic Imaging. *Bioconjugate Chemistry*, **2016**, 27, 383-90	6.3	13
36	Shear Forces from Flow Are Responsible for a Distinct Statistical Signature of Adherent Microbubbles in Large Vessels. *Molecular Imaging*, **2013**, 12, 7290.2013.00057	3.7	13
35	Focal areas of increased lipid concentration on the coating of microbubbles during short tone-burst ultrasound insonification. *PLoS ONE*, **2017**, 12, e0180747	3.7	13
34	Reducing Neointima Formation in a Swine Model with IVUS and Sirolimus Microbubbles. *Annals of Biomedical Engineering*, **2015**, 43, 2642-51	4.7	12
33	From Anatomy to Functional and Molecular Biomarker Imaging and Therapy: Ultrasound Is Safe, Ultrafast, Portable, and Inexpensive. *Investigative Radiology*, **2020**, 55, 559-572	10.1	12
32	Ultrasound Contrast: Gas Microbubbles in the Vasculature. *Investigative Radiology*, **2021**, 56, 50-61	10.1	12
31	Non-Invasive, Focal Disconnection of Brain Circuitry Using Magnetic Resonance-Guided Low-Intensity Focused Ultrasound to Deliver a Neurotoxin. *Ultrasound in Medicine and Biology*, **2016**, 42, 2261-9	3.5	11
30	Ultrasound contrast materials in cardiovascular medicine: from perfusion assessment to molecular imaging. *Journal of Cardiovascular Translational Research*, **2013**, 6, 729-39	3.3	11
29	In Vitro Sonothrombolysis Enhancement by Transiently Stable Microbubbles Produced by a Flow-Focusing Microfluidic Device. *Annals of Biomedical Engineering*, **2018**, 46, 222-232	4.7	10
28	The local effects of ovarian diathermy in an ovine model of polycystic ovary syndrome. *PLoS ONE*, **2014**, 9, e111280	3.7	9
27	Efficacy of Sonothrombolysis Using Microbubbles Produced by a Catheter-Based Microfluidic Device in a Rat Model of Ischemic Stroke. *Annals of Biomedical Engineering*, **2019**, 47, 1012-1022	4.7	8
26	Validation of Normalized Singular Spectrum Area as a Classifier for Molecularly Targeted Microbubble Adherence. *Ultrasound in Medicine and Biology*, **2019**, 45, 2493-2501	3.5	8
25	Evaluation of pharmacokinetic and pharmacodynamic profiles of liposomes for the cell type-specific delivery of small molecule drugs. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2017**, 13, 2565-2574	6	8
24	Size Exclusion HPLC Detection of Small-Size Impurities as a Complementary Means for Quality Analysis of Extracellular Vesicles. *Journal of Circulating Biomarkers*, **2015**, 4, 6	3.3	8
23	Bubble Cloud Behavior and Ablation Capacity for Histotripsy Generated from Intrinsic or Artificial Cavitation Nuclei. *Ultrasound in Medicine and Biology*, **2021**, 47, 620-639	3.5	8
22	Pulsed ultrasound attenuates the hyperglycemic exacerbation of myocardial ischemia-reperfusion injury. *Journal of Thoracic and Cardiovascular Surgery*, **2021**, 161, e297-e306	1.5	6

21	Intravascular ultrasound mediated delivery of DNA via microbubble carriers to an injured porcine artery in vivo **2008**,		5
20	Targeted Ultrasound Contrast Imaging of Tumor Vasculature With Positively Charged Microbubbles. *Investigative Radiology*, **2020**, 55, 736-740	10.1	5
19	Moving toward Noninvasive, Focused Ultrasound Therapeutic Delivery of Drugs in the Brain: Prolonged Opening of Blood-Brain Barrier May Not Be Needed. *Radiology*, **2019**, 291, 467-468	20.5	4
18	Vancomycin-decorated microbubbles as a theranostic agent for Staphylococcus aureus biofilms. *International Journal of Pharmaceutics*, **2021**, 609, 121154	6.5	3
17	Monitoring Oxygenation Levels Deep in the Tumor Core: Noninvasive Imaging of Hypoxia, Now in Real-Time 3D. *Cancer Research*, **2019**, 79, 4577-4579	10.1	2
16	Closed-loop feedback control of microbubble diameter from a flow-focusing microfluidic device. *Biomicrofluidics*, **2020**, 14, 034101	3.2	2
15	Acoustically active red blood cell carriers for ultrasound-triggered drug delivery with photoacoustic tracking **2015**,		2
14	Ultrasound Molecular Imaging of Cancer: Design and Formulation Strategies of Targeted Contrast Agents. *Recent Results in Cancer Research*, **2020**, 216, 319-336	1.5	2
13	Importance of thorough tissue and cellular level characterization of targeted drugs in the evaluation of pharmacodynamic effects. *PLoS ONE*, **2019**, 14, e0224917	3.7	1
12	The use of acoustic radiation force decorrelation weighted pulse inversion (ADW-PI) in enhancing microbubble contrast **2015**,		1
11	Multifunction intravascular ultrasound for microbubble based drug delivery **2012**,		1
10	Preparation, Administration, and Assessment of In vivo Tissue-Specific Cellular Uptake of Fluorescent Dye-Labeled Liposomes. *Journal of Visualized Experiments*, **2020**,	1.6	1
9	Photoacoustic imaging of stimuli-responsive red blood cell drug delivery agents **2016**,		1
8	Dynamic Filtering of Adherent and Non-adherent Microbubble Signals Using Singular Value Thresholding and Normalized Singular Spectrum Area Techniques. *Ultrasound in Medicine and Biology*, **2021**, 47, 3240-3252	3.5	1
7	Identification of Novel Ligands for Targeted Antifibrotic Therapy of Chronic Pancreatitis. *International Journal of Nanomedicine*, **2021**, 16, 5495-5512	7.3	0
6	Regulation of L-selectin-dependent hydrodynamic shear thresholding by leukocyte deformability and shear dependent bond number. *Biorheology*, **2015**, 52, 415-32	1.7	
5	Nanoengineering at the Gas□liquid Interface: Gas-Filled Microbubbles as Tools for Molecular Imaging and Drug Delivery. *Frontiers in Nanobiomedical Research*, **2014**, 127-143		
4	Noninvasive disconnection of targeted neuronal circuitry sparing axons of passage and nonneuronal cells. *Journal of Neurosurgery*, **2021**, 1-11	3.2	

List of Publications

3	Therapeutic Arteriogenesis via the Ultrasound-Microbubble-Targeted Delivery of Fibroblast Growth Factor-2 (FGF-2) Bearing Poly(Lactic-Co-Glycolic Acid) Nanoparticles. *FASEB Journal*, **2008**, 22, 1147.1	0.9
2	Dual targeted molecular imaging for atherosclerotic plaque detection. *FASEB Journal*, **2008**, 22, 924.22	0.9
1	VEGFR-2 Targeted Microbubble Contrast Agents for Ultrasound Molecular Imaging of Tumor Angiogenesis. *FASEB Journal*, **2009**, 23, LB337	0.9