Graeme F Mason

List of Publications by Year
in descending order

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Version: 2024-02-01

108 papers	9,091 citations	30070 54 h-index	40979 93 g-index
110 all docs	110 docs citations	110 times ranked	8113 citing authors

#	Article	IF	Citations
1	Increased Occipital Cortex GABA Concentrations in Depressed Patients After Therapy With Selective Serotonin Reuptake Inhibitors. American Journal of Psychiatry, 2002, 159, 663-665.	7.2	426
2	Increased Cortical GABA Concentrations in Depressed Patients Receiving ECT. American Journal of Psychiatry, 2003, 160, 577-579.	7.2	414
3	Impaired Mitochondrial Substrate Oxidation in Muscle of Insulin-Resistant Offspring of Type 2 Diabetic Patients. Diabetes, 2007, 56, 1376-1381.	0.6	391
4	Astroglial Contribution to Brain Energy Metabolism in Humans Revealed by¹³C Nuclear Magnetic Resonance Spectroscopy: Elucidation of the Dominant Pathway for Neurotransmitter Glutamate Repletion and Measurement of Astrocytic Oxidative Metabolism. Journal of Neuroscience, 2002, 22, 1523-1531.	3.6	351
5	The contribution of GABA to glutamate/glutamine cycling and energy metabolism in the rat cortex in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5588-5593.	7.1	308
6	Simultaneous Determination of the Rates of the TCA Cycle, Glucose Utilization, Î±-Ketoglutarate/Glutamate Exchange, and Glutamine Synthesis in Human Brain by NMR. Journal of Cerebral Blood Flow and Metabolism, 1995, 15, 12-25.	4.3	307
7	The Contribution of Blood Lactate to Brain Energy Metabolism in Humans Measured by Dynamic¹³C Nuclear Magnetic Resonance Spectroscopy. Journal of Neuroscience, 2010, 30, 13983-13991.	3.6	279
8	NMR Determination of the TCA Cycle Rate and Î±-Ketoglutarate/Glutamate Exchange Rate in Rat Brain. Journal of Cerebral Blood Flow and Metabolism, 1992, 12, 434-447.	4.3	249
9	¹³C MRS studies of neuroenergetics and neurotransmitter cycling in humans. NMR in Biomedicine, 2011, 24, 943-957.	2.8	249
10	Localized ¹³C NMR Spectroscopy in the Human Brain of Amino Acid Labeling from <scp>d</scp>â€[1â€¹³C]Glucose. Journal of Neurochemistry, 1994, 63, 1377-1385.	3.9	229
11	In vivo13Câ€ƒNMR measurement of neurotransmitter glutamate cycling, anaplerosis and TCA cycle flux in rat brain during [2-13C]glucose infusion. Journal of Neurochemistry, 2003, 76, 975-989.	3.9	229
12	Altered Brain Mitochondrial Metabolism in Healthy Aging as Assessed by in vivo Magnetic Resonance Spectroscopy. Journal of Cerebral Blood Flow and Metabolism, 2010, 30, 211-221.	4.3	223
13	Quantitative1H spectroscopic imaging of human brain at 4.1 T using image segmentation. Magnetic Resonance in Medicine, 1996, 36, 21-29.	3.0	202
14	Evaluation of cerebral gray and white matter metabolite differences by spectroscopic imaging at 4.1T. Magnetic Resonance in Medicine, 1994, 32, 565-571.	3.0	190
15	The antidepressant effect of ketamine is not associated with changes in occipital amino acid neurotransmitter content as measured by [1H]-MRS. Psychiatry Research - Neuroimaging, 2011, 191, 122-127.	1.8	170
16	Glutamate Metabolism in Major Depressive Disorder. American Journal of Psychiatry, 2014, 171, 1320-1327.	7.2	155
17	The effects of ketamine on prefrontal glutamate neurotransmission in healthy and depressed subjects. Neuropsychopharmacology, 2018, 43, 2154-2160.	5.4	146
18	Clinical Studies Implementing Glutamate Neurotransmission in Mood Disorders. Annals of the New York Academy of Sciences, 2003, 1003, 292-308.	3.8	145

