Sergey Kasparov

List of Publications by Year
in descending order

136	6,158	47006 47	76900 74
papers	citations	h-index	g-index

138	138	138	6349
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Astrocytes Control Breathing Through pH-Dependent Release of ATP. Science, 2010, 329, 571-575.	12.6	752
2	Functional Oxygen Sensitivity of Astrocytes. Journal of Neuroscience, 2015, 35, 10460-10473.	3.6	219
3	Cardioprotection evoked by remote ischaemic preconditioning is critically dependent on the activity of vagal pre-ganglionic neurones. Cardiovascular Research, 2012, 95, 487-494.	3.8	187
4	Efficient large-scale production and concentration of HIV-1-based lentiviral vectors for use in vivo. Physiological Genomics, 2003, 12, 221-228.	2.3	154
5	Adenoviral vector demonstrates that angiotensin IIâ€induced depression of the cardiac baroreflex is mediated by endothelial nitric oxide synthase in the nucleus tractus solitarii of the rat. Journal of Physiology, 2001, 531, 445-458.	2.9	151
6	Is L-Lactate a Novel Signaling Molecule in the Brain?. Journal of Cerebral Blood Flow and Metabolism, 2015, 35, 1069-1075.	4.3	148
7	Astrocytes monitor cerebral perfusion and control systemic circulation to maintain brain blood flow. Nature Communications, 2020, 11, 131.	12.8	137
8	fMRI response to blue light delivery in the naÃ¯ve brain: Implications for combined optogenetic fMRI studies. NeuroImage, 2013, 66, 634-641.	4.2	122
9	Nitric oxide and autonomic control of heart rate: a question of specificity. Trends in Neurosciences, 2002, 25, 626-631.	8.6	110
10	Astrocytes modulate brainstem respiratory rhythm-generating circuits and determine exercise capacity. Nature Communications, 2018, 9, 370.	12.8	104
11	Mechanisms of CO₂/H⁺Sensitivity of Astrocytes. Journal of Neuroscience, 2016, 36, 10750-10758.	3.6	101
12	Differential effects of angiotensin II on cardiorespiratory reflexes mediated by nucleus tractus solitarii - a microinjection study in the rat. Journal of Physiology, 1999, 521, 213-225.	2.9	99
13	Single fluorescent protein-based Ca2+ sensors with increased dynamic range. BMC Biotechnology, 2007, 7, 37.	3.3	99
14	Chronic inhibition of endothelial nitric oxide synthase activity in nucleus tractus solitarii enhances baroreceptor reflex in conscious rats. Journal of Physiology, 2003, 546, 233-242.	2.9	98
15	Differential Sensitivity of Brainstem versus Cortical Astrocytes to Changes in pH Reveals Functional Regional Specialization of Astroglia. Journal of Neuroscience, 2013, 33, 435-441.	3.6	96
16	Junctional Adhesion Molecule-1 Is Upregulated in Spontaneously Hypertensive Rats. Hypertension, 2007, 49, 1321-1327.	2.7	92
17	Astroglia as a cellular target for neuroprotection and treatment of neuroâ€psychiatric disorders. Glia, 2017, 65, 1205-1226.	4.9	88
18	Release of ATP by preâ€BÃ¶tzinger complex astrocytes contributes to the hypoxic ventilatory response via a Ca²⁺â€dependent P2Y₁ receptor mechanism. Journal of Physiology, 2018, 596, 3245-3269.	2.9	82

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19	Brainstem Hypoxia Contributes to the Development of Hypertension in the Spontaneously Hypertensive Rat. Hypertension, 2015, 65, 775-783.	2.7	81
20	Reflex response and convergence of pharyngoesophageal and peripheral chemoreceptors in the nucleus of the solitary tract. Neuroscience, 1999, 93, 143-154.	2.3	78
21	Hemichannel-mediated release of lactate. Journal of Cerebral Blood Flow and Metabolism, 2016, 36, 1202-1211.	4.3	77
22	Signalling across the blood brain barrier by angiotensin II: novel implications for neurogenic hypertension. Journal of Molecular Medicine, 2008, 86, 705-710.	3.9	74
