Craig R Malloy

List of Publications by Year
in descending order

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273 papers	16,949 citations	15466 65 h-index	18075 120 g-index
279 all docs	279 docs citations	279 times ranked	17121 citing authors

#	Article	IF	Citations
1	Lactate Metabolism in Human Lung Tumors. Cell, 2017, 171, 358-371.e9.	13.5	899
2	Metabolic Heterogeneity in Human Lung Tumors. Cell, 2016, 164, 681-694.	13.5	830
3	2-hydroxyglutarate detection by magnetic resonance spectroscopy in IDH-mutated patients with gliomas. Nature Medicine, 2012, 18, 624-629.	15.2	711
4	Analysis of Cancer Metabolism by Imaging Hyperpolarized Nuclei: Prospects for Translation to Clinical Research. Neoplasia, 2011, 13, 81-97.	2.3	623
5	A roadmap for interpreting 13 C metabolite labeling patterns from cells. Current Opinion in Biotechnology, 2015, 34, 189-201.	3.3	513
6	Transcardiac serotonin concentration is increased in selected patients with limiting angina and complex coronary lesion morphology.. Circulation, 1989, 79, 116-124.	1.6	487
7	Analysis of Tumor Metabolism Reveals Mitochondrial Glucose Oxidation in Genetically Diverse Human Glioblastomas in the Mouse Brain InÂVivo. Cell Metabolism, 2012, 15, 827-837.	7.2	459
8	MRI detection of glycogen in vivo by using chemical exchange saturation transfer imaging (glycoCEST). Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 4359-4364.	3.3	370
9	Composition of adipose tissue and marrow fat in humans by 1H NMR at 7 Tesla. Journal of Lipid Research, 2008, 49, 2055-2062.	2.0	320
10	Mitochondrial metabolism mediates oxidative stress and inflammation in fatty liver. Journal of Clinical Investigation, 2015, 125, 4447-4462.	3.9	320
11	Hyperpolarized 13C MRI: Path to Clinical Translation in Oncology. Neoplasia, 2019, 21, 1-16.	2.3	316
12	Effect of metoprolol on myocardial function and energetics in patients with nonischemic dilated cardiomyopathy: A randomized, double-blind, placebo-controlled study. Journal of the American College of Cardiology, 1994, 24, 1310-1320.	1.2	297
13	Metabolism of [Uâ€‹¹³C]glucose in human brain tumors in vivo. NMR in Biomedicine, 2012, 25, 1234-1244.	1.6	282
14	Hyperpolarized ¹³ C allows a direct measure of flux through a single enzyme-catalyzed step by NMR. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 19773-19777.	3.3	266
15	Cardioprotective effects of 70-kDa heat shock protein in transgenic mice.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 2339-2342.	3.3	249
16	Effect of beta-adrenergic blockade on myocardial function and energetics in congestive heart failure. Improvements in hemodynamic, contractile, and diastolic performance with bucindolol.. Circulation, 1990, 82, 473-483.	1.6	244
17	Responsive MRI Agents for Sensing Metabolism in Vivo. Accounts of Chemical Research, 2009, 42, 948-957.	7.6	243
18	Cytosolic Phosphoenolpyruvate Carboxykinase Does Not Solely Control the Rate of Hepatic Gluconeogenesis in the Intact Mouse Liver. Cell Metabolism, 2007, 5, 313-320.	7.2	232

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19	Assessing Cardiac Metabolism. Circulation Research, 2016, 118, 1659-1701.	2.0	211
20	Isotope Tracing of Human Clear Cell Renal Cell Carcinomas Demonstrates Suppressed Glucose Oxidation InÂVivo. Cell Metabolism, 2018, 28, 793-800.e2.	7.2	193
21	MRI Thermometry Based on PARACEST Agents. Journal of the American Chemical Society, 2005, 127, 17572-17573.	6.6	168