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19	Glutamatergic Neurotransmission and Neuronal Glucose Oxidation are Coupled during Intense Neuronal Activation. Journal of Cerebral Blood Flow and Metabolism, 2004, 24, 972-985.	4.3	141
20	Proton nuclear magnetic resonance spectroscopic imaging of human temporal lobe epilepsy at 4.1 T. Annals of Neurology, 1995, 38, 396-404.	5.3	138
21	Oxidative Glucose Metabolism in Rat Brain during Single Forepaw Stimulation: A Spatially Localized 1H[13C] Nuclear Magnetic Resonance Study. Journal of Cerebral Blood Flow and Metabolism, 1997, 17, 1040-1047.	4.3	122
22	Increased Brain Monocarboxylic Acid Transport and Utilization in Type 1 Diabetes. Diabetes, 2006, 55, 929-934.	0.6	117
23	Sex, GABA, and nicotine: The impact of smoking on cortical GABA levels across the menstrual cycle as measured with proton magnetic resonance spectroscopy. Biological Psychiatry, 2005, 57, 44-48.	1.3	111
24	Preliminary evidence of reduced occipital GABA concentrations in puerperal women: a 1H-MRS study. Psychopharmacology, 2006, 186, 425-433.	3.1	111
25	Increased brain uptake and oxidation of acetate in heavy drinkers. Journal of Clinical Investigation, 2013, 123, 1605-1614.	8.2	111
26	NMR Determination of Intracerebral Glucose Concentration and Transport Kinetics in Rat Brain. Journal of Cerebral Blood Flow and Metabolism, 1992, 12, 448-455.	4.3	106
27	Integrated, Step-Wise, Mass-Isotopomeric Flux Analysis of the TCA Cycle. Cell Metabolism, 2015, 22, 936-947.	16.2	106
28	Impaired GABA Neuronal Response to Acute Benzodiazepine Administration in Panic Disorder. American Journal of Psychiatry, 2004, 161, 2186-2193.	7.2	105
29	Cortical Î³-Aminobutyric Acid Concentrations in Depressed Patients Receiving Cognitive Behavioral Therapy. Biological Psychiatry, 2006, 59, 284-286.	1.3	102
30	Increased substrate oxidation and mitochondrial uncoupling in skeletal muscle of endurance-trained individuals. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 16701-16706.	7.1	94
31	Dependence of Oxygen Delivery on Blood Flow in Rat Brain: A 7 Tesla Nuclear Magnetic Resonance Study. Journal of Cerebral Blood Flow and Metabolism, 2000, 20, 485-498.	4.3	92
32	Regional glucose metabolism and glutamatergic neurotransmission in rat brain in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 12700-12705.	7.1	88
33	Utility of Imaging-Based Biomarkers for Glutamate-Targeted Drug Development in Psychotic Disorders. JAMA Psychiatry, 2018, 75, 11.	11.0	88
34	Functional Energy Metabolism:In vivo ¹³C-NMR Spectroscopy Evidence for Coupling of Cerebral Glucose Consumption and Gl utamatergic Neuronal Activity. Developmental Neuroscience, 1998, 20, 321-330.	2.0	86
35	A Method to measure arbitraryk-space trajectories for rapid MR imaging. Magnetic Resonance in Medicine, 1997, 38, 492-496.	3.0	82
36	Measurements of the anaplerotic rate in the human cerebral cortex using13C magnetic resonance spectroscopy and [1-13C] and [2-13C] glucose. Journal of Neurochemistry, 2007, 100, 73-86.	3.9	82