23	Automation of analysis of cardiovascular autonomic function from chronic measurements of arterial pressure in conscious rats. Experimental Physiology, 2006, 91, 201-213.	2.0	73
24	Optogenetic experimentation on astrocytes. Experimental Physiology, 2011, 96, 40-50.	2.0	71
25	Astrocytes as brain interoceptors. Experimental Physiology, 2011, 96, 411-416.	2.0	71
26	Purinergic signalling in the rostral ventro-lateral medulla controls sympathetic drive and contributes to the progression of heart failure following myocardial infarction in rats. Basic Research in Cardiology, 2013, 108, 317.	5.9	71
27	Viral vectors based on bidirectional cell-specific mammalian promoters and transcriptional amplification strategy for use in vitro and in vivo. BMC Biotechnology, 2008, 8, 49.	3.3	70
28	Changes in baroreceptor vagal reflex performance in the developing rat. Pflugers Archiv European Journal of Physiology, 1997, 434, 438-444.	2.8	69
29	Kidney-Induced Hypertension Depends on Superoxide Signaling in the Rostral Ventrolateral Medulla. Hypertension, 2010, 56, 290-296.	2.7	67
30	Differential effects of angiotensin II in the nucleus tractus solitarii of the rat - plausible neuronal mechanisms. Journal of Physiology, 1999, 521, 227-238.	2.9	66
31	Endothelial NO Synthase Activity in Nucleus Tractus Solitarii Contributes to Hypertension in Spontaneously Hypertensive Rats. Hypertension, 2006, 48, 644-650.	2.7	66
32	Properties of solitary tract neurones responding to peripheral arterial chemoreceptors. Neuroscience, 2001, 105, 231-248.	2.3	64
33	Role of Estradiol in the Dynamic Control of Tanycyte Plasticity Mediated by Vascular Endothelial Cells in the Median Eminence. Endocrinology, 2010, 151, 1760-1772.	2.8	62
34	Comparative analysis of optogenetic actuators in cultured astrocytes. Cell Calcium, 2014, 56, 208-214.	2.4	62
35	Are Astrocytes the Pressure-Reservoirs of Lactate in the Brain?. Cell Metabolism, 2016, 23, 1-2.	16.2	60
36	Vascular-brain signaling in hypertension: Role of angiotensin II and nitric oxide. Current Hypertension Reports, 2007, 9, 242-247.	3.5	59

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37	Manipulation of dorsal raphe serotonergic neurons modulates active coping to inescapable stress and anxiety-related behaviors in mice and rats. Neuropsychopharmacology, 2019, 44, 721-732.	5.4	59
38	A sweet taste receptorâ€dependent mechanism of glucosensing in hypothalamic tanycytes. Glia, 2017, 65, 773-789.	4.9	58
39	Targeting brain stem centers of cardiovascular control using adenoviral vectors: impact of promoters on transgene expression. Physiological Genomics, 2005, 20, 165-172.	2.3	56
40	Differences in transductional tropism of adenoviral and lentiviral vectors in the rat brainstem. Experimental Physiology, 2005, 90, 71-78.	2.0	56
41	Vagal determinants of exercise capacity. Nature Communications, 2017, 8, 15097.	12.8	55
42	Glioâ€•and neuroâ€protection by prosaposin is mediated by orphan Gâ€protein coupled receptors GPR37L1 and GPR37. Glia, 2018, 66, 2414-2426.	4.9	54
43	Somatic nociception activates NK1receptors in the nucleus tractus solitarii to attenuate the baroreceptor cardiac reflex. European Journal of Neuroscience, 2002, 16, 907-920.	2.6	52
44	Mechanism of nitric oxide action on inhibitory GABAergic signaling within the nucleus tractus solitarii. FASEB Journal, 2006, 20, 1537-1539.	0.5	52
45	Restraining influence of A2 neurons in chronic control of arterial pressure in spontaneously hypertensive rats. Cardiovascular Research, 2007, 76, 184-193.	3.8	51
