

Julien Valette

List of Publications by Year in descending order

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57
papers

1,763
citations

186265

28
h-index

302126

39
g-index

61
all docs

61
docs citations

61
times ranked

2592
citing authors

#	ARTICLE	IF	CITATIONS
1	Neurochemical changes in the rat prefrontal cortex following acute phencyclidine treatment: an <i>in vivo</i> localized ¹ H MRS study. <i>NMR in Biomedicine</i> , 2009, 22, 737-744.	2.8	83
2	New paradigm to assess brain cell morphology by diffusion-weighted MR spectroscopy <i>in vivo</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 6671-6676.	7.1	81
3	Long-circulating perfluorooctyl bromide nanocapsules for tumor imaging by ¹⁹ F MRI. <i>Biomaterials</i> , 2012, 33, 5593-5602.	11.4	69
4	<i>In vivo</i> imaging of brain glutamate defects in a knock-in mouse model of Huntington's disease. <i>NeuroImage</i> , 2016, 139, 53-64.	4.2	68
5	Insights into brain microstructure from <i>in vivo</i> DW-MRS. <i>NeuroImage</i> , 2018, 182, 97-116.	4.2	62
6	Proton-observed carbon-edited NMR spectroscopy in strongly coupled second-order spin systems. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 250-257.	3.0	58
7	Energy defects in Huntington's disease: Why <i>in vivo</i> evidence matters. <i>Biochemical and Biophysical Research Communications</i> , 2017, 483, 1084-1095.	2.1	57
8	A new paradigm for high-sensitivity ¹⁹ F magnetic resonance imaging of perfluorooctylbromide. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 1119-1124.	3.0	53
9	Neuron-astrocyte interactions in the regulation of brain energy metabolism: a focus on NMR spectroscopy. <i>Journal of Neurochemistry</i> , 2006, 99, 393-401.	3.9	51
10	Multimodal neuroimaging provides a highly consistent picture of energy metabolism, validating ³¹ P MRS for measuring brain ATP synthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 3988-3993.	7.1	47
11	Modeling diffusion of intracellular metabolites in the mouse brain up to very high diffusion-weighting: Diffusion in long fibers (almost) accounts for non-monoexponential attenuation. <i>Magnetic Resonance in Medicine</i> , 2017, 77, 343-350.	3.0	47
12	On the reliability of ¹³ C metabolic modeling with two-compartment neuronal-glia models. <i>Journal of Neuroscience Research</i> , 2007, 85, 3294-3303.	2.9	46
13	Isoflurane Strongly Affects the Diffusion of Intracellular Metabolites, as Shown by ¹ H Nuclear Magnetic Resonance Spectroscopy of the Monkey Brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2007, 27, 588-596.	4.3	45
14	Brain intracellular metabolites are freely diffusing along cell fibers in grey and white matter, as measured by diffusion-weighted MR spectroscopy in the human brain at 7 T. <i>Brain Structure and Function</i> , 2016, 221, 1245-1254.	2.3	44
15	NMR measurement of brain oxidative metabolism in monkeys using ¹³ C-labeled glucose without a ¹³ C radiofrequency channel. <i>Magnetic Resonance in Medicine</i> , 2004, 52, 33-40.	3.0	43
16	Anomalous Diffusion of Brain Metabolites Evidenced by Diffusion-Weighted Magnetic Resonance Spectroscopy <i>in Vivo</i> . <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2012, 32, 2153-2160.	4.3	43
17	¹⁹ F molecular MR imaging for detection of brain tumor angiogenesis: <i>in vivo</i> validation using targeted PFOB nanoparticles. <i>Angiogenesis</i> , 2013, 16, 171-179.	7.2	43
18	Diffusion-weighted magnetic resonance spectroscopy enables cell-specific monitoring of astrocyte reactivity <i>in vivo</i> . <i>NeuroImage</i> , 2019, 191, 457-469.	4.2	42