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37	Decrease in GABA synthesis rate in rat cortex following GABA-transaminase inhibition correlates with the decrease in GAD67 protein. Brain Research, 2001, 914, 81-91.	2.2	81
38	Cortical GABA Levels in Primary Insomnia. Sleep, 2012, 35, 807-814.	1.1	81
39	Lactate preserves neuronal metabolism and function following antecedent recurrent hypoglycemia. Journal of Clinical Investigation, 2013, 123, 1988-1998.	8.2	80
40	Evaluation of Cerebral Acetate Transport and Metabolic Rates in the Rat Brain in vivo Using ¹H-[¹³C]-NMR. Journal of Cerebral Blood Flow and Metabolism, 2010, 30, 1200-1213.	4.3	78
41	Spectroscopic imaging of human brain glutamate by water-suppressedJ-refocused coherence transfer at 4.1 T. Magnetic Resonance in Medicine, 1996, 36, 7-12.	3.0	76
42	Measurement of the Tricarboxylic Acid Cycle Rate in Human Grey and White Matter in Vivo by 1H-[13C] Magnetic Resonance Spectroscopy at 4.1T. Journal of Cerebral Blood Flow and Metabolism, 1999, 19, 1179-1188.	4.3	76
43	Glutamatergic and GABAergic Neurotransmitter Cycling and Energy Metabolism in Rat Cerebral Cortex during Postnatal Development. Journal of Cerebral Blood Flow and Metabolism, 2007, 27, 1895-1907.	4.3	75
44	Reproducibility measurement of glutathione, GABA, and glutamate: Towards in vivo neurochemical profiling of multiple sclerosis with MR spectroscopy at 7T. Journal of Magnetic Resonance Imaging, 2017, 45, 187-198.	3.4	75
45	Intravenous Ethanol Infusion Decreases Human Cortical Î³-Aminobutyric Acid and N-Acetylaspartate as Measured with Proton Magnetic Resonance Spectroscopy at 4 Tesla. Biological Psychiatry, 2012, 71, 239-246.	1.3	74
46	Glutamate and Choline Levels Predict Individual Differences in Reading Ability in Emergent Readers. Journal of Neuroscience, 2014, 34, 4082-4089.	3.6	73
47	Cortical Gamma-Aminobutyric Acid Levels and the Recovery from Ethanol Dependence: Preliminary Evidence of Modification by Cigarette Smoking. Biological Psychiatry, 2006, 59, 85-93.	1.3	71
48	A comparison of 13C NMR measurements of the rates of glutamine synthesis and the tricarboxylic acid cycle during oral and intravenous administration of [1-13C]glucose. Brain Research Protocols, 2003, 10, 181-190.	1.6	70
49	A novelk-space trajectory measurement technique. Magnetic Resonance in Medicine, 1998, 39, 999-1004.	3.0	65
50	It Is Time to Take a Stand for Medical Research and Against Terrorism Targeting Medical Scientists. Biological Psychiatry, 2008, 63, 725-727.	1.3	65
51	Blunted rise in brain glucose levels during hyperglycemia in adults with obesity and T2DM. JCI Insight, 2017, 2, .	5.0	65
52	The interaction of neuroactive steroids and GABA in the development of neuropsychiatric disorders in women. Pharmacology Biochemistry and Behavior, 2006, 84, 635-643.	2.9	62
53	2D1H spectroscopic imaging of the human brain at 4.1 T. Magnetic Resonance in Medicine, 1994, 32, 530-534.	3.0	59
54	The human brain produces fructose from glucose. JCI Insight, 2017, 2, e90508.	5.0	58

