Slobodan M Todorovic

List of Publications by Year
in descending order

81 papers	4,178 citations	147801 31 h-index	114465 63 g-index
82 all docs	82 docs citations	82 times ranked	2519 citing authors

#	Article	IF	Citations
1	Pharmacological Properties of T-Type Ca²⁺ Current in Adult Rat Sensory Neurons: Effects of Anticonvulsant and Anesthetic Agents. Journal of Neurophysiology, 1998, 79, 240-252.	1.8	301
2	Cell-Specific Alterations of T-Type Calcium Current in Painful Diabetic Neuropathy Enhance Excitability of Sensory Neurons. Journal of Neuroscience, 2007, 27, 3305-3316.	3.6	240
3	Redox Modulation of T-Type Calcium Channels in Rat Peripheral Nociceptors. Neuron, 2001, 31, 75-85.	8.1	230
4	Role of voltage-gated calcium channels in ascending pain pathways. Brain Research Reviews, 2009, 60, 84-89.	9.0	215
5	Upregulation of the T-Type Calcium Current in Small Rat Sensory Neurons After Chronic Constrictive Injury of the Sciatic Nerve. Journal of Neurophysiology, 2008, 99, 3151-3156.	1.8	184
6	General Anesthesia Causes Long-term Impairment of Mitochondrial Morphogenesis and Synaptic Transmission in Developing Rat Brain. Anesthesiology, 2011, 115, 992-1002.	2.5	164
7	In vivo silencing of the CaV3.2 T-type calcium channels in sensory neurons alleviates hyperalgesia in rats with streptozocin-induced diabetic neuropathy. Pain, 2009, 145, 184-195.	4.2	153
8	Presynaptic CaV3.2 Channels Regulate Excitatory Neurotransmission in Nociceptive Dorsal Horn Neurons. Journal of Neuroscience, 2012, 32, 9374-9382.	3.6	152
9	The Endogenous Redox Agent L-Cysteine Induces T-Type Ca2+ Channel-Dependent Sensitization of a Novel Subpopulation of Rat Peripheral Nociceptors. Journal of Neuroscience, 2005, 25, 8766-8775.	3.6	148
10	Reducing Agents Sensitize C-Type Nociceptors by Relieving High-Affinity Zinc Inhibition of T-Type Calcium Channels. Journal of Neuroscience, 2007, 27, 8250-8260.	3.6	147
11	Tâ€type voltageâ€gated calcium channels as targets for the development of novel pain therapies. British Journal of Pharmacology, 2011, 163, 484-495.	5.4	144
12	TTA-P2 Is a Potent and Selective Blocker of T-Type Calcium Channels in Rat Sensory Neurons and a Novel Antinociceptive Agent. Molecular Pharmacology, 2011, 80, 900-910.	2.3	144
13	New evidence that both T-type calcium channels and GABAA channels are responsible for the potent peripheral analgesic effects of 5Î±-reduced neuroactive steroids. Pain, 2005, 114, 429-443.	4.2	121
14	Selective T-Type Calcium Channel Blockade Alleviates Hyperalgesia in ob/ob Mice. Diabetes, 2009, 58, 2656-2665.	0.6	113
15	Mechanical and thermal antinociception in rats following systemic administration of mibefradil, a T-type calcium channel blocker. Brain Research, 2002, 951, 336-340.	2.2	100
16	Reversal of Neuropathic Pain in Diabetes by Targeting Glycosylation of Cav3.2 T-Type Calcium Channels. Diabetes, 2013, 62, 3828-3838.	0.6	96
17	CaV3.2 is the major molecular substrate for redox regulation of T-type Ca2+channels in the rat and mouse thalamus. Journal of Physiology, 2006, 574, 415-430.	2.9	81
18	5Î²-Reduced Neuroactive Steroids Are Novel Voltage-Dependent Blockers of T-Type Ca2+ Channels in Rat Sensory Neurons in Vitro and Potent Peripheral Analgesics in Vivo. Molecular Pharmacology, 2004, 66, 1223-1235.	2.3	80