22	Left ventricular volumes measured by MR imaging.. Radiology, 1985, 156, 717-719.	3.6	165
23	Prospective Longitudinal Analysis of 2-Hydroxyglutarate Magnetic Resonance Spectroscopy Identifies Broad Clinical Utility for the Management of Patients With IDH-Mutant Glioma. Journal of Clinical Oncology, 2016, 34, 4030-4039.	0.8	157
24	Carbon flux through citric acid cycle pathways in perfused heart by13C NMR spectroscopy. FEBS Letters, 1987, 212, 58-62.	1.3	153
25	Contribution of exogenous substrates to acetyl coenzyme A: measurement by carbon-13 NMR under non-steady-state conditions. Biochemistry, 1990, 29, 6756-6761.	1.2	145
26	Impaired Tricarboxylic Acid Cycle Activity in Mouse Livers Lacking Cytosolic Phosphoenolpyruvate Carboxykinase. Journal of Biological Chemistry, 2004, 279, 48941-48949.	1.6	141
27	The metabolic state of the rat liver in vivo measured by 31P-NMR spectroscopy. Biochimica Et Biophysica Acta - Molecular Cell Research, 1986, 885, 1-11.	1.9	134
28	Mitochondrial substrate utilization regulates cardiomyocyte cell-cycle progression. Nature Metabolism, 2020, 2, 167-178.	5.1	131
29	Flux through hepatic pyruvate carboxylase and phosphoenolpyruvate carboxykinase detected by hyperpolarized ¹³ C magnetic resonance. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19084-19089.	3.3	129
30	In vivo measurement of myocardial mass using nuclear magnetic resonance imaging. Journal of the American College of Cardiology, 1986, 8, 113-117.	1.2	123
31	Tm(DOTP)5â^': A23Na+ shift agent for perfused rat hearts. Magnetic Resonance in Medicine, 1990, 15, 25-32.	1.9	123
32	MOXI Is a Mitochondrial Micropeptide That Enhances Fatty Acid Î²-Oxidation. Cell Reports, 2018, 23, 3701-3709.	2.9	118
33	Gadolinium-DTPA-enhanced nuclear magnetic resonance imaging of reperfused myocardium: Identification of the myocardial bed at risk. Journal of the American College of Cardiology, 1988, 12, 1064-1072.	1.2	115
34	Influence of global ischemia on intracellular sodium in the perfused rat heart. Magnetic Resonance in Medicine, 1990, 15, 33-44.	1.9	112
35	An integrated²H and¹³C NMR study of gluconeogenesis and TCA cycle flux in humans. American Journal of Physiology - Endocrinology and Metabolism, 2001, 281, E848-E856.	1.8	108
36	C-NMR: a simple yet comprehensive method for analysis of intermediary metabolism. Trends in Biochemical Sciences, 1991, 16, 5-10.	3.7	105

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37	The Greater Contribution of Gluconeogenesis to Glucose Production in Obesity Is Related to Increased Whole-Body Protein Catabolism. Diabetes, 2006, 55, 675-681.	0.3	105
38	Substrate selection in the isolated working rat heart: effects of reperfusion, afterload, and concentration. Basic Research in Cardiology, 1995, 90, 388-396.	2.5	104
39	Mechanisms by Which Liver-Specific PEPCK Knockout Mice Preserve Euglycemia During Starvation. Diabetes, 2003, 52, 1649-1654.	0.3	103
40	Comparison of kinetic models for analysis of pyruvateâ€toâ€lactate exchange by hyperpolarized ¹³C NMR. NMR in Biomedicine, 2012, 25, 1286-1294.	1.6	100
41	Diminished Hepatic Gluconeogenesis via Defects in Tricarboxylic Acid Cycle Flux in Peroxisome Proliferator-activated Receptor Î³ Coactivator-1Î± (PGC-1Î±)-deficient Mice*. Journal of Biological Chemistry, 2006, 281, 19000-19008.	1.6	99
42	Improved in vivo magnetic resonance imaging of acute myocardial infarction after intravenous paramagnetic contrast agent administration. American Journal of Cardiology, 1986, 57, 864-868.	0.7	98
