Helle Snderby Waagepetersen

List of Publications by Citations

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176 papers	7,642 citations	47 h-index	80 g-index
180 ext. papers	8,805 ext. citations	5.3 avg, IF	5.99 L-index

#	Paper	IF	Citations
176	The glutamate/GABA-glutamine cycle: aspects of transport, neurotransmitter homeostasis and ammonia transfer. *Journal of Neurochemistry*, **2006**, 98, 641-53	6	640
175	The transcriptome and metabolic gene signature of protoplasmic astrocytes in the adult murine cortex. *Journal of Neuroscience*, **2007**, 27, 12255-66	6.6	376
174	Neuronal and astrocytic shuttle mechanisms for cytosolic-mitochondrial transfer of reducing equivalents: current evidence and pharmacological tools. *Biochemical Pharmacology*, **2006**, 71, 399-407	6	235
173	Glutamate metabolism in the brain focusing on astrocytes. *Advances in Neurobiology*, **2014**, 11, 13-30	2.1	180
172	Astrocytic Control of Biosynthesis and Turnover of the Neurotransmitters Glutamate and GABA. *Frontiers in Endocrinology*, **2013**, 4, 102	5.7	178
171	Trafficking between glia and neurons of TCA cycle intermediates and related metabolites **1997**, 21, 99-105		147
170	A possible role of alanine for ammonia transfer between astrocytes and glutamatergic neurons. *Journal of Neurochemistry*, **2000**, 75, 471-9	6	143
169	Role of astrocytes in glutamate homeostasis: implications for excitotoxicity. *Neurotoxicity Research*, **2005**, 8, 221-5	4.3	137
168	Astrocyte glycogen metabolism is required for neural activity during aglycemia or intense stimulation in mouse white matter. *Journal of Neuroscience Research*, **2005**, 79, 74-80	4.4	136
167	Brain glycogen-new perspectives on its metabolic function and regulation at the subcellular level. *Frontiers in Neuroenergetics*, **2012**, 4, 3		135
166	Glucose is necessary to maintain neurotransmitter homeostasis during synaptic activity in cultured glutamatergic neurons. *Journal of Cerebral Blood Flow and Metabolism*, **2006**, 26, 1285-97	7.3	132
165	The glutamine-glutamate/GABA cycle: function, regional differences in glutamate and GABA production and effects of interference with GABA metabolism. *Neurochemical Research*, **2015**, 40, 402-9	4.6	129
164	Role of astrocytic transport processes in glutamatergic and GABAergic neurotransmission. *Neurochemistry International*, **2004**, 45, 521-7	4.4	128
163	Robust glycogen shunt activity in astrocytes: Effects of glutamatergic and adrenergic agents. *Neuroscience*, **2009**, 158, 284-92	3.9	127
162	The GABA paradox: multiple roles as metabolite, neurotransmitter, and neurodifferentiative agent. *Journal of Neurochemistry*, **1999**, 73, 1335-42	6	126
161	Comparison of lactate and glucose metabolism in cultured neocortical neurons and astrocytes using 13C-NMR spectroscopy. *Developmental Neuroscience*, **1998**, 20, 310-20	2.2	126
160	Glutamine in the central nervous system: function and dysfunction. *Frontiers in Bioscience - Landmark*, **2007**, 12, 332-43	2.8	110

159	Primary cultures of astrocytes: their value in understanding astrocytes in health and disease. *Neurochemical Research*, **2012**, 37, 2569-88	4.6	109
158	Functional significance of brain glycogen in sustaining glutamatergic neurotransmission. *Journal of Neurochemistry*, **2009**, 109 Suppl 1, 80-6	6	97
157	Compartmentation of glutamine, glutamate, and GABA metabolism in neurons and astrocytes: functional implications. *Neuroscientist*, **2003**, 9, 398-403	7.6	96
156	Metabolism of lactate in cultured GABAergic neurons studied by 13C nuclear magnetic resonance spectroscopy. *Journal of Cerebral Blood Flow and Metabolism*, **1998**, 18, 109-17	7.3	85
