

# Matthew R Hodges

## List of Publications by Year in descending order

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82  
papers

1,659  
citations

430874

18  
h-index

302126

39  
g-index

82  
all docs

82  
docs citations

82  
times ranked

1483  
citing authors

#	ARTICLE	IF	CITATIONS
1	Defects in Breathing and Thermoregulation in Mice with Near-Complete Absence of Central Serotonin Neurons. <i>Journal of Neuroscience</i> , 2008, 28, 2495-2505.	3.6	283
2	Transgenic Mice Lacking Serotonin Neurons Have Severe Apnea and High Mortality during Development. <i>Journal of Neuroscience</i> , 2009, 29, 10341-10349.	3.6	142
3	Medullary serotonin neurons and central CO <sub>2</sub> chemoreception. <i>Respiratory Physiology and Neurobiology</i> , 2009, 168, 49-58.	1.6	126
4	The role of medullary serotonin (5-HT) neurons in respiratory control: contributions to eupneic ventilation, CO <sub>2</sub> chemoreception, and thermoregulation. <i>Journal of Applied Physiology</i> , 2010, 108, 1425-1432.	2.5	117
5	Contributions of 5-HT neurons to respiratory control: Neuromodulatory and trophic effects. <i>Respiratory Physiology and Neurobiology</i> , 2008, 164, 222-232.	1.6	115
6	Transposon-mediated transgenesis, transgenic rescue, and tissue-specific gene expression in rodents and rabbits. <i>FASEB Journal</i> , 2013, 27, 930-941.	0.5	86
7	Essential role of Kir5.1 channels in renal salt handling and blood pressure control. <i>JCI Insight</i> , 2017, 2, .	5.0	78
8	Medullary serotonin neurons and their roles in central respiratory chemoreception. <i>Respiratory Physiology and Neurobiology</i> , 2010, 173, 256-263.	1.6	76
9	Ventilatory phenotypes among four strains of adult rats. <i>Journal of Applied Physiology</i> , 2002, 93, 974-983.	2.5	56
10	Acute and chronic effects of carotid body denervation on ventilation and chemoreflexes in three rat strains. <i>Journal of Physiology</i> , 2012, 590, 3335-3347.	2.9	45
11	Interaction between defects in ventilatory and thermoregulatory control in mice lacking 5-HT neurons. <i>Respiratory Physiology and Neurobiology</i> , 2008, 164, 350-357.	1.6	43
12	Altered ventilatory and thermoregulatory control in male and female adult Pet-1 null mice. <i>Respiratory Physiology and Neurobiology</i> , 2011, 177, 133-140.	1.6	39
13	Chronic central serotonin depletion attenuates ventilation and body temperature in young but not adult Tph2 knockout rats. <i>Journal of Applied Physiology</i> , 2016, 120, 1070-1081.	2.5	33
14	Characteristics of microRNAs enriched in specific cell types and primary tissue types in solid organs. <i>Physiological Genomics</i> , 2013, 45, 1144-1156.	2.3	29
15	Active sleep unmasks apnea and delayed arousal in infant rat pups lacking central serotonin. <i>Journal of Applied Physiology</i> , 2017, 123, 825-834.	2.5	24
16	Ventilatory and integrated physiological responses to chronic hypercapnia in goats. <i>Journal of Physiology</i> , 2018, 596, 5343-5363.	2.9	21
17	The serotonergic system and the control of breathing during development. <i>Respiratory Physiology and Neurobiology</i> , 2019, 270, 103255.	1.6	21
18	Expression, localization, and functional properties of inwardly rectifying K <sup>+</sup> channels in the kidney. <i>American Journal of Physiology - Renal Physiology</i> , 2020, 318, F332-F337.	2.7	21