43	Glucose production, gluconeogenesis, and hepatic tricarboxylic acid cycle fluxes measured by nuclear magnetic resonance analysis of a single glucose derivative. Analytical Biochemistry, 2004, 327, 149-155.	1.1	97
44	Inhibition of cardiac lipoprotein utilization by transgenic overexpression of Angptl4 in the heart. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 1767-1772.	3.3	96
45	Impact of Gd³⁺ on DNP of [1-¹³C]Pyruvate Doped with Trityl OX063, BDPA, or 4-Oxo-TEMPO. Journal of Physical Chemistry A, 2012, 116, 5129-5138.	1.1	96
46	Gated sodium-23 nuclear magnetic resonance images of an isolated perfused working rat heart. Science, 1981, 212, 935-936.	6.0	92
47	Ultraâ€short echo time (UTE) MR imaging of the lung: Comparison between normal and emphysematous lungs in mutant mice. Journal of Magnetic Resonance Imaging, 2010, 32, 326-333.	1.9	87
48	DNP by Thermal Mixing under Optimized Conditions Yields >60â€‰000-fold Enhancement of ⁸⁹Y NMR Signal. Journal of the American Chemical Society, 2011, 133, 8673-8680.	6.6	86
49	Effect of fasting and acute ethanol administration on the energy state of in vivo liver as measured by 31P-NMR spectroscopy. Biochimica Et Biophysica Acta - Molecular Cell Research, 1986, 885, 12-22.	1.9	85
50	Inhibition of carbohydrate oxidation during the first minute of reperfusion after brief ischemia: NMR detection of hyperpolarized ¹³CO₂ and H¹³CO. Magnetic Resonance in Medicine, 2008, 60, 1029-1036.	1.9	85
51	Measurement of gluconeogenesis and pyruvate recycling in the rat liver: a simple analysis of glucose and glutamate isotopomers during metabolism of [1,2,3-13C3]propionate. FEBS Letters, 1997, 412, 131-137.	1.3	84
52	Magnetic resonance imaging of acute myocardial infarction: gadolinium diethylenetriamine pentaacetic acid as a marker of reperfusion.. Circulation, 1986, 74, 1434-1440.	1.6	83
53	Heptanoate as a Neural Fuel: Energetic and Neurotransmitter Precursors in Normal and Glucose Transporter I-Deficient (G1D) Brain. Journal of Cerebral Blood Flow and Metabolism, 2013, 33, 175-182.	2.4	83
54	³¹Pâ€MRS of healthy human brain: ATP synthesis, metabolite concentrations, pH, and T₁ relaxation times. NMR in Biomedicine, 2015, 28, 1455-1462.	1.6	83

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55	Effects of bucindolol on neurohormonal activation in congestive heart failure. American Journal of Cardiology, 1991, 67, 67-73.	0.7	82
56	Electron spin resonance studies of trityl OX063 at a concentration optimal for DNP. Physical Chemistry Chemical Physics, 2013, 15, 9800.	1.3	81
57	Channeling of TCA cycle intermediates in cultured Saccharomyces cerevisiae. Biochemistry, 1990, 29, 9106-9110.	1.2	79
58	<scp>MED</scp>13â€dependent signaling from the heart confers leanness by enhancing metabolism in adipose tissue and liver. EMBO Molecular Medicine, 2014, 6, 1610-1621.	3.3	77
59	Contribution of various substrates to total citric acid cycle flux and]anaplerosis as determined by13C isotopomer analysis and O2 consumption in the heart. Magnetic Resonance Materials in Physics, Biology, and Medicine, 1996, 4, 35-46.	1.1	76
60	Imaging the tissue distribution of glucose in livers using a PARACEST sensor. Magnetic Resonance in Medicine, 2008, 60, 1047-1055.	1.9	76
61	A comparative study of shortâ€and longâ€TE ¹H MRS at 3 T for in vivo detection of 2â€hydroxyglutarate in brain tumors. NMR in Biomedicine, 2013, 26, 1242-1250.	1.6	73
