Jan-Marino Ramirez

List of Publications by Year
in descending order

137	8,833	38660 50	48187 88
papers	citations	h-index	g-index

142	142	142	7047
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A toolbox of Cre-dependent optogenetic transgenic mice for light-induced activation and silencing. Nature Neuroscience, 2012, 15, 793-802.	7.1	1,153
2	Differential Contribution of Pacemaker Properties to the Generation of Respiratory Rhythms during Normoxia and Hypoxia. Neuron, 2004, 43, 105-117.	3.8	322
3	Mecp2 Deficiency Disrupts Norepinephrine and Respiratory Systems in Mice. Journal of Neuroscience, 2005, 25, 11521-11530.	1.7	251
4	Hypoxia Tolerance in Mammals and Birds: From the Wilderness to the Clinic. Annual Review of Physiology, 2007, 69, 113-143.	5.6	240
5	Pacemaker neurons and neuronal networks: an integrative view. Current Opinion in Neurobiology, 2004, 14, 665-674.	2.0	215
6	Endogenous Activation of Serotonin-2A Receptors Is Required for Respiratory Rhythm GenerationIn Vitro. Journal of Neuroscience, 2002, 22, 11055-11064.	1.7	207
7	A novel excitatory network for the control of breathing. Nature, 2016, 536, 76-80.	13.7	196
8	Neuromodulation and the orchestration of the respiratory rhythm. Respiratory Physiology and Neurobiology, 2008, 164, 96-104.	0.7	195
9	Identification of Two Types of Inspiratory Pacemaker Neurons in the Isolated Respiratory Neural Network of Mice. Journal of Neurophysiology, 2001, 86, 104-112.	0.9	173
10	Non-Cell-Autonomous Effects of Presenilin 1 Variants on Enrichment-Mediated Hippocampal Progenitor Cell Proliferation and Differentiation. Neuron, 2008, 59, 568-580.	3.8	159
11	The neuronal mechanisms of respiratory rhythm generation. Current Opinion in Neurobiology, 1996, 6, 817-825.	2.0	157
12	Breathing disorders in Rett syndrome: Progressive neurochemical dysfunction in the respiratory network after birth. Respiratory Physiology and Neurobiology, 2009, 168, 101-108.	0.7	155
13	Autonomic Nervous System Dysregulation: Breathing and Heart Rate Perturbation During Wakefulness in Young Girls with Rett Syndrome. Pediatric Research, 2006, 60, 443-449.	1.1	152
14	Gasping Activity In Vitro: A Rhythm Dependent on 5-HT2A Receptors. Journal of Neuroscience, 2006, 26, 2623-2634.	1.7	150
15	Substance P-Mediated Modulation of Pacemaker Properties in the Mammalian Respiratory Network. Journal of Neuroscience, 2004, 24, 7549-7556.	1.7	144
16	The Na,K-ATPase Î±2 Isoform Is Expressed in Neurons, and Its Absence Disrupts Neuronal Activity in Newborn Mice. Journal of Biological Chemistry, 2003, 278, 5317-5324.	1.6	137
17	The interdependence of excitation and inhibition for the control of dynamic breathing rhythms. Nature Communications, 2018, 9, 843.	5.8	134
18	Differential Modulation of Neural Network and Pacemaker Activity Underlying Eupnea and Sigh-Breathing Activities. Journal of Neurophysiology, 2008, 99, 2114-2125.	0.9	124

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19	State-Dependent Interactions between Excitatory Neuromodulators in the Neuronal Control of Breathing. Journal of Neuroscience, 2010, 30, 8251-8262.	1.7	122
20	Maternal Smoking Before and During Pregnancy and the Risk of Sudden Unexpected Infant Death. Pediatrics, 2019, 143, .	1.0	120
21	The Role of the Hyperpolarization-Activated Current in Modulating Rhythmic Activity in the Isolated Respiratory Network of Mice. Journal of Neuroscience, 2000, 20, 2994-3005.	1.7	114
22	Breathing challenges in Rett Syndrome: Lessons learned from humans and animal models. Respiratory Physiology and Neurobiology, 2013, 189, 280-287.	0.7	107
