

Carlos Belmonte

List of Publications by Year in descending order

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104
papers

8,589
citations

47006

47
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54911

84
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105
all docs

105
docs citations

105
times ranked

5776
citing authors

#	ARTICLE	IF	CITATIONS
1	Sodium Channel Blockers Modulate Abnormal Activity of Regenerating Nociceptive Corneal Nerves After Surgical Lesion. , 2021, 62, 2.		13
2	Optical Assessment of Nociceptive TRP Channel Function at the Peripheral Nerve Terminal. International Journal of Molecular Sciences, 2021, 22, 481.	4.1	5
3	Unilateral Corneal Insult Also Alters Sensory Nerve Activity in the Contralateral Eye. Frontiers in Medicine, 2021, 8, 767967.	2.6	7
4	Piezo2 Mediates Low-Threshold Mechanically Evoked Pain in the Cornea. Journal of Neuroscience, 2020, 40, 8976-8993.	3.6	49
5	Role of TRPM8 Channels in Altered Cold Sensitivity of Corneal Primary Sensory Neurons Induced by Axonal Damage. Journal of Neuroscience, 2019, 39, 8177-8192.	3.6	38
6	Pain, Dryness, and Itch Sensations in Eye Surface Disorders Are Defined By a Balance Between Inflammation and Sensory Nerve Injury. Cornea, 2019, 38, S11-S24.	1.7	31
7	The Immunosuppressant Macrolide Tacrolimus Activates Cold-Sensing TRPM8 Channels. Journal of Neuroscience, 2019, 39, 949-969.	3.6	33
8	Morphological and functional changes in TRPM8-expressing corneal cold thermoreceptor neurons during aging and their impact on tearing in mice. Journal of Comparative Neurology, 2018, 526, 1859-1874.	1.6	47
9	Joint nociceptor nerve activity and pain in an animal model of acute gout and its modulation by intra-articular hyaluronan. Pain, 2018, 159, 739-748.	4.2	18
10	Inhibitory Effect of Amitriptyline on the Impulse Activity of Cold Thermoreceptor Terminals of Intact and Tear-Deficient Guinea Pig Corneas. Journal of Ocular Pharmacology and Therapeutics, 2018, 34, 195-203.	1.4	6
11	Cover Image, Volume 526, Issue 11. Journal of Comparative Neurology, 2018, 526, C1-C1.	1.6	0
12	Functional and Morphologic Alterations in Mechanical, Polymodal, and Cold Sensory Nerve Fibers of the Cornea Following Photorefractive Keratectomy. , 2018, 59, 2281.		26
13	TFOS DEWS II pain and sensation report. Ocular Surface, 2017, 15, 404-437.	4.4	437
14	TFOS DEWS II Report Executive Summary. Ocular Surface, 2017, 15, 802-812.	4.4	502
15	Building Bridges through Science. Neuron, 2017, 96, 730-735.	8.1	2
16	Functional Properties of Sensory Nerve Terminals of the Mouse Cornea. , 2017, 58, 404.		71
17	Lacosamide diminishes dryness-induced hyperexcitability of corneal cold sensitive nerve terminals. European Journal of Pharmacology, 2016, 787, 2-8.	3.5	7
18	Abnormal activity of corneal cold thermoreceptors underlies the unpleasant sensations in dry eye disease. Pain, 2016, 157, 399-417.	4.2	86

