

Xu Cao

List of Publications by Year in descending order

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Version: 2024-02-01

97
papers

10,288
citations

47006

47
h-index

39675

94
g-index

106
all docs

106
docs citations

106
times ranked

12597
citing authors

#	ARTICLE	IF	CITATIONS
1	The meaning, the sense and the significance: translating the science of mesenchymal stem cells into medicine. <i>Nature Medicine</i> , 2013, 19, 35-42.	30.7	1,032
2	TGF- β 2-induced migration of bone mesenchymal stem cells couples bone resorption with formation. <i>Nature Medicine</i> , 2009, 15, 757-765.	30.7	1,001
3	Inhibition of TGF- β 2 signaling in mesenchymal stem cells of subchondral bone attenuates osteoarthritis. <i>Nature Medicine</i> , 2013, 19, 704-712.	30.7	780
4	PDGF-BB secreted by preosteoclasts induces angiogenesis during coupling with osteogenesis. <i>Nature Medicine</i> , 2014, 20, 1270-1278.	30.7	641
5	Matrix IGF-1 maintains bone mass by activation of mTOR in mesenchymal stem cells. <i>Nature Medicine</i> , 2012, 18, 1095-1101.	30.7	498
6	Bone marrow mesenchymal stem cells and TGF- β 2 signaling in bone remodeling. <i>Journal of Clinical Investigation</i> , 2014, 124, 466-472.	8.2	338
7	Excess TGF- β 2 mediates muscle weakness associated with bone metastases in mice. <i>Nature Medicine</i> , 2015, 21, 1262-1271.	30.7	300
8	Transforming growth factor- β 2 in stem cells and tissue homeostasis. <i>Bone Research</i> , 2018, 6, 2.	11.4	262
9	Subchondral bone osteoclasts induce sensory innervation and osteoarthritis pain. <i>Journal of Clinical Investigation</i> , 2019, 129, 1076-1093.	8.2	239
10	Ankylosing spondylitis: etiology, pathogenesis, and treatments. <i>Bone Research</i> , 2019, 7, 22.	11.4	229
11	Irradiation induces bone injury by damaging bone marrow microenvironment for stem cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 1609-1614.	7.1	226
12	Parathyroid hormone signaling through low-density lipoprotein-related protein 6. <i>Genes and Development</i> , 2008, 22, 2968-2979.	5.9	208
13	Painful intervertebral disc degeneration and inflammation: from laboratory evidence to clinical interventions. <i>Bone Research</i> , 2021, 9, 7.	11.4	184
14	Halofuginone attenuates osteoarthritis by inhibition of TGF- β 2 activity and H-type vessel formation in subchondral bone. <i>Annals of the Rheumatic Diseases</i> , 2016, 75, 1714-1721.	0.9	182
15	Targeting TGF- β 2 signaling in subchondral bone and articular cartilage homeostasis. <i>Trends in Pharmacological Sciences</i> , 2014, 35, 227-236.	8.7	168
16	MiR-497-195 cluster regulates angiogenesis during coupling with osteogenesis by maintaining endothelial Notch and HIF-1 α activity. <i>Nature Communications</i> , 2017, 8, 16003.	12.8	157
17	Prostaglandin E2 mediates sensory nerve regulation of bone homeostasis. <i>Nature Communications</i> , 2019, 10, 181.	12.8	152
18	TGF- β 2 type II receptor phosphorylates PTH receptor to integrate bone remodelling signalling. <i>Nature Cell Biology</i> , 2010, 12, 224-234.	10.3	136

