Christoph Stein

List of Publications by Year
in descending order

205 papers	18,556 citations	8755 75 h-index	12597 132 g-index
232 all docs	232 docs citations	232 times ranked	8217 citing authors

#	Article	IF	Citations
1	Agonist that activates the Âµ-opioid receptor in acidified microenvironments inhibits colitis pain without side effects. Gut, 2022, 71, 695-704.	12.1	28
2	Cannabidivarin for HIVâ€Associated Neuropathic Pain: A Randomized, Blinded, Controlled Clinical Trial. Clinical Pharmacology and Therapeutics, 2021, 109, 1055-1062.	4.7	19
3	Uncovering the analgesic effects of a pH-dependent mu-opioid receptor agonist using a model of nonevoked ongoing pain. Pain, 2020, 161, 2798-2804.	4.2	10
4	A low pKa ligand inhibits cancer-associated pain in mice by activating peripheral mu-opioid receptors. Scientific Reports, 2020, 10, 18599.	3.3	7
5	Opioid analgesia: recent developments. Current Opinion in Supportive and Palliative Care, 2020, 14, 112-117.	1.3	20
6	Potential Energy Function for Fentanyl-Based Opioid Pain Killers. Journal of Chemical Information and Modeling, 2020, 60, 3566-3576.	5.4	13
7	Immune System, Pain and Analgesia. , 2020, , 385-397.		1
8	Modulation of Î¼â€opioid receptor activation by acidic pH is dependent on ligand structure and an ionizable amino acid residue. British Journal of Pharmacology, 2019, 176, 4510-4520.	5.4	18
9	Pain therapy â€" Are there new options on the horizon?. Best Practice and Research in Clinical Rheumatology, 2019, 33, 101420.	3.3	10
10	Tailorâ€Made Coreâ€Multishell Nanocarriers for the Delivery of Cationic Analgesics to Inflamed Tissue. Advanced Therapeutics, 2019, 2, 1900007.	3.2	2
11	pKa of opioid ligands as a discriminating factor for side effects. Scientific Reports, 2019, 9, 19344.	3.3	19
12	Topical application of morphine for wound healing and analgesia in patients with oral lichen planus: a randomized, double-blind, placebo-controlled study. Clinical Oral Investigations, 2018, 22, 305-311.	3.0	10
13	Analgesic effects of a novel pH-dependent Î¼-opioid receptor agonist in models of neuropathic and abdominal pain. Pain, 2018, 159, 2277-2284.	4.2	51
14	New concepts in opioid analgesia. Expert Opinion on Investigational Drugs, 2018, 27, 765-775.	4.1	104
15	Opioid receptor signaling, analgesic and side effects induced by a computationally designed pH-dependent agonist. Scientific Reports, 2018, 8, 8965.	3.3	47
16	Inflammatory-linked changes in CpG island methylation of three opioid peptide genes in a rat model for pain. PLoS ONE, 2018, 13, e0191698.	2.5	5
17	Ankyrinâ€rich membrane spanning protein as a novel modulator of transient receptor potential vanilloid 1â€function in nociceptive neurons. European Journal of Pain, 2017, 21, 1072-1086.	2.8	4
18	A nontoxic pain killer designed by modeling of pathological receptor conformations. Science, 2017, 355, 966-969.	12.6	175

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19	Cytotoxic T cells modulate inflammation and endogenous opioid analgesia in chronic arthritis. Journal of Neuroinflammation, 2017, 14, 30.	7.2	38
20	Production of G proteinâ€coupled receptors in an insectâ€based cellâ€free system. Biotechnology and Bioengineering, 2017, 114, 2328-2338.	3.3	29
21	Novel Opioid Analgesics and Side Effects. ACS Chemical Neuroscience, 2017, 8, 1638-1640.	3.5	52
22	B Lymphocytes Express Pomc mRNA, Processing Enzymes and Î²-Endorphin in Painful Inflammation. Journal of NeuroImmune Pharmacology, 2017, 12, 180-186.	4.1	10
23	Targeting delta opioid receptors for pain treatment: drugs in phase I and II clinical development. Expert Opinion on Investigational Drugs, 2017, 26, 155-160.	4.1	37
