Damian J Tyler

List of Publications by Year
in descending order

125	6,280	50276	74163
papers	citations	46 h-index	75 g-index

127	127	127	7462
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Abnormal whole-body energy metabolism in iron-deficient humans despite preserved skeletal muscle oxidative phosphorylation. Scientific Reports, 2022, 12, 998.	3.3	6
2	Evaluation of Acute Supplementation With the Ketone Ester (R)-3-Hydroxybutyl-(R)-3-Hydroxybutyrate (deltaG) in Healthy Volunteers by Cardiac and Skeletal Muscle 31P Magnetic Resonance Spectroscopy. Frontiers in Physiology, 2022, 13, 793987.	2.8	3
3	Acute intermittent hypoxia drives hepatic de novo lipogenesis in humans and rodents. Metabolism Open, 2022, 14, 100177.	2.9	6
4	Acidic environments trigger intracellular H+-sensing FAK proteins to re-balance sarcolemmal acidâ€“base transporters and auto-regulate cardiomyocyte pH. Cardiovascular Research, 2022, 118, 2946-2959.	3.8	2
5	Assessing the effect of anesthetic gas mixtures on hyperpolarized ¹³<scp>C</scp> pyruvate metabolism in the rat brain. Magnetic Resonance in Medicine, 2022, 88, 1324-1332.	3.0	3
6	Lactate saturation limits bicarbonate detection in hyperpolarized <scp>¹³C</scp>â€pyruvate <scp>MRI</scp> of the brain. Magnetic Resonance in Medicine, 2022, 88, 1170-1179.	3.0	8
7	Increased cardiac Pi/PCr in the diabetic heart observed using phosphorus magnetic resonance spectroscopy at 7T. PLoS ONE, 2022, 17, e0269957.	2.5	4
8	Insights Into the Metabolic Aspects of Aortic Stenosis With the Use of MagneticÂResonance Imaging. JACC: Cardiovascular Imaging, 2022, 15, 2112-2126.	5.3	2
9	Hyperpolarized 13 C magnetic resonance imaging for noninvasive assessment of tissue inflammation. NMR in Biomedicine, 2021, 34, e4460.	2.8	6
10	Quantifying the effect of dobutamine stress on myocardial Pi and pH in healthy volunteers: A ³¹P MRS study at 7T. Magnetic Resonance in Medicine, 2021, 85, 1147-1159.	3.0	12
11	A 3D hybridâ€shot spiral sequence for hyperpolarized imaging. Magnetic Resonance in Medicine, 2021, 85, 790-801.	3.0	2
12	Effects of contrast agents on relaxation properties of 31 P metabolites. Magnetic Resonance in Medicine, 2021, 85, 1805-1813.	3.0	1
13	Probing hepatic metabolism of [2-13C]dihydroxyacetone in vivo with 1H-decoupled hyperpolarized 13C-MR. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2021, 34, 49-56.	2.0	10
14	Novel Views on Heart Function from Dynamic Hyperpolarized NMR. , 2021, , 205-235.		0
15	Rapid, â€insensitive, dualâ€band quasiâ€adiabatic saturation transfer with optimal control for complete quantification of myocardial ATP flux. Magnetic Resonance in Medicine, 2021, 85, 2978-2991.	3.0	4
16	L-Carnitine Stimulates In Vivo Carbohydrate Metabolism in the Type 1 Diabetic Heart as Demonstrated by Hyperpolarized MRI. Metabolites, 2021, 11, 191.	2.9	6
17	BH4 Increases nNOS Activity and Preserves Left Ventricular Function in Diabetes. Circulation Research, 2021, 128, 585-601.	4.5	13
18	Proof-of-Principle Demonstration of Direct Metabolic Imaging Following Myocardial Infarction Using Hyperpolarized 13C CMR. JACC: Cardiovascular Imaging, 2021, 14, 1285-1288.	5.3	17

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19	Activation of HIF1Î± Rescues the Hypoxic Response and Reverses Metabolic Dysfunction in the Diabetic Heart. Diabetes, 2021, 70, 2518-2531.	0.6	18
20	Hyperpolarized magnetic resonance shows that the antiâ€ischemic drug meldonium leads to increased flux through pyruvate dehydrogenase in vivo resulting in improved postâ€ischemic function in the diabetic heart. NMR in Biomedicine, 2021, 34, e4471.	2.8	5