46	Sensory channel specific modulation in the nucleus of the solitary tract. Journal of the Autonomic Nervous System, 2000, 80, 117-129.	1.9	50
47	Genetic and pharmacological dissection of pathways involved in the angiotensin IIâ€mediated depression of baroreflex function. FASEB Journal, 2002, 16, 1595-1601.	0.5	50
48	Neuroprotective potential of astroglia. Journal of Neuroscience Research, 2017, 95, 2126-2139.	2.9	50
49	A Critical Role for Purinergic Signalling in the Mechanisms Underlying Generation of BOLD fMRI Responses. Journal of Neuroscience, 2015, 35, 5284-5292.	3.6	49
50	Morphological and electrophysiological properties of neurones in the dorsal vagal complex of the rat activated by arterial baroreceptors. Journal of Comparative Neurology, 2000, 417, 233-249.	1.6	48
51	Glia, sympathetic activity and cardiovascular disease. Experimental Physiology, 2016, 101, 565-576.	2.0	47
52	Altered central catecholaminergic transmission and cardiovascular disease. Experimental Physiology, 2008, 93, 725-740.	2.0	46
53	Astroglia are a possible cellular substrate of angiotensin(1-7) effects in the rostral ventrolateral medulla. Cardiovascular Research, 2010, 87, 578-584.	3.8	45
54	Excessive Leukotriene B4 in Nucleus Tractus Solitarii Is Prohypertensive in Spontaneously Hypertensive Rats. Hypertension, 2013, 61, 194-201.	2.7	44

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55	CNS distribution, signalling properties and central effects of G-protein coupled receptor 4. Neuropharmacology, 2018, 138, 381-392.	4.1	44
56	Inhibition of Resting Potassium Conductances by Long-Term Activation of the NO/cGMP/Protein Kinase G Pathway: A New Mechanism Regulating Neuronal Excitability. Journal of Neuroscience, 2007, 27, 6302-6312.	3.6	42
57	Differential sensitivity of excitatory and inhibitory synaptic transmission to modulation by nitric oxide in rat nucleus tractus solitarii. Experimental Physiology, 2007, 92, 371-382.	2.0	42
58	Current technical approaches to brain energy metabolism. Glia, 2018, 66, 1138-1159.	4.9	40
59	GAL4â€"NF-Î°B Fusion Protein Augments Transgene Expression from Neuronal Promoters in the Rat Brain. Molecular Therapy, 2006, 14, 872-882.	8.2	39
60	A Role for Astrocytes in Sensing the Brain Microenvironment and Neuro-Metabolic Integration. Neurochemical Research, 2015, 40, 2386-2393.	3.3	37
61	Imaging living central neurones using viral gene transfer. Advanced Drug Delivery Reviews, 2005, 57, 79-93.	13.7	36
62	Targeting specific neuronal populations using adeno- and lentiviral vectors: applications for imaging and studies of cell function. Experimental Physiology, 2005, 90, 61-69.	2.0	36
63	Parasympathetic innervation of vertebrobasilar arteries: is this a potential clinical target?. Journal of Physiology, 2016, 594, 6463-6485.	2.9	36
64	GABA A receptor É›â€subunit may confer benzodiazepine insensitivity to the caudal aspect of the nucleus tractus solitarii of the rat. Journal of Physiology, 2001, 536, 785-796.	2.9	35
65	Enhancement of cellâ€specific transgene expression from a Tetâ€Off regulatory system using a transcriptional amplification strategy in the rat brain. Journal of Gene Medicine, 2008, 10, 583-592.	2.8	34
66	Signal transduction in astrocytes: Localization and release of inorganic polyphosphate. Glia, 2018, 66, 2126-2136.	4.9	34
67	Unravelling mechanisms of action of angiotensin II on cardiorespiratory function usingin vivogene transfer. Acta Physiologica Scandinavica, 2001, 173, 127-137.	2.2	32
68	Angiotensin II receptors within the nucleus of the solitary tract mediate the developmental attenuation of the baroreceptor vagal reflex in pre-weaned rats. Journal of the Autonomic Nervous System, 1998, 74, 160-168.	1.9	31
