Xu Cao

List of Publications by Year in descending order

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	Periosteal CD68⁺F4/80⁺ Macrophages Are Mechanosensitive for Cortical Bone Formation by Secretion and Activation of TGFâ€Î²1. Advanced Science, 2022, 9, e2103343.	11.2	24
2	Divalent metal cations stimulate skeleton interoception for new bone formation in mouse injury models. Nature Communications, 2022, 13, 535.	12.8	33
3	Statin use and MRI subchondral bone marrow lesion worsening in generalized osteoarthritis: longitudinal analysis from Osteoarthritis Initiative data. European Radiology, 2022, 32, 3944-3953.	4.5	6
4	Inhibition of Integrin Î±vÎ²6 Activation of TGFâ€Î² Attenuates Tendinopathy. Advanced Science, 2022, 9, e2104469.	11.2	8
5	Elevated levels of active Transforming Growth Factor Î²1 in the subchondral bone relate spatially to cartilage loss and impaired bone quality in human knee osteoarthritis. Osteoarthritis and Cartilage, 2022, 30, 896-907.	1.3	6
6	Sialylation of TLR2 initiates osteoclast fusion. Bone Research, 2022, 10, 24.	11.4	12
7	PGE2 activates EP4 in subchondral bone osteoclasts to regulate osteoarthritis. Bone Research, 2022, 10, 27.	11.4	40
8	A novel prostaglandin E receptor 4 (EP4) small molecule antagonist induces articular cartilage regeneration. Cell Discovery, 2022, 8, 24.	6.7	15
9	Conventional MRI-derived subchondral trabecular biomarkers and their association with knee cartilage volume loss as early as 1Âyear: a longitudinal analysis from Osteoarthritis Initiative. Skeletal Radiology, 2022, 51, 1959-1966.	2.0	2
10	Mechanisms of bone pain: Progress in research from bench to bedside. Bone Research, 2022, 10, .	11.4	15
11	Painful intervertebral disc degeneration and inflammation: from laboratory evidence to clinical interventions. Bone Research, 2021, 9, 7.	11.4	184
12	Osteoclasts protect bone blood vessels against senescence through the angiogenin/plexin-B2 axis. Nature Communications, 2021, 12, 1832.	12.8	50
13	Parathyroid hormone attenuates osteoarthritis pain by remodeling subchondral bone in mice. ELife, 2021, 10, .	6.0	34
14	Mechanical stress determines the configuration of TGFÎ² activation in articular cartilage. Nature Communications, 2021, 12, 1706.	12.8	81
15	Chondrogenesis mediates progression of ankylosing spondylitis through heterotopic ossification. Bone Research, 2021, 9, 19.	11.4	32
16	Metabolic Syndrome and Osteoarthritis Distribution in the Hand Joints: A Propensity Score Matching Analysis From the Osteoarthritis Initiative. Journal of Rheumatology, 2021, 48, 1608-1615.	2.0	8
17	PGE2/EP4 skeleton interoception activity reduces vertebral endplate porosity and spinal pain with low-dose celecoxib. Bone Research, 2021, 9, 36.	11.4	17
18	Skeleton-secreted PDGF-BB mediates arterial stiffening. Journal of Clinical Investigation, 2021, 131, .	8.2	22

