

Daniel K Mulkey

List of Publications by Year in descending order

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78
papers

3,530
citations

172457

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138484

58
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100
all docs

100
docs citations

100
times ranked

2384
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Respiratory control by ventral surface chemoreceptor neurons in rats. <i>Nature Neuroscience</i> , 2004, 7, 1360-1369. | 14.8 | 486 |
| 2 | Expression of Phox2b by Brainstem Neurons Involved in Chemosensory Integration in the Adult Rat. <i>Journal of Neuroscience</i> , 2006, 26, 10305-10314. | 3.6 | 311 |
| 3 | TASK Channels Determine pH Sensitivity in Select Respiratory Neurons But Do Not Contribute to Central Respiratory Chemosensitivity. <i>Journal of Neuroscience</i> , 2007, 27, 14049-14058. | 3.6 | 167 |
| 4 | Regulation of Ventral Surface Chemoreceptors by the Central Respiratory Pattern Generator. <i>Journal of Neuroscience</i> , 2005, 25, 8938-8947. | 3.6 | 159 |
| 5 | Oxygen measurements in brain stem slices exposed to normobaric hyperoxia and hyperbaric oxygen. <i>Journal of Applied Physiology</i> , 2001, 90, 1887-1899. | 2.5 | 140 |
| 6 | Hyperoxia, reactive oxygen species, and hyperventilation: oxygen sensitivity of brain stem neurons. <i>Journal of Applied Physiology</i> , 2004, 96, 784-791. | 2.5 | 137 |
| 7 | Serotonergic Neurons Activate Chemosensitive Retrotrapezoid Nucleus Neurons by a pH-Independent Mechanism. <i>Journal of Neuroscience</i> , 2007, 27, 14128-14138. | 3.6 | 127 |
| 8 | Astrocytes in the Retrotrapezoid Nucleus Sense H^{+} by Inhibition of a Kir4.1/Kir5.1-Like Current and May Contribute to Chemoreception by a Purinergic Mechanism. <i>Journal of Neurophysiology</i> , 2010, 104, 3042-3052. | 1.8 | 119 |
| 9 | Re: Retrotrapezoid nucleus: a litmus test for the identification of central chemoreceptors. <i>Experimental Physiology</i> , 2005, 90, 253-257. | 2.0 | 102 |
| 10 | Continuous intracellular recording from mammalian neurons exposed to hyperbaric helium, oxygen, or air. <i>Journal of Applied Physiology</i> , 2000, 89, 807-822. | 2.5 | 101 |
| 11 | Neuronal sensitivity to hyperoxia, hypercapnia, and inert gases at hyperbaric pressures. <i>Journal of Applied Physiology</i> , 2003, 95, 883-909. | 2.5 | 93 |
| 12 | Retrotrapezoid nucleus and parafacial respiratory group. <i>Respiratory Physiology and Neurobiology</i> , 2010, 173, 244-255. | 1.6 | 85 |
| 13 | Regulation of ventral surface CO_2/H^{+} -sensitive neurons by purinergic signalling. <i>Journal of Physiology</i> , 2012, 590, 2137-2150. | 2.9 | 82 |
| 14 | Purinergic P2 Receptors Modulate Excitability But Do Not Mediate pH Sensitivity of RTN Respiratory Chemoreceptors. <i>Journal of Neuroscience</i> , 2006, 26, 7230-7233. | 3.6 | 71 |
| 15 | Anesthetic Activation of Central Respiratory Chemoreceptor Neurons Involves Inhibition of a THIK-1-Like Background K^{+} Current. <i>Journal of Neuroscience</i> , 2010, 30, 9324-9334. | 3.6 | 67 |
| 16 | Hyperbaric oxygen and chemical oxidants stimulate CO_2/H^{+} -sensitive neurons in rat brain stem slices. <i>Journal of Applied Physiology</i> , 2003, 95, 910-921. | 2.5 | 65 |
| 17 | Oxidative stress decreases pH_i and Na^{+}/H^{+} exchange and increases excitability of solitary complex neurons from rat brain slices. <i>American Journal of Physiology - Cell Physiology</i> , 2004, 286, C940-C951. | 4.6 | 64 |
| 18 | Increased uncoupling protein (UCP) activity in <i>Drosophila</i> insulin-producing neurons attenuates insulin signaling and extends lifespan. <i>Aging</i> , 2009, 1, 699-713. | 3.1 | 57 |