69	Presynaptic action of the neurosteroid pregnenolone sulfate on inhibitory transmitter release in cultured hippocampal neurons. Brain Research, 1997, 772, 226-232.	2.2	29
70	Targeting central serotonergic neurons with lentiviral vectors based on a transcriptional amplification strategy. Gene Therapy, 2009, 16, 681-688.	4.5	29
71	Upregulation of junctional adhesion molecule-A is a putative prognostic marker of hypertension. Cardiovascular Research, 2012, 96, 552-560.	3.8	29
72	Astrocytes and Brain Hypoxia. Advances in Experimental Medicine and Biology, 2016, 903, 201-207.	1.6	28

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73	Using Light for Therapy of Glioblastoma Multiforme (GBM). Brain Sciences, 2020, 10, 75.	2.3	27
74	Adenoviral vectors for highly selective gene expression in central serotonergic neurons reveal quantal characteristics of serotonin release in the rat brain. BMC Biotechnology, 2009, 9, 23.	3.3	26
75	Dynamic Exercise Attenuates Spontaneous Baroreceptor Reflex Sensitivity in Conscious Rats. Experimental Physiology, 2003, 88, 517-526.	2.0	24
76	Viral vectors as tools for studies of central cardiovascular control. Progress in Biophysics and Molecular Biology, 2004, 84, 251-277.	2.9	24
77	Selective optogenetic stimulation of efferent fibers in the vagus nerve of a large mammal. Brain Stimulation, 2021, 14, 88-96.	1.6	24
78	Dynamic Confocal Imaging in Acute Brain Slices and Organotypic Slice Cultures Using a Spectral Confocal Microscope with Single Photon Excitation. Experimental Physiology, 2002, 87, 715-724.	2.0	23
79	Thyrotropin-releasing hormone enhances excitatory postsynaptic potentials in neocortical neurons of the rat in vitro. Brain Research, 1994, 656, 229-235.	2.2	21
80	Stimulant effect of thyrotropin-releasing hormone and its analog, RGH 2202, on the diaphragm respiratory activity, and their antagonism with morphine: possible involvement of the N-methyl-D-aspartate receptors. Brain Research, 1991, 551, 110-115.	2.2	20
81	Astrocytes Modulate Baroreflex Sensitivity at the Level of the Nucleus of the Solitary Tract. Journal of Neuroscience, 2020, 40, 3052-3062.	3.6	20
82	Area-Specific Differences in Transmitter Release in Central Catecholaminergic Neurons of Spontaneously Hypertensive Rats. Hypertension, 2008, 52, 351-358.	2.7	19
83	Dynamics of a Transgene Expression in Acute Rat Brain Slices Transfected with Adenoviral Vectors. Experimental Physiology, 2003, 88, 459-466.	2.0	17
84	Evidence for a detrimental role of nitric oxide synthesized by endothelial nitric oxide synthase after peripheral nerve injury. Neuroscience, 2008, 157, 40-51.	2.3	17
85	Putative Receptors Underpinning l-Lactate Signalling in Locus Coeruleus. Neuroglia (Basel,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	0.9	17
86	Differential effects of apamin on neuronal excitability in the nucleus tractus solitarii of rats studied in vitro. Journal of the Autonomic Nervous System, 1999, 77, 90-97.	1.9	16
87	Viral Gene Delivery: Optimized Protocol for Production of High Titer Lentiviral Vectors. Methods in Molecular Biology, 2013, 998, 65-75.	0.9	15
88	Beyond Gene Inactivation: Evolution of Tools for Analysis of Serotonergic Circuitry. ACS Chemical Neuroscience, 2015, 6, 1116-1129.	3.5	14
89	Viral Vectors as Gene Therapy Agents for Treatment of Glioblastoma. Cancers, 2020, 12, 3724.	3.7	14
90	A micro-optrode for simultaneous extracellular electrical and intracellular optical recording from neurons in an intact oscillatory neuronal network. Journal of Neuroscience Methods, 2008, 168, 383-395.	2.5	13