155	Role of glutamine and neuronal glutamate uptake in glutamate homeostasis and synthesis during vesicular release in cultured glutamatergic neurons. *Neurochemistry International*, **2005**, 47, 92-102	4.4	84
154	Low cerebral oxygen consumption and blood flow in patients with cirrhosis and an acute episode of hepatic encephalopathy. *Gastroenterology*, **2009**, 136, 863-71	13.3	83
153	Neuronal glucose but not lactate utilization is positively correlated with NMDA-induced neurotransmission and fluctuations in cytosolic Ca2+ levels. *Journal of Neurochemistry*, **2009**, 109 Suppl 1, 87-93	6	76
152	Demonstration of pyruvate recycling in primary cultures of neocortical astrocytes but not in neurons. *Neurochemical Research*, **2002**, 27, 1431-7	4.6	74
151	Multiple compartments with different metabolic characteristics are involved in biosynthesis of intracellular and released glutamine and citrate in astrocytes. *Glia*, **2001**, 35, 246-52	9	74
150	GABA: homeostatic and pharmacological aspects. *Progress in Brain Research*, **2007**, 160, 9-19	2.9	69
149	Metabolic distinction between vesicular and cytosolic GABA in cultured GABAergic neurons using 13C magnetic resonance spectroscopy. *Journal of Neuroscience Research*, **2001**, 63, 347-55	4.4	68
148	Effects of ketone bodies in Alzheimer□s disease in relation to neural hypometabolism, □amyloid toxicity, and astrocyte function. *Journal of Neurochemistry*, **2015**, 134, 7-20	6	67
147	Elucidation of the quantitative significance of pyruvate carboxylation in cultured cerebellar neurons and astrocytes. *Journal of Neuroscience Research*, **2001**, 66, 763-70	4.4	67
146	Astrocytic glycogen metabolism in the healthy and diseased brain. *Journal of Biological Chemistry*, **2018**, 293, 7108-7116	5.4	64
145	Compartmentation of lactate originating from glycogen and glucose in cultured astrocytes. *Neurochemical Research*, **2005**, 30, 1295-304	4.6	64
144	In vitro evidence for the brain glutamate efflux hypothesis: brain endothelial cells cocultured with astrocytes display a polarized brain-to-blood transport of glutamate. *Glia*, **2012**, 60, 882-93	9	62
143	Obesity and type 2 diabetes in rats are associated with altered brain glycogen and amino-acid homeostasis. *Journal of Cerebral Blood Flow and Metabolism*, **2010**, 30, 1527-37	7.3	62
142	Aspects of astrocyte energy metabolism, amino acid neurotransmitter homoeostasis and metabolic compartmentation. *ASN Neuro*, **2012**, 4,	5.3	61

141	Comparison of effects of DL-threo-beta-benzyloxyaspartate (DL-TBOA) and L-trans-pyrrolidine-2,4-dicarboxylate (t-2,4-PDC) on uptake and release of [3h]D-aspartate in astrocytes and glutamatergic neurons. *Neurochemical Research*, **2001**, 26, 661-6	4.6	61
140	Energy Metabolism of the Brain **2012**, 200-231		60
139	Characterization of 1,4-dideoxy-1,4-imino-d-arabinitol (DAB) as an inhibitor of brain glycogen shunt activity. *Journal of Neurochemistry*, **2008**, 105, 1462-70	6	58
138	Hepatic encephalopathy is associated with decreased cerebral oxygen metabolism and blood flow, not increased ammonia uptake. *Hepatology*, **2013**, 57, 258-65	11.2	57
137	Glutamate oxidation in astrocytes: Roles of glutamate dehydrogenase and aminotransferases. *Journal of Neuroscience Research*, **2016**, 94, 1561-1571	4.4	56
136	Synthesis of vesicular GABA from glutamine involves TCA cycle metabolism in neocortical neurons. *Journal of Neuroscience Research*, **1999**, 57, 342-349	4.4	55
135	Patient iPSC-Derived Neurons for Disease Modeling of Frontotemporal Dementia with Mutation in CHMP2B. *Stem Cell Reports*, **2017**, 8, 648-658	8	52