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19	Redox modulation of peripheral T-type Ca2+ channels in vivo: alteration of nerve injury-induced thermal hyperalgesia. Pain, 2004, 109, 328-339.	4.2	62
20	The role of peripheral T-type calcium channels in pain transmission. Cell Calcium, 2006, 40, 197-203.	2.4	61
21	Different kinetic properties of two T-type Ca2+currents of rat reticular thalamic neurones and their modulation by enflurane. Journal of Physiology, 2005, 566, 125-142.	2.9	59
22	Potent analgesic effects of anticonvulsants on peripheral thermal nociception in rats. British Journal of Pharmacology, 2003, 140, 255-260.	5.4	57
23	Molecular Mechanisms of Lipoic Acid Modulation of T-Type Calcium Channels in Pain Pathway. Journal of Neuroscience, 2009, 29, 9500-9509.	3.6	57
24	Neuropathic pain: role for presynaptic T-type channels in nociceptive signaling. Pflugers Archiv European Journal of Physiology, 2013, 465, 921-927.	2.8	57
25	Contrasting anesthetic sensitivities of T-type Ca2+ channels of reticular thalamic neurons and recombinant Cav 3.3 channels. British Journal of Pharmacology, 2005, 144, 59-70.	5.4	56
26	Targeting of CaV3.2 T-type calcium channels in peripheral sensory neurons for the treatment of painful diabetic neuropathy. Pflugers Archiv European Journal of Physiology, 2014, 466, 701-706.	2.8	55
27	CaV3.2 T-Type Calcium Channels in Peripheral Sensory Neurons Are Important for Mibefradil-Induced Reversal of Hyperalgesia and Allodynia in Rats with Painful Diabetic Neuropathy. PLoS ONE, 2014, 9, e91467.	2.5	50
28	Selective inhibition of Ca _V 3.2 channels reverses hyperexcitability of peripheral nociceptors and alleviates postsurgical pain. Science Signaling, 2018, 11, .	3.6	48
29	Properties of Ba2+ currents arising from human Î±1E and Î±1EÎ²3 constructs expressed in HEK293 cells: physiology, pharmacology, and comparison to native T-type Ba2+ currents. Neuropharmacology, 1998, 37, 957-972.	4.1	41
30	Regulation of T-Type Calcium Channels in the Peripheral Pain Pathway. Channels, 2007, 1, 238-245.	2.8	33
31	Free radical signalling underlies inhibition of Ca_V3.2 Tâ€type calcium channels by nitrous oxide in the pain pathway. Journal of Physiology, 2011, 589, 135-148.	2.9	32
32	Molecular and biophysical basis of glutamate and trace metal modulation of voltage-gated Cav2.3 calcium channels. Journal of General Physiology, 2012, 139, 219-234.	1.9	32
33	Redox Regulation of Neuronal Voltage-Gated Calcium Channels. Antioxidants and Redox Signaling, 2014, 21, 880-891.	5.4	31
34	Hyperexcitability of Rat Thalamocortical Networks after Exposure to General Anesthesia during Brain Development. Journal of Neuroscience, 2015, 35, 1481-1492.	3.6	30
35	The Anesthetic Steroid (+)-3Î±-Hydroxy-5Î±-androstane-17Î²-carbonitrile Blocks N-, Q-, and R-Type, but Not L- and P-Type, High Voltage-Activated Ca2+Current in Hippocampal and Dorsal Root Ganglion Neurons of the Rat. Molecular Pharmacology, 1998, 54, 559-568.	2.3	29
36	The role of Tâ€type calcium channels in the subiculum: to burst or not to burst?. Journal of Physiology, 2017, 595, 6327-6348.	2.9	29