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91	Transgenic neuronal nitric oxide synthase expression induces axotomy-like changes in adult motoneurons. Journal of Physiology, 2010, 588, 3425-3443.	2.9	13
92	Ultrastructural Correlates of Enhanced Norepinephrine and Neuropeptide Y Cotransmission in the Spontaneously Hypertensive Rat Brain. ASN Neuro, 2015, 7, 175909141561011.	2.7	13
93	Volumetric Spatial Correlations of Neurovascular Coupling Studied using Single Pulse Opto-fMRI. Scientific Reports, 2017, 7, 41583.	3.3	12
94	Chronic optogenetic stimulation of Bergman glia leads to dysfunction of EAAT1 and Purkinje cell death, mimicking the events caused by expression of pathogenic ataxin-1. Neurobiology of Disease, 2021, 154, 105340.	4.4	12
95	Hypothalamic paraventricular nucleus neuronal nitric oxide synthase activity is a major determinant of renal sympathetic discharge in conscious Wistar rats. Experimental Physiology, 2018, 103, 419-428.	2.0	11
96	In Search of a Breakthrough Therapy for Glioblastoma Multiforme. Neuroglia (Basel, Switzerland), 2018, 1, 292-310.	0.9	11
97	Suitability of hCMV for viral gene expression in the brain. Nature Methods, 2007, 4, 379-379.	19.0	10
98	The NMDA-receptor antagonist dizocilpine (MK-801) suppresses the memory facilitatory action of thyrotropin-releasing hormone. Neuropeptides, 1992, 23, 87-92.	2.2	9
99	Cell- and region-specific miR30-based gene knock-down with temporal control in the rat brain. BMC Molecular Biology, 2010, 11, 93.	3.0	8
100	Differences in autonomic innervation to the vertebrobasilar arteries in spontaneously hypertensive and Wistar rats. Journal of Physiology, 2018, 596, 3505-3529.	2.9	8
101	Reducing <scp>l</scp>â€lactate release from hippocampal astrocytes by intracellular oxidation increases novelty induced activity in mice. Glia, 2021, 69, 1241-1250.	4.9	8
102	Feasibility of Photodynamic Therapy for Glioblastoma with the Mitochondria-Targeted Photosensitizer Tetramethylrhodamine Methyl Ester (TMRM). Biomedicines, 2021, 9, 1453.	3.2	8
103	Rodents and humans are able to detect the odour of L-Lactate. PLoS ONE, 2017, 12, e0178478.	2.5	7
104	In vivo gene transfer to dissect neuronal mechanisms regulating cardiorespiratory function. Canadian Journal of Physiology and Pharmacology, 2003, 81, 311-316.	1.4	6
105	Identification of neuron-type specific promoters in monkey genome and their functional validation in mice. Biochemical and Biophysical Research Communications, 2019, 518, 619-624.	2.1	6
106	Temporal profile of arginine vasopressin release from the neurohypophysis in response to hypertonic saline and hypotension measured using a fluorescent fusion protein. Journal of Neuroscience Methods, 2011, 201, 191-195.	2.5	5
107	The use of viral gene transfer in studies of brainstem noradrenergic and serotonergic neurons. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 2565-2576.	4.0	3
108	The many facets of optogenetics. Experimental Physiology, 2011, 96, 1-3.	2.0	3

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109	Optogenetics at a crossroads?. Experimental Physiology, 2013, 98, 971-972.	2.0	3
110	NOS Antagonism Using Viral Vectors as an Experimental Strategy: Implications for In Vivo Studies of Cardiovascular Control and Peripheral Neuropathies. Methods in Molecular Biology, 2011, 704, 197-223.	0.9	3
111	Dialogue Between Astrocytes and Noradrenergic Neurons Via l -Lactate. , 2017, , 167-182.		2
112	Genes Regulating Cardiovascular Function as Revealed Using Viral Vectors. , 2004, , 399-409.		2