23	Octopamine induces bursting and plateau potentials in insect neurones. Brain Research, 1991, 549, 332-337.	1.1	106
24	Autonomic dysregulation in young girls with Rett Syndrome during nighttime inâ€home recordings. Pediatric Pulmonology, 2008, 43, 1045-1060.	1.0	103
25	Norepinephrine Differentially Modulates Different Types of Respiratory Pacemaker and Nonpacemaker Neurons. Journal of Neurophysiology, 2006, 95, 2070-2082.	0.9	100
26	Role of Inspiratory Pacemaker Neurons in Mediating the Hypoxic Response of the Respiratory NetworkIn Vitro. Journal of Neuroscience, 2000, 20, 5858-5866.	1.7	92
27	Thermal Preconditioning and Heat-Shock Protein 72 Preserve Synaptic Transmission during Thermal Stress. Journal of Neuroscience, 2002, 22, RC193-RC193.	1.7	88
28	Octopaminergic modulation of the forewing stretch receptor in the locust Locusta Migratoria. Journal of Experimental Biology, 1990, 149, 255-279.	0.8	88
29	The Integrative Role of the Sigh in Psychology, Physiology, Pathology, and Neurobiology. Progress in Brain Research, 2014, 209, 91-129.	0.9	86
30	The Dynamic Basis of Respiratory Rhythm Generation: One Breath at a Time. Annual Review of Neuroscience, 2018, 41, 475-499.	5.0	85
31	Cycle-by-cycle assembly of respiratory network activity is dynamic and stochastic. Journal of Neurophysiology, 2013, 109, 296-305.	0.9	84
32	Central and peripheral factors contributing to obstructive sleep apneas. Respiratory Physiology and Neurobiology, 2013, 189, 344-353.	0.7	82
33	Long-Term Deprivation of Substance P in PPT-A Mutant Mice Alters the Anoxic Response of the Isolated Respiratory Network. Journal of Neurophysiology, 2002, 88, 206-213.	0.9	76
34	Hypoxia-Induced Changes in Neuronal Network Properties. Molecular Neurobiology, 2005, 32, 251-284.	1.9	76
35	Calciumâ€activated nonâ€selective cation currents are involved in generation of tonic and bursting activity in dopamine neurons of the substantia nigra pars compacta. Journal of Physiology, 2011, 589, 2497-2514.	1.3	75
36	Stabilization of Bursting in Respiratory Pacemaker Neurons. Journal of Neuroscience, 2003, 23, 3538-3546.	1.7	74

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37	The physiological determinants of Sudden Infant Death Syndrome. Respiratory Physiology and Neurobiology, 2013, 189, 288-300.	0.7	73
38	Differential Responses of Respiratory Nuclei to Anoxia in Rhythmic Brain Stem Slices of Mice. Journal of Neurophysiology, 1999, 82, 2163-2170.	0.9	72
39	Irregular Breathing in Mice following Genetic Ablation of V2a Neurons. Journal of Neuroscience, 2012, 32, 7895-7906.	1.7	72
40	Networks within networks. Progress in Brain Research, 2011, 188, 31-50.	0.9	70
41	How early media exposure may affect cognitive function: A review of results from observations in humans and experiments in mice. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9851-9858.	3.3	70
42	Determinants of inspiratory activity. Respiratory Physiology and Neurobiology, 2005, 147, 145-157.	0.7	68
43	Mechanisms of respiratory rhythm generation change profoundly during early life in mice and rats. Neuroscience Letters, 1994, 170, 167-170.	1.0	66
44	Role of Persistent Sodium Current in Bursting Activity of Mouse Neocortical Networks In Vitro. Journal of Neurophysiology, 2006, 96, 2564-2577.	0.9	66
45	Cardiorespiratory coupling in health and disease. Autonomic Neuroscience: Basic and Clinical, 2013, 175, 26-37.	1.4	65
