

Jan-Marino Ramirez

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128
papers

6,931
citations

47
h-index

81
g-index

142
ext. papers

7,974
ext. citations

5.3
avg, IF

6.11
L-index

#	Paper	IF	Citations
128	A toolbox of Cre-dependent optogenetic transgenic mice for light-induced activation and silencing. <i>Nature Neuroscience</i> , 2012 , 15, 793-802	25.5	845
127	Differential contribution of pacemaker properties to the generation of respiratory rhythms during normoxia and hypoxia. <i>Neuron</i> , 2004 , 43, 105-17	13.9	261
126	Mecp2 deficiency disrupts norepinephrine and respiratory systems in mice. <i>Journal of Neuroscience</i> , 2005 , 25, 11521-30	6.6	222
125	Hypoxia tolerance in mammals and birds: from the wilderness to the clinic. <i>Annual Review of Physiology</i> , 2007 , 69, 113-43	23.1	191
124	Endogenous activation of serotonin-2A receptors is required for respiratory rhythm generation in vitro. <i>Journal of Neuroscience</i> , 2002 , 22, 11055-64	6.6	185
123	Pacemaker neurons and neuronal networks: an integrative view. <i>Current Opinion in Neurobiology</i> , 2004 , 14, 665-74	7.6	179
122	Neuromodulation and the orchestration of the respiratory rhythm. <i>Respiratory Physiology and Neurobiology</i> , 2008 , 164, 96-104	2.8	164
121	Identification of two types of inspiratory pacemaker neurons in the isolated respiratory neural network of mice. <i>Journal of Neurophysiology</i> , 2001 , 86, 104-12	3.2	150
120	Non-cell-autonomous effects of presenilin 1 variants on enrichment-mediated hippocampal progenitor cell proliferation and differentiation. <i>Neuron</i> , 2008 , 59, 568-80	13.9	147
119	The neuronal mechanisms of respiratory rhythm generation. <i>Current Opinion in Neurobiology</i> , 1996 , 6, 817-25	7.6	143
118	Breathing disorders in Rett syndrome: progressive neurochemical dysfunction in the respiratory network after birth. <i>Respiratory Physiology and Neurobiology</i> , 2009 , 168, 101-8	2.8	133
117	A novel excitatory network for the control of breathing. <i>Nature</i> , 2016 , 536, 76-80	50.4	131
116	Autonomic nervous system dysregulation: breathing and heart rate perturbation during wakefulness in young girls with Rett syndrome. <i>Pediatric Research</i> , 2006 , 60, 443-9	3.2	131
115	Gasping activity in vitro: a rhythm dependent on 5-HT _{2A} receptors. <i>Journal of Neuroscience</i> , 2006 , 26, 2623-34	6.6	131
114	Substance P-mediated modulation of pacemaker properties in the mammalian respiratory network. <i>Journal of Neuroscience</i> , 2004 , 24, 7549-56	6.6	127
113	The Na,K-ATPase alpha 2 isoform is expressed in neurons, and its absence disrupts neuronal activity in newborn mice. <i>Journal of Biological Chemistry</i> , 2003 , 278, 5317-24	5.4	120
112	Differential modulation of neural network and pacemaker activity underlying eupnea and sigh-breathing activities. <i>Journal of Neurophysiology</i> , 2008 , 99, 2114-25	3.2	106