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19	TRPV1 channel modulation by hyaluronan reduces pain. Channels, 2016, 10, 81-82.	2.8	10
20	TRPM8 is a neuronal osmosensor that regulates eye blinking in mice. Nature Communications, 2015, 6, 7150.	12.8	111
21	Lección Magistral Andrés Laguna: La exploración del cerebro y la neurobiología española. Aupados a hombros de gigantes. Educacion Medica, 2015, 16, 141-148.	0.3	1
22	What Causes Eye Pain?. Current Ophthalmology Reports, 2015, 3, 111-121.	1.2	148
23	Preclinical pharmacology, ocular tolerability and ocular hypotensive efficacy of a novel non-peptide bradykinin mimetic small molecule. Experimental Eye Research, 2014, 128, 170-180.	2.6	10
24	Expression of Cholecystokinin, Gastrin, and Their Receptors in the Mouse Cornea. , 2014, 55, 1965.		15
25	Tear fluid hyperosmolality increases nerve impulse activity of cold thermoreceptor endings of the cornea. Pain, 2014, 155, 1481-1491.	4.2	105
26	Corneal Sensory Nerve Activity in an Experimental Model of UV Keratitis. , 2014, 55, 3403.		48
27	Changes in sensory activity of ocular surface sensory nerves during allergic keratoconjunctivitis. Pain, 2013, 154, 2353-2362.	4.2	55
28	Amplified Cold Transduction in Native Nociceptors by M-Channel Inhibition. Journal of Neuroscience, 2013, 33, 16627-16641.	3.6	37
29	The TFOS International Workshop on Contact Lens Discomfort: Report of the Subcommittee on Neurobiology. , 2013, 54, TFOS71.		79
30	N-Glycosylation of TRPM8 Ion Channels Modulates Temperature Sensitivity of Cold Thermoreceptor Neurons. Journal of Biological Chemistry, 2012, 287, 18218-18229.	3.4	64
31	Role of h in the firing pattern of mammalian cold thermoreceptor endings. Journal of Neurophysiology, 2012, 108, 3009-3023.	1.8	31
32	Direct inhibition of the cold-activated TRPM8 ion channel by G_{iq} . Nature Cell Biology, 2012, 14, 851-858.	10.3	134
33	The Influence of Cold Temperature on Cellular Excitability of Hippocampal Networks. PLoS ONE, 2012, 7, e52475.	2.5	22
34	Altered thermal sensitivity in neurons injured by infraorbital nerve lesion. Neuroscience Letters, 2011, 488, 168-172.	2.1	5
35	Carlos Belmonte, MD, PhD. Ocular Surface, 2011, 9, 181-183.	4.4	1
36	Corneal Sensitivity in Diabetic Patients Subjected to Retinal Laser Photocoagulation. , 2011, 52, 6043.		33

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37	Cold Thermoreceptors, Unexpected Players in Tear Production and Ocular Dryness Sensations. , 2011, 52, 3888.		133
38	Membrane-attached peptides patterned after the TRP domain (TRPducins) selectively inhibit TRPV1 channel activity. FASEB Journal, 2011, 25, 1628-1640.	0.5	37
39	Sensory Innervation of the Eye. , 2011, , 363-384.		15
40	Regeneration of functional nerves within full thickness collagen-phosphorylcholine corneal substitute implants in guinea pigs. Biomaterials, 2010, 31, 2770-2778.	11.4	65
41	Ocular surface wetness is regulated by TRPM8-dependent cold thermoreceptors of the cornea. Nature Medicine, 2010, 16, 1396-1399.	30.7	270
42	Selective Changes in Human Corneal Sensation Associated with Herpes Simplex Virus Keratitis. , 2010, 51, 4516.		57
43	Variable Threshold of Trigeminal Cold-Thermosensitive Neurons Is Determined by a Balance between TRPM8 and Kv1 Potassium Channels. Journal of Neuroscience, 2009, 29, 3120-3131.	3.6	169
44	Metalloproteinase MT5-MMP is an essential modulator of neuro-immune interactions in thermal pain stimulation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16451-16456.	7.1	69
45	Converting cold into pain. Experimental Brain Research, 2009, 196, 13-30.	1.5	99
46	Characteristics and physiological role of hyperpolarization activated currents in mouse cold thermoreceptors. Journal of Physiology, 2009, 587, 1961-1976.	2.9	57
47	Hypoosmotic- and pressure-induced membrane stretch activate TRPC5 channels. Journal of Physiology, 2008, 586, 5633-5649.	2.9	123
48	Molecular and Cellular Limits to Somatosensory Specificity. Molecular Pain, 2008, 4, 1744-8069-4-14.	2.1	116
49	TRPA1 channels: Novel targets of 1,4-dihydropyridines. Channels, 2008, 2, 429-438.	2.8	64
50	Identification of molecular determinants of channel gating in the transient receptor potential box of vanilloid receptor I. FASEB Journal, 2008, 22, 3298-3309.	0.5	79
51	TRPA1 Channels Mediate Cold Temperature Sensing in Mammalian Vagal Sensory Neurons: Pharmacological and Genetic Evidence. Journal of Neuroscience, 2008, 28, 7863-7875.	3.6	148
52	Impulse Activity in Corneal Sensory Nerve Fibers after Photorefractive Keratectomy. , 2007, 48, 4033.		48
53	A Role of the Transient Receptor Potential Domain of Vanilloid Receptor I in Channel Gating. Journal of Neuroscience, 2007, 27, 11641-11650.	3.6	82
54	Nociceptive nerve activity in an experimental model of knee joint osteoarthritis of the guinea pig: Effect of intra-articular hyaluronan application. Pain, 2007, 130, 126-136.	4.2	54