46	Tbr2Expression in Cajal-Retzius Cells and Intermediate Neuronal Progenitors Is Required for Morphogenesis of the Dentate Gyrus. Journal of Neuroscience, 2013, 33, 4165-4180.	1.7	65
47	Respiratory rhythm generation: triple oscillator hypothesis. F1000Research, 2017, 6, 139.	0.8	65
48	Long-Term Modulation of Respiratory Network Activity Following Anoxia In Vitro. Journal of Neurophysiology, 2002, 87, 2964-2971.	0.9	56
49	Calcium Currents of Rhythmic Neurons Recorded in the Isolated Respiratory Network of Neonatal Mice. Journal of Neuroscience, 1998, 18, 10652-10662.	1.7	55
50	Activity Deprivation Leads to Seizures in Hippocampal Slice Cultures: Is Epilepsy the Consequence of Homeostatic Plasticity?. Journal of Clinical Neurophysiology, 2007, 24, 154-164.	0.9	55
51	Chronic Intermittent Hypoxia Alters Local Respiratory Circuit Function at the Level of the preBÃ¶tzinger Complex. Frontiers in Neuroscience, 2016, 10, 4.	1.4	55
52	Defining the Rhythmogenic Elements of Mammalian Breathing. Physiology, 2018, 33, 302-316.	1.6	53
53	Remarkable neuronal hypoxia tolerance in the deep-diving adult hooded seal (Cystophora cristata). Neuroscience Letters, 2008, 446, 147-150.	1.0	52
54	Pattern-Specific Synaptic Mechanisms in a Multifunctional Network. I. Effects of Alterations in Synapse Strength. Journal of Neurophysiology, 2006, 95, 1323-1333.	0.9	52

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55	The role of spiking and bursting pacemakers in the neuronal control of breathing. Journal of Biological Physics, 2011, 37, 241-261.	0.7	50
56	Intermittent Hypoxia Disrupts Adult Neurogenesis and Synaptic Plasticity in the Dentate Gyrus. Journal of Neuroscience, 2019, 39, 1320-1331.	1.7	50
57	When Norepinephrine Becomes a Driver of Breathing Irregularities: How Intermittent Hypoxia Fundamentally Alters the Modulatory Response of the Respiratory Network. Journal of Neuroscience, 2014, 34, 36-50.	1.7	49
58	A spatially dynamic network underlies the generation of inspiratory behaviors. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 7493-7502.	3.3	49
59	Synchrony Levels During Evoked Seizure-Like Bursts in Mouse Neocortical Slices. Journal of Neurophysiology, 2003, 90, 1571-1580.	0.9	48
60	Hyperthermia Modulates Respiratory Pacemaker Bursting Properties. Journal of Neurophysiology, 2004, 92, 2844-2852.	0.9	48
61	A subpopulation of dorsal unpaired median neurons in the blood-feeding insectRhodnius prolixus displays serotonin-like immunoreactivity. Journal of Comparative Neurology, 1989, 289, 118-128.	0.9	47
62	Prostaglandin E2-Induced Synaptic Plasticity in Neocortical Networks of Organotypic Slice Cultures. Journal of Neuroscience, 2010, 30, 11678-11687.	1.7	47
63	Pattern-Specific Synaptic Mechanisms in a Multifunctional Network. II. Intrinsic Modulation by Metabotropic Glutamate Receptors. Journal of Neurophysiology, 2006, 95, 1334-1344.	0.9	46
64	Patterns of inspiratory phase-dependent activity in the in vitro respiratory network. Journal of Neurophysiology, 2013, 109, 285-295.	0.9	46
65	Neuronal mechanisms underlying opioid-induced respiratory depression: our current understanding. Journal of Neurophysiology, 2021, 125, 1899-1919.	0.9	43
66	Graded Reductions in Oxygenation Evoke Graded Reconfiguration of the Isolated Respiratory Network. Journal of Neurophysiology, 2011, 105, 625-639.	0.9	42
67	Microcircuits in respiratory rhythm generation: commonalities with other rhythm generating networks and evolutionary perspectives. Current Opinion in Neurobiology, 2016, 41, 53-61.	2.0	42