111	State-dependent interactions between excitatory neuromodulators in the neuronal control of breathing. <i>Journal of Neuroscience</i> , 2010 , 30, 8251-62	6.6	102
110	The role of the hyperpolarization-activated current in modulating rhythmic activity in the isolated respiratory network of mice. <i>Journal of Neuroscience</i> , 2000 , 20, 2994-3005	6.6	96
109	Octopamine induces bursting and plateau potentials in insect neurones. <i>Brain Research</i> , 1991 , 549, 332-7	3.7	96
108	Breathing challenges in Rett syndrome: lessons learned from humans and animal models. <i>Respiratory Physiology and Neurobiology</i> , 2013 , 189, 280-7	2.8	87
107	Role of inspiratory pacemaker neurons in mediating the hypoxic response of the respiratory network in vitro. <i>Journal of Neuroscience</i> , 2000 , 20, 5858-66	6.6	86
106	Autonomic dysregulation in young girls with Rett Syndrome during nighttime in-home recordings. <i>Pediatric Pulmonology</i> , 2008 , 43, 1045-1060	3.5	85
105	Norepinephrine differentially modulates different types of respiratory pacemaker and nonpacemaker neurons. <i>Journal of Neurophysiology</i> , 2006 , 95, 2070-82	3.2	84
104	Thermal preconditioning and heat-shock protein 72 preserve synaptic transmission during thermal stress. <i>Journal of Neuroscience</i> , 2002 , 22, RC193	6.6	81
103	The interdependence of excitation and inhibition for the control of dynamic breathing rhythms. <i>Nature Communications</i> , 2018 , 9, 843	17.4	69
102	Long-term deprivation of substance P in PPT-A mutant mice alters the anoxic response of the isolated respiratory network. <i>Journal of Neurophysiology</i> , 2002 , 88, 206-13	3.2	69
101	Differential responses of respiratory nuclei to anoxia in rhythmic brain stem slices of mice. <i>Journal of Neurophysiology</i> , 1999 , 82, 2163-70	3.2	69
100	OCTOPAMINERGIC MODULATION OF THE FOREWING STRETCH RECEPTOR IN THE LOCUST LOCUSTA MIGRATORIA. <i>Journal of Experimental Biology</i> , 1990 , 149, 255-279	3	69
99	Calcium-activated non-selective cation currents are involved in generation of tonic and bursting activity in dopamine neurons of the substantia nigra pars compacta. <i>Journal of Physiology</i> , 2011 , 589, 2497-514	3.9	68
98	The integrative role of the sigh in psychology, physiology, pathology, and neurobiology. <i>Progress in Brain Research</i> , 2014 , 209, 91-129	2.9	66
97	Mechanisms of respiratory rhythm generation change profoundly during early life in mice and rats. <i>Neuroscience Letters</i> , 1994 , 170, 167-70	3.3	64
96	Cycle-by-cycle assembly of respiratory network activity is dynamic and stochastic. <i>Journal of Neurophysiology</i> , 2013 , 109, 296-305	3.2	62
95	Determinants of inspiratory activity. <i>Respiratory Physiology and Neurobiology</i> , 2005 , 147, 145-57	2.8	62
94	Stabilization of bursting in respiratory pacemaker neurons. <i>Journal of Neuroscience</i> , 2003 , 23, 3538-46	6.6	62