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55	Comparative Effects of the Nonsteroidal Anti-inflammatory Drug Nepafenac on Corneal Sensory Nerve Fibers Responding to Chemical Irritation. , 2007, 48, 182.		26
56	Bidirectional shifts of TRPM8 channel gating by temperature and chemical agents modulate the cold sensitivity of mammalian thermoreceptors. Journal of Physiology, 2007, 581, 155-174.	2.9	99
57	Eye Dryness Sensations After Refractive Surgery: Impaired Tear Secretion or "Phantom" Cornea?. Journal of Refractive Surgery, 2007, 23, 598-602.	2.3	92
58	Dolor ocular y periocular. , 2007, , 911-924.		0
59	Eye dryness sensations after refractive surgery: impaired tear secretion or "phantom" cornea?. Journal of Refractive Surgery, 2007, 23, 598-602.	2.3	33
60	Design and Characterization of a Noncompetitive Antagonist of the Transient Receptor Potential Vanilloid Subunit 1 Channel With In Vivo Analgesic and Anti-inflammatory Activity. Journal of Pain, 2006, 7, 735-746.	1.4	29
61	JosÃ© A. Zadunaisky (1932â€“2005). Experimental Eye Research, 2006, 82, 1-2.	2.6	0
62	Influence of age, gender and iris color on mechanical and chemical sensitivity of the cornea and conjunctiva. Experimental Eye Research, 2006, 83, 932-938.	2.6	61
63	Cold sensitivity in axotomized fibers of experimental neuromas in mice. Pain, 2006, 120, 24-35.	4.2	29
64	Barium ions inhibit the dynamic response of guinea-pig corneal cold receptors to heating but not to cooling. Journal of Physiology, 2006, 575, 573-581.	2.9	11
65	Contribution of TRPM8 Channels to Cold Transduction in Primary Sensory Neurons and Peripheral Nerve Terminals. Journal of Neuroscience, 2006, 26, 12512-12525.	3.6	156
66	Pain in and around the eye. , 2006, , 887-901.		3
67	The contribution of TRPM8 channels to cold sensing in mammalian neurones. Journal of Physiology, 2005, 567, 415-426.	2.9	69
68	Changes in Mechanical, Chemical, and Thermal Sensitivity of the Cornea after Topical Application of Nonsteroidal Anti-inflammatory Drugs. , 2005, 46, 282.		33
69	Decreased Corneal Sensitivity in Patients with Dry Eye. , 2005, 46, 2341.		212
70	Tear Secretion Induced by Selective Stimulation of Corneal and Conjunctival Sensory Nerve Fibers. , 2004, 45, 2333.		91
71	Neural basis of sensation in intact and injured corneas. Experimental Eye Research, 2004, 78, 513-525.	2.6	438
72	Nerves and Sensations from the Eye Surface. Ocular Surface, 2004, 2, 248-253.	4.4	181