62	BDPA: An Efficient Polarizing Agent for Fast Dissolution Dynamic Nuclear Polarization NMR Spectroscopy. Chemistry - A European Journal, 2011, 17, 10825-10827.	1.7	72
63	Detection and localization of recent myocardial infarction by magnetic resonance imaging. American Journal of Cardiology, 1986, 58, 214-219.	0.7	71
64	13C Isotopomer Analysis of Glutamate by Tandem Mass Spectrometry. Analytical Biochemistry, 2002, 300, 192-205.	1.1	71
65	Direct Evidence That Perhexiline Modifies Myocardial Substrate Utilization from Fatty Acids to Lactate. Journal of Cardiovascular Pharmacology, 1995, 25, 469-472.	0.8	70
66	In vivo Na-23 MR imaging and spectroscopy of rat brain during TmDOTP5â" infusion. Journal of Magnetic Resonance Imaging, 1992, 2, 385-391.	1.9	69
67	Kinetic Modeling and Constrained Reconstruction of Hyperpolarized [1-13C]-Pyruvate Offers Improved Metabolic Imaging of Tumors. Cancer Research, 2015, 75, 4708-4717.	0.4	69
68	Glucose metabolism via the pentose phosphate pathway, glycolysis and Krebs cycle in an orthotopic mouse model of human brain tumors. NMR in Biomedicine, 2012, 25, 1177-1186.	1.6	66
69	A New Class of Macrocyclic Lanthanide Complexes for Cell Labeling and Magnetic Resonance Imaging Applications. Journal of the American Chemical Society, 2005, 127, 16178-16188.	6.6	64
70	Hyperpolarized ⁸⁹Y Complexes as pH Sensitive NMR Probes. Journal of the American Chemical Society, 2010, 132, 1784-1785.	6.6	64
71	Analytical solutions for 13C isotopomer analysis of complex metabolic conditions: substrate oxidation, multiple pyruvate cycles, and gluconeogenesis. Metabolic Engineering, 2004, 6, 12-24.	3.6	61
72	Effect of exercise on23Na MRI and relaxation characteristics of the human calf muscle. Journal of Magnetic Resonance Imaging, 2000, 11, 532-538.	1.9	59

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73	Effect of murine strain on metabolic pathways of glucose production after brief or prolonged fasting. American Journal of Physiology - Endocrinology and Metabolism, 2005, 289, E53-E61.	1.8	57
74	Tmdotp5â^' as a23na shift reagent for thein vivo rat kidney. Magnetic Resonance in Medicine, 1995, 34, 25-31.	1.9	56
75	Competition of pyruvate with physiological substrates for oxidation by the heart: implications for studies with hyperpolarized [1-¹³C]pyruvate. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 298, H1556-H1564.	1.5	56
76	Real-time Detection of Hepatic Gluconeogenic and Glycogenolytic States Using Hyperpolarized [2-13C]Dihydroxyacetone. Journal of Biological Chemistry, 2014, 289, 35859-35867.	1.6	55
77	Quantifying tracer levels of2H2O enrichment from microliter amounts of plasma and urine by2H NMR. Magnetic Resonance in Medicine, 2001, 45, 156-158.	1.9	53
78	Noninvasive evaluation of liver metabolism by 2H and 13C NMR isotopomer analysis of human urine. Analytical Biochemistry, 2003, 312, 228-234.	1.1	53
79	Brain metabolism modulates neuronal excitability in a mouse model of pyruvate dehydrogenase deficiency. Science Translational Medicine, 2019, 11, .	5.8	53
80	Hyperpolarized89Y Offers the Potential of Direct Imaging of Metal Ions in Biological Systems by Magnetic Resonance. Journal of the American Chemical Society, 2007, 129, 12942-12943.	6.6	50
81	Effect of ischemia on NMR detection of phosphorylated metabolites in the intact rat heart. Biochemistry, 1989, 28, 5323-5326.	1.2	49