93	Hypoxia-induced changes in neuronal network properties. <i>Molecular Neurobiology</i> , 2005 , 32, 251-83	6.2	61
92	Central and peripheral factors contributing to obstructive sleep apneas. <i>Respiratory Physiology and Neurobiology</i> , 2013 , 189, 344-53	2.8	60
91	Maternal Smoking Before and During Pregnancy and the Risk of Sudden Unexpected Infant Death. <i>Pediatrics</i> , 2019 , 143,	7.4	59
90	Chapter 3--networks within networks: the neuronal control of breathing. <i>Progress in Brain Research</i> , 2011 , 188, 31-50	2.9	59
89	The physiological determinants of sudden infant death syndrome. <i>Respiratory Physiology and Neurobiology</i> , 2013 , 189, 288-300	2.8	58
88	Role of persistent sodium current in bursting activity of mouse neocortical networks in vitro. <i>Journal of Neurophysiology</i> , 2006 , 96, 2564-77	3.2	56
87	Long-term modulation of respiratory network activity following anoxia in vitro. <i>Journal of Neurophysiology</i> , 2002 , 87, 2964-71	3.2	53
86	Tbr2 expression in Cajal-Retzius cells and intermediate neuronal progenitors is required for morphogenesis of the dentate gyrus. <i>Journal of Neuroscience</i> , 2013 , 33, 4165-80	6.6	52
85	Respiratory rhythm generation: triple oscillator hypothesis. <i>F1000Research</i> , 2017 , 6, 139	3.6	50
84	Calcium currents of rhythmic neurons recorded in the isolated respiratory network of neonatal mice. <i>Journal of Neuroscience</i> , 1998 , 18, 10652-62	6.6	50
83	Activity deprivation leads to seizures in hippocampal slice cultures: is epilepsy the consequence of homeostatic plasticity?. <i>Journal of Clinical Neurophysiology</i> , 2007 , 24, 154-64	2.2	48
82	Pattern-specific synaptic mechanisms in a multifunctional network. I. Effects of alterations in synapse strength. <i>Journal of Neurophysiology</i> , 2006 , 95, 1323-33	3.2	47
81	The role of spiking and bursting pacemakers in the neuronal control of breathing. <i>Journal of Biological Physics</i> , 2011 , 37, 241-61	1.6	45
80	The Dynamic Basis of Respiratory Rhythm Generation: One Breath at a Time. <i>Annual Review of Neuroscience</i> , 2018 , 41, 475-499	17	44
79	Cardiorespiratory coupling in health and disease. <i>Autonomic Neuroscience: Basic and Clinical</i> , 2013 , 175, 26-37	2.4	43
78	Irregular Breathing in Mice following Genetic Ablation of V2a Neurons. <i>Journal of Neuroscience</i> , 2012 , 32, 7895-906	6.6	43
77	Hyperthermia modulates respiratory pacemaker bursting properties. <i>Journal of Neurophysiology</i> , 2004 , 92, 2844-52	3.2	43
76	A subpopulation of dorsal unpaired median neurons in the blood-feeding insect <i>Rhodnius prolixus</i> displays serotonin-like immunoreactivity. <i>Journal of Comparative Neurology</i> , 1989 , 289, 118-28	3.4	43

75	Synchrony levels during evoked seizure-like bursts in mouse neocortical slices. <i>Journal of Neurophysiology</i> , 2003 , 90, 1571-80	3.2	42
74	When norepinephrine becomes a driver of breathing irregularities: how intermittent hypoxia fundamentally alters the modulatory response of the respiratory network. <i>Journal of Neuroscience</i> , 2014 , 34, 36-50	6.6	40
73	Patterns of inspiratory phase-dependent activity in the in vitro respiratory network. <i>Journal of Neurophysiology</i> , 2013 , 109, 285-95	3.2	40
72	Remarkable neuronal hypoxia tolerance in the deep-diving adult hooded seal (<i>Cystophora cristata</i>). <i>Neuroscience Letters</i> , 2008 , 446, 147-50	3.3	40
71	Pattern-specific synaptic mechanisms in a multifunctional network. II. Intrinsic modulation by metabotropic glutamate receptors. <i>Journal of Neurophysiology</i> , 2006 , 95, 1334-44	3.2	39
70	Chronic Intermittent Hypoxia Alters Local Respiratory Circuit Function at the Level of the preBötzinger Complex. <i>Frontiers in Neuroscience</i> , 2016 , 10, 4	5.1	39
69	Graded reductions in oxygenation evoke graded reconfiguration of the isolated respiratory network. <i>Journal of Neurophysiology</i> , 2011 , 105, 625-39	3.2	38
68	Unraveling the mechanism for respiratory rhythm generation. <i>BioEssays</i> , 2000 , 22, 6-9	4.1	38
67	Reconfiguration of the respiratory network at the onset of locust flight. <i>Journal of Neurophysiology</i> , 1998 , 80, 3137-47	3.2	37
66	How early media exposure may affect cognitive function: A review of results from observations in humans and experiments in mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 9851-9858	11.5	37
65	Prostaglandin E2-induced synaptic plasticity in neocortical networks of organotypic slice cultures. <i>Journal of Neuroscience</i> , 2010 , 30, 11678-87	6.6	36
64	Response of the respiratory network of mice to hyperthermia. <i>Journal of Neurophysiology</i> , 2003 , 89, 2975-83	3.2	35
63	Respiratory rhythm generation: converging concepts from in vitro and in vivo approaches?. <i>Respiratory Physiology and Neurobiology</i> , 2002 , 131, 43-56	2.8	35
62	Defining the Rhythmogenic Elements of Mammalian Breathing. <i>Physiology</i> , 2018 , 33, 302-316	9.8	32
61	Interneurons in the suboesophageal ganglion of the locust associated with flight initiation. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1988 , 162, 669-683	2.3	32
60	Microcircuits in respiratory rhythm generation: commonalities with other rhythm generating networks and evolutionary perspectives. <i>Current Opinion in Neurobiology</i> , 2016 , 41, 53-61	7.6	32
59	Intermittent Hypoxia Disrupts Adult Neurogenesis and Synaptic Plasticity in the Dentate Gyrus. <i>Journal of Neuroscience</i> , 2019 , 39, 1320-1331	6.6	31
58	A spatially dynamic network underlies the generation of inspiratory behaviors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 7493-7502	11.5	29

