

Barry J Sessle

List of Publications by Year in descending order

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87
papers

4,407
citations

109321

35
h-index

118850

62
g-index

133
all docs

133
docs citations

133
times ranked

2554
citing authors

#	ARTICLE	IF	CITATIONS
1	Acute and Chronic Craniofacial Pain: Brainstem Mechanisms of Nociceptive Transmission and Neuroplasticity, and Their Clinical Correlates. <i>Critical Reviews in Oral Biology and Medicine</i> , 2000, 11, 57-91.	4.4	561
2	The Neural Basis of Oral and Facial Function. , 1978, , .		333
3	Activation of Peripheral NMDA Receptors Contributes to Human Pain and Rat Afferent Discharges Evoked by Injection of Glutamate into the Masseter Muscle. <i>Journal of Neurophysiology</i> , 2003, 90, 2098-2105.	1.8	206
4	Peripheral and central mechanisms of orofacial inflammatory pain. <i>International Review of Neurobiology</i> , 2011, 97, 179-206.	2.0	171
5	Functional Properties of Neurons in the Primate Tongue Primary Motor Cortex During Swallowing. <i>Journal of Neurophysiology</i> , 1997, 78, 1516-1530.	1.8	156
6	Trigeminal projections to the nucleus submedius of the thalamus in the rat. <i>Journal of Comparative Neurology</i> , 1991, 307, 609-625.	1.6	152
7	Features of Cortically Evoked Swallowing in the Awake Primate (<i>Macaca fascicularis</i>). <i>Journal of Neurophysiology</i> , 1999, 82, 1529-1541.	1.8	143
8	Face sensorimotor cortex and its neuroplasticity related to orofacial sensorimotor functions. <i>Archives of Oral Biology</i> , 2011, 56, 1440-1465.	1.8	138
9	Plasticity in corticomotor control of the human tongue musculature induced by tongue-task training. <i>Experimental Brain Research</i> , 2003, 152, 42-51.	1.5	134
10	The effects of intra-oral pain on motor cortex neuroplasticity associated with short-term novel tongue-protrusion training in humans. <i>Pain</i> , 2007, 132, 169-178.	4.2	124
11	NMDA Receptor Mechanisms Contribute to Neuroplasticity Induced in Caudalis Nociceptive Neurons by Tooth Pulp Stimulation. <i>Journal of Neurophysiology</i> , 1998, 80, 2621-2631.	1.8	119
12	Raphe-induced suppression of the jaw-opening reflex and single neurons in trigeminal subnucleus oralis, and influence of naloxone and subnucleus caudalis. <i>Pain</i> , 1981, 10, 19-36.	4.2	118
13	Mechanisms of craniofacial pain. <i>Cephalalgia</i> , 2017, 37, 613-626.	3.9	101
14	Effects of reversible bilateral inactivation of face primary motor cortex on mastication and swallowing. <i>Brain Research</i> , 2002, 944, 40-55.	2.2	88
15	Properties and plasticity of the primate somatosensory and motor cortex related to orofacial sensorimotor function. <i>Clinical and Experimental Pharmacology and Physiology</i> , 2005, 32, 109-114.	1.9	85
16	Neural Mechanisms and Pathways in Craniofacial Pain. <i>Canadian Journal of Neurological Sciences</i> , 1999, 26, 7-11.	0.5	83
17	Neuroplasticity of face primary motor cortex control of orofacial movements. <i>Archives of Oral Biology</i> , 2007, 52, 334-337.	1.8	83
18	Similarity in Neuronal Firing Regimes across Mammalian Species. <i>Journal of Neuroscience</i> , 2016, 36, 5736-5747.	3.6	78