82	In vivo determination of human breast fat composition by ¹H magnetic resonance spectroscopy at 7 T. Magnetic Resonance in Medicine, 2012, 67, 20-26.	1.9	49
83	Simultaneous Steady-state and Dynamic 13C NMR Can Differentiate Alternative Routes of Pyruvate Metabolism in Living Cancer Cells. Journal of Biological Chemistry, 2014, 289, 6212-6224.	1.6	49
84	Mitochondrial Substrate Utilization Regulates Cardiomyocyte Cell Cycle Progression. Nature Metabolism, 2020, 2, 167-178.	5.1	49
85	Nuclear magnetic resonance imaging in Marfan's syndrome. Journal of the American College of Cardiology, 1987, 9, 70-74.	1.2	48
86	Alterations in substrate utilization in the reperfused myocardium: a direct analysis by carbon-13 NMR. Biochemistry, 1992, 31, 4833-4837.	1.2	47
87	A noninvasive assessment of myocardial oxygen tension:19f nmr spectroscopy of sequestered perfluorocarbon emulsion. Magnetic Resonance in Medicine, 1992, 27, 310-317.	1.9	47
88	Measurement of glycine in the human brain in vivo by ¹Hâ€MRS at 3 T: application in brain tumors. Magnetic Resonance in Medicine, 2011, 66, 609-618.	1.9	44
89	Effects of visceral adiposity on glycerol pathways in gluconeogenesis. Metabolism: Clinical and Experimental, 2017, 67, 80-89.	1.5	43
90	Lactate Dehydrogenase A Governs Cardiac Hypertrophic Growth in Response to Hemodynamic Stress. Cell Reports, 2020, 32, 108087.	2.9	43

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91	Energetics and metabolism in the failing heart: important but poorly understood. Current Opinion in Clinical Nutrition and Metabolic Care, 2010, 13, 458-465.	1.3	41
92	Metabolism of hyperpolarized [1â€¹³C]pyruvate through alternate pathways in rat liver. NMR in Biomedicine, 2016, 29, 466-474.	1.6	41
93	Could ¹³C MRI assist clinical decisionâ€making for patients with heart disease?. NMR in Biomedicine, 2011, 24, 973-979.	1.6	40
94	Analysis of gluconeogenic pathways in vivo by distribution of 2H in plasma glucose: comparison of nuclear magnetic resonance and mass spectrometry. Analytical Biochemistry, 2003, 318, 321-324.	1.1	39
95	Quantitation of intracellular [Na⁺] in vivo by using TmDOTP^{5â"}â€‰asâ€‰anâ€‰NMRâ€‰shiftâ€‰reagentâ€‰and extracellularâ€‰marker. Journal of Applied Physiology, 1998, 85, 1806-1812.	1.2	38
96	¹H MRS of intramyocellular lipids in soleus muscle at 7 T: Spectral simplification by using long echo times without water suppression. Magnetic Resonance in Medicine, 2010, 64, 662-671.	1.9	38
97	Differing mechanisms of hepatic glucose overproduction in triiodothyronine-treated rats vs. Zucker diabetic fatty rats by NMR analysis of plasma glucose. American Journal of Physiology - Endocrinology and Metabolism, 2005, 288, E654-E662.	1.8	37
98	Glycine by MR spectroscopy is an imaging biomarker of glioma aggressiveness. Neuro-Oncology, 2020, 22, 1018-1029.	0.6	37
99	Orientation-Conserved Transfer of Symmetric Krebs Cycle Intermediates in Mammalian Tissue. Biochemistry, 1994, 33, 6268-6275.	1.2	36
100	Storage and oxidation of long-chain fatty acids in the C57/BL6 mouse heart as measured by NMR spectroscopy. FEBS Letters, 2006, 580, 4282-4287.	1.3	36
101	The effect of¹³C enrichment in the glassing matrix on dynamic nuclear polarization of [1-¹³C]pyruvate. Physics in Medicine and Biology, 2011, 56, N85-N92.	1.6	36
102	Effects of insulin and cytosolic redox state on glucose production pathways in the isolated perfused mouse liver measured by integrated 2H and 13C NMR. Biochemical Journal, 2006, 394, 465-473.	1.7	35