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|----|---|-----|-----------|
| 19 | Glucose increases activity and Ca ²⁺ in insulin-producing cells of adult Drosophila. <i>NeuroReport</i> , 2010, 21, 1116-1120. | 1.2 | 55 |
| 20 | Epilepsy-Associated KCNQ2 Channels Regulate Multiple Intrinsic Properties of Layer 2/3 Pyramidal Neurons. <i>Journal of Neuroscience</i> , 2017, 37, 576-586. | 3.6 | 51 |
| 21 | Disordered breathing in a mouse model of Dravet syndrome. <i>ELife</i> , 2019, 8, . | 6.0 | 50 |
| 22 | Leptin into the ventrolateral medulla facilitates chemorespiratory response in leptin-deficient (ob/ob) mice. <i>Acta Physiologica</i> , 2014, 211, 240-248. | 3.8 | 48 |
| 23 | AMP-activated protein kinase inhibits TREK channels. <i>Journal of Physiology</i> , 2009, 587, 5819-5830. | 2.9 | 47 |
| 24 | Astrocyte chemoreceptors: mechanisms of H ⁺ sensing by astrocytes in the retrotrapezoid nucleus and their possible contribution to respiratory drive. <i>Experimental Physiology</i> , 2011, 96, 400-406. | 2.0 | 45 |
| 25 | HCN channels contribute to serotonergic modulation of ventral surface chemosensitive neurons and respiratory activity. <i>Journal of Neurophysiology</i> , 2015, 113, 1195-1205. | 1.8 | 43 |
| 26 | Purinergic regulation of vascular tone in the retrotrapezoid nucleus is specialized to support the drive to breathe. <i>ELife</i> , 2017, 6, . | 6.0 | 42 |
| 27 | Purinergic signalling contributes to chemoreception in the retrotrapezoid nucleus but not the nucleus of the solitary tract or medullary raphe. <i>Journal of Physiology</i> , 2014, 592, 1309-1323. | 2.9 | 41 |
| 28 | KCNQ Channels Determine Serotonergic Modulation of Ventral Surface Chemoreceptors and Respiratory Drive. <i>Journal of Neuroscience</i> , 2012, 32, 16943-16952. | 3.6 | 36 |
| 29 | The Retrotrapezoid Nucleus and Central Chemoreception. <i>Advances in Experimental Medicine and Biology</i> , 2008, 605, 327-332. | 1.6 | 32 |
| 30 | Connexin26 hemichannels with a mutation that causes KID syndrome in humans lack sensitivity to CO ₂ . <i>ELife</i> , 2014, 3, e04249. | 6.0 | 30 |
| 31 | MeCP2 deficiency results in robust Rett-like behavioural and motor deficits in male and female rats. <i>Human Molecular Genetics</i> , 2016, 25, 3303-3320. | 2.9 | 30 |
| 32 | Characterization of the chemosensitive response of individual solitary complex neurons from adult rats. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2009, 296, R763-R773. | 1.8 | 29 |
| 33 | Pressure (4 ATA) increases membrane conductance and firing rate in the rat solitary complex. <i>Journal of Applied Physiology</i> , 2003, 95, 922-930. | 2.5 | 28 |
| 34 | P2Y1 Receptors Expressed by C1 Neurons Determine Peripheral Chemoreceptor Modulation of Breathing, Sympathetic Activity, and Blood Pressure. <i>Hypertension</i> , 2013, 62, 263-273. | 2.7 | 28 |
| 35 | External pH modulates EAG superfamily K ⁺ channels through EAG-specific acidic residues in the voltage sensor. <i>Journal of General Physiology</i> , 2013, 141, 721-735. | 1.9 | 27 |
| 36 | α ₁ - and α ₂ -adrenergic receptors in the retrotrapezoid nucleus differentially regulate breathing in anesthetized adult rats. <i>Journal of Neurophysiology</i> , 2016, 116, 1036-1048. | 1.8 | 26 |