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19	In vivo CEST MR imaging of U87 mice brain tumor angiogenesis using targeted LipoCEST contrast agent at 7 T. <i>Magnetic Resonance in Medicine</i> , 2013, 69, 179-187.	3.0	40
20	pH as a Biomarker of Neurodegeneration in Huntington's Disease: A Translational Rodent-Human MRS Study. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2012, 32, 771-779.	4.3	39
21	RGD decoration of PEGylated polyester nanocapsules of perfluorooctyl bromide for tumor imaging: Influence of pre or post-functionalization on capsule morphology. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2014, 87, 170-177.	4.3	39
22	Alzheimer's disease-like APP processing in wild-type mice identifies synaptic defects as initial steps of disease progression. <i>Molecular Neurodegeneration</i> , 2016, 11, 5.	10.8	37
23	Can we detect the effect of spines and leaflets on the diffusion of brain intracellular metabolites?. <i>NeuroImage</i> , 2018, 182, 283-293.	4.2	37
24	High sensitivity ¹⁹ F MRI of a perfluorooctyl bromide emulsion: application to a dynamic biodistribution study and oxygen tension mapping in the mouse liver and spleen. <i>NMR in Biomedicine</i> , 2012, 25, 654-660.	2.8	36
25	Paclitaxel-loaded PEGylated nanocapsules of perfluorooctyl bromide as theranostic agents. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2016, 108, 136-144.	4.3	34
26	Glycolysis versus TCA Cycle in the Primate Brain as Measured by Combining 18F-FDG PET and 13C-NMR. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2005, 25, 1418-1423.	4.3	33
27	A new sequence for single-shot diffusion-weighted NMR spectroscopy by the trace of the diffusion tensor. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 1705-1712.	3.0	31
28	Intracellular metabolites in the primate brain are primarily localized in long fibers rather than in cell bodies, as shown by diffusion-weighted magnetic resonance spectroscopy. <i>NeuroImage</i> , 2014, 90, 374-380.	4.2	30
29	¹³ C NMR spectroscopy applications to brain energy metabolism. <i>Frontiers in Neuroenergetics</i> , 2013, 5, 9.	5.3	29
30	Metabolite diffusion up to very high <i>b</i> in the mouse brain in vivo: Revisiting the potential correlation between relaxation and diffusion properties. <i>Magnetic Resonance in Medicine</i> , 2017, 77, 1390-1398.	3.0	28
31	Imaging and spectroscopic approaches to probe brain energy metabolism dysregulation in neurodegenerative diseases. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017, 37, 1927-1943.	4.3	24
32	Optimized diffusion-weighted spectroscopy for measuring brain glutamate apparent diffusion coefficient on a whole-body MR system. <i>NMR in Biomedicine</i> , 2005, 18, 527-533.	2.8	23
33	The striatal kinase DCLK3 produces neuroprotection against mutant huntingtin. <i>Brain</i> , 2018, 141, 1434-1454.	7.6	23
34	Metabolic Modeling of Dynamic Brain ¹³ C NMR Multiplet Data: Concepts and Simulations with a Two-Compartment Neuronal-Glial Model. <i>Neurochemical Research</i> , 2012, 37, 2388-2401.	3.3	21
35	The Neuroprotective Agent CNTF Decreases Neuronal Metabolites in the Rat Striatum: An <i>In Vivo</i> Multimodal Magnetic Resonance Imaging Study. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2015, 35, 917-921.	4.3	21
36	Probing metabolite diffusion at ultra-short time scales in the mouse brain using optimized oscillating gradients and <i>echo</i> -time diffusion-weighted MRS. <i>NMR in Biomedicine</i> , 2017, 30, e3671.	2.8	20

