

# Richard J A Wilson

## List of Publications by Year in descending order

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113  
papers

2,175  
citations

218381

26  
h-index

264894

42  
g-index

116  
all docs

116  
docs citations

116  
times ranked

1835  
citing authors

#	ARTICLE	IF	CITATIONS
1	Intestinal fungi are causally implicated in microbiome assembly and immune development in mice. <i>Nature Communications</i> , 2020, 11, 2577.	5.8	151
2	Developmental disinhibition: Turning off inhibition turns on breathing in vertebrates. <i>Journal of Neurobiology</i> , 2000, 45, 75-83.	3.7	118
3	Which came first, the lung or the breath?. <i>Comparative Biochemistry and Physiology Part A, Molecular &amp; Integrative Physiology</i> , 2001, 129, 37-47.	0.8	97
4	Evidence that ventilatory rhythmogenesis in the frog involves two distinct neuronal oscillators. <i>Journal of Physiology</i> , 2002, 540, 557-570.	1.3	92
5	Ancient gill and lung oscillators may generate the respiratory rhythm of frogs and rats. <i>Journal of Neurobiology</i> , 2005, 62, 369-385.	3.7	79
6	Sudden neonatal death in PACAP-deficient mice is associated with reduced respiratory chemoresponse and susceptibility to apnoea. <i>Journal of Physiology</i> , 2004, 555, 15-26.	1.3	75
7	Rapid-Onset Obesity With Hypothalamic Dysfunction, Hypoventilation, and Autonomic Dysregulation: Analysis of Hypothalamic and Autonomic Candidate Genes. <i>Pediatric Research</i> , 2011, 70, 375-378.	1.1	66
8	Respiratory activity in neonatal rats. <i>Autonomic Neuroscience: Basic and Clinical</i> , 2000, 84, 19-29.	1.4	65
9	A negative interaction between brainstem and peripheral respiratory chemoreceptors modulates peripheral chemoreflex magnitude. <i>Journal of Physiology</i> , 2009, 587, 883-896.	1.3	63
10	Brainstem PCO <sub>2</sub> modulates phrenic responses to specific carotid body hypoxia in an in situ perfused rat preparation. <i>Journal of Physiology</i> , 2007, 578, 843-857.	1.3	61
11	Serotonergic sensory-motor neurons mediate a behavioral response to hypoxia in pond snail embryos. <i>Journal of Neurobiology</i> , 2002, 52, 73-83.	3.7	57
12	Integration of Central and Peripheral Respiratory Chemoreflexes. , 2016, 6, 1005-1041.		47
13	Rapid-Onset Obesity with Hypothalamic Dysfunction, Hypoventilation, and Autonomic Dysregulation (ROHHAD): exome sequencing of trios, monozygotic twins and tumours. <i>Orphanet Journal of Rare Diseases</i> , 2015, 10, 103.	1.2	45
14	Integrated and Sequence-Ordered BAC- and YAC-Based Physical Maps for the Rat Genome. <i>Genome Research</i> , 2004, 14, 766-779.	2.4	44
15	Preventing acute asthmatic symptoms by targeting a neuronal mechanism involving carotid body lysophosphatidic acid receptors. <i>Nature Communications</i> , 2018, 9, 4030.	5.8	42
16	Brain stem P <sub>O<sub>2</sub></sub> and pH of the working heart-brain stem preparation during vascular perfusion with aqueous medium. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2001, 281, R528-R538.	0.9	41
17	Time-dependent modulation of carotid body afferent activity during and after intermittent hypoxia. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2005, 288, R1571-R1580.	0.9	40
18	Phylogeny of vertebrate respiratory rhythm generators: The Oscillator Homology Hypothesis. <i>Respiratory Physiology and Neurobiology</i> , 2006, 154, 47-60.	0.7	37