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37	Inhibition of T-type calcium current in rat thalamocortical neurons by isoflurane. Neuropharmacology, 2012, 63, 266-273.	4.1	27
38	Inhibition of CaV3.2 T-type calcium channels in peripheral sensory neurons contributes to analgesic properties of epipregnanolone. Psychopharmacology, 2014, 231, 3503-3515.	3.1	25
39	Early Exposure to General Anesthesia with Isoflurane Downregulates Inhibitory Synaptic Neurotransmission in the Rat Thalamus. Molecular Neurobiology, 2015, 52, 952-958.	4.0	25
40	Neurosteroids in Pain Management: A New Perspective on an Old Player. Frontiers in Pharmacology, 2018, 9, 1127.	3.5	24
41	Alterations in Oscillatory Behavior of Central Medial Thalamic Neurons Demonstrate a Key Role of CaV3.1 Isoform of T-Channels During Isoflurane-Induced Anesthesia. Cerebral Cortex, 2019, 29, 4679-4696.	2.9	24
42	Neonatal general anesthesia causes lasting alterations in excitatory and inhibitory synaptic transmission in the ventrobasal thalamus of adolescent female rats. Neurobiology of Disease, 2019, 127, 472-481.	4.4	24
43	Mechanisms and Functional Significance of Inhibition of Neuronal T-Type Calcium Channels by Isoflurane. Molecular Pharmacology, 2009, 75, 542-554.	2.3	23
44	Are neuroactive steroids promising therapeutic agents in the management of acute and chronic pain?. Psychoneuroendocrinology, 2009, 34, S178-S185.	2.7	23
45	Neuroactive steroids alphaxalone and CDNC24 are effective hypnotics and potentiators of GABAA currents, but are not neurotoxic to the developing rat brain. British Journal of Anaesthesia, 2020, 124, 603-613.	3.4	23
46	Mechanical and thermal anti-nociception in rats after systemic administration of verapamil. Neuroscience Letters, 2004, 360, 57-60.	2.1	22
47	Are neuronal voltage-gated calcium channels valid cellular targets for general anesthetics?. Channels, 2010, 4, 518-522.	2.8	22
48	Differential effects of endogenous cysteine analogs on peripheral thermal nociception in intact rats. Pain, 2006, 125, 53-64.	4.2	20
49	Novel neuroactive steroid with hypnotic and Tâ€type calcium channel blocking properties exerts effective analgesia in a rodent model of postâ€surgical pain. British Journal of Pharmacology, 2020, 177, 1735-1753.	5.4	18
50	Histone Deacetylase Inhibitor Entinostat (MS-275) Restores Anesthesia-induced Alteration of Inhibitory Synaptic Transmission in the Developing Rat Hippocampus. Molecular Neurobiology, 2018, 55, 222-228.	4.0	16
51	The T-type calcium channel isoform Cav3.1 is a target for the hypnotic effect of the anaesthetic neurosteroid (3Î²,5Î²,17Î²)-3-hydroxyandrostane-17-carbonitrile. British Journal of Anaesthesia, 2021, 126, 245-255.	3.4	16
52	Is Diabetic Nerve Pain Caused by Dysregulated Ion Channels in Sensory Neurons?. Diabetes, 2015, 64, 3987-3989.	0.6	15
53	Inhibition of Tâ€type Calcium Current in the Reticular Thalamic Nucleus by a Novel Neuroactive Steroid. Annals of the New York Academy of Sciences, 2007, 1122, 83-94.	3.8	14
54	Differential effects of the novel neurosteroid hypnotic (3Î²,5Î²,17Î²)-3-hydroxyandrostane-17-carbonitrile on electroencephalogram activity in male and female rats. British Journal of Anaesthesia, 2021, 127, 435-446.	3.4	14

