Zaver M Bhujwalla

List of Publications by Year
in descending order

114 papers	4,359 citations	117625 34 h-index	123424 61 g-index
119 all docs	119 docs citations	119 times ranked	6798 citing authors

#	Article	IF	Citations
1	Choline metabolism in malignant transformation. Nature Reviews Cancer, 2011, 11, 835-848.	28.4	651
2	In vivo imaging of extracellular pH using1H MRSI. Magnetic Resonance in Medicine, 1999, 41, 743-750.	3.0	303
3	RNA Interferenceâ€“Mediated Choline Kinase Suppression in Breast Cancer Cells Induces Differentiation and Reduces Proliferation. Cancer Research, 2005, 65, 11034-11043.	0.9	165
4	â€˜The Metabolism of Tumoursâ€™: 70 Years Later. Novartis Foundation Symposium, 2008, , 251-264.	1.1	152
5	Targeting Phospholipid Metabolism in Cancer. Frontiers in Oncology, 2016, 6, 266.	2.8	146
6	Targeting Glutamine Metabolism in Breast Cancer with Aminooxyacetate. Clinical Cancer Research, 2015, 21, 3263-3273.	7.0	129
7	Choline metabolism-based molecular diagnosis of cancer: an update. Expert Review of Molecular Diagnostics, 2015, 15, 735-747.	3.1	99
8	Collagen I fiber density increases in lymph node positive breast cancers: pilot study. Journal of Biomedical Optics, 2012, 17, 116017.	2.6	95
9	PSMA-Targeted Theranostic Nanoplex for Prostate Cancer Therapy. ACS Nano, 2012, 6, 7752-7762.	14.6	95
10	Nm23-transfected MDA-mB-435 human breast carcinoma cells form tumors with altered phospholipid metabolism and pH: A31P nuclear magnetic resonance study in vivo and in vitro. Magnetic Resonance in Medicine, 1999, 41, 897-903.	3.0	91
11	Reduction of vascular and permeable regions in solid tumors detected by macromolecular contrast magnetic resonance imaging after treatment with antiangiogenic agent TNP-470. Clinical Cancer Research, 2003, 9, 355-62.	7.0	86
12	Hypoxic Tumor Microenvironments Reduce Collagen I Fiber Density. Neoplasia, 2010, 12, 608-617.	5.3	73
13	Choline Kinase Down-regulation Increases the Effect of 5-Fluorouracil in Breast Cancer Cells. Cancer Research, 2007, 67, 11284-11290.	0.9	71
14	Characterizing Vascular Parameters in Hypoxic Regions: A Combined Magnetic Resonance and Optical Imaging Study of a Human Prostate Cancer Model. Cancer Research, 2006, 66, 9929-9936.	0.9	65
15	Phototheranostics of CD44-positive cell populations in triple negative breast cancer. Scientific Reports, 2016, 6, 27871.	3.3	64
16	MALDI-Mass Spectrometric Imaging Revealing Hypoxia-Driven Lipids and Proteins in a Breast Tumor Model. Analytical Chemistry, 2015, 87, 5947-5956.	6.5	61
17	Synthesis and Evaluation of Gd^{III}â€Based Magnetic Resonance Contrast Agents for Molecular Imaging of Prostateâ€Specific Membrane Antigen. Angewandte Chemie - International Edition, 2015, 54, 10778-10782.	13.8	57
18	Nanoplex Delivery of siRNA and Prodrug Enzyme for Multimodality Image-Guided Molecular Pathway Targeted Cancer Therapy. ACS Nano, 2010, 4, 6707-6716.	14.6	54