57	Reorganization of sensory regulation of locust flight after partial deafferentation. <i>Journal of Neurobiology</i> , 1992 , 23, 31-43		29
56	Connections of the forewing tegulae in the locust flight system and their modification following partial deafferentation. <i>Journal of Neurobiology</i> , 1992 , 23, 44-60		29
55	Stable respiratory activity requires both P/Q-type and N-type voltage-gated calcium channels. <i>Journal of Neuroscience</i> , 2013 , 33, 3633-45	6.6	28
54	Activation of alpha-2 noradrenergic receptors is critical for the generation of fictive eupnea and fictive gasping inspiratory activities in mammals in vitro. <i>European Journal of Neuroscience</i> , 2011 , 33, 2228-37	3.5	28
53	Network reconfiguration and neuronal plasticity in rhythm-generating networks. <i>Integrative and Comparative Biology</i> , 2011 , 51, 856-68	2.8	28
52	Post-hypoxic recovery of respiratory rhythm generation is gender dependent. <i>PLoS ONE</i> , 2013 , 8, e60695	3.7	25
51	Prostaglandin E2 differentially modulates the central control of eupnoea, sighs and gasping in mice. <i>Journal of Physiology</i> , 2015 , 593, 305-19	3.9	24
50	Chronic Intermittent Hypoxia Differentially Impacts Different States of Inspiratory Activity at the Level of the pre-Bötzinger Complex. <i>Frontiers in Physiology</i> , 2017 , 8, 571	4.6	23
49	Different roles for inhibition in the rhythm-generating respiratory network. <i>Journal of Neurophysiology</i> , 2017 , 118, 2070-2088	3.2	22
48	Noradrenergic receptor activation specifically modulates the generation of sighs in vivo and in vitro. <i>Frontiers in Neural Circuits</i> , 2013 , 7, 179	3.5	22
47	Point: Medullary pacemaker neurons are essential for both eupnea and gasping in mammals. <i>Journal of Applied Physiology</i> , 2007 , 103, 717-8; discussion 722	3.7	22
46	Familial dysautonomia: frequent, prolonged and severe hypoxemia during wakefulness and sleep. <i>Pediatric Pulmonology</i> , 2008 , 43, 251-60	3.5	22
45	Presynaptic Mechanisms and KCNQ Potassium Channels Modulate Opioid Depression of Respiratory Drive. <i>Frontiers in Physiology</i> , 2019 , 10, 1407	4.6	22
44	Distinct Populations of Sudden Unexpected Infant Death Based on Age. <i>Pediatrics</i> , 2020 , 145,	7.4	19
43	Neuron-specific cholinergic modulation of a forebrain song control nucleus. <i>Journal of Neurophysiology</i> , 2010 , 103, 733-45	3.2	19
42	Hydrogen peroxide differentially affects activity in the pre-Bötzinger complex and hippocampus. <i>Journal of Neurophysiology</i> , 2011 , 106, 3045-55	3.2	18
41	Postnatal development differentially affects voltage-activated calcium currents in respiratory rhythmic versus nonrhythmic neurons of the pre-Bötzinger complex. <i>Journal of Neurophysiology</i> , 2005 , 94, 1423-31	3.2	18
40	Neuronal bursting properties in focal and parafocal regions in pediatric neocortical epilepsy stratified by histology. <i>Journal of Clinical Neurophysiology</i> , 2010 , 27, 387-97	2.2	17