24	Emergent biomarker derived from next-generation sequencing to identify pain patients requiring uncommonly high opioid doses. Pharmacogenomics Journal, 2017, 17, 419-426.	2.0	25
25	Polyglycerol-opioid conjugate produces analgesia devoid of side effects. ELife, 2017, 6, .	6.0	32
26	Opioid Receptors. Annual Review of Medicine, 2016, 67, 433-451.	12.2	339
27	Scientific fraud. Trends in Anaesthesia and Critical Care, 2015, 5, 76-79.	0.9	1
28	Analgesic efficacy of opioids in chronic pain: recent metaâ€analyses. British Journal of Pharmacology, 2015, 172, 324-333.	5.4	89
29	Methylnaltrexone and opioid analgesia. Pain, 2014, 155, 2722-2723.	4.2	4
30	Opioids for the treatment of arthritis pain. Expert Opinion on Pharmacotherapy, 2014, 15, 193-202.	1.8	15
31	Modulation of Transient Receptor Vanilloid 1 Activity by Transient Receptor Potential Ankyrin 1. Molecular Pharmacology, 2014, 85, 335-344.	2.3	79
32	Peripheral opioid receptor blockade increases postoperative morphine demandsâ€"A randomized, double-blind, placebo-controlled trial. Pain, 2014, 155, 2056-2062.	4.2	54
33	A randomized, controlled, clinical pilot study assessing the analgesic effect of morphine applied topically onto split-thickness skin wounds. Journal of Pharmacy and Pharmacology, 2014, 66, 1559-1566.	2.4	8
34	Targeting inflammation and wound healing by opioids. Trends in Pharmacological Sciences, 2013, 34, 303-312.	8.7	105
35	Towards safer and more effective analgesia. Veterinary Journal, 2013, 196, 6-7.	1.7	6
36	Opioid withdrawal increases transient receptor potential vanilloid 1 activity in a protein kinase A-dependent manner. Pain, 2013, 154, 598-608.	4.2	54

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37	Opioids, sensory systems and chronic pain. European Journal of Pharmacology, 2013, 716, 179-187.	3.5	87
38	A thermosensitive morphine-containing hydrogel for the treatment of large-scale skin wounds. International Journal of Pharmaceutics, 2013, 444, 96-102.	5.2	86
39	The K ⁺ channel GIRK2 is both necessary and sufficient for peripheral opioidâ€mediated analgesia. EMBO Molecular Medicine, 2013, 5, 1263-1277.	6.9	87
40	Functional Characteristics of the Naked Mole Rat Î¼-Opioid Receptor. PLoS ONE, 2013, 8, e79121.	2.5	11
41	Targeting pain and inflammation by peripherally acting opioids. Frontiers in Pharmacology, 2013, 4, 123.	3.5	61
42	Pain inhibition by blocking leukocytic and neuronal opioid peptidases in peripheral inflamed tissue. FASEB Journal, 2012, 26, 5161-5171.	0.5	63
43	Non-Analgesic Effects of Opioids: Peripheral Opioid Effects on Inflammation and Wound Healing. Current Pharmaceutical Design, 2012, 18, 6053-6069.	1.9	63
44	Fentanyl decreases discharges of C and A nociceptors to suprathreshold mechanical stimulation in chronic inflammation. Journal of Neurophysiology, 2012, 108, 2827-2836.	1.8	21
45	JAK-STAT1/3-Induced Expression of Signal Sequence-Encoding Proopiomelanocortin mRNA in Lymphocytes Reduces Inflammatory Pain in Rats. Molecular Pain, 2012, 8, 1744-8069-8-83.	2.1	29
46	Liquid Chromatography-Tandem Mass Spectrometry for Analysis of Intestinal Permeability of Loperamide in Physiological Buffer. PLoS ONE, 2012, 7, e48502.	2.5	5
47	Analysis of absorption enhancers in epithelial cell models. Annals of the New York Academy of Sciences, 2012, 1258, 86-92.	3.8	22
48	Impaired Nociception and Peripheral Opioid Antinociception in Mice Lacking Both Kinin B1 and B2 Receptors. Anesthesiology, 2012, 116, 448-457.	2.5	38
49	Modulation of Tight Junction Proteins in the Perineurium to Facilitate Peripheral Opioid Analgesia. Anesthesiology, 2012, 116, 1323-1334.	2.5	25