#	Article	IF	Citations
19	Molecular Imaging of the Tumor Microenvironment for Precision Medicine and Theranostics. Advances in Cancer Research, 2014, 124, 235-256.	5.0	54
20	Metastatic breast cancer cells in lymph nodes increase nodal collagen density. Scientific Reports, 2015, 5, 10002.	3.3	54
21	Structure and Function of a Prostate Cancer Disseminationâ€“Permissive Extracellular Matrix. Clinical Cancer Research, 2017, 23, 2245-2254.	7.0	53
22	Silencing of Cyclooxygenase-2 Inhibits Metastasis and Delays Tumor Onset of Poorly Differentiated Metastatic Breast Cancer Cells. Molecular Cancer Research, 2007, 5, 435-442.	3.4	52
23	Microglia activation in a pediatric rabbit model of tuberculous meningitis. DMM Disease Models and Mechanisms, 2016, 9, 1497-1506.	2.4	51
24	COX-2 in cancer: Gordian knot or Achilles heel?. Frontiers in Pharmacology, 2013, 4, 34.	3.5	47
25	Developing imidazoles as CEST MRI pH sensors. Contrast Media and Molecular Imaging, 2016, 11, 304-312.	0.8	47
26	Metabolic Imaging of Pancreatic Ductal Adenocarcinoma Detects Altered Choline Metabolism. Clinical Cancer Research, 2015, 21, 386-395.	7.0	42
27	The Tumor Microenvironment Modulates Choline and Lipid Metabolism. Frontiers in Oncology, 2016, 6, 262.	2.8	42
28	Breast cancer cell cyclooxygenase-2 expression alters extracellular matrix structure and function and numbers of cancer associated fibroblasts. Oncotarget, 2017, 8, 17981-17994.	1.8	42
29	Image-Guided Enzyme/Prodrug Cancer Therapy. Clinical Cancer Research, 2008, 14, 515-522.	7.0	41
30	Choline Metabolism Alteration: A Focus on Ovarian Cancer. Frontiers in Oncology, 2016, 6, 153.	2.8	40
31	Molecular Effects of Doxorubicin on Choline Metabolism in Breast Cancer. Neoplasia, 2017, 19, 617-627.	5.3	40
32	A PSMA-targeted theranostic agent for photodynamic therapy. Journal of Photochemistry and Photobiology B: Biology, 2017, 167, 111-116.	3.8	39
33	The Physiological Environment in Cancer Vascularization, Invasion and Metastasis. Novartis Foundation Symposium, 2008, 240, 23-45.	1.1	36
34	Targeting choline phospholipid metabolism: GDPD5 and GDPD6 silencing decrease breast cancer cell proliferation, migration, and invasion. NMR in Biomedicine, 2016, 29, 1098-1107.	2.8	36
35	PSMA-specific theranostic nanoplex for combination of TRAIL gene and 5-FC prodrug therapy of prostate cancer. Biomaterials, 2016, 80, 57-67.	11.4	36
36	In Vivo Selective Measurement of {1â˜’13C}-Glucose Metabolism in Tumors by Heteronuclear Cross Polarization. Magnetic Resonance in Medicine, 1995, 33, 151-155.	3.0	35

#	Article	IF	Citations
37	Breast cancer cell adhesome and degradome interact to drive metastasis. Npj Breast Cancer, 2015, 1, 15017.	5.2	35
38	Phospholipase D1 and choline kinase-Î± are interactive targets in breast cancer. Cancer Biology and Therapy, 2014, 15, 593-601.	3.4	33
39	Ascites Volumes and the Ovarian Cancer Microenvironment. Frontiers in Oncology, 2018, 8, 595.	2.8	33
40	A fully human CXCR4 antibody demonstrates diagnostic utility and therapeutic efficacy in solid tumor xenografts. Oncotarget, 2016, 7, 12344-12358.	1.8	32
41	Determination of Absolute Phosphate Metabolite Concentrations in RIF-1 Tumors in Vivo by31P-1H-2H NMR Spectroscopy Using Water as an Internal Intensity Reference. Magnetic Resonance in Medicine, 1992, 28, 105-121.	3.0	31
42	Two-compartment model for determination of glycolytic rates of solid tumors byin vivo13C NMR spectroscopy. , 1998, 11, 395-404.		30
43	Optimized acriflavine-loaded lipid nanocapsules as a safe and effective delivery system to treat breast cancer. International Journal of Pharmaceutics, 2018, 551, 322-328.	5.2	30
44	Real-time measurements of cellular oxygen consumption, pH, and energy metabolism using nuclear magnetic resonance spectroscopy. Magnetic Resonance in Medicine, 2001, 45, 749-755.	3.0	29
45	Choline kinase-Î± protein and phosphatidylcholine but not phosphocholine are required for breast cancer cell survival. NMR in Biomedicine, 2015, 28, 1697-1706.	2.8	29
46	Combining Optical Reporter Proteins with Different Half-lives to Detect Temporal Evolution of Hypoxia and Reoxygenation in Tumors. Neoplasia, 2015, 17, 871-881.	5.3	29
47	The Impact of the COVID-19 Pandemic on the Radiology Research Enterprise: Radiology Scientific Expert Panel. Radiology, 2020, 296, E134-E140.	7.3	29
48	HIF isoforms have divergent effects on invasion, metastasis, metabolism and formation of lipid droplets. Oncotarget, 2015, 6, 28104-28119.	1.8	29
49	Pharmacokinetics of the13C labeled anticancer agent temozolomide detectedin vivo by selective cross-polarization transfer. Magnetic Resonance in Medicine, 1995, 34, 338-342.	3.0	28
50	¹H NMR spectroscopy of subcutaneous tumors in mice: Preliminary studies of effects of growth, chemotherapy and blood flow reduction. NMR in Biomedicine, 1992, 5, 296-302.	2.8	27
51	Proton NMR Observation of the Antineoplastic Agent IproplatinIn Vivo by Selective Multiple Quantum Coherence Transfer (Sel-MQC). Magnetic Resonance in Medicine, 1995, 33, 414-416.	3.0	27
52	Acid-degradable Dextran as an Image Guided siRNA Carrier for COX-2 Downregulation. Theranostics, 2018, 8, 1-12.	10.0	27
53	Collagen fibers mediate MRI-detected water diffusion and anisotropy in breast cancers. Neoplasia, 2016, 18, 585-593.	5.3	25
54	Hypoxia Inducible Factors Modify Collagen I Fibers in MDA-MB-231 Triple Negative Breast Cancer Xenografts. Neoplasia, 2018, 20, 131-139.	5.3	25