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55	Cerebral benzodiazepine receptors in depressed patients measured with [123i]iomazenil SPECT. Biological Psychiatry, 2003, 54, 792-799.	1.3	57
56	Detection of brain glutamate and glutamine in spectroscopic images at 4.1 T. Magnetic Resonance in Medicine, 1994, 32, 142-145.	3.0	53
57	MR spectroscopy: its potential role for drug development for the treatment of psychiatric diseases. NMR in Biomedicine, 2006, 19, 690-701.	2.8	53
58	Decreased Occipital Cortical Glutamate Levels in Response to Successful Cognitive-Behavioral Therapy and Pharmacotherapy for Major Depressive Disorder. Psychotherapy and Psychosomatics, 2014, 83, 298-307.	8.8	53
59	Metabolic control analysis of hepatic glycogen synthesis in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8166-8176.	7.1	51
60	Evaluation of31P metabolite differences in human cerebral gray and white matter. Magnetic Resonance in Medicine, 1998, 39, 346-353.	3.0	48
61	Basic principles of metabolic modeling of NMR 13C isotopic turnover to determine rates of brain metabolism in vivo. Metabolic Engineering, 2004, 6, 75-84.	7.0	47
62	Metabotropic Glutamate Receptor 5 and Glutamate Involvement in Major Depressive Disorder: A Multimodal Imaging Study. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2017, 2, 449-456.	1.5	47
63	Regional metabolite levels and turnover in the awake rat brain under the influence of nicotine. Journal of Neurochemistry, 2010, 113, 1447-1458.	3.9	44
64	Regional Cerebral Blood Flow and Magnetic Resonance Spectroscopic Imaging Findings in Diaschisis From Stroke. Stroke, 2002, 33, 1243-1248.	2.0	42
65	In vivo neurochemical profiling of rat brain by ¹Hâ€[¹³C] NMR spectroscopy: cerebral energetics and glutamatergic/GABAergic neurotransmission. Journal of Neurochemistry, 2010, 112, 24-33.	3.9	41
66	Differential role of ventral tegmental area acetylcholine and N-methyl-d-aspartate receptors in cocaine-seeking. Neuropharmacology, 2013, 75, 9-18.	4.1	41
67	Oxidation of ethanol in the rat brain and effects associated with chronic ethanol exposure. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 14444-14449.	7.1	41
68	Multi-Tissue Acceleration of the Mitochondrial Phosphoenolpyruvate Cycle Improves Whole-Body Metabolic Health. Cell Metabolism, 2020, 32, 751-766.e11.	16.2	41
69	Increased Brain Lactate Concentrations Without Increased Lactate Oxidation During Hypoglycemia in Type 1 Diabetic Individuals. Diabetes, 2013, 62, 3075-3080.	0.6	40
70	Recurrent Antecedent Hypoglycemia Alters Neuronal Oxidative Metabolism In Vivo. Diabetes, 2009, 58, 1266-1274.	0.6	38
71	In vivo ¹³C and ¹Hâ€[¹³C] MRS studies of neuroenergetics and neurotransmitter cycling, applications to neurological and psychiatric disease and brain cancer. NMR in Biomedicine, 2019, 32, e4172.	2.8	34
72	Characterization of Cerebral Glutamine Uptake from Blood in the Mouse Brain: Implications for Metabolic Modeling of ¹³C NMR Data. Journal of Cerebral Blood Flow and Metabolism, 2014, 34, 1666-1672.	4.3	31

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73	13C editing of glutamate in human brain usingJ-refocused coherence transfer spectroscopy at 4.1 T. Magnetic Resonance in Medicine, 1997, 37, 355-358.	3.0	28
74	Cortical Substrate Oxidation during Hyperketonemia in the Fasted Anesthetized Rat in Vivo. Journal of Cerebral Blood Flow and Metabolism, 2011, 31, 2313-2323.	4.3	28
75	Glycemic Variability and Brain Glucose Levels in Type 1 Diabetes. Diabetes, 2019, 68, 163-171.	0.6	27
76	Dissociation of Muscle Insulin Resistance from Alterations in Mitochondrial Substrate Preference. Cell Metabolism, 2020, 32, 726-735.e5.	16.2	27
77	Neuroimaging insights into the role of cortical GABA systems and the influence of nicotine on the recovery from alcohol dependence. Neuropharmacology, 2011, 60, 1318-1325.	4.1	24
78	Increased Brain Transport and Metabolism of Acetate in Hypoglycemia Unawareness. Journal of Clinical Endocrinology and Metabolism, 2013, 98, 3811-3820.	3.6	24
79	Neuroimaging in Alcohol and Drug Dependence. Current Behavioral Neuroscience Reports, 2014, 1, 45-54.	1.3	22
80	How Imaging Glutamate, Î³â€Aminobutyric Acid, and Dopamine Can Inform the Clinical Treatment of Alcohol Dependence and Withdrawal. Alcoholism: Clinical and Experimental Research, 2015, 39, 2268-2282.	2.4	21
81	Selective protonâ€observed, carbonâ€edited (selPOCE) MRS method for measurement of glutamate and glutamine ¹³Câ€labeling in the human frontal cortex. Magnetic Resonance in Medicine, 2018, 80, 11-20.	3.0	19
82	Impaired neuronal and astroglial metabolic activity in chronic unpredictable mild stress model of depression: Reversal of behavioral and metabolic deficit with lanicemine. Neurochemistry International, 2020, 137, 104750.	3.8	19
83	Effects of ketogenic diet and ketone monoester supplement on acute alcohol withdrawal symptoms in male mice. Psychopharmacology, 2021, 238, 833-844.	3.1	19
84	Graded image segmentation of brain tissue in the presence of inhomogeneous radio frequency fields. Magnetic Resonance Imaging, 2002, 20, 431-436.	1.8	17
85	Differential increase in cerebral cortical glucose oxidative metabolism during rat postnatal development is greater in vivo than in vitro. Brain Research, 2001, 888, 193-202.	2.2	16
86	Neurochemistry Predicts Convergence of Written and Spoken Language: A Proton Magnetic Resonance Spectroscopy Study of Cross-Modal Language Integration. Frontiers in Psychology, 2018, 9, 1507.	2.1	16
87	Imaging Biomarkers of the Neuroimmune System among Substance Use Disorders: A Systematic Review. Molecular Neuropsychiatry, 2019, 5, 125-146.	2.9	15
88	Family Psychopathology and Magnitude of Reductions in Occipital Cortex GABA Levels in Panic Disorder. Neuropsychopharmacology, 2004, 29, 639-640.	5.4	14
89	Metabolic products of [2â€¹³C]ethanol in the rat brain after chronic ethanol exposure. Journal of Neurochemistry, 2013, 127, 353-364.	3.9	14
90	Early life stress and glutamate neurotransmission in major depressive disorder. European Neuropsychopharmacology, 2020, 35, 71-80.	0.7	12