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19	Anandamide modulates carotid sinus nerve afferent activity via TRPV1 receptors increasing responses to heat. <i>Journal of Applied Physiology</i> , 2012, 112, 212-224.	1.2	36
20	Lung and Buccal Ventilation in the Frog: Uncoupling Coupled Oscillators. <i>Physiological and Biochemical Zoology</i> , 2006, 79, 1010-1018.	0.6	35
21	Pituitary adenylate cyclase-activating polypeptide is vital for neonatal survival and the neuronal control of breathing. <i>Respiratory Physiology and Neurobiology</i> , 2008, 164, 168-178.	0.7	34
22	Zac1 Regulates the Differentiation and Migration of Neocortical Neurons via Pac1. <i>Journal of Neuroscience</i> , 2015, 35, 13430-13447.	1.7	34
23	Evolution of central respiratory chemoreception: a new twist on an old story. <i>Respiration Physiology</i> , 2001, 129, 211-217.	2.8	32
24	Baclofen eliminates cluster lung breathing of the tadpole brainstem, in vitro. <i>Neuroscience Letters</i> , 2000, 292, 13-16.	1.0	31
25	Respiratory Control in Neonatal Rats Exposed to Prenatal Cigarette Smoke. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2008, 177, 1255-1261.	2.5	31
26	Sudden infant death syndrome (SIDS) in African Americans: polymorphisms in the gene encoding the stress peptide pituitary adenylate cyclase-activating polypeptide (PACAP). <i>Acta Paediatrica, International Journal of Paediatrics</i> , 2009, 98, 482-489.	0.7	31
27	CrossTalk opposing view: Peripheral and central chemoreceptors have hypoadditive effects on respiratory motor output. <i>Journal of Physiology</i> , 2013, 591, 4355-4357.	1.3	31
28	Acute intermittent hypoxia with concurrent hypercapnia evokes P2X and TRPV1 receptor-dependent sensory long-term facilitation in naïve carotid bodies. <i>Journal of Physiology</i> , 2018, 596, 3149-3169.	1.3	27
29	ROHHAD and Prader-Willi syndrome (PWS): clinical and genetic comparison. <i>Orphanet Journal of Rare Diseases</i> , 2018, 13, 124.	1.2	27
30	The essential role of peripheral respiratory chemoreceptor inputs in maintaining breathing revealed when CO <sub>2</sub> stimulation of central chemoreceptors is diminished. <i>Journal of Physiology</i> , 2013, 591, 1507-1521.	1.3	26
31	Central respiratory activity of the tadpole in vitro brain stem is modulated diversely by nitric oxide. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2002, 283, R417-R428.	0.9	25
32	Three brainstem areas involved in respiratory rhythm generation in bullfrogs. <i>Journal of Physiology</i> , 2015, 593, 2941-2954.	1.3	25
33	Specific carotid body chemostimulation is sufficient to elicit phrenic poststimulus frequency decline in a novel in situ dual-perfused rat preparation. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2005, 289, R532-R544.	0.9	23
34	Testing the evolutionary conservation of vocal motoneurons in vertebrates. <i>Respiratory Physiology and Neurobiology</i> , 2016, 224, 2-10.	0.7	23
35	Native Canadians relocating for renal dialysis. Psychosocial and cultural issues. <i>Canadian Family Physician</i> , 1994, 40, 1934-41.	0.1	22
36	Advancing respiratory cardiovascular physiology with the working heart-brainstem preparation over 25 years. <i>Journal of Physiology</i> , 2022, 600, 2049-2075.	1.3	22