68	Unraveling the mechanism for respiratory rhythm generation. BioEssays, 2000, 22, 6-9.	1.2	41
69	Response of the Respiratory Network of Mice to Hyperthermia. Journal of Neurophysiology, 2003, 89, 2975-2983.	0.9	41
70	Presynaptic Mechanisms and KCNQ Potassium Channels Modulate Opioid Depression of Respiratory Drive. Frontiers in Physiology, 2019, 10, 1407.	1.3	41
71	Reconfiguration of the Respiratory Network at the Onset of Locust Flight. Journal of Neurophysiology, 1998, 80, 3137-3147.	0.9	38
72	Interneurons in the suboesophageal ganglion of the locust associated with flight initiation. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1988, 162, 669-685.	0.7	37

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73	Respiratory rhythm generation: converging concepts from in vitro and in vivo approaches?. Respiratory Physiology and Neurobiology, 2002, 131, 43-56.	0.7	36
74	Distinct Populations of Sudden Unexpected Infant Death Based on Age. Pediatrics, 2020, 145, .	1.0	36
75	Dual mechanisms of opioid-induced respiratory depression in the inspiratory rhythm-generating network. ELife, 2021, 10, .	2.8	36
76	Activation of alphaâ€2 noradrenergic receptors is critical for the generation of fictive eupnea and fictive gasping inspiratory activities in mammals in vitro. European Journal of Neuroscience, 2011, 33, 2228-2237.	1.2	35
77	Network Reconfiguration and Neuronal Plasticity in Rhythm-Generating Networks. Integrative and Comparative Biology, 2011, 51, 856-868.	0.9	34
78	Prostaglandin E₂ differentially modulates the central control of eupnoea, sighs and gasping in mice. Journal of Physiology, 2015, 593, 305-319.	1.3	34
79	Reorganization of sensory regulation of locust flight after partial deafferentation. Journal of Neurobiology, 1992, 23, 31-43.	3.7	33
80	Connections of the forewing tegulae in the locust flight system and their modification following partial deafferentation. Journal of Neurobiology, 1992, 23, 44-60.	3.7	33
81	Post-Hypoxic Recovery of Respiratory Rhythm Generation Is Gender Dependent. PLoS ONE, 2013, 8, e60695.	1.1	33
82	Different roles for inhibition in the rhythm-generating respiratory network. Journal of Neurophysiology, 2017, 118, 2070-2088.	0.9	33
83	Stable Respiratory Activity Requires Both P/Q-Type and N-Type Voltage-Gated Calcium Channels. Journal of Neuroscience, 2013, 33, 3633-3645.	1.7	32
84	Î²-noradrenergic receptor activation specifically modulates the generation of sighs in vivo and in vitro. Frontiers in Neural Circuits, 2013, 7, 179.	1.4	32
85	Chronic Intermittent Hypoxia Differentially Impacts Different States of Inspiratory Activity at the Level of the preBÂ¶tzinger Complex. Frontiers in Physiology, 2017, 8, 571.	1.3	31
86	Dual recombinase fate mapping reveals a transient cholinergic phenotype in multiple populations of developing glutamatergic neurons. Journal of Comparative Neurology, 2020, 528, 283-307.	0.9	26
87	Familial dysautonomia: Frequent, prolonged and severe hypoxemia during wakefulness and sleep. Pediatric Pulmonology, 2008, 43, 251-260.	1.0	25
88	Glutamatergic Neurotransmission Links Sensitivity to Volatile Anesthetics with Mitochondrial Function. Current Biology, 2016, 26, 2194-2201.	1.8	25
89	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. Journal of Applied Physiology, 2007, 103, 717-718.	1.2	24
90	Respiratory and cardiovascular indicators of autonomic nervous system dysregulation in familial dysautonomia. Pediatric Pulmonology, 2012, 47, 682-691.	1.0	24