134	Knockout of GAD65 has major impact on synaptic GABA synthesized from astrocyte-derived glutamine. *Journal of Cerebral Blood Flow and Metabolism*, **2011**, 31, 494-503	7.3	52
133	Differential expression of glutamate dehydrogenase in cultured neurons and astrocytes from mouse cerebellum and cerebral cortex. *Journal of Neuroscience Research*, **2001**, 66, 909-13	4.4	51
132	Astrocyte glycogenolysis is triggered by store-operated calcium entry and provides metabolic energy for cellular calcium homeostasis. *Glia*, **2014**, 62, 526-34	9	49
131	Quantitative importance of the pentose phosphate pathway determined by incorporation of 13C from [2-13C]- and [3-13C]glucose into TCA cycle intermediates and neurotransmitter amino acids in functionally intact neurons. *Journal of Cerebral Blood Flow and Metabolism*, **2012**, 32, 1788-99	7.3	49
130	Paracellular tightness and claudin-5 expression is increased in the BCEC/astrocyte blood-brain barrier model by increasing media buffer capacity during growth. *AAPS Journal*, **2010**, 12, 759-70	3.7	48
129	Brain glycogen and its role in supporting glutamate and GABA homeostasis in a type 2 diabetes rat model. *Neurochemistry International*, **2012**, 60, 267-75	4.4	47
128	Glial modulation of GABAergic and glutamat ergic neurotransmission. *Current Topics in Medicinal Chemistry*, **2006**, 6, 929-34	3	47
127	First direct demonstration of extensive GABA synthesis in mouse cerebellar neuronal cultures. *Journal of Neurochemistry*, **2004**, 91, 796-803	6	47
126	Integrative Characterization of the R6/2 Mouse Model of Huntington?s Disease Reveals Dysfunctional Astrocyte Metabolism. *Cell Reports*, **2018**, 23, 2211-2224	10.6	47
125	Dysfunctional TCA-Cycle Metabolism in Glutamate Dehydrogenase Deficient Astrocytes. *Glia*, **2015**, 63, 2313-26	9	46
124	The metabolic role of isoleucine in detoxification of ammonia in cultured mouse neurons and astrocytes. *Neurochemistry International*, **2007**, 50, 1042-51	4.4	46

123	Differential roles of alanine in GABAergic and glutamatergic neurons. *Neurochemistry International*, **2003**, 43, 311-5	4.4	46
122	Cellular mitochondrial heterogeneity in cultured astrocytes as demonstrated by immunogold labeling of alpha-ketoglutarate dehydrogenase. *Glia*, **2006**, 53, 225-31	9	45
121	Compartmentation of TCA cycle metabolism in cultured neocortical neurons revealed by 13C MR spectroscopy. *Neurochemistry International*, **2000**, 36, 349-58	4.4	45
120	GAD65 is essential for synthesis of GABA destined for tonic inhibition regulating epileptiform activity. *Journal of Neurochemistry*, **2010**, 115, 1398-408	6	43
119	The micro-architecture of the cerebral cortex: functional neuroimaging models and metabolism. *NeuroImage*, **2008**, 40, 1436-59	7.9	43
118	Energy substrates to support glutamatergic and GABAergic synaptic function: role of glycogen, glucose and lactate. *Neurotoxicity Research*, **2007**, 12, 263-8	4.3	43
117	Neuron-glia interactions in glutamatergic neurotransmission: roles of oxidative and glycolytic adenosine triphosphate as energy source. *Journal of Neuroscience Research*, **2011**, 89, 1926-34	4.4	42
116	Deletion of glutamate dehydrogenase 1 (Glud1) in the central nervous system affects glutamate handling without altering synaptic transmission. *Journal of Neurochemistry*, **2012**, 123, 342-8	6	41
115	GDH-Dependent Glutamate Oxidation in the Brain Dictates Peripheral Energy Substrate Distribution. *Cell Reports*, **2015**, 13, 365-75	10.6	40
114	Alterations in Cerebral Cortical Glucose and Glutamine Metabolism Precedes Amyloid Plaques in the APPswe/PSEN1dE9 Mouse Model of Alzheimer's Disease. *Neurochemical Research*, **2017**, 42, 1589-1598	4.6	39