39	Commentary on the definition of eupnea and gasping. <i>Respiratory Physiology and Neurobiology</i> , 2003 , 139, 113-9	2.8	17
38	Octopamine effects mimic state-dependent changes in a proprioceptive feedback system. <i>Journal of Neurobiology</i> , 1993 , 24, 598-610		16
37	Glutamatergic Neurotransmission Links Sensitivity to Volatile Anesthetics with Mitochondrial Function. <i>Current Biology</i> , 2016 , 26, 2194-201	6.3	16
36	The human pre-Bötzinger complex identified. <i>Brain</i> , 2011 , 134, 8-10	11.2	15
35	Respiratory and cardiovascular indicators of autonomic nervous system dysregulation in familial dysautonomia. <i>Pediatric Pulmonology</i> , 2012 , 47, 682-91	3.5	14
34	Background sodium current stabilizes bursting in respiratory pacemaker neurons. <i>Journal of Neurobiology</i> , 2004 , 60, 481-9		14
33	Dual recombinase fate mapping reveals a transient cholinergic phenotype in multiple populations of developing glutamatergic neurons. <i>Journal of Comparative Neurology</i> , 2020 , 528, 283-307	3.4	14
32	Defining modulatory inputs into CNS neuronal subclasses by functional pharmacological profiling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 6449-54	11.5	13
31	Neuronal mechanisms underlying opioid-induced respiratory depression: our current understanding. <i>Journal of Neurophysiology</i> , 2021 , 125, 1899-1919	3.2	11
30	Advances in cellular and integrative control of oxygen homeostasis within the central nervous system. <i>Journal of Physiology</i> , 2018 , 596, 3043-3065	3.9	10
29	The role of voltage dependence of the NMDA receptor in cellular and network oscillation. <i>European Journal of Neuroscience</i> , 2012 , 36, 2121-36	3.5	7
28	N-methyl-D-aspartate-induced oscillatory properties in neocortical pyramidal neurons from patients with epilepsy. <i>Journal of Clinical Neurophysiology</i> , 2010 , 27, 398-405	2.2	7
27	Reconfiguration of the central respiratory network under normoxic and hypoxic conditions. <i>Advances in Experimental Medicine and Biology</i> , 2001 , 499, 171-8	3.6	7
26	Insights into the dynamic control of breathing revealed through cell-type-specific responses to substance P. <i>ELife</i> , 2019 , 8,	8.9	7
25	Diurnal variation in autonomic regulation among patients with genotyped Rett syndrome. <i>Journal of Medical Genetics</i> , 2020 , 57, 786-793	5.8	7
24	Neural Networks for the Generation of Rhythmic Motor Behaviors 2017 , 225-262		4
23	The Pathophysiology of Rett Syndrome With a Focus on Breathing Dysfunctions. <i>Physiology</i> , 2020 , 35, 375-390	9.8	4
22	Unraveling the Mechanisms Underlying Irregularities in Inspiratory Rhythm Generation in a Mouse Model of Parkinson's Disease. <i>Journal of Neuroscience</i> , 2021 , 41, 4732-4747	6.6	4