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19	Fluoxetine augments ventilatory CO <sub>2</sub> sensitivity in Brown Norway but not Sprague Dawley rats. <i>Respiratory Physiology and Neurobiology</i> , 2013, 186, 221-228.	1.6	19
20	Genetic mutation of <i>Kcnj16</i> identifies Kir5.1-containing channels as key regulators of acute and chronic pH homeostasis. <i>FASEB Journal</i> , 2019, 33, 5067-5075.	0.5	18
21	Contributions of the Pre-Bötzinger Complex and the K <sub>A</sub> lliker-Fuse Nuclei to Respiratory Rhythm and Pattern Generation in Awake and Sleeping Goats. <i>Progress in Brain Research</i> , 2014, 209, 73-89.	1.4	16
22	Acute and chronic changes in the control of breathing in a rat model of bronchopulmonary dysplasia. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2019, 316, L506-L518.	2.9	16
23	Changes in neurochemicals within the ventrolateral medullary respiratory column in awake goats after carotid body denervation. <i>Journal of Applied Physiology</i> , 2013, 115, 1088-1098.	2.5	15
24	Methods for the Comprehensive in vivo Analysis of Energy Flux, Fluid Homeostasis, Blood Pressure, and Ventilatory Function in Rodents. <i>Frontiers in Physiology</i> , 2022, 13, 855054.	2.8	15
25	Atropine microdialysis within or near the pre-Bötzinger Complex increases breathing frequency more during wakefulness than during NREM sleep. <i>Journal of Applied Physiology</i> , 2013, 114, 694-704.	2.5	14
26	<i>Kcnj16</i> knockout produces audiogenic seizures in the Dahl salt-sensitive rat. <i>JCI Insight</i> , 2021, 6, .	5.0	14
27	RNASeq-derived transcriptome comparisons reveal neuromodulatory deficiency in the CO <sub>2</sub> insensitive brown Norway rat. <i>Journal of Physiology</i> , 2015, 593, 415-430.	2.9	13
28	Respiratory neuroplasticity following carotid body denervation: Central and peripheral adaptations. <i>Neural Regeneration Research</i> , 2012, 7, 1073-9.	3.0	13
29	Effects on breathing of agonists to $\mu$ -opioid or GABA A receptors dialyzed into the ventral respiratory column of awake and sleeping goats. <i>Respiratory Physiology and Neurobiology</i> , 2017, 239, 10-25.	1.6	12
30	Identifying Candidate Genes that Underlie Cellular pH Sensitivity in Serotonin Neurons Using Transcriptomics: A Potential Role for Kir5.1 Channels. <i>Frontiers in Cellular Neuroscience</i> , 2017, 11, 34.	3.7	12
31	Effects of neonatal hyperoxia on the critical period of postnatal development of neurochemical expressions in brain stem respiratory-related nuclei in the rat. <i>Physiological Reports</i> , 2018, 6, e13627.	1.7	12
32	Glutamate receptor plasticity in brainstem respiratory nuclei following chronic hypercapnia in goats. <i>Physiological Reports</i> , 2019, 7, e14035.	1.7	11
33	Relationship between the renin-angiotensin-aldosterone system and renal Kir5.1 channels. <i>Clinical Science</i> , 2019, 133, 2449-2461.	4.3	11
34	Kir5.1 channels: potential role in epilepsy and seizure disorders. <i>American Journal of Physiology - Cell Physiology</i> , 2022, 323, C706-C717.	4.6	10
35	Changes in glutamate receptor subunits within the medulla in goats after section of the carotid sinus nerves. <i>Journal of Applied Physiology</i> , 2014, 116, 1531-1542.	2.5	9
36	Evidence for respiratory neuromodulator interdependence after cholinergic disruption in the ventral respiratory column. <i>Respiratory Physiology and Neurobiology</i> , 2015, 205, 7-15.	1.6	8