113	Functional importance of the astrocytic glycogen-shunt and glycolysis for maintenance of an intact intra/extracellular glutamate gradient. *Neurotoxicity Research*, **2010**, 18, 94-9	4.3	39
112	Activity of the lactate-alanine shuttle is independent of glutamate-glutamine cycle activity in cerebellar neuronal-astrocytic cultures. *Journal of Neuroscience Research*, **2005**, 79, 88-96	4.4	39
111	Detoxification of ammonia in mouse cortical GABAergic cell cultures increases neuronal oxidative metabolism and reveals an emerging role for release of glucose-derived alanine. *Neurotoxicity Research*, **2011**, 19, 496-510	4.3	38
110	Availability of neurotransmitter glutamate is diminished when beta-hydroxybutyrate replaces glucose in cultured neurons. *Journal of Neurochemistry*, **2009**, 110, 80-91	6	38
109	Intracellular metabolic compartmentation assessed by 13C magnetic resonance spectroscopy. *Neurochemistry International*, **2004**, 45, 305-10	4.4	38
108	Novel model of neuronal bioenergetics: postsynaptic utilization of glucose but not lactate correlates positively with Ca2+ signalling in cultured mouse glutamatergic neurons. *ASN Neuro*, **2012**, 4,	5.3	37
107	The effects of isofagomine, a potent glycogen phosphorylase inhibitor, on glycogen metabolism in cultured mouse cortical astrocytes. *Neurochemistry International*, **2000**, 36, 435-40	4.4	37
106	Synthesis of neurotransmitter GABA via the neuronal tricarboxylic acid cycle is elevated in rats with liver cirrhosis consistent with a high GABAergic tone in chronic hepatic encephalopathy. *Journal of Neurochemistry*, **2011**, 117, 824-32	6	36

105	Branched-chain amino acids increase arterial blood ammonia in spite of enhanced intrinsic muscle ammonia metabolism in patients with cirrhosis and healthy subjects. *American Journal of Physiology - Renal Physiology*, **2011**, 301, G269-77	5.1	36
104	Metabolism of [U-13C]glutamine and [U-13C]glutamate in isolated rat brain mitochondria suggests functional phosphate-activated glutaminase activity in matrix. *Neurochemical Research*, **2008**, 33, 273-8	4.6	36
103	Epigallocatechin-3-gallate (EGCG) activates AMPK through the inhibition of glutamate dehydrogenase in muscle and pancreatic □cells: A potential beneficial effect in the pre-diabetic state?. *International Journal of Biochemistry and Cell Biology*, **2017**, 88, 220-225	5.6	35
102	Isoform-selective regulation of glycogen phosphorylase by energy deprivation and phosphorylation in astrocytes. *Glia*, **2015**, 63, 154-62	9	35
101	Characterization of depolarization-coupled release of glutamate from cultured mouse cerebellar granule cells using DL-threo-beta-benzyloxyaspartate (DL-TBOA) to distinguish between the vesicular and cytoplasmic pools. *Neurochemistry International*, **2003**, 43, 417-24	4.4	35
100	Inhibition of glutamine synthesis induces glutamate dehydrogenase-dependent ammonia fixation into alanine in co-cultures of astrocytes and neurons. *Neurochemistry International*, **2011**, 59, 482-8	4.4	34
99	Delineation of glutamate pathways and secretory responses in pancreatic islets with □cell-specific abrogation of the glutamate dehydrogenase. *Molecular Biology of the Cell*, **2012**, 23, 3851-62	3.5	34
98	Mitochondrial function in M□ller cells - Does it matter?. *Mitochondrion*, **2017**, 36, 43-51	4.9	33
97	siRNA knock down of glutamate dehydrogenase in astrocytes affects glutamate metabolism leading to extensive accumulation of the neuroactive amino acids glutamate and aspartate. *Neurochemistry International*, **2012**, 61, 490-7	4.4	31