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91	The13C isotope and nuclear magnetic resonance: unique tools for the study of brain metabolism. Metabolic Brain Disease, 1996, 11, 283-313.	2.9	11
92	Rates of pyruvate carboxylase, glutamate and GABA neurotransmitter cycling, and glucose oxidation in multiple brain regions of the awake rat using a combination of [2-¹³C]/[1-¹³C]glucose infusion and¹H-[¹³C]NMRex vivo. Journal of Cerebral Blood Flow and Metabolism, 2022, 42, 1507-1523.	4.3	11
93	Coupling of Glutamatergic Neurotransmission and Neuronal Glucose Oxidation over the Entire Range of Cerebral Cortex Activity. Annals of the New York Academy of Sciences, 2003, 1003, 452-453.	3.8	10
94	An ethanol vapor chamber system for small animals. Journal of Neuroscience Methods, 2012, 208, 79-85.	2.5	10
95	Prefrontal Glutamate Neurotransmission in PTSD: A Novel Approach to Estimate Synaptic Strength in Vivo in Humans. Chronic Stress, 2022, 6, 247054702210927.	3.4	8
96	A sobering addition to the literature on COVID-19 and the brain. Journal of Clinical Investigation, 2021, 131, .	8.2	5
97	Magnetic resonance spectroscopy for studies of neurotransmission in vivo. Psychopharmacology Bulletin, 2003, 37, 26-40.	0.0	4
98	Nonlinear determination of Michaelis-Menten kinetics with model evaluation through estimation of uncertainties. Metabolic Brain Disease, 2000, 15, 133-149.	2.9	3
99	Novel approaches to estimate prefrontal synaptic strength in vivo in humans: of relevance to depression, schizophrenia, and ketamine. Neuropsychopharmacology, 2022, 47, 399-400.	5.4	3
100	Reversibility of brain glucose kinetics in type 2 diabetes mellitus. Diabetologia, 2022, 65, 895-905.	6.3	3
101	An Application of the Elastic Net for an Endophenotype Analysis. Behavior Genetics, 2011, 41, 120-124.	2.1	2
102	Constance E. Lieber, Theodore R. Stanley, and the Enduring Impact of Philanthropy on Psychiatry Research. Biological Psychiatry, 2016, 80, 84-86.	1.3	2
103	Metabolic Modeling Analysis of Brain Metabolism. , 2005, , 53-72.		1
104	Mapping Lithium in the Brain: New 3-Dimensional Methodology Reveals Regional Distribution in Euthymic Patients With Bipolar Disorder. Biological Psychiatry, 2020, 88, 367-368.	1.3	1
105	AplicaÃ§Ãµes da ressonÃ¢ncia magnÃ©tica para medidas espectroscÃ³picas da neurotransmissÃ£o. Revista Brasileira De Psiquiatria, 2001, 23, 6-10.	1.7	1
106	The Role of Altered Energetics of Neurotransmitter Systems in Psychiatric Disease. , 2005, , 239-256.		0
107	Get sober; stay sober. Brain, 2006, 130, 8-9.	7.6	0
108	A Novel Biomarker of Neuronal Glutamate Metabolism in Nonhuman Primates Using Localized 1H-Magnetic Resonance Spectroscopy: Development and Effects of BNC375, an Î±7 Nicotinic Acetylcholine Receptor Positive Allosteric Modulator. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2020, , .	1.5	0