113	Chronic inhibition of phosphoinositideâ€3â€kinase (PI3K) in the nucleus of the solitary tract (NTS) of hypertensive rats increases blood pressure. FASEB Journal, 2007, 21, A899.	0.5	2
114	Expression of Microbial Enzymes in Mammalian Astrocytes to Modulate Lactate Release. Brain Sciences, 2021, 11, 1056.	2.3	1
115	Morphological and electrophysiological properties of neurones in the dorsal vagal complex of the rat activated by arterial baroreceptors. , 2000, 417, 233.		1
116	Morphological and electrophysiological properties of neurones in the dorsal vagal complex of the rat activated by arterial baroreceptors. Journal of Comparative Neurology, 2000, 417, 233.	1.6	1
117	Nitroxergic Modulation in the NTS. Frontiers in Neuroscience, 2005, , 209-258.	0.0	1
118	cAMPâ€dependent modulation of I h underlies the P2Y 1 receptorâ€mediated excitation of the preBÃ¶tzinger Complex inspiratory network in vitro. FASEB Journal, 2019, 33, 551.8.	0.5	1
119	Memantine Disrupts Motor Coordination through Anxiety-like Behavior in CD1 Mice. Brain Sciences, 2022, 12, 495.	2.3	1
120	Astrocytes Control Breathing Through pH-Dependent Vesicular Release of Atp. Biophysical Journal, 2010, 98, 95a-96a.	0.5	0
121	Glial-neuronal interactions in the central nervous cardiovascular and respiratory control. Experimental Physiology, 2011, 96, 391-392.	2.0	0
122	Optogenetics. , 2012, , 689-691.		0
123	OS 05-09 REDUCED VASODILATOR EFFICIENCY OF ADENOSINE IN THE BRAINSTEM OF YOUNG SPONTANEOUSLY HYPERTENSIVE RATS. Journal of Hypertension, 2016, 34, e60.	0.5	0
124	Optogenetic Control of Astroglia. , 0, , 181-195.		0
125	Downâ€regulation of leukotriene B4 12â€hydroxydehydrogenase gene in the nucleus tractus solitarii (NTS) of the spontaneously hypertensive rat may be proâ€hypertensive. FASEB Journal, 2006, 20, .	0.5	0
126	Microarray analysis of brainstem micro vessels in an animal model genetically predisposed to hypertension. FASEB Journal, 2007, 21, A1411.	0.5	0

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127	Role of phosphoinositideâ€3â€kinase (PI3K) in the nucleus of the solitary tract (NTS) in the modulation of baroreceptor reflex function in the hypertensive rat. FASEB Journal, 2008, 22, 737.34.	0.5	0
128	Proteomic analysis of brainstem micro vessels in angiotensin II induced hypertension. FASEB Journal, 2008, 22, 968.1.	0.5	0
129	A fibreâ€optic laser system and cellâ€specific viral vectors for chronic optoâ€genetic experimentation on deep brain structures. FASEB Journal, 2009, 23, 818.11.	0.5	0
130	Cellular substrates for angiotensin1â€7 (Ang1â€7) action in the rostral ventroâ€lateral medulla (RVLM) of the normotentsive and spontaneously hypertensive rat (SHR). FASEB Journal, 2009, 23, 958.3.	0.5	0
131	Autonomic cardiovascular responses to chronic infusions of angiotensin II (ANGII) in wistar kyoto rats (WKY). FASEB Journal, 2009, 23, 1017.13.	0.5	0
132	Photostimulation of Channelrhodopsinâ€2 expressing ventral medullary astrocytes increases sympathetic nerve activity and blood pressure in rats. FASEB Journal, 2010, 24, 808.16.	0.5	0
133	Optogenetic Analysis of Areaâ€Specific Glialâ€Neuronal Signalling. FASEB Journal, 2010, 24, 1064.19.	0.5	0
134	Chronic knockdown of nNOS in the paraventricular nucleus (PVN) produces persistent increases in arterial pressure and renal sympathetic nerve activity (RSNA) in the rat. FASEB Journal, 2011, 25, 1078.8.	0.5	0
135	Leptin activates rat carotid body Type I cells and brainstem astroglial cells. FASEB Journal, 2012, 26, 1128.4.	0.5	0
136	Population genetics of spinoÑerebellar ataxias caused by polyglutamine expansions. Vavilovskii Zhurnal Genetiki I Selektsii, 2019, 23, 473-481.	1.1	0