21	Hyperpolarized MR in cardiology: probing the heart of life. Advances in Magnetic Resonance Technology and Applications, 2021, 3, 217-256.	0.1	2
22	Metabolic Effects of Doxorubicin on the Rat Liver Assessed With Hyperpolarized MRI and Metabolomics. Frontiers in Physiology, 2021, 12, 782745.	2.8	12
23	Early detection of doxorubicin-induced cardiotoxicity in rats by its cardiac metabolic signature assessed with hyperpolarized MRI. Communications Biology, 2020, 3, 692.	4.4	25
24	Use of cardiac magnetic resonance to detect changes in metabolism in heart failure. Cardiovascular Diagnosis and Therapy, 2020, 10, 583-597.	1.7	9
25	Nicotinic acid receptor agonists impair myocardial contractility by energy starvation. FASEB Journal, 2020, 34, 14878-14891.	0.5	3
26	Clinical Cardiovascular Applications of Hyperpolarized Magnetic Resonance. Cardiovascular Drugs and Therapy, 2020, 34, 231-240.	2.6	13
27	Hyperpolarized ¹³C MRI: A novel approach for probing cerebral metabolism in health and neurological disease. Journal of Cerebral Blood Flow and Metabolism, 2020, 40, 1137-1147.	4.3	49
28	Noninvasive In Vivo Assessment of Cardiac Metabolism in the Healthy and Diabetic Human Heart Using Hyperpolarized ¹³ C MRI. Circulation Research, 2020, 126, 725-736.	4.5	105
29	The Role of AMPK Activation for Cardioprotection in Doxorubicin-Induced Cardiotoxicity. Cardiovascular Drugs and Therapy, 2020, 34, 255-269.	2.6	97
30	Rescue of myocardial energetic dysfunction in diabetes through the correction of mitochondrial hyperacetylation by honokiol. JCI Insight, 2020, 5, .	5.0	17
31	Cmah-dystrophin deficient mdx mice display an accelerated cardiac phenotype that is improved following peptide-PMO exon skipping treatment. Human Molecular Genetics, 2019, 28, 396-406.	2.9	10
32	Quantifying normal human brain metabolism using hyperpolarized [1â€“13C]pyruvate and magnetic resonance imaging. NeuroImage, 2019, 189, 171-179.	4.2	144
33	Assessing the effect of hypoxia on cardiac metabolism using hyperpolarized ¹³C magnetic resonance spectroscopy. NMR in Biomedicine, 2019, 32, e4099.	2.8	11
34	Hyperpolarized 13C MRI: Path to Clinical Translation in Oncology. Neoplasia, 2019, 21, 1-16.	5.3	316
35	Cardiac Dysfunction and Metabolic Inflexibility in a Mouse Model of Diabetes Without Dyslipidemia. Diabetes, 2018, 67, 1057-1067.	0.6	28
36	Hyperpolarized ketone body metabolism in the rat heart. NMR in Biomedicine, 2018, 31, e3912.	2.8	22

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37	Noninvasive Immunometabolic Cardiac Inflammation Imaging Using Hyperpolarized Magnetic Resonance. Circulation Research, 2018, 122, 1084-1093.	4.5	64
38	Hyperpolarized [1,4-13C2]Fumarate Enables Magnetic Resonance-Based Imaging of Myocardial Necrosis. JACC: Cardiovascular Imaging, 2018, 11, 1594-1606.	5.3	46
39	Hyperpolarised magnetic resonance for in vivo real-time metabolic imaging. Heart, 2018, 104, 1484-1491.	2.9	23
40	Susceptibilityâ€induced distortion correction in hyperpolarized echo planar imaging. Magnetic Resonance in Medicine, 2018, 79, 2135-2141.	3.0	17
41	13C Pyruvate Transport Across the Blood-Brain Barrier in Preclinical Hyperpolarised MRI. Scientific Reports, 2018, 8, 15082.	3.3	43
42	Fatty Acids Prevent Hypoxia-Inducible Factor-1Î± Signaling Through Decreased Succinate in Diabetes. JACC Basic To Translational Science, 2018, 3, 485-498.	4.1	55