21	AUTS2 Regulates RNA Metabolism and Dentate Gyrus Development in Mice. <i>Cerebral Cortex</i> , 2021 , 31, 4808-4824	5.1	4
20	Dual mechanisms of opioid-induced respiratory depression in the inspiratory rhythm-generating network. <i>ELife</i> , 2021 , 10,	8.9	4
19	Factors associated with age of death in sudden unexpected infant death. <i>Acta Paediatrica, International Journal of Paediatrics</i> , 2021 , 110, 174-183	3.1	3
18	Is burst activity in cortical slices a representative model for epilepsy?. <i>Neurocomputing</i> , 2003 , 52-54, 963-968	3.4	2
17	The ins and outs of breathing. <i>ELife</i> , 2014 , 3, e03375	8.9	1
16	Suppression of PIK3CA-driven epileptiform activity by acute pathway control		1
15	The psychophysiology of the sigh: I: The sigh from the physiological perspective.. <i>Biological Psychology</i> , 2022 , 170, 108313	3.2	1
14	Non-synaptic Cell-Autonomous Mechanisms Underlie Neuronal Hyperactivity in a Genetic Model of -Driven Intractable Epilepsy.. <i>Frontiers in Molecular Neuroscience</i> , 2021 , 14, 772847	6.1	0
13	Dynamic Rhythmogenic Network States Drive Differential Opioid Responses in the Respiratory Network. <i>Journal of Neuroscience</i> , 2021 , 41, 9919-9931	6.6	0
12	Sudden Infant Death Syndrome from the Brainstem Perspective 2019 , 178-188		
11	Last Word on Point:Counterpoint Medullary pacemaker neurons are essential for both eupnea and gasping in mammals vs. medullary pacemaker neurons are essential for gasping, but not eupnea, in mammals <i>Journal of Applied Physiology</i> , 2007 , 103, 726-726	3.7	
10	Chronic intermittent hypoxia (CIH) alters respiratory behavior in the Pre-Bötzinger complex (PBC). <i>FASEB Journal</i> , 2007 , 21, A557	0.9	
9	Oxidative stress alters respiratory behavior in the Pre-Bötzinger complex (PBC). <i>FASEB Journal</i> , 2007 , 21, A557	0.9	
8	Manipulating the presence of hydrogen peroxide reveals redox modulation of rhythmogenesis originating from the in vitro pre-Bötzinger complex.. <i>FASEB Journal</i> , 2008 , 22, 755.2	0.9	
7	Transitioning to eupnea during the first hour after birth in term and preterm mice (1177.6). <i>FASEB Journal</i> , 2014 , 28, 1177.6	0.9	
6	Reactive oxygen species production and modulation of rhythmogenesis from VRG neurons. <i>FASEB Journal</i> , 2011 , 25, 1074.3	0.9	
5	Prostaglandins differentially modulate eupnea, sigh and gasping activity. <i>FASEB Journal</i> , 2011 , 25, 1074.0.9	0.9	
4	Acute Intermittent Hypoxia Increases Synaptic Inhibition in the Respiratory Network in the Presence of Norepinephrine. An In Vitro Study in Mice. <i>FASEB Journal</i> , 2011 , 25, 1074.4	0.9	

- 3 Norepinephrine reconfigures post-inspiratory neurons within the pre-Bötzinger complex of mice. *FASEB Journal*, **2013**, 27, 1214.8 0.9
- 2 Decreased neurogenesis in the Dentate Gyrus following sensory non-normative overstimulation.. *FASEB Journal*, **2013**, 27, 1124.6 0.9
- 1 Unraveling premature breathing and apneas of prematurity in mice. *FASEB Journal*, **2013**, 27, 720.7 0.9