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37	Brainstem serotonergic, catecholaminergic, and inflammatory adaptations during chronic hypercapnia in goats. <i>FASEB Journal</i> , 2019, 33, 14491-14505.	0.5	8
38	Impact of inflammation on developing respiratory control networks: rhythm generation, chemoreception and plasticity. <i>Respiratory Physiology and Neurobiology</i> , 2020, 274, 103357.	1.6	8
39	Single-Cell Transcriptomic Analysis. , 2020, 10, 767-783.		8
40	Combined unilateral blockade of cholinergic, peptidergic, and serotonergic receptors in the ventral respiratory column does not affect breathing in awake or sleeping goats. <i>Journal of Applied Physiology</i> , 2015, 119, 308-320.	2.5	6
41	Improved rat genome gene prediction by integration of ESTs with RNA-Seq information. <i>Bioinformatics</i> , 2015, 31, 25-32.	4.1	6
42	State-dependent and -independent effects of dialyzing excitatory neuromodulator receptor antagonists into the ventral respiratory column. <i>Journal of Applied Physiology</i> , 2017, 122, 327-338.	2.5	6
43	Blockade of neurokinin-1 receptors in the ventral respiratory column does not affect breathing but alters neurochemical release. <i>Journal of Applied Physiology</i> , 2015, 118, 732-741.	2.5	5
44	Raphe gene expression changes implicate immune-related functions in ventilatory plasticity following carotid body denervation in rats. <i>Experimental Neurology</i> , 2017, 287, 102-112.	4.1	5
45	Ventilation and neurochemical changes during $\mu$ -opioid receptor activation or blockade of excitatory receptors in the hypoglossal motor nucleus of goats. <i>Journal of Applied Physiology</i> , 2017, 123, 1532-1544.	2.5	4
46	Patch-to-Seq and Transcriptomic Analyses Yield Molecular Markers of Functionally Distinct Brainstem Serotonin Neurons. <i>Frontiers in Synaptic Neuroscience</i> , 0, 14, .	2.5	3
47	Midbrain and cerebral inflammatory and glutamatergic adaptations during chronic hypercapnia in goats. <i>Brain Research</i> , 2019, 1724, 146437.	2.2	2
48	Mortality and ventilatory effects of central serotonin deficiency during postnatal development depend on age but not sex. <i>Physiological Reports</i> , 2021, 9, e14946.	1.7	2
49	The central role of serotonin. <i>ELife</i> , 2018, 7, .	6.0	1
50	Evidence of Progressive Brainstem Pathology after Repeated Seizure Exposure in a Novel Rat Model of SUDEP. <i>FASEB Journal</i> , 2020, 34, 1-1.	0.5	1
51	Single Nuclear RNA Sequencing Reveals Activation of Neuroinflammation Within the Pre-Bötzing Complex Following Repeated Seizures. <i>FASEB Journal</i> , 2022, 36, .	0.5	1
52	Going to WAR: using a rat model of audiogenic seizure to uncover potential links to ventilatory dysfunction in epilepsy. <i>Journal of Physiology</i> , 2017, 595, 617-618.	2.9	0
53	Single Nuclear RNA Sequencing Reveals Activation of Neuroinflammation Within the Pre-Bötzing Complex Following Repeated Seizures. <i>FASEB Journal</i> , 2021, 35, .	0.5	0
54	Dose-dependent multiple physiologic effects of systemic fentanyl in awake adult goats. <i>FASEB Journal</i> , 2021, 35, .	0.5	0