43	Cardiac applications of hyperpolarised magnetic resonance. Progress in Nuclear Magnetic Resonance Spectroscopy, 2018, 106-107, 66-87.	7.5	14
44	Assessing the optimal preparation strategy to minimize the variability of cardiac pyruvate dehydrogenase flux measurements with hyperpolarized MRS. NMR in Biomedicine, 2018, 31, e3992.	2.8	4
45	Inhibition of sarcolemmal FAT/CD36 by sulfo-N-succinimidyl oleate rapidly corrects metabolism and restores function in the diabetic heart following hypoxia/reoxygenation. Cardiovascular Research, 2017, 113, 737-748.	3.8	50
46	Weighted averaging in spectroscopic studies improves statistical power. Magnetic Resonance in Medicine, 2017, 78, 2082-2094.	3.0	15
47	Simultaneous assessment of cardiac metabolism and perfusion using copolarized [1â€¹³C]pyruvate and ¹³Câ€urea. Magnetic Resonance in Medicine, 2017, 77, 151-158.	3.0	47
48	Mapping of intracellular pH in the in vivo rodent heart using hyperpolarized [1â€13C]pyruvate. Magnetic Resonance in Medicine, 2017, 77, 1810-1817.	3.0	28
49	Increased oxidative metabolism following hypoxia in the type 2 diabetic heart, despite normal hypoxia signalling and metabolic adaptation. Journal of Physiology, 2016, 594, 307-320.	2.9	40
50	Cardiac perfusion imaging using hyperpolarized ¹³c urea using flow sensitizing gradients. Magnetic Resonance in Medicine, 2016, 75, 1474-1483.	3.0	39
51	Robust and high resolution hyperpolarized metabolic imaging of the rat heart at 7 t with 3d spectralâ€spatial EPI. Magnetic Resonance in Medicine, 2016, 75, 1515-1524.	3.0	48
52	Assessment of Metformin-Induced Changes in Cardiac and Hepatic Redox State Using Hyperpolarized[1-13C]Pyruvate. Diabetes, 2016, 65, 3544-3551.	0.6	43
53	Novel ketone diet enhances physical and cognitive performance. FASEB Journal, 2016, 30, 4021-4032.	0.5	132
54	Simultaneous in vivo assessment of cardiac and hepatic metabolism in the diabetic rat using hyperpolarized MRS. NMR in Biomedicine, 2016, 29, 1759-1767.	2.8	22

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55	The von Hippel-Lindau Chuvash mutation in mice alters cardiac substrate and high-energy phosphate metabolism. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 311, H759-H767.	3.2	11
56	Science to Practice: Hyperpolarized Metabolic MR Imagingâ€" The Light at the End of the Tunnel for Clinical13C MR Spectroscopy?. Radiology, 2016, 278, 639-641.	7.3	4
57	Pyruvate dehydrogenase as a therapeutic target for obesity cardiomyopathy. Expert Opinion on Therapeutic Targets, 2016, 20, 755-766.	3.4	14
58	Accelerated human cardiac diffusion tensor imaging using simultaneous multislice imaging. Magnetic Resonance in Medicine, 2015, 73, 995-1004.	3.0	67
59	Exacerbation of cardiac energetic impairment during exercise in hypertrophic cardiomyopathy: a potential mechanism for diastolic dysfunction. European Heart Journal, 2015, 36, 1547-1554.	2.2	53
60	In vivo assessment of cardiac metabolism and function in the abdominal aortic banding model of compensated cardiac hypertrophy. Cardiovascular Research, 2015, 106, 249-260.	3.8	40
61	Cardiac ferroportin regulates cellular iron homeostasis and is important for cardiac function. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3164-3169.	7.1	173
62	Increasing Pyruvate Dehydrogenase Flux as a Treatment for Diabetic Cardiomyopathy: A Combined 13C Hyperpolarized Magnetic Resonance and Echocardiography Study. Diabetes, 2015, 64, 2735-2743.	0.6	88