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19	Skeleton interoception regulates bone and fat metabolism through hypothalamic neuroendocrine NPY. ELife, 2021, 10, .	6.0	16
20	Sources of lumbar back pain during aging and potential therapeutic targets. Vitamins and Hormones, 2021, 115, 571-583.	1.7	0
21	An antibody against Siglec-15 promotes bone formation and fracture healing by increasing TRAP+ mononuclear cells and PDGF-BB secretion. Bone Research, 2021, 9, 47.	11.4	20
22	Transforming growth factor-Î² and skeletal homeostasis. , 2020, , 1153-1187.		1
23	Glucocorticoids Disrupt Skeletal Angiogenesis Through Transrepression of NFâ€ÎºBâ€“Mediated Preosteoclast Pdgfb Transcription in Young Mice. Journal of Bone and Mineral Research, 2020, 35, 1188-1202.	2.8	20
24	Angiogenesis stimulated by elevated PDGF-BB in subchondral bone contributes to osteoarthritis development. JCI Insight, 2020, 5, .	5.0	99
25	Sensory nerves regulate mesenchymal stromal cell lineage commitment by tuning sympathetic tones. Journal of Clinical Investigation, 2020, 130, 3483-3498.	8.2	65
26	Aberrant subchondral osteoblastic metabolism modifies NaV1.8 for osteoarthritis. ELife, 2020, 9, .	6.0	34
27	TGF-Î² and Genetic Skeletal Diseases. , 2020, , 513-520.		0
28	Bone Remodeling and Homeostasis. , 2020, , 152-161.		0
29	Ankylosing spondylitis: etiology, pathogenesis, and treatments. Bone Research, 2019, 7, 22.	11.4	229
30	Statin Use and Knee Osteoarthritis Outcome Measures according to the Presence of Heberden Nodes: Results from the Osteoarthritis Initiative. Radiology, 2019, 293, 396-404.	7.3	33
31	Inhibition of cyclooxygenase-2 activity in subchondral bone modifies a subtype of osteoarthritis. Bone Research, 2019, 7, 29.	11.4	37
32	IFT80 is required for stem cell proliferation, differentiation, and odontoblast polarization during tooth development. Cell Death and Disease, 2019, 10, 63.	6.3	19
33	Subchondral bone osteoclasts induce sensory innervation and osteoarthritis pain. Journal of Clinical Investigation, 2019, 129, 1076-1093.	8.2	239
34	Ciliary IFT80 regulates dental pulp stem cells differentiation by FGF/FGFR1 and Hh/BMP2 signaling. International Journal of Biological Sciences, 2019, 15, 2087-2099.	6.4	19
35	Sensory innervation in porous endplates by Netrin-1 from osteoclasts mediates PGE2-induced spinal hypersensitivity in mice. Nature Communications, 2019, 10, 5643.	12.8	72
36	Prostaglandin E2 mediates sensory nerve regulation of bone homeostasis. Nature Communications, 2019, 10, 181.	12.8	152

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37	Macrophage-lineage TRAP+ cells recruit periosteum-derived cells for periosteal osteogenesis and regeneration. Journal of Clinical Investigation, 2019, 129, 2578-2594.	8.2	102
38	IGF-I induced phosphorylation of PTH receptor enhances osteoblast to osteocyte transition. Bone Research, 2018, 6, 5.	11.4	42
39	Mechanically induced Ca2+ oscillations in osteocytes release extracellular vesicles and enhance bone formation. Bone Research, 2018, 6, 6.	11.4	122
40	Transforming growth factor-Î² in stem cells and tissue homeostasis. Bone Research, 2018, 6, 2.	11.4	262
41	Inhibition of overactive TGF-Î² attenuates progression of heterotopic ossification in mice. Nature Communications, 2018, 9, 551.	12.8	125
42	Subchondral Trabecular Rod Loss and Plate Thickening in the Development of Osteoarthritis. Journal of Bone and Mineral Research, 2018, 33, 316-327.	2.8	86
43	RANKL-RANK signaling regulates osteoblast differentiation and bone formation. Bone Research, 2018, 6, 35.	11.4	53
44	Generation of Functional Hepatocytes from Human Adipose-Derived MYC+ KLF4+ GMNN+ Stem Cells Analyzed by Single-Cell RNA-Seq Profiling. Stem Cells Translational Medicine, 2018, 7, 792-805.	3.3	12
45	Inhibition of Src Homology 2 Domain-Containing Protein Tyrosine Phosphatase-2 Facilitates CD31^{hi}Endomucin^{hi} Blood Vessel and Bone Formation in Ovariectomized Mice. Cellular Physiology and Biochemistry, 2018, 50, 1068-1083.	1.6	13
46	Aberrant activation of latent transforming growth factor-Î² initiates the onset of temporomandibular joint osteoarthritis. Bone Research, 2018, 6, 26.	11.4	33
47	Preservation of type H vessels and osteoblasts by enhanced preosteoclast platelet-derived growth factor type BB attenuates glucocorticoid-induced osteoporosis in growing mice. Bone, 2018, 114, 1-13.	2.9	40
48	Ciliary parathyroid hormone signaling activates transforming growth factor-Î² to maintain intervertebral disc homeostasis during aging. Bone Research, 2018, 6, 21.	11.4	59
49	Harmine enhances type H vessel formation and prevents bone loss in ovariectomized mice. Theranostics, 2018, 8, 2435-2446.	10.0	89
50	Oxidized phospholipids are ligands for LRP6. Bone Research, 2018, 6, 22.	11.4	27
51	Boneâ€targeted delivery of TGFâ€Î² type 1 receptor inhibitor rescues uncoupled bone remodeling in Camuratiâ€“Engelmann disease. Annals of the New York Academy of Sciences, 2018, 1433, 29-40.	3.8	16
52	Aberrant TGF-Î² activation in bone tendon insertion induces enthesopathy-like disease. Journal of Clinical Investigation, 2018, 128, 846-860.	8.2	36
53	Mechanosignaling activation of TGFÎ² maintains intervertebral disc homeostasis. Bone Research, 2017, 5, 17008.	11.4	83
54	Programmed cell senescence in skeleton during late puberty. Nature Communications, 2017, 8, 1312.	12.8	70