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19	Primary motor and sensory cortical areas communicate via spatiotemporally coordinated networks at multiple frequencies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 5083-5088.	7.1	78
20	Characteristics of Glutamate-Evoked Temporomandibular Joint Afferent Activity in the Rat. <i>Journal of Neurophysiology</i> , 2001, 85, 2446-2454.	1.8	75
21	Two major types of premotoneurons in the feline trigeminal nucleus oralis as demonstrated by intracellular staining with horseradish peroxidase. <i>Journal of Comparative Neurology</i> , 1994, 347, 495-514.	1.6	65
22	Effects on mastication of reversible bilateral inactivation of the lateral pericentral cortex in the monkey (<i>Macaca fascicularis</i>). <i>Archives of Oral Biology</i> , 2002, 47, 673-688.	1.8	61
23	Jaw sensorimotor control in healthy adults and effects of ageing. <i>Journal of Oral Rehabilitation</i> , 2018, 45, 50-80.	3.0	58
24	Neural mechanisms of swallowing: Neurophysiological and neurochemical studies on brain stem neurons in the solitary tract region. <i>Dysphagia</i> , 1989, 4, 61-75.	1.8	55
25	Effects of incisor extraction on jaw and tongue motor representations within face sensorimotor cortex of adult rats. <i>Journal of Comparative Neurology</i> , 2010, 518, 1030-1045.	1.6	52
26	NMDA Receptor Involvement in Neuroplastic Changes Induced By Neonatal Capsaicin Treatment in Trigeminal Nociceptive Neurons. <i>Journal of Neurophysiology</i> , 1997, 78, 2799-2803.	1.8	48
27	Neuroplasticity Induced by Tooth Pulp Stimulation in Trigeminal Subnucleus Oralis Involves NMDA Receptor Mechanisms. <i>Journal of Neurophysiology</i> , 2001, 85, 1836-1846.	1.8	47
28	Modulation Dynamics in the Orofacial Sensorimotor Cortex during Motor Skill Acquisition. <i>Journal of Neuroscience</i> , 2014, 34, 5985-5997.	3.6	46
29	Repeated tongue lift movement induces neuroplasticity in corticomotor control of tongue and jaw muscles in humans. <i>Brain Research</i> , 2015, 1627, 70-79.	2.2	46
30	Central distribution of synaptic contacts of primary and secondary jaw muscle spindle afferents in the trigeminal motor nucleus of the cat. <i>Journal of Comparative Neurology</i> , 1998, 391, 50-63.	1.6	45
31	Chronic Orofacial Pain: Models, Mechanisms, and Genetic and Related Environmental Influences. <i>International Journal of Molecular Sciences</i> , 2021, 22, 7112.	4.1	43
32	Activation of Peripheral GABA _A Receptors Inhibits Temporomandibular Joint-Evoked Jaw Muscle Activity. <i>Journal of Neurophysiology</i> , 1999, 81, 1966-1969.	1.8	41
33	Corticomotor plasticity induced by tongue-task training in humans: a longitudinal fMRI study. <i>Experimental Brain Research</i> , 2011, 212, 199-212.	1.5	41
34	Face sensorimotor cortex. <i>Progress in Brain Research</i> , 2011, 188, 71-82.	1.4	39
35	The Pain Crisis: What It Is and What Can Be Done. <i>Pain Research and Treatment</i> , 2012, 2012, 1-6.	1.7	39
36	Motor cortex neuroplasticity associated with lingual nerve injury in rats. <i>Somatosensory & Motor Research</i> , 2007, 24, 97-109.	0.9	37