63	Impaired In Vivo Mitochondrial Krebs Cycle Activity After Myocardial Infarction Assessed Using Hyperpolarized Magnetic Resonance Spectroscopy. Circulation: Cardiovascular Imaging, 2014, 7, 895-904.	2.6	54
64	Hyperpolarized butyrate: A metabolic probe of short chain fatty acid metabolism in the heart. Magnetic Resonance in Medicine, 2014, 71, 1663-1669.	3.0	68
65	Varying degrees of ventricular unloading in the heterotopic rat heart transplant model demonstrated by magnetic resonance imaging. International Journal of Biomedical Science, 2014, 10, 223-8.	0.1	1
66	In vivo mouse cardiac hyperpolarized magnetic resonance spectroscopy. Journal of Cardiovascular Magnetic Resonance, 2013, 15, 19.	3.3	34
67	Cardiac metabolism in a new rat model of type 2 diabetes using high-fat diet with low dose streptozotocin. Cardiovascular Diabetology, 2013, 12, 136.	6.8	102
68	An Extra-Mitochondrial Domain Rich in Carbonic Anhydrase Activity Improves Myocardial Energetics. Biophysical Journal, 2013, 104, 303a.	0.5	0
69	Human hippocampal energy metabolism is impaired during cognitive activity in a lipid infusion model of insulin resistance. Brain and Behavior, 2013, 3, 134-144.	2.2	34
70	Clinical Implications of Cardiac Hyperpolarized Magnetic Resonance Imaging. Journal of Cardiovascular Magnetic Resonance, 2013, 15, 93.	3.3	83
71	Myocardial energy shortage and unmet anaplerotic needs in the fasted long-chain acyl-CoA dehydrogenase knockout mouse. Cardiovascular Research, 2013, 100, 441-449.	3.8	40
72	Rearrangement of Atrial Bundle Architecture and Consequent Changes in Anisotropy of Conduction Constitute the 3-Dimensional Substrate for Atrial Fibrillation. Circulation: Arrhythmia and Electrophysiology, 2013, 6, 967-975.	4.8	67

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73	Extramitochondrial domain rich in carbonic anhydrase activity improves myocardial energetics. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E958-67.	7.1	42
74	Hyperpolarized ¹³C magnetic resonance reveals earlyâ€•and lateâ€•onset changes to in vivo pyruvate metabolism in the failing heart. European Journal of Heart Failure, 2013, 15, 130-140.	7.1	133
75	Metabolic imaging of acute and chronic infarction in the perfused rat heart using hyperpolarised [1â€•13 C]pyruvate. NMR in Biomedicine, 2013, 26, 1441-1450.	2.8	40
76	The Cycling of Acetyl-Coenzyme A Through Acetylcarnitine Buffers Cardiac Substrate Supply. Circulation: Cardiovascular Imaging, 2012, 5, 201-209.	2.6	91
77	Effects of Catecholamine Stress on Diastolic Function and Myocardial Energetics in Obesity. Circulation, 2012, 125, 1511-1519.	1.6	117
78	MEN1 Gene Replacement Therapy Reduces Proliferation Rates in a Mouse Model of Pituitary Adenomas. Cancer Research, 2012, 72, 5060-5068.	0.9	34
79	In vivo alterations in cardiac metabolism and function in the spontaneously hypertensive rat heart. Cardiovascular Research, 2012, 95, 69-76.	3.8	77
80	Fumarate Is Cardioprotective via Activation of the Nrf2 Antioxidant Pathway. Cell Metabolism, 2012, 15, 361-371.	16.2	231
81	In vivo MRI Characterization of Progressive Cardiac Dysfunction in the mdx Mouse Model of Muscular Dystrophy. PLoS ONE, 2012, 7, e28569.	2.5	61
82	The Reproducibility of 31-Phosphorus MRS Measures of Muscle Energetics at 3 Tesla in Trained Men. PLoS ONE, 2012, 7, e37237.	2.5	27
83	Cardiovascular Applications of Hyperpolarized MRI. Current Cardiovascular Imaging Reports, 2011, 4, 108-115.	0.6	29