50	Exploiting Fluorescence Lifetime Plasticity in FLIM: Target Molecule Localization in Cells and Tissues. ACS Medicinal Chemistry Letters, 2011, 2, 724-728.	2.8	37
51	Modulation of Peripheral Sensory Neurons by the Immune System: Implications for Pain Therapy. Pharmacological Reviews, 2011, 63, 860-881.	16.0	165
52	Blockade of intra-articular adrenergic receptors increases analgesic demands for pain relief after knee surgery. Rheumatology International, 2011, 31, 1299-1306.	3.0	13
53	Immunosuppressive Effects of Opioidsâ€”Clinical Relevance. Journal of NeuroImmune Pharmacology, 2011, 6, 490-502.	4.1	64
54	Opioid use in chronic noncancer pain: guidelines revisited. Current Opinion in Anaesthesiology, 2010, 23, 598-601.	2.0	48

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55	3D-Wound healing model: Influence of morphine and solid lipid nanoparticles. Journal of Biotechnology, 2010, 148, 24-30.	3.8	110
56	Opioids in rheumatic diseases. Annals of the New York Academy of Sciences, 2010, 1193, 111-116.	3.8	19
57	Opioid receptors and opioid peptide-producing leukocytes in inflammatory pain â€“ Basic and therapeutic aspects. Brain, Behavior, and Immunity, 2010, 24, 683-694.	4.1	68
58	Anesthesia and Treatment of Chronic Pain. , 2010, , 1797-1818.		4
59	Mycobacteria Attenuate Nociceptive Responses by Formyl Peptide Receptor Triggered Opioid Peptide Release from Neutrophils. PLoS Pathogens, 2009, 5, e1000362.	4.7	79
60	Peripheral mechanisms of pain and analgesia. Brain Research Reviews, 2009, 60, 90-113.	9.0	230
61	Peripheral mechanisms of opioid analgesia. Current Opinion in Pharmacology, 2009, 9, 3-8.	3.5	227
62	Antinociception by neutrophil-derived opioid peptides in noninflamed tissueâ€"Role of hypertonicity and the perineurium. Brain, Behavior, and Immunity, 2009, 23, 548-557.	4.1	31
63	Peripheral Non-Viral MIDGE Vector-Driven Delivery of Î²-Endorphin in Inflammatory Pain. Molecular Pain, 2009, 5, 1744-8069-5-72.	2.1	25
64	Opioids and Sensory Nerves. Handbook of Experimental Pharmacology, 2009, , 495-518.	1.8	84
65	Topical administration of analgesics. , 2009, , 450-457.		2
66	The other side of the medal: How chemokines promote analgesia. Neuroscience Letters, 2008, 437, 203-208.	2.1	24
67	Pain and the immune system. British Journal of Anaesthesia, 2008, 101, 40-44.	3.4	91
68	Chronic morphine use does not induce peripheral tolerance in a rat model of inflammatory pain. Journal of Clinical Investigation, 2008, 118, 1065-73.	8.2	105
69	Immune System, Pain and Analgesia. , 2008, , 407-427.		5
70	Opioids. , 2007, , 31-63.		125
71	Â-Endorphin, Met-enkephalin and corresponding opioid receptors within synovium of patients with joint trauma, osteoarthritis and rheumatoid arthritis. Annals of the Rheumatic Diseases, 2007, 66, 871-879.	0.9	105
72	Î¼-Opioid Receptor Activation Modulates Transient Receptor Potential Vanilloid 1 (TRPV1) Currents in Sensory Neurons in A Model of Inflammatory Pain. Molecular Pharmacology, 2007, 71, 12-18.	2.3	131

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73	Involvement of Intra-articular Corticotropin-releasing Hormone in Postoperative Pain Modulation. Clinical Journal of Pain, 2007, 23, 136-142.	1.9	47
74	Influence of pain treatment by epidural fentanyl and bupivacaine on homing of opioid-containing leukocytes to surgical wounds. Brain, Behavior, and Immunity, 2007, 21, 544-552.	4.1	23
75	CXCR1/2 ligands induce p38 MAPK-dependent translocation and release of opioid peptides from primary granules in vitro and in vivo. Brain, Behavior, and Immunity, 2007, 21, 1021-1032.	4.1	53
76	Endothelin Potentiates TRPV1 via ETAReceptor-Mediated Activation of Protein Kinase C. Molecular Pain, 2007, 3, 1744-8069-3-35.	2.1	68
