Prem Kumar

List of Publications by Year
in descending order

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54 papers	1,523 citations	516215 16 h-index	414034 32 g-index
56 all docs	56 docs citations	56 times ranked	1283 citing authors

#	Article	IF	Citations
1	Peripheral Chemoreceptors: Function and Plasticity of the Carotid Body. , 2012, 2, 141-219.		421
2	Does AMP-activated Protein Kinase Couple Inhibition of Mitochondrial Oxidative Phosphorylation by Hypoxia to Calcium Signaling in O2-sensing Cells?. Journal of Biological Chemistry, 2005, 280, 41504-41511.	1.6	160
3	AMP-activated Protein Kinase Mediates Carotid Body Excitation by Hypoxia. Journal of Biological Chemistry, 2007, 282, 8092-8098.	1.6	126
4	Absence of Ventilatory Responses to Alternating Breaths of Mild Hypoxia and Air in Infants Who Have Had Bronchopulmonary Dysplasia: Implications for the Risk of Sudden Infant Death. Pediatric Research, 1994, 35, 677-681.	1.1	91
5	Adequate stimuli of the carotid body: More than an oxygen sensor?. Respiratory Physiology and Neurobiology, 2007, 157, 12-21.	0.7	61
6	Sensing hypoxia in the carotid body: from stimulus to response. Essays in Biochemistry, 2007, 43, 43-60.	2.1	46
7	Ion Channel Regulation by AMPK. Annals of the New York Academy of Sciences, 2009, 1177, 89-100.	1.8	42
8	AMP-activated Protein Kinase Deficiency Blocks the Hypoxic Ventilatory Response and Thus Precipitates Hypoventilation and Apnea. American Journal of Respiratory and Critical Care Medicine, 2016, 193, 1032-1043.	2.5	41
9	Systemic Effects Resulting from Carotid Body Stimulationâ€“Invited Article. Advances in Experimental Medicine and Biology, 2009, 648, 223-233.	0.8	40
10	The Respiratory Response of Healthy Term Infants to Breath-by-Breath Alternations in Inspired Oxygen at Two Postnatal Ages. Pediatric Research, 1994, 35, 321-323.	1.1	38
11	Longâ€term facilitation of ventilation following acute continuous hypoxia in awake humans during sustained hypercapnia. Journal of Physiology, 2012, 590, 5151-5165.	1.3	34
12	Adrenaline release evokes hyperpnoea and an increase in ventilatory CO₂ sensitivity during hypoglycaemia: a role for the carotid body. Journal of Physiology, 2016, 594, 4439-4452.	1.3	31
13	Respiratory chemoreceptor function in vertebrates comparative and evolutionary aspects. Integrative and Comparative Biology, 2007, 47, 592-600.	0.9	25
14	A Possible Dual Site of Action for Carbon Monoxideâ€Mediated Chemoexcitation in the Rat Carotid Body. Journal of Physiology, 2002, 543, 933-945.	1.3	23
15	A respiratory response to the activation of the muscle metaboreflex during concurrent hypercapnia in man. Experimental Physiology, 2010, 95, 194-201.	0.9	19
16	AMP-Activated Protein Kinase Couples Mitochondrial Inhibition by Hypoxia to Cell-Specific Ca2+ Signalling Mechanisms in Oxygensensing Cells. Novartis Foundation Symposium, 0, , 234-258.	1.2	19
17	Glycogen metabolism protects against metabolic insult to preserve carotid body function during glucose deprivation. Journal of Physiology, 2014, 592, 4493-4506.	1.3	17
18	Measuring changes in chest wall motion after lung resection using structured light plethysmography: a feasibility study. Interactive Cardiovascular and Thoracic Surgery, 2016, 23, 544-547.	0.5	17