84	First-pass perfusion CMR two days after infarction predicts severity of functional impairment six weeks later in the rat heart. Journal of Cardiovascular Magnetic Resonance, 2011, 13, 38.	3.3	12
85	Validation of the in vivo assessment of pyruvate dehydrogenase activity using hyperpolarised ¹³C MRS. NMR in Biomedicine, 2011, 24, 201-208.	2.8	85
86	Determining the in vivo regulation of cardiac pyruvate dehydrogenase based on label flux from hyperpolarised [1â€•¹³C]pyruvate. NMR in Biomedicine, 2011, 24, 980-987.	2.8	26
87	Endurance exercise training blunts the deleterious effect of high-fat feeding on whole body efficiency. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2011, 301, R320-R326.	1.8	5
88	Cardiac response to hypobaric hypoxia: persistent changes in cardiac mass, function, and energy metabolism after a trek to Mt. Everest Base Camp. FASEB Journal, 2011, 25, 792-796.	0.5	85
89	A high-fat diet impairs cardiac high-energy phosphate metabolism and cognitive function in healthy human subjects. American Journal of Clinical Nutrition, 2011, 93, 748-755.	4.7	139
90	Role of Pyruvate Dehydrogenase Inhibition in the Development of Hypertrophy in the Hyperthyroid Rat Heart. Circulation, 2011, 123, 2552-2561.	1.6	98

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91	Hyperpolarized Magnetic Resonance. Circulation, 2011, 124, 1580-1594.	1.6	120
92	Shortâ€term consumption of a highâ€fat diet impairs wholeâ€body efficiency and cognitive function in sedentary men. FASEB Journal, 2011, 25, 1088-1096.	0.5	103
93	Echo-planar magnetic resonance imaging of Gaviscon alginate rafts in-vivo. Journal of Pharmacy and Pharmacology, 2010, 54, 1351-1356.	2.4	23
94	Ongoing dualâ€angle measurements for the correction of partial saturation in ³¹P MR spectroscopy. Magnetic Resonance in Medicine, 2010, 64, 957-966.	3.0	7
95	Magnetic Resonance Imaging Evaluation of Remodeling by Cardiac Elastomeric Tissue Scaffold Biomaterials in a Rat Model of Myocardial Infarction. Tissue Engineering - Part A, 2010, 16, 3395-3402.	3.1	73
96	Measuring intracellular pH in the heart using hyperpolarized carbon dioxide and bicarbonate: a 13C and 31P magnetic resonance spectroscopy study. Cardiovascular Research, 2010, 86, 82-91.	3.8	114
97	Adenosine Monophosphate-Activated Protein Kinase Activation, Substrate Transporter Translocation, and Metabolism in the Contracting Hyperthyroid Rat Heart. Endocrinology, 2010, 151, 422-431.	2.8	23
98	The Effect of High-Altitude on Human Skeletal Muscle Energetics: 31P-MRS Results from the Caudwell Xtreme Everest Expedition. PLoS ONE, 2010, 5, e10681.	2.5	50
99	Realâ€time assessment of Krebs cycle metabolism using hyperpolarized C magnetic resonance spectroscopy. FASEB Journal, 2009, 23, 2529-2538.	0.5	197
100	The effect of hyperpolarized tracer concentration on myocardial uptake and metabolism. Magnetic Resonance in Medicine, 2009, 61, 1007-1014.	3.0	50
101	Reproducibility of ³¹P cardiac magnetic resonance spectroscopy at 3â€‰T. NMR in Biomedicine, 2009, 22, 405-413.	2.8	49
102	31P cardiac magnetic resonance spectroscopy during leg exercise at 3 Tesla. International Journal of Cardiovascular Imaging, 2009, 25, 819-826.	1.5	15
103	Systemic Inflammatory Response Reactivates Immune-Mediated Lesions in Rat Brain. Journal of Neuroscience, 2009, 29, 4820-4828.	3.6	115
104	Application of Hyperpolarized Magnetic Resonance in the Study of Cardiac Metabolism. Applied Magnetic Resonance, 2008, 34, 523-531.	1.2	29
105	Novel MRI method to detect altered left ventricular ejection and filling patterns in rodent models of disease. Magnetic Resonance in Medicine, 2008, 60, 582-587.	3.0	37