77	Immune-derived Opioids: Production and Function in Inflammatory Pain. , 2007, , 159-169.		0
78	Relative contribution of peripheral versus central opioid receptors to antinociception. Brain Research, 2007, 1160, 30-38.	2.2	111
79	Lymphocytes upregulate signal sequence-encoding proopiomelanocortin mRNA and beta-endorphin during painful inflammation in vivo. Journal of Neuroimmunology, 2007, 183, 133-145.	2.3	61
80	Neurokinin-1 Receptor Antagonists Inhibit the Recruitment of Opioid-containing Leukocytes and Impair Peripheral Antinociception. Anesthesiology, 2007, 107, 1009-1017.	2.5	35
81	Intra-Articular Morphine for Inflammatory Pain. Regional Anesthesia and Pain Medicine, 2006, 31, 496-497.	2.3	8
82	Interleukin-1 beta contributes to the upregulation of kappa opioid receptor mrna in dorsal root ganglia in response to peripheral inflammation. Neuroscience, 2006, 141, 989-998.	2.3	60
83	Intra-Articular Morphine for Inflammatory Pain. Regional Anesthesia and Pain Medicine, 2006, 31, 496-497.	2.3	4
84	Leukocyte-Derived Opioid Peptides and Inhibition of Pain. Journal of NeuroImmune Pharmacology, 2006, 1, 90-97.	4.1	44
85	Comment on â€œNeutrophils: are they hyperalgesic or anti-hyperalgesic?â€• Journal of Leukocyte Biology, 2006, 80, 729-730.	3.3	2
86	Selective local PMN recruitment by CXCL1 or CXCL2/3 injection does not cause inflammatory pain. Journal of Leukocyte Biology, 2006, 79, 1022-1032.	3.3	81
87	Pain control by CXCR2 ligands through Ca 2+ â€regulated release of opioid peptides from polymorphonuclear cells. FASEB Journal, 2006, 20, 2627-2629.	0.5	110
88	Peripheral Antinociceptive Effects of Exogenous and Immune Cell-Derived Endomorphins in Prolonged Inflammatory Pain. Journal of Neuroscience, 2006, 26, 4350-4358.	3.6	73
89	Involvement of cytokines, chemokines and adhesion molecules in opioid analgesia. European Journal of Pain, 2005, 9, 109-112.	2.8	35
90	Leukocytes in the regulation of pain and analgesia. Journal of Leukocyte Biology, 2005, 78, 1215-1222.	3.3	104

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91	Controlling Pain by Influencing Neurogenic Pathways. Rheumatic Disease Clinics of North America, 2005, 31, 103-113.	1.9	8
92	Subcellular Pathways of Î²-Endorphin Synthesis, Processing, and Release from Immunocytes in Inflammatory Pain. Endocrinology, 2004, 145, 1331-1341.	2.8	161
93	Increased numbers of opioid expressing inflammatory cells do not affect intra-articular morphine analgesia â€. British Journal of Anaesthesia, 2004, 93, 375-380.	3.4	34
94	Characterization of Î¼ Opioid Receptor Binding and G Protein Coupling in Rat Hypothalamus, Spinal Cord, and Primary Afferent Neurons during Inflammatory Pain. Journal of Pharmacology and Experimental Therapeutics, 2004, 308, 712-718.	2.5	79
95	Sympathetic activation triggers endogenous opioid release and analgesia within peripheral inflamed tissue. European Journal of Neuroscience, 2004, 20, 92-100.	2.6	124
96	Selectins and integrins but not platelet-endothelial cell adhesion molecule-1 regulate opioid inhibition of inflammatory pain. British Journal of Pharmacology, 2004, 142, 772-780.	5.4	53
97	Endogenous peripheral antinociception in early inflammation is not limited by the number of opioid-containing leukocytes but by opioid receptor expression. Pain, 2004, 108, 67-75.	4.2	72
98	Potential links between leukocytes and antinociception. Pain, 2004, 111, 1-2.	4.2	6
99	Control of inflammatory pain by chemokine-mediated recruitment of opioid-containing polymorphonuclear cells. Pain, 2004, 112, 229-238.	4.2	115
100	Rapid upregulation of Î¼ opioid receptor mrna in dorsal root ganglia in response to peripheral inflammation depends on neuronal conduction. Neuroscience, 2004, 129, 473-479.	2.3	109