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55	MiR-497â^¼195 cluster regulates angiogenesis during coupling with osteogenesis by maintaining endothelial Notch and HIF-1Î± activity. Nature Communications, 2017, 8, 16003.	12.8	157
56	Aberrant Transforming Growth Factor-Î² Activation Recruits Mesenchymal Stem Cells During Prostatic Hyperplasia. Stem Cells Translational Medicine, 2017, 6, 394-404.	3.3	27
57	Cartilage degeneration and excessive subchondral bone formation in spontaneous osteoarthritis involves altered TGF-Î² signaling. Journal of Orthopaedic Research, 2016, 34, 763-770.	2.3	66
58	Excessive Activation of TGFÎ² by Spinal Instability Causes Vertebral Endplate Sclerosis. Scientific Reports, 2016, 6, 27093.	3.3	59
59	Ciliary IFT80 balances canonical versus non-canonical hedgehog signalling for osteoblast differentiation. Nature Communications, 2016, 7, 11024.	12.8	106
60	RhoA determines lineage fate of mesenchymal stem cells by modulating CTGFâ€“VEGF complex in extracellular matrix. Nature Communications, 2016, 7, 11455.	12.8	61
61	Reduced Dentin Matrix Protein Expression in Camurati-Engelmann Disease Transgenic Mouse Model. Journal of Cellular Physiology, 2016, 231, 1106-1113.	4.1	1
62	Systemic neutralization of TGFâ€Î²² attenuates osteoarthritis. Annals of the New York Academy of Sciences, 2016, 1376, 53-64.	3.8	62
63	Halofuginone attenuates osteoarthritis by inhibition of TGF-Î² activity and H-type vessel formation in subchondral bone. Annals of the Rheumatic Diseases, 2016, 75, 1714-1721.	0.9	182
64	Lipoprotein receptorâ€“related protein 6 is required for parathyroid hormoneâ€“induced Sost suppression. Annals of the New York Academy of Sciences, 2016, 1364, 62-73.	3.8	33
65	Role of TGF-Î² Signaling in Coupling Bone Remodeling. Methods in Molecular Biology, 2016, 1344, 287-300.	0.9	67
66	Aberrant Activation of TGF-Î² in Subchondral Bone at the Onset of Rheumatoid Arthritis Joint Destruction. Journal of Bone and Mineral Research, 2015, 30, 2033-2043.	2.8	34
67	Aryl Hydrocarbon Receptor Protects Lungs from Cockroach Allergenâ€“Induced Inflammation by Modulating Mesenchymal Stem Cells. Journal of Immunology, 2015, 195, 5539-5550.	0.8	52
68	Excess TGF-Î² mediates muscle weakness associated with bone metastases in mice. Nature Medicine, 2015, 21, 1262-1271.	30.7	300
69	PTH Receptor Signaling in Osteoblasts Regulates Endochondral Vascularization in Maintenance of Postnatal Growth Plate. Journal of Bone and Mineral Research, 2015, 30, 309-317.	2.8	33
70	Intestinal dendritic cells change in number in fulminant hepatic failure. World Journal of Gastroenterology, 2015, 21, 4883.	3.3	4
71	Bone marrow mesenchymal stem cells and TGF-Î² signaling in bone remodeling. Journal of Clinical Investigation, 2014, 124, 466-472.	8.2	338
72	Function of matrix IGF-1 in coupling bone resorption and formation. Journal of Molecular Medicine, 2014, 92, 107-115.	3.9	91