96	Glutamate metabolism and recycling at the excitatory synapse in health and neurodegeneration. *Neuropharmacology*, **2021**, 196, 108719	5.5	30
95	Mutation Causes Metabolic Disturbances and Impaired Survival of Human iPSC-Derived Neurons. *Frontiers in Cellular Neuroscience*, **2019**, 13, 297	6.1	29
94	Brain alanine formation as an ammonia-scavenging pathway during hyperammonemia: effects of glutamine synthetase inhibition in rats and astrocyte-neuron co-cultures. *Journal of Cerebral Blood Flow and Metabolism*, **2013**, 33, 1235-41	7.3	28
93	Metabolic fate of isoleucine in a rat model of hepatic encephalopathy and in cultured neural cells exposed to ammonia. *Metabolic Brain Disease*, **2009**, 24, 135-45	3.9	26
92	Impairment of the organization of locomotor and exploratory behaviors in bile duct-ligated rats. *PLoS ONE*, **2012**, 7, e36322	3.7	25
91	Glutamate and ATP at the Interface Between Signaling and Metabolism in Astroglia: Examples from Pathology. *Neurochemical Research*, **2017**, 42, 19-34	4.6	24
90	The role of astrocytes in seizure generation: insights from a novel in vitro seizure model based on mitochondrial dysfunction. *Brain*, **2019**, 142, 391-411	11.2	24
89	Analysis of glutamine accumulation in rat brain mitochondria in the presence of a glutamine uptake inhibitor, histidine, reveals glutamine pools with a distinct access to deamidation. *Neurochemical Research*, **2004**, 29, 2121-3	4.6	24
88	Improved cerebral energetics and ketone body metabolism in db/db mice. *Journal of Cerebral Blood Flow and Metabolism*, **2017**, 37, 1137-1147	7.3	23

87	Glutamate dehydrogenase is essential to sustain neuronal oxidative energy metabolism during stimulation. *Journal of Cerebral Blood Flow and Metabolism*, **2018**, 38, 1754-1768	7.3	23
86	Citrate, a Ubiquitous Key Metabolite with Regulatory Function in the CNS. *Neurochemical Research*, **2017**, 42, 1583-1588	4.6	22
85	Expression of the human isoform of glutamate dehydrogenase, hGDH2, augments TCA cycle capacity and oxidative metabolism of glutamate during glucose deprivation in astrocytes. *Glia*, **2017**, 65, 474-488	9	22
84	Effects of diabetes on brain metabolism--is brain glycogen a significant player?. *Metabolic Brain Disease*, **2015**, 30, 335-43	3.9	22
83	Effects of adrenergic agents on intracellular Ca2+ homeostasis and metabolism of glucose in astrocytes with an emphasis on pyruvate carboxylation, oxidative decarboxylation and recycling: implications for glutamate neurotransmission and excitotoxicity. *Neurotoxicity Research*, **2012**, 21, 405-17	4.3	22
82	Deletion of Neuronal GLT-1 in Mice Reveals Its Role in Synaptic Glutamate Homeostasis and Mitochondrial Function. *Journal of Neuroscience*, **2019**, 39, 4847-4863	6.6	21
81	Glutamate neurotransmission is affected in prenatally stressed offspring. *Neurochemistry International*, **2015**, 88, 73-87	4.4	21
80	Complex glutamate labeling from [U-13C]glucose or [U-13C]lactate in co-cultures of cerebellar neurons and astrocytes. *Neurochemical Research*, **2007**, 32, 671-80	4.6	21
79	Metabolic Mapping of Astrocytes and Neurons in Culture Using Stable Isotopes and Gas Chromatography-Mass Spectrometry (GC-MS). *Neuromethods*, **2014**, 73-105	0.4	21
78	Limited energy supply in Müller cells alters glutamate uptake. *Neurochemical Research*, **2014**, 39, 941-9	4.6	20
77	Astrocytic pyruvate carboxylation: Status after 35 years. *Journal of Neuroscience Research*, **2019**, 97, 890-896	4.4	19
76	Direct measurement of backflux between oxaloacetate and fumarate following pyruvate carboxylation. *Glia*, **2012**, 60, 147-58	9	19