101	Tissue Monocytes/Macrophages in Inflammation. Anesthesiology, 2004, 101, 204-211.	2.5	66
102	Mobilization of Opioid-containing Polymorphonuclear Cells by Hematopoietic Growth Factors and Influence on Inflammatory Pain. Anesthesiology, 2004, 100, 149-157.	2.5	57
103	Altered Cell-mediated Immunity and Increased Postoperative Infection Rate in Long-term Alcoholic Patients. Anesthesiology, 2004, 100, 1088-1100.	2.5	151
104	Neurogenic painful inflammation. Current Opinion in Anaesthesiology, 2004, 17, 461-464.	2.0	7
105	Different mechanisms of intrinsic pain inhibition in early and late inflammation. Journal of Neuroimmunology, 2003, 141, 30-39.	2.3	115
106	Immune mechanisms in pain control. Journal of Neurochemistry, 2003, 85, 12-12.	3.9	0
107	Breaking the pain barrier. Nature Medicine, 2003, 9, 1353-1354.	30.7	10
108	Attacking pain at its source: new perspectives on opioids. Nature Medicine, 2003, 9, 1003-1008.	30.7	535

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109	The role of the peripheral nervous system in immune cell recruitment. Experimental Neurology, 2003, 184, 44-49.	4.1	14
110	Involvement of corticotropin-releasing hormone receptor subtypes 1 and 2 in peripheral opioid-mediated inhibition of inflammatory pain. Pain, 2003, 106, 297-307.	4.2	68
111	Advances in Neuropathic Pain. Archives of Neurology, 2003, 60, 1524.	4.5	1,117
112	Painful Inflammation-Induced Increase in Î¼-Opioid Receptor Binding and G-Protein Coupling in Primary Afferent Neurons. Molecular Pharmacology, 2003, 64, 202-210.	2.3	178
113	Pro-algesic versus analgesic actions of immune cells. Current Opinion in Anaesthesiology, 2003, 16, 527-533.	2.0	26
114	Modulation of Peripheral Endogenous Opioid Analgesia by Central Afferent Blockade. Anesthesiology, 2003, 98, 195-202.	2.5	46
115	Peripheral Opioid Analgesia. Current Pharmaceutical Biotechnology, 2003, 4, 270-274.	1.6	86
116	Peripheral analgesic and anti-inflammatory effects of opioids â€" neuro-immune crosstalk. , 2003, , 137-148.		0
117	Peripheral Opioid Analgesia Neuroimmune Interactions and Therapeutic Implications. , 2003, , .		0
118	Opioid receptors on peripheral sensory neurons. Advances in Experimental Medicine and Biology, 2003, 521, 69-76.	1.6	29
119	Immune Mechanisms in Pain Control. Anesthesia and Analgesia, 2002, 95, 1002-1008.	2.2	39
120	Immune Mechanisms in Pain Control. Anesthesia and Analgesia, 2002, 95, 1002-1008.	2.2	55
121	Opioid Control of Inflammatory Pain Regulated by Intercellular Adhesion Molecule-1. Journal of Neuroscience, 2002, 22, 5588-5596.	3.6	111
122	Immunohistochemical localization of endomorphin-1 and endomorphin-2 in immune cells and spinal cord in a model of inflammatory pain. Journal of Neuroimmunology, 2002, 126, 5-15.	2.3	120
123	Methionine-enkephalin-and Dynorphin A-release from immune cells and control of inflammatory pain. Pain, 2001, 93, 207-212.	4.2	142
124	Peripheral opioid analgesia. Current Opinion in Pharmacology, 2001, 1, 62-65.	3.5	88
125	Analgesic and Antiinflammatory Effects of Two Novel Îº-Opioid Peptides. Anesthesiology, 2001, 94, 1034-1044.	2.5	100
126	Opioid Peptideâ€"expressing Leukocytes. Anesthesiology, 2001, 95, 500-508.	2.5	206

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127	Peripheral analgesic and antiinflammatory effects of opioids. Zeitschrift Fur Rheumatologie, 2001, 60, 416-424.	1.0	81
128	Î²-Endorphin-containing memory-cells and Î¼-opioid receptors undergo transport to peripheral inflamed tissue. Journal of Neuroimmunology, 2001, 115, 71-78.	2.3	185