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91	Neuron-Specific Cholinergic Modulation of a Forebrain Song Control Nucleus. Journal of Neurophysiology, 2010, 103, 733-745.	0.9	23
92	Octopamine effects mimick state-dependent changes in a proprioceptive feedback system. Journal of Neurobiology, 1993, 24, 598-610.	3.7	21
93	Neuronal Bursting Properties in Focal and Parafocal Regions in Pediatric Neocortical Epilepsy Stratified by Histology. Journal of Clinical Neurophysiology, 2010, 27, 387-397.	0.9	21
94	Commentary on the definition of eupnea and gasping. Respiratory Physiology and Neurobiology, 2003, 139, 113-119.	0.7	20
95	Hydrogen peroxide differentially affects activity in the pre-BÃ¶tzinger complex and hippocampus. Journal of Neurophysiology, 2011, 106, 3045-3055.	0.9	20
96	The Pathophysiology of Rett Syndrome With a Focus on Breathing Dysfunctions. Physiology, 2020, 35, 375-390.	1.6	20
97	The human pre-Botzinger complex identified. Brain, 2011, 134, 8-10.	3.7	19
98	Postnatal Development Differentially Affects Voltage-Activated Calcium Currents in Respiratory Rhythmic Versus Nonrhythmic Neurons of the Pre-BÃ¶tzinger Complex. Journal of Neurophysiology, 2005, 94, 1423-1431.	0.9	18
99	Unraveling the Mechanisms Underlying Irregularities in Inspiratory Rhythm Generation in a Mouse Model of Parkinson's Disease. Journal of Neuroscience, 2021, 41, 4732-4747.	1.7	18
100	Diurnal variation in autonomic regulation among patients with genotyped Rett syndrome. Journal of Medical Genetics, 2020, 57, 786-793.	1.5	17
101	Background sodium current stabilizes bursting in respiratory pacemaker neurons. Journal of Neurobiology, 2004, 60, 481-489.	3.7	16
102	Optogenetic stimulation of preâ€“BÃ¶tzinger complex reveals novel circuit interactions in swallowingâ€“breathing coordination. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	16
103	Defining modulatory inputs into CNS neuronal subclasses by functional pharmacological profiling. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6449-6454.	3.3	15
104	Advances in cellular and integrative control of oxygen homeostasis within the central nervous system. Journal of Physiology, 2018, 596, 3043-3065.	1.3	15
105	Insights into the dynamic control of breathing revealed through cell-type-specific responses to substance P. ELife, 2019, 8, .	2.8	15
106	An American Physiological Society cross-journal Call for Papers on â€œInter-Organ Communication in Homeostasis and Diseaseâ€. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2021, 321, L42-L49.	1.3	13
107	AUTS2 Regulates RNA Metabolism and Dentate Gyrus Development in Mice. Cerebral Cortex, 2021, 31, 4808-4824.	1.6	12
108	Isoflurane inhibition of endocytosis is an anesthetic mechanism of action. Current Biology, 2022, 32, 3016-3032.e3.	1.8	12

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109	Dynamic Rhythmogenic Network States Drive Differential Opioid Responses in theIn VitroRespiratory Network. Journal of Neuroscience, 2021, 41, 9919-9931.	1.7	11
110	The role of voltage dependence of the NMDA receptor in cellular and network oscillation. European Journal of Neuroscience, 2012, 36, 2121-2136.	1.2	10
111	The psychophysiology of the sigh: I: The sigh from the physiological perspective. Biological Psychology, 2022, 170, 108313.	1.1	10
112	N-Methyl-d-Aspartate-Induced Oscillatory Properties in Neocortical Pyramidal Neurons From Patients With Epilepsy. Journal of Clinical Neurophysiology, 2010, 27, 398-405.	0.9	9
113	Reconfiguration of the Central Respiratory Network Under Normoxic and Hypdxic Conditions. Advances in Experimental Medicine and Biology, 2001, 499, 171-178.	0.8	7