103	Hyperpolarized ¹³C NMR detects rapid drugâ€induced changes in cardiac metabolism. Magnetic Resonance in Medicine, 2015, 74, 312-319.	1.9	35
104	Dynamic monitoring of carnitine and acetylcarnitine in the trimethylamine signal after exercise in human skeletal muscle by 7T ¹Hâ€MRS. Magnetic Resonance in Medicine, 2013, 69, 7-17.	1.9	34
105	Measurement of Hepatic Glucose Output, Krebs Cycle, and Gluconeogenic Fluxes by NMR Analysis of a Single Plasma Glucose Sample. Analytical Biochemistry, 1998, 263, 39-45.	1.1	33
106	Pentose phosphate pathway activity parallels lipogenesis but not antioxidant processes in rat liver. American Journal of Physiology - Endocrinology and Metabolism, 2018, 314, E543-E551.	1.8	33
107	Effects of amino acids on substrate selection, anaplerosis, and left ventricular function in the ischemic reperfused rat heart.. Journal of Clinical Investigation, 1993, 92, 831-839.	3.9	33
108	Oxidation of lactate and acetate in rat skeletal muscle: analysis by¹³C-nuclear magnetic resonance spectroscopy. Journal of Applied Physiology, 1997, 83, 32-39.	1.2	32

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109	Increased Hepatic Fructose 2,6-Bisphosphate after an Oral Glucose Load Does Not Affect Gluconeogenesis. Journal of Biological Chemistry, 2003, 278, 28427-28433.	1.6	32
110	Hepatic glucose production pathways after three days of a high-fat diet. Metabolism: Clinical and Experimental, 2013, 62, 152-162.	1.5	32
111	¹³C NMR measurements of human gluconeogenic fluxes after ingestion of [U-¹³C]propionate, phenylacetate, and acetaminophen. American Journal of Physiology - Endocrinology and Metabolism, 1998, 275, E843-E852.	1.8	30
112	Alterations in hepatic glucose and energy metabolism as a result of calorie and carbohydrate restriction. Hepatology, 2008, 48, 1487-1496.	3.6	30
113	Fast Dissolution Dynamic Nuclear Polarization NMR of 13C-Enriched 89Y-DOTA Complex: Experimental and Theoretical Considerations. Applied Magnetic Resonance, 2012, 43, 69-79.	0.6	30
114	Influence of propranolol on acidosis and high energy phosphates in ischaemic myocardium of the rabbit. Cardiovascular Research, 1986, 20, 710-720.	1.8	29
115	NMR indirect detection of glutamate to measure citric acid cycle flux in the isolated perfused mouse heart. FEBS Letters, 2001, 505, 163-167.	1.3	29
116	Measuring in-vivo metabolism using nuclear magnetic resonance. Current Opinion in Clinical Nutrition and Metabolic Care, 2003, 6, 501-509.	1.3	28
117	Dissolution DNP-NMR spectroscopy using galvinoxyl as a polarizing agent. Journal of Magnetic Resonance, 2013, 227, 14-19.	1.2	28
118	Quantitation of Gluconeogenesis by 2H Nuclear Magnetic Resonance Analysis of Plasma Glucose Following Ingestion of 2H2O. Analytical Biochemistry, 2000, 277, 121-126.	1.1	27
119	13C Isotopomer Analysis of Glutamate by J-Resolved Heteronuclear Single Quantum Coherence Spectroscopy. Analytical Biochemistry, 2001, 289, 187-195.	1.1	27
120	Compartmentation of glycolysis and glycogenolysis in the perfused rat heart. NMR in Biomedicine, 2004, 17, 51-59.	1.6	27
121	Active transport and inotropic state in guinea pig left atrium.. Circulation Research, 1983, 52, 411-422.	2.0	26
122	Sources of acetyl-CoA entering the tricarboxylic acid cycle as determined by analysis of succinate carbon-13 isotopomers. Biochemistry, 1993, 32, 12240-12244.	1.2	26
123	Dipolar cross-relaxation modulates signal amplitudes in the 1H NMR spectrum of hyperpolarized [13C]formate. Journal of Magnetic Resonance, 2007, 189, 280-285.	1.2	26