129	Efficacy of Peripheral Morphine Analgesia in Inflamed, Non-Inflamed and Perineural Tissue of Dental Surgery Patients. Journal of Pain and Symptom Management, 2001, 21, 330-337.	1.2	88
130	What is wrong with opioids in chronic pain?. Current Opinion in Anaesthesiology, 2000, 13, 557-559.	2.0	8
131	Pain Control by Immune-Derived Opioids. Clinical and Experimental Pharmacology and Physiology, 2000, 27, 533-536.	1.9	49
132	Co-expression of Î²-endorphin with adhesion molecules in a model of inflammatory pain. Journal of Neuroimmunology, 2000, 108, 160-170.	2.3	50
133	Dynorphin A Peptides. CNS Drugs, 2000, 13, 161-166.	5.9	1
134	Why is morphine not the ultimate analgesic and what can be done to improve it?. Journal of Pain, 2000, 1, 51-56.	1.4	26
135	Dose-dependency of intra-articular morphine analgesia. British Journal of Anaesthesia, 1999, 83, 241-244.	3.4	64
136	Intraarticular morphine versus dexamethasone in chronic arthritis. Pain, 1999, 83, 525-532.	4.2	128
137	Pain control and the immune system. Current Opinion in Anaesthesiology, 1999, 12, 579-581.	2.0	1
138	Peripheral effects of the kappa-opioid agonist EMD 61753 on pain and inflammation in rats and humans. Journal of Pharmacology and Experimental Therapeutics, 1999, 290, 354-61.	2.5	68
139	Pain control in inflammation governed by selectins. Nature Medicine, 1998, 4, 1425-1428.	30.7	164
140	Peripheral morphine analgesia in dental surgery. Pain, 1998, 76, 145-150.	4.2	90
141	Effects of neurotoxins and hindpaw inflammation on opioid receptor immunoreactivities in dorsal root ganglia. Neuroscience, 1998, 85, 281-291.	2.3	77
142	Peripheral nociceptive integration. Pain Forum, 1998, 7, 87-89.	1.1	0
143	Endogenous Opioid Peptides and Analgesia. , 1998, , 21-45.		3
144	Peripheral Opioid Analgesia: Mechanisms and Clinical Implications. , 1998, , 96-108.		5

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145	Opioids in Visceral Pain. , 1998, , 325-334.		1
146	The Control of Pain in Peripheral Tissue by Cytokines and Neuropeptides. , 1998, , .		0
147	Contribution of opioid receptors on primary afferent versus sympathetic neurons to peripheral opioid analgesia. Journal of Pharmacology and Experimental Therapeutics, 1998, 286, 1000-6.	2.5	76
148	Opioid Treatment of Chronic Nonmalignant Pain1. Anesthesia and Analgesia, 1997, 84, 912-914.	2.2	15
149	Peripheral morphine analgesia. Pain, 1997, 71, 119-121.	4.2	85
150	Opioid Treatment of Chronic Nonmalignant Pain1. Anesthesia and Analgesia, 1997, 84, 912-914.	2.2	31
151	Corticotropin-releasing factor in antinociception and inflammation. European Journal of Pharmacology, 1997, 323, 1-10.	3.5	105
152	Antinociceptive effects of dynorphin peptides in a model of inflammatory pain. Pain, 1997, 70, 141-147.	4.2	20
153	Cholecystokinin inhibits peripheral opioid analgesia in inflamed tissue. Neuroscience, 1997, 82, 603-611.	2.3	30
154	Novel peripheral mechanisms of opioid analgesia. Behavioral and Brain Sciences, 1997, 20, 465-466.	0.7	0
155	Peripheral opioid analgesia: Basic and clinical aspects. Seminars in Anesthesia, 1997, 16, 112-116.	0.3	6
156	Immune cell-derived beta-endorphin. Production, release, and control of inflammatory pain in rats.. Journal of Clinical Investigation, 1997, 100, 142-148.	8.2	274
157	Local upregulation of corticotropin-releasing hormone and interleukin-1 receptors in rats with painful hindlimb inflammation. European Journal of Pharmacology, 1996, 311, 221-231.	3.5	64
158	Expression of corticotropin-releasing factor in inflamed tissue is required for intrinsic peripheral opioid analgesia.. Proceedings of the National Academy of Sciences of the United States of America, 1996, 93, 6096-6100.	7.1	172