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37	Pituitary adenylate cyclase-activating polypeptide maintains neonatal breathing but not metabolism during mild reductions in ambient temperature. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2008, 294, R956-R965.	0.9	20
38	Absence of mutations in HCRT , HCRTR1 and HCRTR2 in patients with ROHHAD. <i>Respiratory Physiology and Neurobiology</i> , 2016, 221, 59-63.	0.7	19
39	Diving into the mammalian swamp of respiratory rhythm generation with the bullfrog. <i>Respiratory Physiology and Neurobiology</i> , 2016, 224, 37-51.	0.7	18
40	PKC $\mu$ stimulation of TRPV1 orchestrates carotid body responses to asthmakines. <i>Journal of Physiology</i> , 2021, 599, 1335-1354.	1.3	18
41	Localization of essential rhombomeres for respiratory rhythm generation in bullfrog tadpoles using a binary search algorithm: Rhombomere 7 is essential for the gill rhythm and suppresses lung bursts before metamorphosis. <i>Developmental Neurobiology</i> , 2013, 73, 888-898.	1.5	17
42	Transmission of the respiratory rhythm to trigeminal and hypoglossal motor neurons in the American Bullfrog ( <i>Lithobates catesbeiana</i> ). <i>Respiratory Physiology and Neurobiology</i> , 2013, 188, 180-191.	0.7	15
43	Stress peptide PACAP engages multiple signaling pathways within the carotid body to initiate excitatory responses in respiratory and sympathetic chemosensory afferents. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2013, 304, R1070-R1084.	0.9	15
44	Cardiorespiratory control and cytokine profile in response to heat stress, hypoxia, and lipopolysaccharide (LPS) exposure during early neonatal period. <i>Physiological Reports</i> , 2016, 4, e12688.	0.7	15
45	Functional-Optical Coherence Tomography: A Non-invasive Approach to Assess the Sympathetic Nervous System and Intrinsic Vascular Regulation. <i>Frontiers in Physiology</i> , 2019, 10, 1146.	1.3	15
46	A Negative Interaction Between Central and Peripheral Respiratory Chemoreceptors May Underlie Sleep-Induced Respiratory Instability: A Novel Hypothesis. <i>Advances in Experimental Medicine and Biology</i> , 2008, 605, 447-451.	0.8	14
47	Novel oxygen sensing mechanism in the spinal cord involved in cardiorespiratory responses to hypoxia. <i>Science Advances</i> , 2022, 8, eabm1444.	4.7	13
48	Two-oscillator model of ventilatory rhythmogenesis in the frog. <i>Neurocomputing</i> , 2005, 65-66, 751-757.	3.5	12
49	Analysis of PAC1 receptor gene variants in Caucasian and African American infants dying of sudden infant death syndrome. <i>Acta Paediatrica, International Journal of Paediatrics</i> , 2013, 102, e546-e552.	0.7	12
50	Methylxanthine reversal of opioid-induced respiratory depression in the neonatal rat: Mechanism and location of action. <i>Respiratory Physiology and Neurobiology</i> , 2014, 200, 80-89.	0.7	12
51	Time course and magnitude of ventilatory and renal acid-base acclimatization following rapid ascent to and residence at 3,800 m over nine days. <i>Journal of Applied Physiology</i> , 2021, 130, 1705-1715.	1.2	12
52	Chemical and thermal stimuli have short-lived effects on the Retzius cell in the medicinal leech. , 2000, 43, 304-311.		11
53	Oxygen sensitive chemoreceptors in the first gill arch of the tadpole, <i>Rana catesbeiana</i> . <i>Canadian Journal of Physiology and Pharmacology</i> , 2001, 79, 959-962.	0.7	11
54	Novel method for conscious airway resistance and ventilation estimation in neonatal rodents using plethysmography and a mechanical lung. <i>Respiratory Physiology and Neurobiology</i> , 2014, 201, 75-83.	0.7	11

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55	A SIDS-Like Phenotype is Associated With Reduced Respiratory Chemoresponses in PACAP Deficient Neonatal Mice. <i>Advances in Experimental Medicine and Biology</i> , 2004, 551, 77-83.	0.8	10
56	TRPV1 deletion exacerbates hyperthermic seizures in an age-dependent manner in mice. <i>Epilepsy Research</i> , 2016, 128, 27-34.	0.8	10
57	Vagal TRPV1 activation exacerbates thermal hyperpnea and increases susceptibility to experimental febrile seizures in immature rats. <i>Neurobiology of Disease</i> , 2018, 119, 172-189.	2.1	10
58	Incidence and prevalence of end-stage renal disease among Ontario's James Bay Cree. <i>Canadian Journal of Public Health</i> , 1992, 83, 143-6.	1.1	10
59	Stress peptide PACAP stimulates and stabilizes neonatal breathing through distinct mechanisms. <i>Respiratory Physiology and Neurobiology</i> , 2013, 187, 217-223.	0.7	9
60	Peaks and valleys: oscillatory cerebral blood flow at high altitude protects cerebral tissue oxygenation. <i>Physiological Measurement</i> , 2021, 42, 064005.	1.2	9
61	Syncope and silent hypoxemia in COVID-19: Implications for the autonomic field. <i>Autonomic Neuroscience: Basic and Clinical</i> , 2021, 235, 102842.	1.4	9
62	Neural activity and branching of embryonic retinal ganglion cell dendrites. <i>Mechanisms of Development</i> , 2012, 129, 125-135.	1.7	8
63	The effects of sex and neonatal stress on pituitary adenylate cyclase-activating peptide expression. <i>Experimental Physiology</i> , 2015, 100, 203-215.	0.9	8
64	Impaired neonatal cardiorespiratory responses to hypoxia in mice lacking PAC1 or VPAC2 receptors. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2019, 316, R594-R606.	0.9	8
65	Interactive effects of maternal cigarette smoke, heat stress, hypoxia, and lipopolysaccharide on neonatal cardiorespiratory and cytokine responses. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2016, 311, R1113-R1124.	0.9	7
66	Pituitary adenylate cyclase-activating polypeptide drives cardiorespiratory responses to heat stress in neonatal mice. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2017, 313, R385-R394.	0.9	7
67	PACAP-PAC1 Receptor Activation Is Necessary for the Sympathetic Response to Acute Intermittent Hypoxia. <i>Frontiers in Neuroscience</i> , 2019, 13, 881.	1.4	7
68	Angiotensin II-Type I Receptor Antagonism Does Not Influence the Chemoreceptor Reflex or Hypoxia-Induced Central Sleep Apnea in Men. <i>Frontiers in Neuroscience</i> , 2020, 14, 382.	1.4	7
69	Asthmatic allergen inhalation sensitises carotid bodies to lysophosphatidic acid. <i>Journal of Neuroinflammation</i> , 2021, 18, 191.	3.1	7
70	Biomechanics of Hydroskeletons: Studies of Crawling in the Medicinal Leech. , 2000, , 206-220.		6
71	The molecular makeup of peripheral and central baroreceptors: stretching a role for Transient Receptor Potential (TRP), Epithelial Sodium Channel (ENaC), Acid Sensing Ion Channel (ASIC), and Piezo channels. <i>Cardiovascular Research</i> , 2022, 118, 3052-3070.	1.8	6
72	Surgical preparation of mice for recording cardiorespiratory parameters in vivo. <i>Journal of Neuroscience Methods</i> , 2015, 248, 41-45.	1.3	5