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19	Moderate inhibition of mitochondrial function augments carotid body hypoxic sensitivity. Pflugers Archiv European Journal of Physiology, 2016, 468, 143-155.	1.3	17
20	Chemoreceptor Function in the Fetus and Neonate. Advances in Experimental Medicine and Biology, 1994, 360, 99-108.	0.8	17
21	Sensing hypoxia: Carotid body mechanisms and reflexes in health and disease. Respiratory Physiology and Neurobiology, 2007, 157, 1-3.	0.7	16
22	Ectoâ€5â€²â€nucleotidase (CD73) regulates peripheral chemoreceptor activity and cardiorespiratory responses to hypoxia. Journal of Physiology, 2018, 596, 3137-3148.	1.3	15
23	Is Carotid Body Physiological O2 Sensitivity Determined by a Unique Mitochondrial Phenotype?. Frontiers in Physiology, 2018, 9, 562.	1.3	15
24	How sweet it is: sensing low glucose in the carotid body. Journal of Physiology, 2007, 578, 627-627.	1.3	14
25	Bicarbonate-sensitive soluble and transmembrane adenylyl cyclases in peripheral chemoreceptors. Respiratory Physiology and Neurobiology, 2013, 188, 83-93.	0.7	14
26	Calcium oscillations induced by ATP in human umbilical cord smooth muscle cells. Journal of Cellular Physiology, 2007, 213, 79-87.	2.0	13
27	Ion Channel Regulation by the LKB1-AMPK Signalling Pathway: The Key to Carotid Body Activation by Hypoxia and Metabolic Homeostasis at the Whole Body Level. Advances in Experimental Medicine and Biology, 2012, 758, 81-90.	0.8	13
28	Chest wall mechanics before and after diaphragm plication. Journal of Cardiothoracic Surgery, 2016, 11, 25.	0.4	13
29	Mitochondrial Succinate Metabolism and Reactive Oxygen Species Are Important but Not Essential for Eliciting Carotid Body and Ventilatory Responses to Hypoxia in the Rat. Antioxidants, 2021, 10, 840.	2.2	13
30	Ecto-5â€²-Nucleotidase, Adenosine and Transmembrane Adenylyl Cyclase Signalling Regulate Basal Carotid Body Chemoafferent Outflow and Establish the Sensitivity to Hypercapnia. Advances in Experimental Medicine and Biology, 2015, 860, 279-289.	0.8	13
31	G-Protein-Coupled Receptor (GPCR) Signaling in the Carotid Body: Roles in Hypoxia and Cardiovascular and Respiratory Disease. International Journal of Molecular Sciences, 2020, 21, 6012.	1.8	12
32	Adrenaline activation of the carotid body: Key to CO2 and pH homeostasis in hypoglycaemia and potential pathological implications in cardiovascular disease. Respiratory Physiology and Neurobiology, 2019, 265, 92-99.	0.7	10
33	The effects of pharmacological modulation of KATP on the guinea-pig isolated diaphragm. European Journal of Pharmacology, 1996, 302, 79-88.	1.7	9
34	Key Roles for AMP-activated Protein Kinase in the Function of the Carotid Body?. Advances in Experimental Medicine and Biology, 2008, 605, 63-68.	0.8	8
35	The impact of acute and chronic catecholamines on respiratory responses to hypoxic stress in the rat. Pflugers Archiv European Journal of Physiology, 2013, 465, 209-219.	1.3	8
36	Adrenaline Increases Carotid Body CO2 Sensitivity: An in vivo Study. , 2006, 580, 245-250.		8

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37	Mild Chronic Intermittent Hypoxia in Wistar Rats Evokes Significant Cardiovascular Pathophysiology but No Overt Changes in Carotid Body-Mediated Respiratory Responses. Advances in Experimental Medicine and Biology, 2015, 860, 245-254.	0.8	7
38	Î²-Adrenoceptor blockade prevents carotid body hyperactivity and elevated vascular sympathetic nerve density induced by chronic intermittent hypoxia. Pflugers Archiv European Journal of Physiology, 2021, 473, 37-51.	1.3	7
39	AMP-activated protein kinase: function and dysfunction in health and disease. Journal of Physiology, 2006, 574, 3-6.	1.3	5
40	Are Multiple Mitochondrial Related Signalling Pathways Involved in Carotid Body Oxygen Sensing?. Frontiers in Physiology, 2022, 13, .	1.3	5
41	The Interaction Between Low Glucose and Hypoxia in the in vitro, Rat Carotid Body. Advances in Experimental Medicine and Biology, 2012, 758, 123-127.	0.8	4
42	The carotid body in cardiovascular disease: more chicken and egg than horse and cart?. Journal of Physiology, 2012, 590, 4123-4123.	1.3	3
43	Elevation of Metabolic Rate by Pyrogen Administration Does Not Affect the Gain of Respiratory Peripheral Chemoreflexes in Unanesthetized Kittens. Pediatric Research, 1998, 44, 357-362.	1.1	3
44	LKB1 is the gatekeeper of carotid body chemosensing and the hypoxic ventilatory response. Communications Biology, 2022, 5, .	2.0	3
45	Translating blood-borne stimuli: chemotransduction in the carotid body. Acta Physiologica Sinica, 2007, 59, 128-32.	0.5	2
46	Acidosis abolishes the effect of repeated applications of ATP on pulmonary artery force and [Ca2+]i. Respiratory Physiology and Neurobiology, 2004, 141, 157-166.	0.7	1
47	Comments on Point:Counterpoint: High altitude is/is not for the birds!. Journal of Applied Physiology, 2011, 111, 1520-1524.	1.2	1
48	Surgery corrects asynchrony of ribcage secondary to extra-thoracic tumor but leads to expiratory dysfunction during exercise. Journal of Cardiothoracic Surgery, 2015, 10, 187.	0.4	1
49	Regulation of K+ Currents by CO in Carotid Body type I Cells and Pulmonary Artery Smooth Muscle Cells. Advances in Experimental Medicine and Biology, 2003, 536, 147-154.	0.8	1
50	A role for TRP channels in carotid body chemotransduction?. FASEB Journal, 2006, 20, A1229.	0.2	1
51	Foreword. Respiratory Physiology and Neurobiology, 2012, 184, 115-116.	0.7	0
52	Direct inhibition of TRPC3 by polyunsaturated fatty acids in MCFâ€7 breast cancer cells. FASEB Journal, 2006, 20, A329.	0.2	0
53	Calcium oscillations induced by ATP in human umbilical cord smooth muscle cells. FASEB Journal, 2006, 20, A1175.	0.2	0
54	Ion channel regulation by the Lkb1â€AMPK signalling pathway: the key to carotid body activation by hypoxia and metabolic homeostasis at the whole body level. FASEB Journal, 2012, 26, 897.4.	0.2	0