#	Article	IF	Citations
55	Translating preclinical MRI methods to clinical oncology. Journal of Magnetic Resonance Imaging, 2019, 50, 1377-1392.	3.4	24
56	Effects of blood flow modifiers on tumor metabolism observedin vivo by proton magnetic resonance spectroscopic imaging. Magnetic Resonance in Medicine, 1996, 36, 204-211.	3.0	23
57	Choline Kinase Alpha Inhibition by EB-3D Triggers Cellular Senescence, Reduces Tumor Growth and Metastatic Dissemination in Breast Cancer. Cancers, 2018, 10, 391.	3.7	23
58	The Angiogenic Secretome in VEGF overexpressing Breast Cancer Xenografts. Scientific Reports, 2016, 6, 39460.	3.3	22
59	Theranostics and metabolotheranostics for precision medicine in oncology. Journal of Magnetic Resonance, 2018, 291, 141-151.	2.1	22
60	Molecular causes of elevated phosphoethanolamine in breast and pancreatic cancer cells. NMR in Biomedicine, 2018, 31, e3936.	2.8	21
61	Molecular and functional imaging insights into the role of hypoxia in cancer aggression. Cancer and Metastasis Reviews, 2019, 38, 51-64.	5.9	21
62	Hypoxia Patterns in Primary and Metastatic Prostate Cancer Environments. Neoplasia, 2019, 21, 239-246.	5.3	21
63	Metabolic consequences of HIF silencing in a triple negative human breast cancer xenograft. Oncotarget, 2018, 9, 15326-15339.	1.8	21
64	Global metabolic profile identifies choline kinase alpha as a key regulator of glutathione-dependent antioxidant cell defense in ovarian carcinoma. Oncotarget, 2015, 6, 11216-11230.	1.8	20
65	Degradable Dextran Nanopolymer as a Carrier for Choline Kinase (ChoK) siRNA Cancer Therapy. Nanomaterials, 2016, 6, 34.	4.1	19
66	Theranostic small interfering RNA nanoparticles in cancer precision nanomedicine. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2020, 12, e1595.	6.1	19
67	Targeting a cell surface vitamin D receptor on tumor-associated macrophages in triple-negative breast cancer. ELife, 2021, 10, .	6.0	18
68	Dual Probe with Fluorescent and Magnetic Properties for Imaging Solid Tumor Xenografts. Molecular Imaging, 2007, 6, 7290.2007.00006.	1.4	17
69	Metabolomic characterization of experimental ovarian cancer ascitic fluid. Metabolomics, 2017, 13, 1.	3.0	16
70	Hypoxia theranostics of a human prostate cancer xenograft and the resulting effects on the tumor microenvironment. Neoplasia, 2020, 22, 679-688.	5.3	16
71	Hypoxic Tumor Environments Exhibit Disrupted Collagen I Fibers and Low Macromolecular Transport. PLoS ONE, 2013, 8, e81869.	2.5	16
72	Effect of Pantethine on Ovarian Tumor Progression and Choline Metabolism. Frontiers in Oncology, 2016, 6, 244.	2.8	15