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73	Recovery of Corneal Sensitivity to Mechanical and Chemical Stimulation After Laser in situ Keratomileusis. <i>Journal of Refractive Surgery</i> , 2004, 20, 229-235.	2.3	51
74	Recovery of corneal sensitivity to mechanical and chemical stimulation after laser in situ keratomileusis. <i>Journal of Refractive Surgery</i> , 2004, 20, 229-35.	2.3	16
75	GAP43 stimulates inositol trisphosphate-mediated calcium release in response to hypotonicity. <i>EMBO Journal</i> , 2003, 22, 3004-3014.	7.8	31
76	Effects of Heating and Cooling on Nerve Terminal Impulses Recorded from Cold-sensitive Receptors in the Guinea-pig Cornea. <i>Journal of General Physiology</i> , 2003, 121, 427-439.	1.9	52
77	Activation of Scleral Cold Thermoreceptors by Temperature and Blood Flow Changes. , 2003, 44, 697.		27
78	Attenuation of thermal nociception and hyperalgesia by VR1 blockers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 2374-2379.	7.1	178
79	Postnatal Changes in Membrane Properties of Mice Trigeminal Ganglion Neurons. <i>Journal of Neurophysiology</i> , 2002, 87, 2398-2407.	1.8	40
80	Specificity of cold thermotransduction is determined by differential ionic channel expression. <i>Nature Neuroscience</i> , 2002, 5, 254-260.	14.8	316
81	Tau Function and Dysfunction in Neurons. <i>Molecular Neurobiology</i> , 2002, 25, 213-232.	4.0	54
82	Swelling-activated calcium signalling in cultured mouse primary sensory neurons. <i>European Journal of Neuroscience</i> , 2001, 13, 722-734.	2.6	66
83	Three-dimensional reconstruction of scleral cold thermoreceptors of the cat eye. <i>Journal of Comparative Neurology</i> , 2001, 441, 148-154.	1.6	13
84	Differences between nerve terminal impulses of polymodal nociceptors and cold sensory receptors of the guinea-pig cornea. <i>Journal of Physiology</i> , 2001, 533, 493-501.	2.9	71
85	Sensory experiences in humans and single-unit activity in cats evoked by polymodal stimulation of the cornea. <i>Journal of Physiology</i> , 2001, 534, 511-525.	2.9	130
86	Responses of nerve fibres of the rat saphenous nerve neuroma to mechanical and chemical stimulation: an in vitro study. <i>Journal of Physiology</i> , 2000, 527, 305-313.	2.9	51
87	Quantification and immunocytochemical characteristics of trigeminal ganglion neurons projecting to the cornea: Effect of corneal wounding. <i>European Journal of Pain</i> , 1999, 3, 31-39.	2.8	65
88	c-Jun expression after axotomy of corneal trigeminal ganglion neurons is dependent on the site of injury. <i>European Journal of Neuroscience</i> , 1999, 11, 899-906.	2.6	26
89	The Influence of Eye Solutions on Blinking and Ocular Comfort at Rest and During Work at Video Display Terminals. <i>Experimental Eye Research</i> , 1999, 68, 663-669.	2.6	157
90	Altered nociception, analgesia and aggression in mice lacking the receptor for substance P. <i>Nature</i> , 1998, 392, 394-397.	27.8	719

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91	Tetrodotoxin-resistant impulses in single nociceptor nerve terminals in guinea-pig cornea. <i>Journal of Physiology</i> , 1998, 512, 211-217.	2.9	186
92	Corneal innervation and sensitivity to noxious stimuli in <i>trkA</i> knockout mice. <i>European Journal of Neuroscience</i> , 1998, 10, 146-152.	2.6	82
93	Capsaicin and carbon dioxide act by distinct mechanisms on sensory nerve terminals in the cat cornea. <i>Pain</i> , 1997, 70, 23-29.	4.2	46
94	Neurobiology of ocular pain. <i>Progress in Retinal and Eye Research</i> , 1997, 16, 117-156.	15.5	167
95	c-Fos expression in trigeminal nucleus neurons after chemical irritation of the cornea: Reduction by selective blockade of nociceptor chemosensitivity. <i>Experimental Brain Research</i> , 1996, 109, 56-62.	1.5	26
96	CO ₂ Stimulation of the Cornea: A Comparison Between Human Sensation and Nerve Activity in Polymodal Nociceptive Afferents of the Cat. <i>European Journal of Neuroscience</i> , 1995, 7, 1154-1163.	2.6	109
97	Irritation of the anterior segment of the eye by ultraviolet radiation: influence of nerve blockade and calcium antagonists. <i>Current Eye Research</i> , 1995, 14, 827-835.	1.5	19
98	Influence of diltiazem on the ocular irritative response to nitrogen mustard. <i>Experimental Eye Research</i> , 1995, 61, 205-212.	2.6	17
99	Neurotrophic Influences on Corneal Epithelial Cells. <i>Experimental Eye Research</i> , 1994, 59, 597-605.	2.6	195
100	Polymodality in Nociceptive Neurons: Experimental Models of Chemotransduction. , 1994, , 87-117.		13
101	Detection and characterization of Ca ²⁺ -activated K ⁺ channels in transformed cells of human non-pigmented ciliary epithelium. <i>Current Eye Research</i> , 1991, 10, 731-738.	1.5	16
102	Sensory nerve responses elicited by experimental ocular hypertension. <i>Experimental Eye Research</i> , 1986, 43, 759-769.	2.6	34
103	The effects of blood osmolality changes on cat carotid body chemoreceptors in vivo. <i>Pflugers Archiv European Journal of Physiology</i> , 1979, 380, 53-58.	2.8	21
104	Sympathetic fibers in the aortic nerve of the cat. <i>Brain Research</i> , 1972, 43, 25-35.	2.2	9