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19	Parathyroid hormone induces differentiation of mesenchymal stromal/stem cells by enhancing bone morphogenetic protein signaling. <i>Journal of Bone and Mineral Research</i> , 2012, 27, 2001-2014.	2.8	136
20	Injury-Activated Transforming Growth Factor β 2 Controls Mobilization of Mesenchymal Stem Cells for Tissue Remodeling. <i>Stem Cells</i> , 2012, 30, 2498-2511.	3.2	129
21	Inhibition of overactive TGF- β 2 attenuates progression of heterotopic ossification in mice. <i>Nature Communications</i> , 2018, 9, 551.	12.8	125
22	Inhibition of Sca-1-Positive Skeletal Stem Cell Recruitment by Alendronate Blunts the Anabolic Effects of Parathyroid Hormone on Bone Remodeling. <i>Cell Stem Cell</i> , 2010, 7, 571-580.	11.1	122
23	Mechanically induced Ca ²⁺ oscillations in osteocytes release extracellular vesicles and enhance bone formation. <i>Bone Research</i> , 2018, 6, 6.	11.4	122
24	Ciliary IFT80 balances canonical versus non-canonical hedgehog signalling for osteoblast differentiation. <i>Nature Communications</i> , 2016, 7, 11024.	12.8	106
25	Targeting osteoclast-osteoblast communication. <i>Nature Medicine</i> , 2011, 17, 1344-1346.	30.7	104
26	Macrophage-lineage TRAP+ cells recruit periosteum-derived cells for periosteal osteogenesis and regeneration. <i>Journal of Clinical Investigation</i> , 2019, 129, 2578-2594.	8.2	102
27	Angiogenesis stimulated by elevated PDGF-BB in subchondral bone contributes to osteoarthritis development. <i>JCI Insight</i> , 2020, 5, .	5.0	99
28	Function of matrix IGF-1 in coupling bone resorption and formation. <i>Journal of Molecular Medicine</i> , 2014, 92, 107-115.	3.9	91
29	Harmin enhances type H vessel formation and prevents bone loss in ovariectomized mice. <i>Theranostics</i> , 2018, 8, 2435-2446.	10.0	89
30	Subchondral Trabecular Rod Loss and Plate Thickening in the Development of Osteoarthritis. <i>Journal of Bone and Mineral Research</i> , 2018, 33, 316-327.	2.8	86
31	Mechanosignaling activation of TGF β 2 maintains intervertebral disc homeostasis. <i>Bone Research</i> , 2017, 5, 17008.	11.4	83
32	Mechanical stress determines the configuration of TGF β 2 activation in articular cartilage. <i>Nature Communications</i> , 2021, 12, 1706.	12.8	81
33	Sustained BMP Signaling in Osteoblasts Stimulates Bone Formation by Promoting Angiogenesis and Osteoblast Differentiation. <i>Journal of Bone and Mineral Research</i> , 2009, 24, 1224-1233.	2.8	74
34	Sensory innervation in porous endplates by Netrin-1 from osteoclasts mediates PGE2-induced spinal hypersensitivity in mice. <i>Nature Communications</i> , 2019, 10, 5643.	12.8	72
35	Programmed cell senescence in skeleton during late puberty. <i>Nature Communications</i> , 2017, 8, 1312.	12.8	70
36	Role of TGF- β 2 Signaling in Coupling Bone Remodeling. <i>Methods in Molecular Biology</i> , 2016, 1344, 287-300.	0.9	67

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37	Disruption of LRP6 in osteoblasts blunts the bone anabolic activity of PTH. <i>Journal of Bone and Mineral Research</i> , 2013, 28, 2094-2108.	2.8	66
38	Cartilage degeneration and excessive subchondral bone formation in spontaneous osteoarthritis involves altered TGF- β signaling. <i>Journal of Orthopaedic Research</i> , 2016, 34, 763-770.	2.3	66
39	Sensory nerves regulate mesenchymal stromal cell lineage commitment by tuning sympathetic tones. <i>Journal of Clinical Investigation</i> , 2020, 130, 3483-3498.	8.2	65
40	IGF-1 Signaling is Essential for Differentiation of Mesenchymal Stem Cells for Peak Bone Mass. <i>Bone Research</i> , 2013, 1, 186-194.	11.4	62
41	Systemic neutralization of TGF- β 2 attenuates osteoarthritis. <i>Annals of the New York Academy of Sciences</i> , 2016, 1376, 53-64.	3.8	62
42	Functional Effects of TGF- β 1 on Mesenchymal Stem Cell Mobilization in Cockroach Allergen-Induced Asthma. <i>Journal of Immunology</i> , 2014, 192, 4560-4570.	0.8	61
43	RhoA determines lineage fate of mesenchymal stem cells by modulating CTGF-VEGF complex in extracellular matrix. <i>Nature Communications</i> , 2016, 7, 11455.	12.8	61
44	Excessive Activation of TGF- β 2 by Spinal Instability Causes Vertebral Endplate Sclerosis. <i>Scientific Reports</i> , 2016, 6, 27093.	3.3	59
45	Ciliary parathyroid hormone signaling activates transforming growth factor- β 2 to maintain intervertebral disc homeostasis during aging. <i>Bone Research</i> , 2018, 6, 21.	11.4	59
46	LRP6 Mediates cAMP Generation by G Protein-Coupled Receptors Through Regulating the Membrane Targeting of G β . <i>Science Signaling</i> , 2011, 4, ra15.	3.6	54
47	RANKL-RANK signaling regulates osteoblast differentiation and bone formation. <i>Bone Research</i> , 2018, 6, 35.	11.4	53
48	Aryl Hydrocarbon Receptor Protects Lungs from Cockroach Allergen-Induced Inflammation by Modulating Mesenchymal Stem Cells. <i>Journal of Immunology</i> , 2015, 195, 5539-5550.	0.8	52
49	Osteoclasts protect bone blood vessels against senescence through the angiogenin/plexin-B2 axis. <i>Nature Communications</i> , 2021, 12, 1832.	12.8	50
50	IGF-I induced phosphorylation of PTH receptor enhances osteoblast to osteocyte transition. <i>Bone Research</i> , 2018, 6, 5.	11.4	42
51	FGFR3 induces degradation of BMP type I receptor to regulate skeletal development. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2014, 1843, 1237-1247.	4.1	40
52	Preservation of type H vessels and osteoblasts by enhanced preosteoclast platelet-derived growth factor type BB attenuates glucocorticoid-induced osteoporosis in growing mice. <i>Bone</i> , 2018, 114, 1-13.	2.9	40
53	PGE2 activates EP4 in subchondral bone osteoclasts to regulate osteoarthritis. <i>Bone Research</i> , 2022, 10, 27.	11.4	40
54	Mesenchymal Stem Cells Recruited by Active TGF- β 2 Contribute to Osteogenic Vascular Calcification. <i>Stem Cells and Development</i> , 2014, 23, 1392-1404.	2.1	38