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|----|---|------|-----------|
| 37 | Fluorocitrate-mediated depolarization of astrocytes in the retrotrapezoid nucleus stimulates breathing. <i>Journal of Neurophysiology</i> , 2017, 118, 1690-1697. | 1.8 | 26 |
| 38 | MeCP2 Deficiency Leads to Loss of Glial Kir4.1. <i>ENeuro</i> , 2018, 5, ENEURO.0194-17.2018. | 1.9 | 26 |
| 39 | Facilitation of breathing by leptin effects in the central nervous system. <i>Journal of Physiology</i> , 2016, 594, 1617-1625. | 2.9 | 24 |
| 40 | Purnergic receptor blockade in the retrotrapezoid nucleus attenuates the respiratory chemoreflexes in awake rats. <i>Acta Physiologica</i> , 2016, 217, 80-93. | 3.8 | 23 |
| 41 | Vascular control of the CO ₂ /H ⁺ -dependent drive to breathe. <i>ELife</i> , 2020, 9, . | 6.0 | 23 |
| 42 | Nitric oxide activates hypoglossal motoneurons by cGMP-dependent inhibition of TASK channels and cGMP-independent activation of HCN channels. <i>Journal of Neurophysiology</i> , 2012, 107, 1489-1499. | 1.8 | 22 |
| 43 | In vitro characterization of noradrenergic modulation of chemosensitive neurons in the retrotrapezoid nucleus. <i>Journal of Neurophysiology</i> , 2016, 116, 1024-1035. | 1.8 | 21 |
| 44 | Cholinergic neurons in the pedunculopontine tegmental nucleus modulate breathing in rats by direct projections to the retrotrapezoid nucleus. <i>Journal of Physiology</i> , 2019, 597, 1919-1934. | 2.9 | 21 |
| 45 | Cholinergic control of ventral surface chemoreceptors involves Gq/inositol 1,4,5-trisphosphate-mediated inhibition of KCNQ channels. <i>Journal of Physiology</i> , 2016, 594, 407-419. | 2.9 | 20 |
| 46 | Volatile Anesthetics Activate a Leak Sodium Conductance in Retrotrapezoid Nucleus Neurons to Maintain Breathing during Anesthesia in Mice. <i>Anesthesiology</i> , 2020, 133, 824-838. | 2.5 | 18 |
| 47 | Current ideas on central chemoreception by neurons and glial cells in the retrotrapezoid nucleus. <i>Journal of Applied Physiology</i> , 2010, 108, 1433-1439. | 2.5 | 17 |
| 48 | Kir 5.1-dependent CO ₂ /H ⁺ -sensitive currents contribute to astrocyte heterogeneity across brain regions. <i>Glia</i> , 2021, 69, 310-325. | 4.9 | 15 |
| 49 | Inhibition of the hypercapnic ventilatory response by adenosine in the retrotrapezoid nucleus in awake rats. <i>Neuropharmacology</i> , 2018, 138, 47-56. | 4.1 | 14 |
| 50 | The retrotrapezoid nucleus and the neuromodulation of breathing. <i>Journal of Neurophysiology</i> , 2021, 125, 699-719. | 1.8 | 14 |
| 51 | Disordered breathing in a Pitt-Hopkins syndrome model involves Phox2b-expressing parafacial neurons and aberrant Nav1.8 expression. <i>Nature Communications</i> , 2021, 12, 5962. | 12.8 | 14 |
| 52 | Bicarbonate directly modulates activity of chemosensitive neurons in the retrotrapezoid nucleus. <i>Journal of Physiology</i> , 2018, 596, 4033-4042. | 2.9 | 13 |
| 53 | Independent purnergic mechanisms of central and peripheral chemoreception in the rostral ventrolateral medulla. <i>Journal of Physiology</i> , 2015, 593, 1067-1074. | 2.9 | 12 |
| 54 | Adenosine Signaling through A1 Receptors Inhibits Chemosensitive Neurons in the Retrotrapezoid Nucleus. <i>ENeuro</i> , 2018, 5, ENEURO.0404-18.2018. | 1.9 | 11 |