124	Influence of Liver Triglycerides on Suppression of Glucose Production by Insulin in Men. Journal of Clinical Endocrinology and Metabolism, 2015, 100, 235-243.	1.8	26
125	Spatial localization of high resolution 31P spectra with a surface coil. Journal of Magnetic Resonance, 1983, 55, 164-169.	0.5	25
126	Determination of Acetyl-CoA Enrichment in Rat Heart and Skeletal Muscle by1H Nuclear Magnetic Resonance Analysis of Glutamate in Tissue Extracts. Analytical Biochemistry, 1997, 249, 201-206.	1.1	25

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127	Interaction between the Pentose Phosphate Pathway and Gluconeogenesis from Glycerol in the Liver. Journal of Biological Chemistry, 2014, 289, 32593-32603.	1.6	25
128	Oxidation of [Uâ€‹sup›13‹/sup›C]glucose in the human brain at 7T under steady state conditions. Magnetic Resonance in Medicine, 2017, 78, 2065-2071.	1.9	25
129	Clinical and hemodynamic characteristics of patients with inducible pulsus alternans. American Heart Journal, 1988, 115, 1251-1257.	1.2	24
130	13C isotopomer analysis of glutamate by heteronuclear multiple quantum coherence-total correlation spectroscopy (HMQC-TOCSY). FEBS Letters, 1998, 440, 382-386.	1.3	24
131	Glucose production pathways by2H and13C NMR in patients with HIV-associated lipoatrophy. Magnetic Resonance in Medicine, 2004, 51, 649-654.	1.9	24
132	Orientation of lipid strands in the extracellular compartment of muscle: Effect on quantitation of intramyocellular lipids. Magnetic Resonance in Medicine, 2009, 61, 16-21.	1.9	24
133	Modeling of Brain Metabolism and Pyruvate Compartmentation Using ‹sup›13‹/sup›C NMR ‹i›in Vivo:‹/i› Caution Required. Journal of Cerebral Blood Flow and Metabolism, 2013, 33, 1160-1167.	2.4	24
134	Exchange kinetics by inversion transfer: Integrated analysis of the phosphorus metabolite kinetic exchanges in resting human skeletal muscle at 7 T. Magnetic Resonance in Medicine, 2015, 73, 1359-1369.	1.9	24
135	A novel inhibitor of pyruvate dehydrogenase kinase stimulates myocardial carbohydrate oxidation in diet-induced obesity. Journal of Biological Chemistry, 2018, 293, 9604-9613.	1.6	24
136	Assessing the pentose phosphate pathway using [2, 3â€‹sup›13‹/sup›C‹sub›2‹/sub›]glucose. NMR in Biomedicine, 2019, 32, e4096.	1.6	24
137	Novel application of complementary imaging techniques to examine in vivo glucose metabolism in the kidney. American Journal of Physiology - Renal Physiology, 2016, 310, F717-F725.	1.3	23
138	Unveiling a hidden ‹sup›31‹/sup›P signal coresonating with extracellular inorganic phosphate by outerâ€‹volumeâ€‹suppression and localized ‹sup›31‹/sup›P MRS in the human brain at 7T. Magnetic Resonance in Medicine, 2018, 80, 1289-1297.	1.9	23
139	PKM1 Exerts Critical Roles in Cardiac Remodeling Under Pressure Overload in the Heart. Circulation, 2021, 144, 712-727.	1.6	23
140	Use of a single 13C NMR resonance of glutamate for measuring oxygen consumption in tissue. American Journal of Physiology - Endocrinology and Metabolism, 1999, 277, E1111-E1121.	1.8	22
141	Comparison of [3,4-13C2]glucose to [6,6-2H2]glucose as a tracer for glucose turnover by nuclear magnetic resonance. Magnetic Resonance in Medicine, 2005, 53, 1479-1483.	1.9	22
142	Metabolism of Glycerol, Glucose, and Lactate in the Citric Acid Cycle Prior to Incorporation into Hepatic Acylglycerols. Journal of Biological Chemistry, 2013, 288, 14488-14496.	1.6	22