#	Article	IF	Citations
73	Unsupervised Deconvolution of Dynamic Imaging Reveals Intratumor Vascular Heterogeneity and Repopulation Dynamics. PLoS ONE, 2014, 9, e112143.	2.5	15
74	Glucose metabolism in RIF-1 tumors after reduction in blood flow: Anin Vivo13C and31P NMR study. Magnetic Resonance in Medicine, 1994, 32, 303-309.	3.0	14
75	Dynamics of prostate cancer cell invasion studied in vitro by NMR microscopy. Magnetic Resonance in Medicine, 1999, 42, 277-282.	3.0	13
76	A Biomimetic Collagen Derived Peptide Exhibits Anti-Angiogenic Activity in Triple Negative Breast Cancer. PLoS ONE, 2014, 9, e111901.	2.5	12
77	Prostate-specific membrane antigen (PSMA)-targeted photodynamic therapy enhances the delivery of PSMA-targeted magnetic nanoparticles to PSMA-expressing prostate tumors. Nanotheranostics, 2021, 5, 182-196.	5.2	12
78	PD-L1 siRNA Theranostics With a Dextran Nanoparticle Highlights the Importance of Nanoparticle Delivery for Effective Tumor PD-L1 Downregulation. Frontiers in Oncology, 2020, 10, 614365.	2.8	12
79	The PD-L1 metabolic interactome intersects with choline metabolism and inflammation. Cancer & Metabolism, 2021, 9, 10.	5.0	12
80	Deep learningâ€based classification of preclinical breast cancer tumor models using chemical exchange saturation transfer magnetic resonance imaging. NMR in Biomedicine, 2022, 35, e4626.	2.8	12
81	Transport-driven engineering of liposomes for delivery of Î±-particle radiotherapy to solid tumors: effect on inhibition of tumor progression and onset delay of spontaneous metastases. European Journal of Nuclear Medicine and Molecular Imaging, 2021, 48, 4246-4258.	6.4	11
82	Detection of Pancreatic Cancerâ€“Induced Cachexia Using a Fluorescent Myoblast Reporter System and Analysis of Metabolite Abundance. Cancer Research, 2016, 76, 1441-1450.	0.9	10
83	Brain metabolites in cholinergic and glutamatergic pathways are altered by pancreatic cancer cachexia. Journal of Cachexia, Sarcopenia and Muscle, 2020, 11, 1487-1500.	7.3	10
84	Non-invasive delivery of levodopa-loaded nanoparticles to the brain via lymphatic vasculature to enhance treatment of Parkinsonâ€™s disease. Nano Research, 2021, 14, 2749-2761.	10.4	10
85	Hypoxic cell cytotoxin tirapazamine induces acute changes in tumor energy metabolism and pH:A31p magnetic resonance spectroscopy study. Radiation Oncology Investigations, 1998, 6, 249-254.	0.9	8
86	Loss of P53 Function in Colon Cancer Cells Results in Increased Phosphocholine and Total Choline. Molecular Imaging, 2004, 3, 153535002004041.	1.4	8
87	Lymphatic endothelial cells actively regulate prostate cancer cell invasion. NMR in Biomedicine, 2016, 29, 904-911.	2.8	7
88	Effect of alginate microencapsulation on the catalytic efficiency andin vitroenzyme-prodrug therapeutic efficacy of cytosine deaminase and of recombinantE. coliexpressing cytosine deaminase. Journal of Microencapsulation, 2016, 33, 64-70.	2.8	7
89	Water and Collagen Content Are High in Pancreatic Cancer: Implications for Quantitative Metabolic Imaging. Frontiers in Oncology, 2020, 10, 599204.	2.8	5
90	In vivo imaging of extracellular pH using 1H MRSI. Magnetic Resonance in Medicine, 1999, 41, 743-750.	3.0	5