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55	Effects of Serotonin Terminal Lesions in the Retrotrapezoid Nucleus on Ventilatory Chemoreflexes. FASEB Journal, 2021, 35, .	0.5	0
56	The mechanisms of neuroplasticity during acclimatization to and deacclimatization from chronic hypercapnia are fundamentally different. FASEB Journal, 2021, 35, .	0.5	0
57	Repeated Seizure Exposure in the SS <sup>Kcnj16</sup> Rat Causes Progressive Respiratory Suppression and Associated Brainstem Pathology. FASEB Journal, 2021, 35, .	0.5	0
58	Carotid body dysfunction and altered oxygen homeostasis in models of Parkinson's disease. FASEB Journal, 2008, 22, 1231.5.	0.5	0
59	State-Dependence of Ventilation (VE) and Neuromodulator Concentration at the Pre-Bötzinger Complex (pre-BötC) in Response to Cholinergic Receptor Blockade. FASEB Journal, 2011, 25, 1074.1.	0.5	0
60	Carotid body denervation does not affect CO2 sensitivity in multiple rat strains. FASEB Journal, 2012, 26, 894.12.	0.5	0
61	Effects on ventilation (VE) and neuromodulator concentration of cholinergic receptor blockade at the pre-Bötzinger Complex (pre-BötC). FASEB Journal, 2012, 26, 1088.5.	0.5	0
62	Fluoxetine Augments the Hypercapnic Ventilatory Response in CO2-insensitive Brown Norway (BN) Rats. FASEB Journal, 2012, 26, .	0.5	0
63	Microdialysis of a NK1R antagonist into the ventral medulla does not affect breathing frequency. FASEB Journal, 2013, 27, 1214.6.	0.5	0
64	Immunohistochemical Changes in 5 Respiratory Nuclei after Bilateral Carotid Body Denervation (CBD) in Sprague Dawley Rats. FASEB Journal, 2013, 27, 1214.7.	0.5	0
65	Attenuation of the hypercapnic ventilatory response in the Brown Norway (BN) rat occurs prior to postnatal (P) day 26 and does not appear to be influenced by gender. FASEB Journal, 2013, 27, 720.3.	0.5	0
66	RNA sequencing to profile transcriptional changes within the medullary raphe: potential mechanisms of central neuroplasticity driving the recovery of eupneic ventilation after bilateral carotid body denervation (713.7). FASEB Journal, 2014, 28, 713.7.	0.5	0
67	Ventilatory and Neurochemical Effects of Microdialysis of a $\mu$ -opioid Receptor Agonist (DAMGO) into the Region of the Ventral Respiratory Column in Awake Goats. FASEB Journal, 2015, 29, LB745.	0.5	0
68	Concurrent Blockade of Muscarinic, Neurokinin-1, and Serotonergic Receptors in the Ventral Respiratory Column of Intact Goats Does Not Affect Breathing. FASEB Journal, 2015, 29, 1032.12.	0.5	0
69	Knockout of Kcnj16 (Kir5.1) in Dahl Salt-sensitive Rats Produces Seizure Phenotype. FASEB Journal, 2018, 32, 750.3.	0.5	0
70	Acute and Chronic Respiratory Effects from Repeated Audiogenic Seizures in SS Kcnj16 <sup>-/-</sup> Rats. FASEB Journal, 2018, 32, 894.14.	0.5	0
71	Ventilatory, Arterial Blood Gas, pH, and Electrolyte Adaptations to Chronic Hypercapnia in Healthy Goats. FASEB Journal, 2018, 32, 894.12.	0.5	0
72	Ventilatory CO <sub>2</sub> /H <sup>+</sup> + Chemoreflex During Chronic Hypercapnia in Healthy Goats. FASEB Journal, 2018, 32, 894.11.	0.5	0

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73	Effects on Breathing and the CO <sub>2</sub> Chemoreflex of 5-HT and NK-1 Receptor Antagonists in the Retrotrapezoid Nucleus (RTN). FASEB Journal, 2018, 32, 894.13.	0.5	0
74	Hyperoxia-Induced Bronchopulmonary Dysplasia in Neonatal Rats Acutely and Chronically Alters the Control of Breathing. FASEB Journal, 2018, 32, 742.10.	0.5	0
75	Kcnj10 (Kir 4.1) Knockout in Dahl SS Rats Determines the Expression of Kcnj10 and Kcnj16 Proteins in Brain and Kidney. FASEB Journal, 2018, 32, 620.3.	0.5	0
76	Pairing Electrophysiology and Single Cell RNA Sequencing to Identify Mechanisms of Cellular pH/CO <sub>2</sub> Sensitivity in Respiratory Chemoreceptor Neurons. FASEB Journal, 2019, 33, 595.8.	0.5	0
77	The Role of Raphe-derived Neuromodulation of the Retrotrapezoid Nucleus (RTN) in Ventilatory Chemoreflexes. FASEB Journal, 2019, 33, 733.3.	0.5	0
78	Glutamate Receptor Plasticity in Brainstem Respiratory Nuclei Following Chronic Hypercapnia in Goats. FASEB Journal, 2019, 33, 731.7.	0.5	0
79	Kir5.1-Mediated Changes in Renin-Angiotensin-Aldosterone System Balance in Salt Sensitive Hypertension. FASEB Journal, 2019, 33, 862.12.	0.5	0
80	Physiological Adaptations During the Acclimatization To and Deacclimatization From Chronic Hypercapnia. FASEB Journal, 2020, 34, 1-1.	0.5	0
81	Acute and Chronic Effects of Seizures on Cardiorespiratory Control in the SS <sup>Kcnj16</sup> Rat. FASEB Journal, 2022, 36, .	0.5	0
82	Mild to Moderate Chronic Hypercapnia Impairs Adaptation of Acute CO <sub>2</sub> /H <sub>2</sub> O Chemosensitivity but Not Steady State Ventilation. FASEB Journal, 2022, 36, .	0.5	0