143	A new technique for cannulation of the coronary sinus from the femoral vein. Catheterization and Cardiovascular Diagnosis, 1986, 12, 426-429.	0.7	21
144	Dy(DOTP)5â‍': A new, stable 23Na shift reagent. Journal of Magnetic Resonance, 1988, 76, 528-533.	0.5	21

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145	Quadrature transmit coil for breast imaging at 7 tesla using forced current excitation for improved homogeneity. Journal of Magnetic Resonance Imaging, 2014, 40, 1165-1173.	1.9	21
146	Hyperpolarized Î^â€[1â€¹³C]gluconolactone as a probe of the pentose phosphate pathway. NMR in Biomedicine, 2017, 30, e3713.	1.6	21
147	Does Tumor FDG-PET Avidity Represent Enhanced Glycolytic Metabolism in Non-Small Cell Lung Cancer?. Annals of Thoracic Surgery, 2020, 109, 1019-1025.	0.7	21
148	Effect of Doxorubicin on Myocardial Bicarbonate Production From Pyruvate Dehydrogenase in Women With Breast Cancer. Circulation Research, 2020, 127, 1568-1570.	2.0	21
149	Is there tight channelling in the tricarboxylic acid cycle metabolon?. Biochemical Society Transactions, 1991, 19, 1002-1005.	1.6	20
150	Direct observation of lactate and alanine by proton double quantum spectroscopy in rat hearts supplied with [3‐13C]pyruvate. FEBS Letters, 1992, 303, 247-250.	1.3	20
151	Effects of ischemia on intracellular sodium and phosphates in the in vivo rat liver. Journal of Applied Physiology, 1996, 81, 1395-1403.	1.2	20
152	Oxidation of acetate in rabbit skeletal muscle: Detection by13C NMR spectroscopyin vivo. Magnetic Resonance in Medicine, 1996, 36, 451-457.	1.9	20
153	A13C isotopomer kinetic analysis of cardiac metabolism: influence of altered cytosolic redox and [Ca2+]o. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 287, H889-H895.	1.5	20
154	Production of hyperpolarized 13CO2 from [1-13C]pyruvate in perfused liver does reflect total anaplerosis but is not a reliable biomarker of glucose production. Metabolomics, 2015, 11, 1144-1156.	1.4	20
155	Reproducibility and Absolute Quantification of Muscle Glycogen in Patients with Glycogen Storage Disease by 13C NMR Spectroscopy at 7 Tesla. PLoS ONE, 2014, 9, e108706.	1.1	20
156	Predicting functional recovery from ischemia in the rat myocardium. Basic Research in Cardiology, 1992, 87, 548-558.	2.5	19
157	In vivo studies of cellular energy state, pH, and sodium in rat liver after thermal injury. Journal of Applied Physiology, 1994, 76, 1507-1511.	1.2	19
158	Effects of glutamate and aspartate on myocardial substrate oxidation during potassium arrest. Journal of Thoracic and Cardiovascular Surgery, 1996, 112, 1651-1660.	0.4	19
159	Propionate stimulates pyruvate oxidation in the presence of acetate. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H1134-H1141.	1.5	19
160	An Oral Load of [13C3]Glycerol and Blood NMR Analysis Detect Fatty Acid Esterification, Pentose Phosphate Pathway, and Glycerol Metabolism through the Tricarboxylic Acid Cycle in Human Liver. Journal of Biological Chemistry, 2016, 291, 19031-19041.	1.6	19
161	Efficient ³¹P band inversion transfer approach for measuring creatine kinase activity, ATP synthesis, and molecular dynamics in the human brain at 7 T. Magnetic Resonance in Medicine, 2017, 78, 1657-1666.	1.9	19
162	Effects of Empagliflozin Treatment on Glycerolâ€Derived Hepatic Gluconeogenesis in Adults with Obesity: A Randomized Clinical Trial. Obesity, 2020, 28, 1254-1262.	1.5	19

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