75	Role of branched chain amino acids in cerebral ammonia homeostasis related to hepatic encephalopathy. *Metabolic Brain Disease*, **2013**, 28, 209-15	3.9	19
74	Characterization of primary and secondary cultures of astrocytes prepared from mouse cerebral cortex. *Neurochemical Research*, **2010**, 35, 2043-52	4.6	19
73	Demonstration of extensive GABA synthesis in the small population of GAD positive neurons in cerebellar cultures by the use of pharmacological tools. *Neurochemistry International*, **2006**, 48, 572-8	4.4	19
72	Role of astrocytes in homeostasis of glutamate and GABA during physiological and pathophysiological conditions. *Advances in Molecular and Cell Biology*, **2003**, 31, 461-474		19
71	Metabolic Characterization of Acutely Isolated Hippocampal and Cerebral Cortical Slices Using [U-C]Glucose and [1,2-C]Acetate as Substrates. *Neurochemical Research*, **2017**, 42, 810-826	4.6	18
70	Demonstration of neuron-glia transfer of precursors for GABA biosynthesis in a co-culture system of dissociated mouse cerebral cortex. *Neurochemical Research*, **2008**, 33, 2629-35	4.6	17

69	Chronic Pyruvate Supplementation Increases Exploratory Activity and Brain Energy Reserves in Young and Middle-Aged Mice. *Frontiers in Aging Neuroscience*, **2016**, 8, 41	5.3	17
68	Mitochondrial compartmentation at the cellular level: astrocytes and neurons. *Annals of the New York Academy of Sciences*, **1999**, 893, 421-5	6.5	16
67	AMPK Activation Affects Glutamate Metabolism in Astrocytes. *Neurochemical Research*, **2015**, 40, 2431-42	4.6	15
66	AMP-activated protein kinase (AMPK) regulates astrocyte oxidative metabolism by balancing TCA cycle dynamics. *Glia*, **2020**, 68, 1824-1839	9	15
65	Essential Roles of Lactate in M?ller Cell Survival and Function. *Molecular Neurobiology*, **2018**, 55, 9108-9121	6.2	15
64	Complex actions of ionomycin in cultured cerebellar astrocytes affecting both calcium-induced calcium release and store-operated calcium entry. *Neurochemical Research*, **2013**, 38, 1260-5	4.6	15
63	The effect of pH and ADP on ammonia affinity for human glutamate dehydrogenases. *Metabolic Brain Disease*, **2013**, 28, 127-31	3.9	15
62	Glucose replaces glutamate as energy substrate to fuel glutamate uptake in glutamate dehydrogenase-deficient astrocytes. *Journal of Neuroscience Research*, **2015**, 93, 1093-100	4.4	15
61	Dynamic Changes in Cytosolic ATP Levels in Cultured Glutamatergic Neurons During NMDA-Induced Synaptic Activity Supported by Glucose or Lactate. *Neurochemical Research*, **2015**, 40, 2517-26	4.6	14
60	Effects of hyperammonemia on brain energy metabolism: controversial findings in vivo and in vitro. *Metabolic Brain Disease*, **2014**, 29, 913-7	3.9	14
59	Impaired Hippocampal Glutamate and Glutamine Metabolism in the db/db Mouse Model of Type 2 Diabetes Mellitus. *Neural Plasticity*, **2017**, 2017, 2107084	3.3	14
58	Specificity of exogenous acetate and glutamate as astrocyte substrates examined in acute brain slices from female mice using methionine sulfoximine (MSO) to inhibit glutamine synthesis. *Journal of Neuroscience Research*, **2017**, 95, 2207-2216	4.4	13
57	The antidiabetic drug metformin decreases mitochondrial respiration and tricarboxylic acid cycle activity in cultured primary rat astrocytes. *Journal of Neuroscience Research*, **2017**, 95, 2307-2320	4.4	13
56	Lactate-Mediated Protection of Retinal Ganglion Cells. *Journal of Molecular Biology*, **2019**, 431, 1878-1888	5	13
55	Effect of glutamine synthetase inhibition on brain and interorgan ammonia metabolism in bile duct ligated rats. *Journal of Cerebral Blood Flow and Metabolism*, **2014**, 34, 460-6	7.3	13