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37	Unrelieved Pain: A Crisis. <i>Pain Research and Management</i> , 2011, 16, 416-420.	1.8	37
38	Effects of experimental pain on jaw muscle activity during goal-directed jaw movements in humans. <i>Experimental Brain Research</i> , 2008, 189, 451-462.	1.5	35
39	Involvement of medullary GABAergic system in extraterritorial neuropathic pain mechanisms associated with inferior alveolar nerve transection. <i>Experimental Neurology</i> , 2015, 267, 42-52.	4.1	34
40	Dental Occlusal Changes Induce Motor Cortex Neuroplasticity. <i>Journal of Dental Research</i> , 2015, 94, 1757-1764.	5.2	33
41	Features of cortical neuroplasticity associated with multidirectional novel motor skill training: a TMS mapping study. <i>Experimental Brain Research</i> , 2013, 225, 513-526.	1.5	30
42	Long-term neuroplasticity of the face primary motor cortex and adjacent somatosensory cortex induced by tooth loss can be reversed following dental implant replacement in rats. <i>Journal of Comparative Neurology</i> , 2015, 523, 2372-2389.	1.6	29
43	Primary afferent depolarisation of tooth pulp afferents is not affected by naloxone. <i>Nature</i> , 1978, 276, 283-284.	27.8	27
44	Recent Insights into Brainstem Mechanisms Underlying Craniofacial Pain. <i>Journal of Dental Education</i> , 2002, 66, 108-112.	1.2	26
45	Central sensitization induced in thalamic nociceptive neurons by tooth pulp stimulation is dependent on the functional integrity of trigeminal brainstem subnucleus caudalis but not subnucleus oralis. <i>Brain Research</i> , 2006, 1112, 134-145.	2.2	25
46	Widespread Volumetric Brain Changes following Tooth Loss in Female Mice. <i>Frontiers in Neuroanatomy</i> , 2016, 10, 121.	1.7	25
47	Systemic pregabalin attenuates facial hypersensitivity and noxious stimulus-evoked release of glutamate in medullary dorsal horn in a rodent model of trigeminal neuropathic pain. <i>Neurochemistry International</i> , 2013, 62, 831-835.	3.8	24
48	Effects of GABA Receptor Antagonist on Trigeminal Caudalis Nociceptive Neurons in Normal and Neonatally Capsaicin-Treated Rats. <i>Journal of Neurophysiology</i> , 1999, 82, 2154-2162.	1.8	23
49	Cortical Orofacial Motor Representation. <i>Journal of Dental Research</i> , 2010, 89, 1142-1147.	5.2	21
50	Neuroplastic changes in the sensorimotor cortex associated with orthodontic tooth movement in rats. <i>Journal of Comparative Neurology</i> , 2015, 523, 1548-1568.	1.6	19
51	Activation of peripheral P2X receptors is sufficient to induce central sensitization in rat medullary dorsal horn nociceptive neurons. <i>Neuroscience Letters</i> , 2012, 526, 160-163.	2.1	14
52	Face sensorimotor cortex neuroplasticity associated with intraoral alterations. <i>Progress in Brain Research</i> , 2011, 188, 135-150.	1.4	13
53	ERK-GluR1 phosphorylation in trigeminal spinal subnucleus caudalis neurons is involved in pain associated with dry tongue. <i>Molecular Pain</i> , 2016, 12, 174480691664168.	2.1	13
54	Sagittal Plane Kinematics of the Jaw and Hyolingual Apparatus During Swallowing in <i>Macaca mulatta</i> . <i>Dysphagia</i> , 2017, 32, 663-677.	1.8	13