159	No tolerance to peripheral morphine analgesia in presence of opioid expression in inflamed synovia.. Journal of Clinical Investigation, 1996, 98, 793-799.	8.2	177
160	Intraperitoneal Versus Interpleural Morphine or Bupivacaine for Pain after Laparoscopic CholecystectomyÂ. Anesthesiology, 1995, 82, 634-640.	2.5	115
161	Perineurial defect and peripheral opioid analgesia in inflammation. Journal of Neuroscience, 1995, 15, 165-172.	3.6	321
162	Peripheral Opioid Receptors. Annals of Medicine, 1995, 27, 219-221.	3.8	77

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163	Inflammation enhances peripheral Î¼-opioid receptor-mediated analgesia, but not Î¼-opioid receptor transcription in dorsal root ganglia. European Journal of Pharmacology, 1995, 279, 165-169.	3.5	103
164	The Control of Pain in Peripheral Tissue by Opioids. New England Journal of Medicine, 1995, 332, 1685-1690.	27.0	657
165	Opioids as novel intra-articular agents for analgesia following arthroscopic knee surgery. Knee Surgery, Sports Traumatology, Arthroscopy, 1994, 2, 174-175.	4.2	7
166	Local inflammation of the rat paw enhances opioid receptor density in paw tissue and their axonal transport in sciatic nerve. Regulatory Peptides, 1994, 53, S163-S164.	1.9	1
167	Cytokine-induced antinociception mediated by opioids released from immune cells. Regulatory Peptides, 1994, 53, S191-S192.	1.9	1
168	Corticotropin releasing factor receptors in inflamed tissue: Autoradiographic identification. Regulatory Peptides, 1994, 54, 203-204.	1.9	4
169	Interleukin-1 -and corticotropin releasing factor-induced release of Î²-endorphin from immune cells and inhibition of inflammatory pain. Regulatory Peptides, 1994, 54, 255-256.	1.9	1
170	Human Î¼ receptor: Gene structure, expression, and Î¼/Îº chimeras that define nontransmembrane domains influencing peptide binding affinities. Regulatory Peptides, 1994, 54, 317-320.	1.9	1
171	Interleukin 1 beta and corticotropin-releasing factor inhibit pain by releasing opioids from immune cells in inflamed tissue.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 4219-4223.	7.1	314
172	Intraarticular opioid-local anesthetic combinations for chronic joint pain. Middle East Journal of Anesthesiology, 1994, 12, 579-85.	0.2	4
173	Peripheral mechanisms of opioid antinociception in inflammation: involvement of cytokines. European Journal of Pharmacology, 1993, 242, 229-235.	3.5	127
174	Inflammation of the rat paw enhances axonal transport of opioid receptors in the sciatic nerve and increases their density in the inflamed tissue. Neuroscience, 1993, 55, 185-195.	2.3	341
175	Local analgesic effect of endogenous opioid peptides. Lancet, The, 1993, 342, 321-324.	13.7	334
176	Peripheral Mechanisms of Opioid Analgesia. Anesthesia and Analgesia, 1993, 76, 182???191.	2.2	486
177	Peripheral Mechanisms of Opioid Analgesia. Handbook of Experimental Pharmacology, 1993, , 91-103.	1.8	11
178	EFFECT OF INTERPLEURAL MORPHINE ON POSTOPERATIVE PAIN AND PULMONARY FUNCTION AFTER THORACOTOMY. British Journal of Anaesthesia, 1992, 69, 637-639.	3.4	34
179	Intraarticular Morphine, Bupivacaine, and Morphine/Bupivacaine for Pain Control after Knee Videoarthroscopy. Anesthesiology, 1992, 77, 263-266.	2.5	246
180	Gene expression and localization of opioid peptides in immune cells of inflamed tissue: Functional role in antinociception. Neuroscience, 1992, 48, 491-500.	2.3	280

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181	Increased content and transport of substance P and calcitonin gene-related peptide in sensory nerves innervating inflamed tissue: Evidence for a regulatory function of nerve growth factor in vivo. Neuroscience, 1992, 49, 693-698.	2.3	619