54	Oxidative metabolism of astrocytes is not reduced in hepatic encephalopathy: a PET study with [(11)C]acetate in humans. *Frontiers in Neuroscience*, **2014**, 8, 353	5.1	13
53	Interorgan metabolism of ornithine phenylacetate (OP)--a novel strategy for treatment of hyperammonemia. *Biochemical Pharmacology*, **2013**, 85, 115-23	6	13
52	Among the branched-chain amino acids, only valine metabolism is up-regulated in astrocytes during glutamate exposure. *Journal of Neuroscience Research*, **2007**, 85, 3465-70	4.4	13

51	Clearance of activity-evoked K transients and associated glia cell swelling occur independently of AQP4: A study with an isoform-selective AQP4 inhibitor. *Glia*, **2021**, 69, 28-41	9	13
50	Deficient astrocyte metabolism impairs glutamine synthesis and neurotransmitter homeostasis in a mouse model of Alzheimer's disease. *Neurobiology of Disease*, **2021**, 148, 105198	7.5	13
49	The inhibitors of soluble adenylate cyclase 2-OHE, KH7, and bithionol compromise mitochondrial ATP production by distinct mechanisms. *Biochemical Pharmacology*, **2018**, 155, 92-101	6	13
48	Characterization of energy and neurotransmitter metabolism in cortical glutamatergic neurons derived from human induced pluripotent stem cells: A novel approach to study metabolism in human neurons. *Neurochemistry International*, **2017**, 106, 48-61	4.4	12
47	Extensive astrocyte metabolism of γ-aminobutyric acid (GABA) sustains glutamine synthesis in the mammalian cerebral cortex. *Glia*, **2020**, 68, 2601-2612	9	12
46	A subconvulsive dose of kainate selectively compromises astrocytic metabolism in the mouse brain in vivo. *Journal of Cerebral Blood Flow and Metabolism*, **2014**, 34, 1340-6	7.3	12
45	Energy and Amino Acid Neurotransmitter Metabolism in Astrocytes **2009**, 177-200		12
44	Role of astrocytes in depolarization-coupled release of glutamate in cerebellar cultures. *Neurochemical Research*, **2004**, 29, 257-65	4.6	11
43	Distinct differences in rates of oxygen consumption and ATP synthesis of regionally isolated non-synaptic mouse brain mitochondria. *Journal of Neuroscience Research*, **2019**, 97, 961-974	4.4	10
42	Glutamate Transporters in the Blood-Brain Barrier. *Advances in Neurobiology*, **2017**, 16, 297-314	2.1	10
41	Valine but not leucine or isoleucine supports neurotransmitter glutamate synthesis during synaptic activity in cultured cerebellar neurons. *Journal of Neuroscience Research*, **2012**, 90, 1768-75	4.4	10
40	Glycogen Shunt Activity and Glycolytic Supercompensation in Astrocytes May Be Distinctly Mediated via the Muscle Form of Glycogen Phosphorylase. *Neurochemical Research*, **2017**, 42, 2490-2494	4.6	9
39	Fluidic system for long-term in vitro culturing and monitoring of organotypic brain slices. *Biomedical Microdevices*, **2015**, 17, 71	3.7	9
38	Conditional Knockout of GLT-1 in Neurons Leads to Alterations in Aspartate Homeostasis and Synaptic Mitochondrial Metabolism in Striatum and Hippocampus. *Neurochemical Research*, **2020**, 45, 1420-1437	4.6	9
37	Glucose, Lactate and Glutamine but not Glutamate Support Depolarization-Induced Increased Respiration in Isolated Nerve Terminals. *Neurochemical Research*, **2017**, 42, 191-201	4.6	9
36	Glycogen metabolism is impaired in the brain of male type 2 diabetic Goto-Kakizaki rats. *Journal of Neuroscience Research*, **2019**, 97, 1004-1017	4.4	8
35	Dual Properties of Lactate in Müller Cells: The Effect of GPR81 Activation **2019**, 60, 999-1008		8
34	Homeostasis of neuroactive amino acids in cultured cerebellar and neocortical neurons is influenced by environmental cues. *Journal of Neuroscience Research*, **2005**, 79, 97-105	4.4	8

