Kurt David Hankenson

List of Publications by Year
in descending order

126 papers

9,310 citations

50276

46 h-index

43889

91 g-index

134 all docs

134 docs citations

134 times ranked

15772 citing authors

#	Article	IF	Citations
1	GAGE: generally applicable gene set enrichment for pathway analysis. BMC Bioinformatics, 2009, 10, 161.	2.6	1,132
2	Regulation of osteoblastogenesis and bone mass by Wnt10b. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3324-3329.	7.1	778
3	Integration of BMP, Wnt, and notch signaling pathways in osteoblast differentiation. Journal of Cellular Biochemistry, 2011, 112, 3491-3501.	2.6	410
4	Angiogenesis in bone regeneration. Injury, 2011, 42, 556-561.	1.7	396
5	Wnt Signaling Stimulates Osteoblastogenesis of Mesenchymal Precursors by Suppressing CCAAT/Enhancer-binding Protein Î± and Peroxisome Proliferator-activated Receptor Î³. Journal of Biological Chemistry, 2007, 282, 14515-14524.	3.4	350
6	Cellular biology of fracture healing. Journal of Orthopaedic Research, 2019, 37, 35-50.	2.3	304
7	Gene Targeting in Stem Cells from Individuals with Osteogenesis Imperfecta. Science, 2004, 303, 1198-1201.	12.6	271
8	Wnt10b Increases Postnatal Bone Formation by Enhancing Osteoblast Differentiation. Journal of Bone and Mineral Research, 2007, 22, 1924-1932.	2.8	244
9	Genome-wide association study implicates novel loci and reveals candidate effector genes for longitudinal pediatric bone accrual. Genome Biology, 2021, 22, 1.	8.8	239
10	Extracellular signaling molecules to promote fracture healing and bone regeneration. Advanced Drug Delivery Reviews, 2015, 94, 3-12.	13.7	237
11	Extracellular matrix networks in bone remodeling. International Journal of Biochemistry and Cell Biology, 2015, 65, 20-31.	2.8	231
12	Mesenchymal Stem Cells in Bone Regeneration. Advances in Wound Care, 2013, 2, 306-316.	5.1	228
13	Matricellular proteins: Extracellular modulators of bone development, remodeling, and regeneration. Bone, 2006, 38, 749-757.	2.9	221
14	Osteogenic differentiation of human mesenchymal stem cells is regulated by bone morphogenetic proteinâ€6. Journal of Cellular Biochemistry, 2006, 98, 538-554.	2.6	189
15	Thrombospondin 2, a matricellular protein with diverse functions. Matrix Biology, 2000, 19, 557-568.	3.6	156
16	Immunomodulation by mesenchymal stem cells combats the foreign body response to cell-laden synthetic hydrogels. Biomaterials, 2015, 41, 79-88.	11.4	122
17	Thrombospondin 2 Inhibits Microvascular Endothelial Cell Proliferation by a Caspase-independent Mechanism. Molecular Biology of the Cell, 2002, 13, 1893-1905.	2.1	108
18	Biological perspectives of delayed fracture healing. Injury, 2014, 45, S8-S15.	1.7	103