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55	Inhibition of cyclooxygenase-2 activity in subchondral bone modifies a subtype of osteoarthritis. <i>Bone Research</i> , 2019, 7, 29.	11.4	37
56	Aberrant TGF- β 2 activation in bone tendon insertion induces enthesopathy-like disease. <i>Journal of Clinical Investigation</i> , 2018, 128, 846-860.	8.2	36
57	An adaptive Tikhonov regularization method for fluorescence molecular tomography. <i>Medical and Biological Engineering and Computing</i> , 2013, 51, 849-858.	2.8	34
58	Aberrant Activation of TGF- β 2 in Subchondral Bone at the Onset of Rheumatoid Arthritis Joint Destruction. <i>Journal of Bone and Mineral Research</i> , 2015, 30, 2033-2043.	2.8	34
59	Parathyroid hormone attenuates osteoarthritis pain by remodeling subchondral bone in mice. <i>ELife</i> , 2021, 10, .	6.0	34
60	Aberrant subchondral osteoblastic metabolism modifies Nav1.8 for osteoarthritis. <i>ELife</i> , 2020, 9, .	6.0	34
61	PTH Receptor Signaling in Osteoblasts Regulates Endochondral Vascularization in Maintenance of Postnatal Growth Plate. <i>Journal of Bone and Mineral Research</i> , 2015, 30, 309-317.	2.8	33
62	Lipoprotein receptor-related protein 6 is required for parathyroid hormone-induced <i>Sost</i> suppression. <i>Annals of the New York Academy of Sciences</i> , 2016, 1364, 62-73.	3.8	33
63	Aberrant activation of latent transforming growth factor- β 2 initiates the onset of temporomandibular joint osteoarthritis. <i>Bone Research</i> , 2018, 6, 26.	11.4	33
64	Statin Use and Knee Osteoarthritis Outcome Measures according to the Presence of Heberden Nodes: Results from the Osteoarthritis Initiative. <i>Radiology</i> , 2019, 293, 396-404.	7.3	33
65	Divalent metal cations stimulate skeleton interoception for new bone formation in mouse injury models. <i>Nature Communications</i> , 2022, 13, 535.	12.8	33
66	Chondrogenesis mediates progression of ankylosing spondylitis through heterotopic ossification. <i>Bone Research</i> , 2021, 9, 19.	11.4	32
67	Accelerated image reconstruction in fluorescence molecular tomography using dimension reduction. <i>Biomedical Optics Express</i> , 2013, 4, 1.	2.9	27
68	Aberrant Transforming Growth Factor- β 2 Activation Recruits Mesenchymal Stem Cells During Prostatic Hyperplasia. <i>Stem Cells Translational Medicine</i> , 2017, 6, 394-404.	3.3	27
69	Oxidized phospholipids are ligands for LRP6. <i>Bone Research</i> , 2018, 6, 22.	11.4	27
70	Reconstruction for limited-projection fluorescence molecular tomography based on projected restarted conjugate gradient normal residual. <i>Optics Letters</i> , 2011, 36, 4515.	3.3	25
71	Periosteal CD68 ⁺ F4/80 ⁺ Macrophages Are Mechanosensitive for Cortical Bone Formation by Secretion and Activation of TGF- β 2. <i>Advanced Science</i> , 2022, 9, e2103343.	11.2	24
72	LRP6 in mesenchymal stem cells is required for bone formation during bone growth and bone remodeling. <i>Bone Research</i> , 2014, 2, 14006.	11.4	23