33	Glutamate-glutamine homeostasis is perturbed in neurons and astrocytes derived from patient iPSC models of frontotemporal dementia. *Molecular Brain*, **2020**, 13, 125	4.5	8
32	Anaplerosis for Glutamate Synthesis in the Neonate and in Adulthood. *Advances in Neurobiology*, **2016**, 13, 43-58	2.1	8
31	Characterization of the L-glutamate clearance pathways across the blood-brain barrier and the effect of astrocytes in an in vitro blood-brain barrier model. *Journal of Cerebral Blood Flow and Metabolism*, **2017**, 37, 3744-3758	7.3	7
30	Enhanced cerebral branched-chain amino acid metabolism in R6/2 mouse model of Huntington's disease. *Cellular and Molecular Life Sciences*, **2019**, 76, 2449-2461	10.3	5
29	Metabolism of [1,6-(13)C]glucose and [U-(13)C]glutamine and depolarization induced GABA release in superfused mouse cerebral cortical mini-slices. *Neurochemical Research*, **2008**, 33, 1610-7	4.6	5
28	Hippocampal disruptions of synaptic and astrocyte metabolism are primary events of early amyloid pathology in the 5xFAD mouse model of Alzheimer's disease. *Cell Death and Disease*, **2021**, 12, 954	9.8	5
27	Astrocyte metabolism of the medium-chain fatty acids octanoic acid and decanoic acid promotes GABA synthesis in neurons via elevated glutamine supply. *Molecular Brain*, **2021**, 14, 132	4.5	5
26	Phosphorylation of Glutamine Synthetase on Threonine 301 Contributes to Its Inactivation During Epilepsy. *Frontiers in Molecular Neuroscience*, **2019**, 12, 120	6.1	4
25	Glutamate dehydrogenase isoforms with N-terminal (His)6- or FLAG-tag retain their kinetic properties and cellular localization. *Neurochemical Research*, **2014**, 39, 487-99	4.6	4
24	Pharmacological inhibition of mitochondrial soluble adenylyl cyclase in astrocytes causes activation of AMP-activated protein kinase and induces breakdown of glycogen. *Glia*, **2021**, 69, 2828-2844	9	4
23	Trafficking between glia and neurons of TCA cycle intermediates and related metabolites **1997**, 21, 99		4
22	Functional Differences between Synaptic Mitochondria from the Striatum and the Cerebral Cortex. *Neuroscience*, **2019**, 406, 432-443	3.9	3
21	State-Dependent Changes in Brain Glycogen Metabolism. *Advances in Neurobiology*, **2019**, 23, 269-309	2.1	3
20	Diphenylalanine Peptide Nanowires as a Substrate for Neural Cultures. *BioNanoScience*, **2020**, 10, 224-234	3.4	3
19	Downregulation of GABA Transporter 3 (GAT3) is Associated with Deficient Oxidative GABA Metabolism in Human Induced Pluripotent Stem Cell-Derived Astrocytes in Alzheimer's Disease. *Neurochemical Research*, **2021**, 46, 2676-2686	4.6	3
18	The tricarboxylic acid cycle activity in cultured primary astrocytes is strongly accelerated by the protein tyrosine kinase inhibitor tyrphostin 23. *Neurochemistry International*, **2017**, 102, 13-21	4.4	2
17	induces cell-surface expression of immune stimulatory NKG2D ligands on human monocytes. *Journal of Biological Chemistry*, **2020**, 295, 11803-11821	5.4	2
16	13C NMR Spectroscopy and Mass Spectrometry Analysis of Intermediary Metabolism in Cultured Neural Cells. *Neuromethods*, **2011**, 403-415	0.4	2

List of Publications

15	Functional Metabolic Mapping Reveals Highly Active Branched-Chain Amino Acid Metabolism in Human Astrocytes, Which Is Impaired in iPSC-Derived Astrocytes in Alzheimer's Disease. *Frontiers in Aging Neuroscience*, **2021**, 13, 736580	5.3	2
14	Astroglia and Brain Metabolism: Focus on Energy and Neurotransmitter Amino Acid Homeostasis **2015**, 2, 1-64		1
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