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55	Can you be too old for oral implants? An update on ageing and plasticity in the oro-facial sensorimotor system. <i>Journal of Oral Rehabilitation</i> , 2019, 46, 936-951.	3.0	13
56	(α)- β -Bisabolol reduces nociception and trigeminal central sensitisation in acute orofacial neuropathic pain induced by infraorbital nerve injury. <i>Life Sciences</i> , 2019, 227, 122-128.	4.3	13
57	Dental sleep medicine: Time to incorporate sleep apnoea education in the dental curriculum. <i>European Journal of Dental Education</i> , 2020, 24, 605-610.	2.0	13
58	Brainstem Mechanisms Underlying Temporomandibular Joint and Masticatory Muscle Pain. <i>Journal of Musculoskeletal Pain</i> , 1999, 7, 161-169.	0.3	12
59	Central Projections of Identified Trigeminal Primary Afferents after Molar Pulp Deafferentation in Adult Rats. <i>Somatosensory & Motor Research</i> , 1995, 12, 277-297.	0.9	11
60	Recent insights into brainstem mechanisms underlying craniofacial pain. <i>Journal of Dental Education</i> , 2002, 66, 108-12.	1.2	11
61	Decreased face primary motor cortex (face-M1) excitability induced by noxious stimulation of the rat molar tooth pulp is dependent on the functional integrity of face-M1 astrocytes. <i>Experimental Brain Research</i> , 2015, 233, 1261-1272.	1.5	8
62	Integration of basic sciences into the predoctoral curriculum to study temporomandibular disorders and orofacial pain. <i>Journal of Orofacial Pain</i> , 2002, 16, 181-4.	1.7	8
63	Biological adaptation and normative values. <i>International Journal of Prosthodontics</i> , 2005, 18, 280-2.	1.7	8
64	Involvement of ATP in noxious stimulus-evoked release of glutamate in rat medullary dorsal horn: A microdialysis study. <i>Neurochemistry International</i> , 2012, 61, 1276-1279.	3.8	7
65	Decreased face primary motor cortex (face-M1) excitability induced by noxious stimulation of the rat molar tooth pulp is dependent on the functional integrity of medullary astrocytes. <i>Experimental Brain Research</i> , 2016, 234, 645-657.	1.5	7
66	Responses of neurons in rostral ventromedial medulla to nociceptive stimulation of craniofacial region and tail in rats. <i>Brain Research</i> , 2021, 1767, 147539.	2.2	7
67	Neuroplasticity of face sensorimotor cortex and implications for control of orofacial movements. <i>Japanese Dental Science Review</i> , 2010, 46, 132-142.	5.1	6
68	Combination of jaw and tongue movement training influences neuroplasticity of corticomotor pathways in humans. <i>Experimental Brain Research</i> , 2019, 237, 2559-2571.	1.5	6
69	Why are the diagnosis and management of orofacial pain so challenging?. <i>Journal of the Canadian Dental Association</i> , 2009, 75, 275-7.	0.6	6
70	Face sensorimotor cortex undergoes neuroplastic changes in a rat model of trigeminal neuropathic pain. <i>Experimental Brain Research</i> , 2018, 236, 1357-1368.	1.5	5
71	Astrocytes in the rostral ventromedial medulla contribute to the maintenance of oro-facial hyperalgesia induced by late removal of dental occlusal interference. <i>Journal of Oral Rehabilitation</i> , 2022, 49, 207-218.	3.0	5
72	Botulinum toxin promotes orofacial antinociception by modulating TRPV1 and NMDA receptors in adult zebrafish. <i>Toxicon</i> , 2022, 210, 158-166.	1.6	5

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73	Tooth extraction and subsequent dental implant placement in Sprague-Dawley rats induce differential changes in anterior digastric myofibre size and myosin heavy chain isoform expression. Archives of Oral Biology, 2019, 99, 141-149.	1.8	4
74	Role of Peripheral Mechanisms in Craniofacial Pain Conditions. , 0, , 1-20.		4
75	Sensory and Motor Functions of Face Primary Somatosensory Cortex in The Primate. , 2001, , 113-130.		4
76	Contribution of plasticity of sensorimotor cerebral cortex to development of communication skills. Behavioral and Brain Sciences, 2002, 25, 638-639.	0.7	3
77	Mechanoreceptive field and response properties of nociceptive neurons in ventral posteromedial thalamic nucleus of the rat. Thalamus & Related Systems, 2005, 3, 41.	0.5	3
78	Toll-Like Receptor 4 in the Rat Caudal Medulla Mediates Tooth Pulp Inflammatory Pain. Frontiers in Neuroscience, 2020, 14, 643.	2.8	3
79	NMDA and purinergic processes modulate neck muscle activity evoked by noxious stimulation of dura. Journal of Oral Pathology and Medicine, 2020, 49, 547-554.	2.7	2
80	Biological adaptation and normative values. International Journal of Prosthodontics, 2003, 16 Suppl, 72-3; discussion 89-90.	1.7	1
81	Central excitation and inhibitory mechanisms and neuroplasticity are also manifested in trigeminal nociceptive pathways. Behavioral and Brain Sciences, 1997, 20, 453-454.	0.7	0
82	Recent evidence of the involvement of lateral frontal cortex in primate cyclic ingestive movements. Behavioral and Brain Sciences, 1998, 21, 529-530.	0.7	0
83	Interview: Pain management challenges: research, access, costs, education and public awareness. Pain Management, 2011, 1, 25-29.	1.5	0
84	The Canadian Pain Society: A historical perspective. Canadian Journal of Pain, 2020, 4, 247-251.	1.7	0
85	Oro-Facial Pain Mechanism. The Journal of the Kyushu Dental Society, 1984, 38, 948-967.	0.0	0
86	Properties of heat-sensitive neurons in the premotor cortex of conscious monkeys. Journal of Oral Science, 2020, 62, 382-386.	1.7	0
87	Dental Pain Mechanisms. , 2020, , 550-570.		0