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55	CaV3.1 isoform of T-type calcium channels supports excitability of rat and mouse ventral tegmental area neurons. Neuropharmacology, 2018, 135, 343-354.	4.1	13
56	Glycosylation of CaV3.2 Channels Contributes to the Hyperalgesia in Peripheral Neuropathy of Type 1 Diabetes. Frontiers in Cellular Neuroscience, 2020, 14, 605312.	3.7	13
57	Novel neurosteroid hypnotic blocks T-type calcium channel-dependent rebound burst firing and suppresses long-term potentiation in the rat subiculum. British Journal of Anaesthesia, 2019, 122, 643-651.	3.4	12
58	Cytosolic ATP Relieves Voltage-Dependent Inactivation of T-Type Calcium Channels and Facilitates Excitability of Neurons in the Rat Central Medial Thalamus. ENeuro, 2018, 5, ENEURO.0016-18.2018.	1.9	11
59	Mechanisms of inhibition of CaV3.1 T-type calcium current by aliphatic alcohols. Neuropharmacology, 2010, 59, 58-69.	4.1	10
60	Inhibition of multiple voltage-gated calcium channels may contribute to spinally mediated analgesia by epipregnanolone in a rat model of surgical paw incision. Channels, 2019, 13, 48-61.	2.8	9
61	Neonatal Ketamine Alters High-Frequency Oscillations and Synaptic Plasticity in the Subiculum But Does not Affect Sleep Macrostructure in Adolescent Rats. Frontiers in Systems Neuroscience, 2020, 14, 26.	2.5	9
62	Painful diabetic neuropathy leads to functional CaV3.2 expression and spontaneous activity in skin nociceptors of mice. Experimental Neurology, 2021, 346, 113838.	4.1	9
63	The Role of Free Oxygen Radicals in Lasting Hyperexcitability of Rat Subicular Neurons After Exposure to General Anesthesia During Brain Development. Molecular Neurobiology, 2020, 57, 208-216.	4.0	8
64	The role of KCC2 in hyperexcitability of the neonatal brain. Neuroscience Letters, 2020, 738, 135324.	2.1	8
65	A Modeling Study of T-Type Ca2+ Channel Gating and Modulation by L-Cysteine in Rat Nociceptors. Biophysical Journal, 2010, 98, 197-206.	0.5	7
66	Synthetic neuroactive steroids as new sedatives and anaesthetics: Back to the future. Journal of Neuroendocrinology, 2022, 34, e13086.	2.6	7
67	Neuroactive Steroids as Targets for Development of Novel Pain Therapies. Current Medicinal Chemistry - Central Nervous System Agents, 2005, 5, 157-164.	0.5	6
68	Redox and trace metal regulation of ion channels in the pain pathway. Biochemical Journal, 2015, 470, 275-280.	3.7	6
69	Preemptive Analgesic Effect of Intrathecal Applications of Neuroactive Steroids in a Rodent Model of Post-Surgical Pain: Evidence for the Role of T-Type Calcium Channels. Cells, 2020, 9, 2674.	4.1	5
70	Global genetic deletion of CaV3.3 channels facilitates anaesthetic induction and enhances isoflurane-sparing effects of T-type calcium channel blockers. Scientific Reports, 2020, 10, 21510.	3.3	5
71	Thalamic T-Type Calcium Channels as Targets for Hypnotics and General Anesthetics. International Journal of Molecular Sciences, 2022, 23, 2349.	4.1	5
72	L-cysteine modulates visceral nociception mediated by the CaV2.3 R-type calcium channels. Pflugers Archiv European Journal of Physiology, 2022, 474, 435-445.	2.8	5

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73	A novel phospho-modulatory mechanism contributes to the calcium-dependent regulation of T-type Ca2+ channels. Scientific Reports, 2019, 9, 15642.	3.3	4
74	Alpha lipoic acid attenuates evoked and spontaneous pain following surgical skin incision in rats. Channels, 2021, 15, 398-407.	2.8	3
75	Different roles of T-type calcium channel isoforms in hypnosis induced by an endogenous neurosteroid epipregnanolone. Neuropharmacology, 2021, 197, 108739.	4.1	3
76	General Anesthesia and the Young Brain: The Importance of Novel Strategies with Alternate Mechanisms of Action. International Journal of Molecular Sciences, 2022, 23, 1889.	4.1	3
77	The Mechanisms of Plasticity of Nociceptive Ion Channels in Painful Diabetic Neuropathy. Frontiers in Pain Research, 2022, 3, 869735.	2.0	3
78	The role of voltage-gated calcium channels in the mechanisms of anesthesia and perioperative analgesia. Current Opinion in Anaesthesiology, 0, Publish Ahead of Print, .	2.0	3
79	Pharmacological Antagonism of T-Type Calcium Channels Constrains Rebound Burst Firing in Two Distinct Subpopulations of GABA Neurons in the Rat Ventral Tegmental Area: Implications for Î±-Lipoic Acid. Frontiers in Pharmacology, 2019, 10, 1402.	3.5	2
80	Neonatal Isoflurane Does Not Affect Sleep Architecture and Minimally Alters Neuronal Beta Oscillations in Adolescent Rats. Frontiers in Behavioral Neuroscience, 2021, 15, 703859.	2.0	1
81	Further Evidence that Inhibition of Neuronal Voltage-Gated Calcium Channels Contributes to the Hypnotic Effect of Neurosteroid Analogue, 3Î²-OH. Frontiers in Pharmacology, 2022, 13, .	3.5	1