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73	Targeting TGFÎ² signaling in subchondral bone and articular cartilage homeostasis. Trends in Pharmacological Sciences, 2014, 35, 227-236.	8.7	168
74	Functional Effects of TGF-Î²1 on Mesenchymal Stem Cell Mobilization in Cockroach Allergenâ€“Induced Asthma. Journal of Immunology, 2014, 192, 4560-4570.	0.8	61
75	PDGF-BB secreted by preosteoclasts induces angiogenesis during coupling with osteogenesis. Nature Medicine, 2014, 20, 1270-1278.	30.7	641
76	Mesenchymal Stem Cells Recruited by Active TGFÎ² Contribute to Osteogenic Vascular Calcification. Stem Cells and Development, 2014, 23, 1392-1404.	2.1	38
77	FGFR3 induces degradation of BMP type I receptor to regulate skeletal development. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 1237-1247.	4.1	40
78	LRP6 in mesenchymal stem cells is required for bone formation during bone growth and bone remodeling. Bone Research, 2014, 2, 14006.	11.4	23
79	An adaptive Tikhonov regularization method for fluorescence molecular tomography. Medical and Biological Engineering and Computing, 2013, 51, 849-858.	2.8	34
80	The meaning, the sense and the significance: translating the science of mesenchymal stem cells into medicine. Nature Medicine, 2013, 19, 35-42.	30.7	1,032
81	Inhibition of TGF-Î² signaling in mesenchymal stem cells of subchondral bone attenuates osteoarthritis. Nature Medicine, 2013, 19, 704-712.	30.7	780
82	Accelerated image reconstruction in fluorescence molecular tomography using dimension reduction. Biomedical Optics Express, 2013, 4, 1.	2.9	27
83	Disruption of LRP6 in osteoblasts blunts the bone anabolic activity of PTH. Journal of Bone and Mineral Research, 2013, 28, 2094-2108.	2.8	66
84	IGF-1 Signaling is Essential for Differentiation of Mesenchymal Stem Cells for Peak Bone Mass. Bone Research, 2013, 1, 186-194.	11.4	62
85	Injuryâ€Activated Transforming Growth Factor Î² Controls Mobilization of Mesenchymal Stem Cells for Tissue Remodeling. Stem Cells, 2012, 30, 2498-2511.	3.2	129
86	Parathyroid hormone induces differentiation of mesenchymal stromal/stem cells by enhancing bone morphogenetic protein signaling. Journal of Bone and Mineral Research, 2012, 27, 2001-2014.	2.8	136
87	Matrix IGF-1 maintains bone mass by activation of mTOR in mesenchymal stem cells. Nature Medicine, 2012, 18, 1095-1101.	30.7	498
88	Targeting osteoclast-osteoblast communication. Nature Medicine, 2011, 17, 1344-1346.	30.7	104
89	Reconstruction for limited-projection fluorescence molecular tomography based on projected restarted conjugate gradient normal residual. Optics Letters, 2011, 36, 4515.	3.3	25
90	Antagonists of LRP6 regulate PTHâ€induced cAMP generation. Annals of the New York Academy of Sciences, 2011, 1237, 39-46.	3.8	14

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91	LRP6 Mediates cAMP Generation by G Proteinâ€“Coupled Receptors Through Regulating the Membrane Targeting of Gî± _s. Science Signaling, 2011, 4, ra15.	3.6	54
92	Irradiation induces bone injury by damaging bone marrow microenvironment for stem cells. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 1609-1614.	7.1	226
93	TGF-Î² type II receptor phosphorylates PTH receptor to integrate bone remodelling signalling. Nature Cell Biology, 2010, 12, 224-234.	10.3	136
94	Inhibition of Sca-1-Positive Skeletal Stem Cell Recruitment by Alendronate Blunts the Anabolic Effects of Parathyroid Hormone on Bone Remodeling. Cell Stem Cell, 2010, 7, 571-580.	11.1	122
95	TGF-Î²1â€“induced migration of bone mesenchymal stem cells couples bone resorption with formation. Nature Medicine, 2009, 15, 757-765.	30.7	1,001
96	Sustained BMP Signaling in Osteoblasts Stimulates Bone Formation by Promoting Angiogenesis and Osteoblast Differentiation. Journal of Bone and Mineral Research, 2009, 24, 1224-1233.	2.8	74
97	Parathyroid hormone signaling through low-density lipoprotein-related protein 6. Genes and Development, 2008, 22, 2968-2979.	5.9	208