#	Article	IF	Citations
91	Two diverse carriers are better than one: A case study in Î±â€particle therapy for prostate specific membrane antigenâ€expressing prostate cancers. Bioengineering and Translational Medicine, 2022, 7, e10266.	7.1	5
92	Combination of Carriers with Complementary Intratumoral Microdistributions of Delivered Î±-Particles May Realize the Promise for ²²⁵Ac in Large, Solid Tumors. Journal of Nuclear Medicine, 2022, 63, 1223-1230.	5.0	5
93	Molecular and functional imaging of cancer. , 2009, 2009, 47-9.		4
94	Biguanide drugs enhance cytotoxic effects of cisplatin by depleting aspartate and NAD+ in sensitive cancer cells. Cancer Biology and Therapy, 2021, 22, 579-586.	3.4	4
95	PD-L1 near Infrared Photoimmunotherapy of Ovarian Cancer Model. Cancers, 2022, 14, 619.	3.7	4
96	Switchable multicoil array for MR micro-imaging of breast lesions. Magnetic Resonance in Medicine, 1999, 41, 569-574.	3.0	3
97	A Novel Method of Imaging Lysosomes in Living Human Mammary Epithelial Cells. Molecular Imaging, 2003, 2, 153535002003021.	1.4	3
98	Magnetic Resonance Spectroscopy of siRNA-Based Cancer Therapy. Methods in Molecular Biology, 2016, 1372, 37-47.	0.9	3
99	VEGF Overexpression Significantly Increases Nanoparticle-Mediated siRNA Delivery and Target-Gene Downregulation. Pharmaceutics, 2022, 14, 1260.	4.5	3
100	MRI and MRS of intact perfused cancer cell metabolism, invasion, and stromal cell interactions. NMR in Biomedicine, 2019, 32, e4053.	2.8	2
101	Challenges and Initiatives in Diversity, Equity and Inclusion in Cancer Molecular Imaging. Frontiers in Oncology, 2021, 11, 638692.	2.8	2
102	Hypoxia-Induced Reporter Genes with Different Half-Lives. Methods in Molecular Biology, 2018, 1790, 113-125.	0.9	1
103	Abstract 2896: Effects of hypoxia on normal prostate fibroblast and prostate cancer associated fibroblast metabolism and matrix degradation. , 2021, , .		1
104	Nm23â€transfected MDAâ€mBâ€435 human breast carcinoma cells form tumors with altered phospholipid metabolism and pH: A 31P nuclear magnetic resonance study in vivo and in vitro. Magnetic Resonance in Medicine, 1999, 41, 897-903.	3.0	1
105	Delayed Progression of Lung Metastases Following Delivery of a Prodrug-activating Enzyme. Anticancer Research, 2017, 37, 2195-2200.	1.1	1
106	Novel Imaging Agents for Molecular MR Imaging of Cancer. , 2005, , 1309-1341.		0
107	Direct facile screening of recombinant DNA vector constructs. Analytical Biochemistry, 2014, 450, 1-3.	2.4	0
108	Structural and functional roles of collagen 1 fibers in breast cancer metastasis: collagen 1 fiber density increases in lymph node-positive breast cancers. Breast Cancer Management, 2015, 4, 177-182.	0.2	0

#	Article	IF	Citations
109	Editorial: Exploring Cancer Metabolic Reprogramming through Molecular Imaging. Frontiers in Oncology, 2017, 7, 79.	2.8	0
110	Abstract 2353: Metabolic reprogramming by SLC1A5 downregulation in pancreatic cancer cells. , 2021, , .		0
111	Abstract 696: Phototheranostics of epithelioid sarcoma by targeting CD44 or EGFR. , 2021, , .		0
112	Novel antiangiogenic peptides inhibit tumor growth in breast cancer xenografts. FASEB Journal, 2009, 23, 761.1.	0.5	0
113	Cancer insights from magnetic resonance spectroscopy of cells and excised tumors. NMR in Biomedicine, 2022, , e4724.	2.8	0
114	Abstract 6353: Metabolic changes in the spleen and pancreas induced by PDAC xenografts with or without glutamine transporter downregulation. Cancer Research, 2022, 82, 6353-6353.	0.9	0