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|----|--|-----|-----------|
| 55 | Re: Homing in on the specific phenotype(s) of central respiratory chemoreceptors. <i>Experimental Physiology</i> , 2005, 90, 266-268. | 2.0 | 10 |
| 56 | Molecular underpinnings of ventral surface chemoreceptor function: focus on KCNQ channels. <i>Journal of Physiology</i> , 2015, 593, 1075-1081. | 2.9 | 9 |
| 57 | Putative Roles of Astrocytes in General Anesthesia. <i>Current Neuropharmacology</i> , 2022, 20, 5-15. | 2.9 | 9 |
| 58 | Somatostatin-expressing parafacial neurons are CO ₂ /H ⁺ sensitive and regulate baseline breathing. <i>ELife</i> , 2021, 10, . | 6.0 | 9 |
| 59 | HCN as a Mediator of Urinary Homeostasis: Age-Associated Changes in Expression and Function in Adrenergic Detrusor Relaxation. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2019, 74, 325-329. | 3.6 | 8 |
| 60 | Isoflurane inhibits a Kir4.1/5.1-like conductance in neonatal rat brainstem astrocytes and recombinant Kir4.1/5.1 channels in a heterologous expression system. <i>Journal of Neurophysiology</i> , 2020, 124, 740-749. | 1.8 | 6 |
| 61 | 5-HT ₇ receptors expressed in the mouse parafacial region are not required for respiratory chemosensitivity. <i>Journal of Physiology</i> , 2022, 600, 2789-2811. | 2.9 | 5 |
| 62 | Epilepsy-Associated KCNQ2 Channels Regulate Multiple Intrinsic Properties of Layer 2/3 Pyramidal Neurons. <i>Journal of Neuroscience</i> , 2017, 37, 576-586. | 3.6 | 3 |
| 63 | Effects of leptin in the retrotrapezoid nucleus (RTN) on CO ₂ sensitivity and respiration. <i>FASEB Journal</i> , 2013, 27, 1137.12. | 0.5 | 2 |
| 64 | The Retrotrapezoid Nucleus and Central Chemoreception. <i>Tzu Chi Medical Journal</i> , 2008, 20, 239-242. | 1.1 | 1 |
| 65 | New advances in the neural control of breathing. <i>Journal of Physiology</i> , 2015, 593, 1065-1066. | 2.9 | 1 |
| 66 | Re: Homing in on the specific phenotype(s) of central respiratory chemoreceptors. <i>Experimental Physiology</i> , 2005, 90, 266-268. | 2.0 | 0 |
| 67 | Histamine Activates Chemosensitive Neurons in the Retrotrapezoid Nucleus. <i>FASEB Journal</i> , 2021, 35, . | 0.5 | 0 |
| 68 | P2Y ₁ receptors are expressed by C1 cells and regulate peripheral chemoreceptor modulation of breathing and blood pressure. <i>FASEB Journal</i> , 2013, 27, 1118.4. | 0.5 | 0 |
| 69 | Purinergic signaling in the retrotrapezoid nucleus (RTN) contributes to central and peripheral chemoreflexes by divergent mechanisms. <i>FASEB Journal</i> , 2013, 27, 1137.15. | 0.5 | 0 |
| 70 | HCN channels contribute to serotonergic modulation of chemoreceptors in the retrotrapezoid nucleus. <i>FASEB Journal</i> , 2013, 27, 1214.11. | 0.5 | 0 |
| 71 | KCNQ channels regulate activity of chemosensitive neurons in the retrotrapezoid nucleus. <i>FASEB Journal</i> , 2013, 27, 1214.10. | 0.5 | 0 |
| 72 | Role of purinergic neurotransmission in different brainstem CO ₂ chemoreceptor regions. <i>FASEB Journal</i> , 2013, 27, 1137.13. | 0.5 | 0 |

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|----|---|-----|-----------|
| 73 | Chemosensitive neurons in the retrotrapezoid nucleus (RTN) express SK channels with low Ca ²⁺ affinity. FASEB Journal, 2013, 27, 1137.11. | 0.5 | 0 |
| 74 | Chemosensory control by purinergic signaling within the retrotrapezoid nucleus (RTN) in conscious rats. FASEB Journal, 2013, 27, 1137.14. | 0.5 | 0 |
| 75 | Astrocyte Kir4.1 Channels Contribute to Central Respiratory Drive. FASEB Journal, 2015, 29, 860.12. | 0.5 | 0 |
| 76 | Astrocyte-specific deletion of Kir4.1 increases normoxic ventilation after acclimatization to chronic sustained hypoxia.. FASEB Journal, 2018, 32, 625.14. | 0.5 | 0 |
| 77 | 5-HT ₇ receptors expressed in the mouse parafacial region are not required for respiratory chemosensitivity. FASEB Journal, 2022, 36, . | 0.5 | 0 |
| 78 | Histamine/H1 receptor signaling in the parafacial region increases activity of chemosensitive neurons and respiratory activity in rats.. Journal of Neurophysiology, 0, , . | 1.8 | 0 |