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73	Developmental Maturation of Functional Coupling Between Ventilatory Oscillators in the American Bullfrog. <i>Developmental Neurobiology</i> , 2018, 78, 1218-1230.	1.5	5
74	Rebuttal by Richard J. A. Wilson and Trevor A. Day. <i>Journal of Physiology</i> , 2013, 591, 4365-4365.	1.3	4
75	Interleukin-4 Programmed Macrophages Suppress Colitis and Do Not Enhance Infectious-Colitis, Inflammation-Associated Colon Cancer or Airway Hypersensitivity. <i>Frontiers in Immunology</i> , 2021, 12, 744738.	2.2	3
76	Integration in Respiratory Control. <i>Advances in Experimental Medicine and Biology</i> , 2008, , .	0.8	2
77	14-3-3. , 2008, , 1-1.		2
78	Impaired cardiorespiratory responses to hypercapnia in neonatal mice lacking PAC1 but not VPAC2 receptors. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2021, 320, R116-R128.	0.9	2
79	The effects of acute incremental hypocapnia on the magnitude of neurovascular coupling in healthy participants. <i>Physiological Reports</i> , 2021, 9, e14952.	0.7	2
80	Spinal Oxygen Sensors (SOS) drive sympathetic activity that precedes, predicts and outlives phrenic gasps during hypoxia in the absence of the brainstem. <i>FASEB Journal</i> , 2015, 29, 859.7.	0.2	2
81	Artificially Induced Nerve Cell Patterning or Real Neural Networks. , 1992, , 201-206.		2
82	Duration at high altitude influences the onset of arrhythmogenesis during apnea. <i>European Journal of Applied Physiology</i> , 2021, 122, 475.	1.2	2
83	Editorial: Hypoxia and Cardiorespiratory Control. <i>Frontiers in Physiology</i> , 2021, 12, 820815.	1.3	2
84	Functional optical coherence tomography at altitude: retinal microvascular perfusion and retinal thickness at 3,800 meters. <i>Journal of Applied Physiology</i> , 2022, 133, 534-545.	1.2	2
85	Superoxide Dismutase-1 Influences the Timing and Post-hypoxic Stability of Neonatal Breathing. <i>Advances in Experimental Medicine and Biology</i> , 2008, 605, 133-138.	0.8	1
86	Lamprey breathing when feeding sucks: the respiratory rhythm generator of a parasitic fish. <i>Journal of Physiology</i> , 2014, 592, 1725-1726.	1.3	1
87	Carotid Body Chemoreceptors and Respiratory Drive. , 2009, , 571-576.		1
88	The Study of Respiratory Chemoreflexes Using a Novel Dual-Perfused Rodent Preparation. <i>Neuromethods</i> , 2012, , 385-403.	0.2	1
89	Evolution of Vertebrate Respiratory Control. , 2009, , 67-76.		0
90	Investigations Of Mechanisms Of Carbon Dioxide-Induced Bronchial Smooth Muscle Relaxation. , 2012, , .		0