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37	Brain Metabolite Diffusion from Ultra-Short to Ultra-Long Time Scales: What Do We Learn, Where Should We Go?. <i>Frontiers in Neuroscience</i> , 2018, 12, 2.	2.8	20
38	Diffusion-weighted NMR spectroscopy allows probing of ¹³ C labeling of glutamate inside distinct metabolic compartments in the brain. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 306-311.	3.0	17
39	Experimental strategies for in vivo ¹³ C NMR spectroscopy. <i>Analytical Biochemistry</i> , 2017, 529, 216-228.	2.4	17
40	Evidence for a metabolically inactive inorganic phosphate pool in adenosine triphosphate synthase reaction using localized ³¹ P saturation transfer magnetic resonance spectroscopy in the rat brain at 11.7 T. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2016, 36, 1513-1518.	4.3	15
41	Efficient GPU-based Monte-Carlo simulation of diffusion in real astrocytes reconstructed from confocal microscopy. <i>Journal of Magnetic Resonance</i> , 2018, 296, 188-199.	2.1	15
42	Complementarity of gluCEST and ¹ H MRS for the study of mouse models of Huntington's disease. <i>NMR in Biomedicine</i> , 2020, 33, e4301.	2.8	14
43	About the origins of NMR diffusion-weighting induced by frequency-swept pulses. <i>Journal of Magnetic Resonance</i> , 2010, 205, 255-259.	2.1	13
44	Revisiting double diffusion encoding MRS in the mouse brain at 11.7T: Which microstructural features are we sensitive to?. <i>NeuroImage</i> , 2020, 207, 116399.	4.2	13
45	Metabolic Modeling of Dynamic ¹³ C NMR Isotopomer Data in the Brain In Vivo: Fast Screening of Metabolic Models Using Automated Generation of Differential Equations. <i>Neurochemical Research</i> , 2015, 40, 2482-2492.	3.3	11
46	B0 homogeneity throughout the monkey brain is strongly improved in the sphinx position as compared to the supine position. <i>Journal of Magnetic Resonance Imaging</i> , 2006, 23, 408-412.	3.4	9
47	Magnetic resonance spectroscopy in the rodent brain: Experts' consensus recommendations. <i>NMR in Biomedicine</i> , 2021, 34, e4325.	2.8	9
48	Spectroscopic imaging with volume selection by unpaired adiabatic π pulses: Theory and application. <i>Journal of Magnetic Resonance</i> , 2007, 189, 1-12.	2.1	8
49	Longitudinal characterization of cognitive and motor deficits in an excitotoxic lesion model of striatal dysfunction in non-human primates. <i>Neurobiology of Disease</i> , 2019, 130, 104484.	4.4	8
50	Simplified ¹³ C metabolic modeling for simplified measurements of cerebral TCA cycle rate in vivo. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 1641-1645.	3.0	7
51	Inflammation-driven glial alterations in the cuprizone mouse model probed with diffusion-weighted magnetic resonance spectroscopy at 11.7 T. <i>NMR in Biomedicine</i> , 2021, 34, e4480.	2.8	7
52	Characterizing extracellular diffusion properties using diffusion-weighted MRS of sucrose injected in mouse brain. <i>NMR in Biomedicine</i> , 2021, 34, e4478.	2.8	5
53	In Vivo ¹³ C Magnetic Resonance Spectroscopy and Metabolic Modeling: Methodology. <i>Advances in Neurobiology</i> , 2012, , 181-220.	1.8	3
54	Gradient rotating outer volume excitation (GROOVE): A novel method for single-shot two-dimensional outer volume suppression. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 139-149.	3.0	2

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55	Using spectrally-selective radiofrequency pulses to enhance lactate signal for diffusion-weighted MRS measurements in vivo. <i>Journal of Magnetic Resonance</i> , 2022, 334, 107113.	2.1	2
56	Using ³¹ P-MRI of hydroxyapatite for bone attenuation correction in PET-MRI: proof of concept in the rodent brain. <i>EJNMMI Physics</i> , 2017, 4, 16.	2.7	1
57	In Vivo Multidimensional Brain Imaging in Huntington's Disease Animal Models. <i>Methods in Molecular Biology</i> , 2018, 1780, 285-301.	0.9	0