106	Spiral artery blood volume in normal pregnancies and those compromised by preâ€eclampsia. NMR in Biomedicine, 2008, 21, 376-380.	2.8	39
107	A comparison of cardiac ³¹P MRS at 1.5 and 3 T. NMR in Biomedicine, 2008, 21, 793-798.	2.8	37
108	Cineâ€MRI versus twoâ€dimensional echocardiography to measure in vivo left ventricular function in rat heart. NMR in Biomedicine, 2008, 21, 765-772.	2.8	56

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109	Bone marrow-derived stromal cells home to and remain in the infarcted rat heart but fail to improve function: an in vivo cine-MRI study. American Journal of Physiology - Heart and Circulatory Physiology, 2008, 295, H533-H542.	3.2	76
110	In vivo assessment of pyruvate dehydrogenase flux in the heart using hyperpolarized carbon-13 magnetic resonance. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 12051-12056.	7.1	229
111	Assessment of Left Atrial Volumes at 1.5 Tesla and 3 Tesla Using FLASH and SSFP Cine Imaging. Journal of Cardiovascular Magnetic Resonance, 2007, 9, 673-679.	3.3	54
112	MRI tracking of systemically administered bone marrow stem cells. Journal of Molecular and Cellular Cardiology, 2007, 42, S88-S89.	1.9	0
113	Magnetic resonance imaging with ultrashort TE (UTE) PULSE sequences: Technical considerations. Journal of Magnetic Resonance Imaging, 2007, 25, 279-289.	3.4	188
114	Iron Particles for Noninvasive Monitoring of Bone Marrow Stromal Cell Engraftment into, and Isolation of Viable Engrafted Donor Cells from, the Heart. Stem Cells, 2006, 24, 1968-1975.	3.2	123
115	Determination of cardiac volumes and mass with FLASH and SSFP cine sequences at 1.5 vs. 3 Tesla: A validation study. Journal of Magnetic Resonance Imaging, 2006, 24, 312-318.	3.4	81
116	Cardiac Cine MR-Imaging at 3T: FLASH vs SSFP. Journal of Cardiovascular Magnetic Resonance, 2006, 8, 709-715.	3.3	32
117	CINE-MR Imaging of the Normal and Infarcted Rat Heart Using an 11.7 T Vertical Bore MR System. Journal of Cardiovascular Magnetic Resonance, 2006, 8, 327-333.	3.3	29
118	Rapid quantitation of magnetization transfer using pulsed off-resonance irradiation and echo planar imaging. Magnetic Resonance in Medicine, 2005, 53, 103-109.	3.0	18
119	Ultrashort TE chemical shift imaging (UTE-CSI). Magnetic Resonance in Medicine, 2005, 53, 267-274.	3.0	55
120	High-resolution, multicontrast three-dimensional-MRI characterizes atherosclerotic plaque composition in ApoE-/- mice ex vivo. Journal of Magnetic Resonance Imaging, 2004, 20, 981-989.	3.4	28
121	In vivo cardiac1H-MRS in the mouse. Magnetic Resonance in Medicine, 2004, 52, 1029-1035.	3.0	55
122	Rapid and accurate measurement of transverse relaxation times using a single shot multi-echo echo-planar imaging sequence. Magnetic Resonance Imaging, 2004, 22, 1031-1037.	1.8	12
123	Fast, high-resolution in vivo cine magnetic resonance imaging in normal and failing mouse hearts on a vertical 11.7 T system. Journal of Magnetic Resonance Imaging, 2003, 18, 691-701.	3.4	134
124	Myometrial and placental artery reactivity alone cannot explain reduced placental perfusion in pre-eclampsia and intrauterine growth restriction. BJOG: an International Journal of Obstetrics and Gynaecology, 2003, 110, 909-915.	2.3	36
125	<scp>RF</scp> coil design for accurate parallel imaging on <scp> ¹³ C MRSI </scp> using <scp> ²³ Na </scp> sensitivity profiles. Magnetic Resonance in Medicine, 0, , .	3.0	5