114	An American Physiological Society cross-journal Call for Papers on â€œDeconstructing Organs: Single-Cell Analyses, Decellularized Organs, Organoids, and Organ-on-a-Chip Modelsâ€• American Journal of Physiology - Lung Cellular and Molecular Physiology, 2020, 319, L266-L272.	1.3	7
115	Factors associated with age of death in sudden unexpected infant death. Acta Paediatrica, International Journal of Paediatrics, 2021, 110, 174-183.	0.7	5
116	Inspiratory rhythm generation is stabilized by I_h. Journal of Neurophysiology, 2022, 128, 181-196.	0.9	4
117	Is burst activity in cortical slices a representative model for epilepsy?. Neurocomputing, 2003, 52-54, 963-968.	3.5	3
118	Mitochondrial Function and Anesthetic Sensitivity in the Mouse Spinal Cord. Anesthesiology, 2021, 134, 901-914.	1.3	3
119	Non-synaptic Cell-Autonomous Mechanisms Underlie Neuronal Hyperactivity in a Genetic Model of PIK3CA-Driven Intractable Epilepsy. Frontiers in Molecular Neuroscience, 2021, 14, 772847.	1.4	2
120	Clinical challenges to ventilatory control. Respiratory Physiology and Neurobiology, 2013, 189, 211-212.	0.7	1
121	The ins and outs of breathing. ELife, 2014, 3, e03375.	2.8	1
122	Optogenetic stimulation of postinspiratory complex (PiCo) reveals hub for postinspiratory laryngeal closure and swallow related behaviors. FASEB Journal, 2021, 35, .	0.2	1
123	Modeling breathing rhythms. ELife, 2019, 8, .	2.8	1
124	Last Word on Point:Counterpoint â€œMedullary pacemaker neurons are essential for both eupnea and gasping in mammals vs. medullary pacemaker neurons are essential for gasping, but not eupnea, in mammalsâ€• Journal of Applied Physiology, 2007, 103, 726-726.	1.2	0
125	Sparse network models reproduce experimentally observed spike timing jitter during inspiratory population rhythms in the pre-BÃ¶tzinger complex. BMC Neuroscience, 2008, 9, .	0.8	0
126	5 Untranslated Region (5 UTR). , 2008, , 1-1.		0

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127	Sudden Infant Death Syndrome from the Brainstem Perspective. , 2019, , 178-188.		0
128	Chronic intermittent hypoxia (CIH) alters respiratory behavior in the Preâ€ÐÃ¶tzinger complex (PBC). FASEB Journal, 2007, 21, A557.	0.2	0
129	Oxidative stress alters respiratory behavior in the Preâ€ÐÃ¶tzinger complex (PBC). FASEB Journal, 2007, 21, A557.	0.2	0
130	Manipulating the presence of hydrogen peroxide reveals redox modulation of rhythmogenesis originating from the in vitro preâ€ÐÃ¶tzinger complex.. FASEB Journal, 2008, 22, 755.2.	0.2	0
131	Reactive oxygen species production and modulation of rhythmogenesis from VRG neurons. FASEB Journal, 2011, 25, 1074.3.	0.2	0
132	Prostaglandins differentially modulate eupnea, sigh and gasping activity. FASEB Journal, 2011, 25, 1074.9.	0.2	0
133	Acute Intermittent Hypoxia Increases Synaptic Inhibition in the Respiratory Network in the Presence of Norepinephrine. An In Vitro Study in Mice. FASEB Journal, 2011, 25, 1074.4.	0.2	0
134	Norepinephrine reconfigures postâ€inspiratory neurons within the preâ€ÐÃ¶tzinger complex of mice. FASEB Journal, 2013, 27, 1214.8.	0.2	0
135	Decreased neurogenesis in the Dentate Gyrus following sensory nonâ€normative overstimulation.. FASEB Journal, 2013, 27, 1124.6.	0.2	0
136	Unraveling premature breathing and apneas of prematurity in mice. FASEB Journal, 2013, 27, 720.7.	0.2	0
137	Transitioning to eupnea during the first hour after birth in term and preterm mice (1177.6). FASEB Journal, 2014, 28, 1177.6.	0.2	0