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91	PACAP causes the long-term increase in sympathetic activity evoked by acute intermittent hypoxia. <i>Autonomic Neuroscience: Basic and Clinical</i> , 2013, 177, 22-23.	1.4	0
92	The Role of RVLM and PACAP in Sympathetic Response and Breathing Stability. <i>Canadian Journal of Neurological Sciences</i> , 2015, 42, S7-S7.	0.3	0
93	Prelude Special Issue: Control of breathing in non-mammalian vertebrates. <i>Respiratory Physiology and Neurobiology</i> , 2016, 224, 1.	0.7	0
94	Th2 Cytokines Stimulate Carotid Body Chemoreceptors via TRPV1 Channels. , 2020, , .		0
95	Sex Differences in Vascular Reactivity with Acute and Chronic Hypoxia. <i>FASEB Journal</i> , 2021, 35, .	0.2	0
96	Epithelial Barrier Dysfunction Is Mediated by Lysophosphatidic Acid and Associated Cytokines. , 2021, , .		0
97	Duration at High Altitude Influences the Onset of Arrhythmogenesis During Apnea. <i>FASEB Journal</i> , 2021, 35, .	0.2	0
98	The Effects of Hypoxia-Induced Central Sleep Apnea on Splenic Contraction and Oxygen Carrying Capacity. <i>FASEB Journal</i> , 2021, 35, .	0.2	0
99	Suppression of Carotid Body Signalling Reduces Asthmatic Inflammation. , 2021, , .		0
100	Evidence suggesting three respiratory oscillators in frogs ( <i>Rana catesbeiana</i> ): implications for the Oscillator Homology Hypothesis and the evolution of breathing.. <i>FASEB Journal</i> , 2008, 22, 755.14.	0.2	0
101	Methylxanthine reversal of opioid-induced respiratory depression in the in situ neonatal rat working heart-brainstem preparation. <i>FASEB Journal</i> , 2012, 26, 1088.9.	0.2	0
102	Identification of lung priming area in frog brainstem, adjacent to the lung oscillator, distinct from the buccal oscillator: homologous to RTN/pFRG?. <i>FASEB Journal</i> , 2012, 26, 895.1.	0.2	0
103	Oscillating wildly: Turning the evolution of respiratory rhythm generation on its head. <i>FASEB Journal</i> , 2015, 29, 1033.7.	0.2	0
104	Drowning a frog respiratory oscillator in a wash of network excitability. <i>FASEB Journal</i> , 2018, 32, .	0.2	0
105	A novel non-invasive method to measure sympathetic activity and autoregulation in humans. <i>FASEB Journal</i> , 2018, 32, 920.4.	0.2	0
106	Induction of asthma causes sensitization of the carotid bodies to lysophosphatidic acid. <i>FASEB Journal</i> , 2019, 33, 1b580.	0.2	0
107	The Impact of Acute High Altitude Exposure (3800m) And Isocapnic Hypoxia/Hyperoxia on Neurovascular Coupling in Healthy Volunteers. <i>FASEB Journal</i> , 2020, 34, 1-1.	0.2	0
108	Severity of Central Sleep Apnea Does Not Improve Sleeping Oxygen Saturation During Ascent to High Altitude. <i>FASEB Journal</i> , 2020, 34, 1-1.	0.2	0

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109	Sympathetic Preganglionic Neurons (SPNs): a Promising Target to Regain Cardiorespiratory Control in Spinal Cord Injured (SCI) Patients. FASEB Journal, 2020, 34, 1-1.	0.2	0
110	Spinal Oxygen Sensors (SOS): A Novel Oxygen Sensing Mechanism Involved in Cardiovascular Responses to Hypoxia. FASEB Journal, 2020, 34, 1-1.	0.2	0
111	Carotid body-specific shRNA knockdown of PKC $\epsilon$ blunts TRPV1-dependent asthmatic bronchoconstriction. FASEB Journal, 2020, 34, 1-1.	0.2	0
112	Putative Sympathetic Oscillator in the Thoracic Spinal Cord of the Bullfrog. FASEB Journal, 2020, 34, 1-1.	0.2	0
113	Effects of Sustained Hypobaric Hypoxia on Amplitude of Forced Hemodynamic Oscillations During Central Hypovolemia. FASEB Journal, 2022, 36, .	0.2	0