182	Dynorphin, a preferential ligand for Îº-opioid receptors, is present in nerve fibers and immune cells within inflamed tissue of the rat. Neuroscience Letters, 1992, 140, 85-88.	2.1	90
183	Evidence for an Increase in the Release of CGRP from Sensory Nerves during Inflammation. Annals of the New York Academy of Sciences, 1992, 657, 505-506.	3.8	39
184	Analgesic Effect of Intraarticular Morphine after Arthroscopic Knee Surgery. New England Journal of Medicine, 1991, 325, 1123-1126.	27.0	578
185	Periaqueductal gray stimulation produces a spinally mediated, opioid antinociception for the inflamed hindpaw of the rat. Brain Research, 1991, 545, 17-23.	2.2	72
186	Peripheral analgesic actions of opioids. Journal of Pain and Symptom Management, 1991, 6, 119-124.	1.2	47
187	Opioid Analgesia at Peripheral Sites. , 1991, , 273-285.		4
188	A766 INTRA-ARTICULAR MORPHINE PRODUCES ANALGESIA FOLLOWING ARTHROSCOPIC KNEE SURGERY. Anesthesiology, 1990, 73, NA-NA.	2.5	2
189	Involvement of capsaicin-sensitive neurones in hyperalgesia and enhanced opioid antinociception in inflammation. Naunyn-Schmiedeberg's Archives of Pharmacology, 1990, 342, 666-670.	3.0	87
190	Opioids from immunocytes interact with receptors on sensory nerves to inhibit nociception in inflammation.. Proceedings of the National Academy of Sciences of the United States of America, 1990, 87, 5935-5939.	7.1	534
191	Peripheral opioid receptors mediating antinociception in inflammation. Activation by endogenous opioids and role of the pituitary-adrenal axis. Pain, 1990, 41, 81-93.	4.2	61
192	Intrinsic mechanisms of antinociception in inflammation: local opioid receptors and beta-endorphin. Journal of Neuroscience, 1990, 10, 1292-1298.	3.6	204
193	Local opioid receptors mediating antinociception in inflammation: endogenous ligands. Progress in Clinical and Biological Research, 1990, 328, 425-7.	0.2	6
194	Peripheral opioid receptors mediating antinociception in inflammation. Evidence for involvement of mu, delta and kappa receptors. Journal of Pharmacology and Experimental Therapeutics, 1989, 248, 1269-75.	2.5	341
195	Arthritic inflammation in rats as a model of chronic pain: role of opioid systems. NIDA Research Monograph, 1989, 95, 110-5.	0.1	3
196	Peptide neuroanatomy of adjuvant-induced arthritic inflammation in rat. Agents and Actions, 1988, 25, 255-259.	0.7	109
197	Unilateral inflammation of the hindpaw in rats as a model of prolonged noxious stimulation: Alterations in behavior and nociceptive thresholds. Pharmacology Biochemistry and Behavior, 1988, 31, 445-451.	2.9	299
198	Antinociceptive effects of Î¼- and Îº-agonists in inflammation are enhanced by a peripheral opioid receptor-specific mechanism. European Journal of Pharmacology, 1988, 155, 255-264.	3.5	199

#	Article	IF	Citations
199	Peripheral effect of fentanyl upon nociception in inflamed tissue of the rat. Neuroscience Letters, 1988, 84, 225-228.	2.1	127
200	The German counterpart to McGill Pain Questionnaire. Pain, 1988, 32, 251-255.	4.2	140
201	Inflammation of the hind limb as a model of unilateral, localized pain: influence on multiple opioid systems in the spinal cord of the rat. Pain, 1988, 35, 299-312.	4.2	184
202	Neck and shoulder pain associated with hepatic arterial chemotherapy using an implantable infusion pump. Pain, 1988, 32, 275-277.	4.2	2
203	Motivational effects of opioids in an animal model of prolonged inflammatory pain: alteration in the effects of Îº-but not of Î¼-receptor agonists. Pain, 1988, 35, 179-186.	4.2	63
204	Barbiturate-induced inhibition of a spinal nociceptive reflex: role of GABA mechanisms and descending modulation. Brain Research, 1987, 407, 307-311.	2.2	42
205	Opioids and Pain. , 0, , 728-769.		0