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73	Skeleton-secreted PDGF-BB mediates arterial stiffening. <i>Journal of Clinical Investigation</i> , 2021, 131, .	8.2	22
74	Glucocorticoids Disrupt Skeletal Angiogenesis Through Transrepression of NF- κ B-Mediated Preosteoclast <i>PDGFRβ</i> Transcription in Young Mice. <i>Journal of Bone and Mineral Research</i> , 2020, 35, 1188-1202.	2.8	20
75	An antibody against Siglec-15 promotes bone formation and fracture healing by increasing TRAP+ mononuclear cells and PDGF-BB secretion. <i>Bone Research</i> , 2021, 9, 47.	11.4	20
76	IFT80 is required for stem cell proliferation, differentiation, and odontoblast polarization during tooth development. <i>Cell Death and Disease</i> , 2019, 10, 63.	6.3	19
77	Ciliary IFT80 regulates dental pulp stem cells differentiation by FGF/FGFR1 and Hh/BMP2 signaling. <i>International Journal of Biological Sciences</i> , 2019, 15, 2087-2099.	6.4	19
78	PGE2/EP4 skeleton interoception activity reduces vertebral endplate porosity and spinal pain with low-dose celecoxib. <i>Bone Research</i> , 2021, 9, 36.	11.4	17
79	Bone-targeted delivery of TGF- β 2 type 1 receptor inhibitor rescues uncoupled bone remodeling in Camurati-Engelmann disease. <i>Annals of the New York Academy of Sciences</i> , 2018, 1433, 29-40.	3.8	16
80	Skeleton interoception regulates bone and fat metabolism through hypothalamic neuroendocrine NPY. <i>ELife</i> , 2021, 10, .	6.0	16
81	A novel prostaglandin E receptor 4 (EP4) small molecule antagonist induces articular cartilage regeneration. <i>Cell Discovery</i> , 2022, 8, 24.	6.7	15
82	Mechanisms of bone pain: Progress in research from bench to bedside. <i>Bone Research</i> , 2022, 10, .	11.4	15
83	Antagonists of LRP6 regulate PTH-induced cAMP generation. <i>Annals of the New York Academy of Sciences</i> , 2011, 1237, 39-46.	3.8	14
84	Inhibition of Src Homology 2 Domain-Containing Protein Tyrosine Phosphatase-2 Facilitates CD31 ^{hi} Endomucin ^{hi} ; Blood Vessel and Bone Formation in Ovariectomized Mice. <i>Cellular Physiology and Biochemistry</i> , 2018, 50, 1068-1083.	1.6	13
85	Generation of Functional Hepatocytes from Human Adipose-Derived MYC+ KLF4+ GMNN+ Stem Cells Analyzed by Single-Cell RNA-Seq Profiling. <i>Stem Cells Translational Medicine</i> , 2018, 7, 792-805.	3.3	12
86	Sialylation of TLR2 initiates osteoclast fusion. <i>Bone Research</i> , 2022, 10, 24.	11.4	12
87	Metabolic Syndrome and Osteoarthritis Distribution in the Hand Joints: A Propensity Score Matching Analysis From the Osteoarthritis Initiative. <i>Journal of Rheumatology</i> , 2021, 48, 1608-1615.	2.0	8
88	Inhibition of Integrin α 1 ν β 6 Activation of TGF- β 2 Attenuates Tendinopathy. <i>Advanced Science</i> , 2022, 9, e2104469.	11.2	8
89	Statin use and MRI subchondral bone marrow lesion worsening in generalized osteoarthritis: longitudinal analysis from Osteoarthritis Initiative data. <i>European Radiology</i> , 2022, 32, 3944-3953.	4.5	6
90	Elevated levels of active Transforming Growth Factor β 1 in the subchondral bone relate spatially to cartilage loss and impaired bone quality in human knee osteoarthritis. <i>Osteoarthritis and Cartilage</i> , 2022, 30, 896-907.	1.3	6

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91	Intestinal dendritic cells change in number in fulminant hepatic failure. World Journal of Gastroenterology, 2015, 21, 4883.	3.3	4
92	Conventional MRI-derived subchondral trabecular biomarkers and their association with knee cartilage volume loss as early as 1 year: a longitudinal analysis from Osteoarthritis Initiative. Skeletal Radiology, 2022, 51, 1959-1966.	2.0	2
93	Reduced Dentin Matrix Protein Expression in Camurati-Engelmann Disease Transgenic Mouse Model. Journal of Cellular Physiology, 2016, 231, 1106-1113.	4.1	1
94	Transforming growth factor- β^2 and skeletal homeostasis. , 2020, , 1153-1187.		1
95	Sources of lumbar back pain during aging and potential therapeutic targets. Vitamins and Hormones, 2021, 115, 571-583.	1.7	0
96	TGF- β^2 and Genetic Skeletal Diseases. , 2020, , 513-520.		0
97	Bone Remodeling and Homeostasis. , 2020, , 152-161.		0