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19	Genome-scale Capture C promoter interactions implicate effector genes at GWAS loci for bone mineral density. Nature Communications, 2019, 10, 1260.	12.8	101
20	Wnt11 Promotes Osteoblast Maturation and Mineralization through R-spondin 2. Journal of Biological Chemistry, 2009, 284, 14117-14125.	3.4	96
21	Leptin Functions Peripherally to Regulate Differentiation of Mesenchymal Progenitor Cells. Stem Cells, 2010, 28, 1071-1080.	3.2	95
22	Diminished Callus Size and Cartilage Synthesis in Î±1Î²1 Integrin-Deficient Mice during Bone Fracture Healing. American Journal of Pathology, 2002, 160, 1779-1785.	3.8	86
23	Increased Marrow-Derived Osteoprogenitor Cells and Endosteal Bone Formation in Mice Lacking Thrombospondin 2. Journal of Bone and Mineral Research, 2010, 15, 851-862.	2.8	85
24	Skeletal Abnormalities in Mice Lacking Extracellular Matrix Proteins, Thrombospondin-1, Thrombospondin-3, Thrombospondin-5, and Type IX Collagen. American Journal of Pathology, 2008, 172, 1664-1674.	3.8	84
25	The transcription factor osterix (SP7) regulates BMP6â€induced human osteoblast differentiation. Journal of Cellular Physiology, 2012, 227, 2677-2685.	4.1	84
26	Thrombospondin-2 and SPARC/osteonectin are critical regulators of bone remodeling. Journal of Cell Communication and Signaling, 2009, 3, 227-238.	3.4	80
27	Pleiotropic Phenotype of a Genomic Knock-In of an RGS-Insensitive G184S Gnai2 Allele. Molecular and Cellular Biology, 2006, 26, 6870-6879.	2.3	75
28	Osteoblast-Targeted suppression of PPARÎ³ increases osteogenesis through activation of mTOR signaling. Stem Cells, 2013, 31, 2183-2192.	3.2	72
29	Thrombospondin-2 Influences the Proportion of Cartilage and Bone During Fracture Healing. Journal of Bone and Mineral Research, 2009, 24, 1043-1054.	2.8	67
30	Critical Role of Activating Transcription Factor 4 in the Anabolic Actions of Parathyroid Hormone in Bone. PLoS ONE, 2009, 4, e7583.	2.5	67
31	Notch signaling components are upregulated during both endochondral and intramembranous bone regeneration. Journal of Orthopaedic Research, 2012, 30, 296-303.	2.3	65
32	Omega-3 Fatty Acids Enhance Ligament Fibroblast Collagen Formation in Association with Changes in Interleukin-6 Production. Proceedings of the Society for Experimental Biology and Medicine, 2000, 223, 88-95.	1.8	64
33	The Secreted Protein Thrombospondin 2 Is an Autocrine Inhibitor of Marrow Stromal Cell Proliferation. Journal of Bone and Mineral Research, 2002, 17, 415-425.	2.8	63
34	Synergistic Effects of SDF-1Î± and BMP-2 Delivery from Proteolytically Degradable Hyaluronic Acid Hydrogels for Bone Repair. Macromolecular Bioscience, 2015, 15, 1218-1223.	4.1	61
35	Learning transcriptional regulatory networks from high throughput gene expression data using continuous three-way mutual information. BMC Bioinformatics, 2008, 9, 467.	2.6	60
36	PKCÎ´ Is Required for Jagged-1 Induction of Human Mesenchymal Stem Cell Osteogenic Differentiation. Stem Cells, 2013, 31, 1181-1192.	3.2	60

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37	Type III Collagen Regulates Osteoblastogenesis and the Quantity of Trabecular Bone. Calcified Tissue International, 2014, 94, 621-631.	3.1	60
38	Growth Factors: Beyond Bone Morphogenetic Proteins. Journal of Orthopaedic Trauma, 2010, 24, 543-546.	1.4	59
39	Thrombospondin 2 Potentiates Notch3/Jagged1 Signaling. Journal of Biological Chemistry, 2009, 284, 7866-7874.	3.4	58
40	An anionic, endosome-escaping polymer to potentiate intracellular delivery of cationic peptides, biomacromolecules, and nanoparticles. Nature Communications, 2019, 10, 5012.	12.8	58
41	Animal models of tendon and ligament injuries for tissue engineering applications. Biomaterials, 2004, 25, 1715-1722.	11.4	57
42	Systemic Inhibition of Canonical Notch Signaling Results in Sustained Callus Inflammation and Alters Multiple Phases of Fracture Healing. PLoS ONE, 2013, 8, e68726.	2.5	56
43	Jagged1 expression by osteoblast-lineage cells regulates trabecular bone mass and periosteal expansion in mice. Bone, 2016, 91, 64-74.	2.9	56
44	Mice with a Disruption of the Thrombospondin 3 Gene Differ in Geometric and Biomechanical Properties of Bone and Have Accelerated Development of the Femoral Head. Molecular and Cellular Biology, 2005, 25, 5599-5606.	2.3	54
45	A simple method for stem cell labeling with fluorine 18. Nuclear Medicine and Biology, 2005, 32, 701-705.	0.6	51
46	Fractures in Geriatric Mice Show Decreased Callus Expansion and Bone Volume. Clinical Orthopaedics and Related Research, 2014, 472, 3523-3532.	1.5	51
47	Jagged1 immobilization to an osteoconductive polymer activates the Notch signaling pathway and induces osteogenesis. Journal of Biomedical Materials Research - Part A, 2014, 102, 1558-1567.	4.0	50
48	Notch Signaling Promotes Osteoclast Maturation and Resorptive Activity. Journal of Cellular Biochemistry, 2015, 116, 2598-2609.	2.6	50
49	Cyp1B1 expression promotes angiogenesis by suppressing NF-Î°B activity. American Journal of Physiology - Cell Physiology, 2013, 305, C1170-C1184.	4.6	48
50	Effects of Donor Characteristics and Ex Vivo Expansion on Canine Mesenchymal Stem Cell Properties: Implications for MSC-Based Therapies. Cell Transplantation, 2012, 21, 2189-2200.	2.5	47
51	Megakaryocytes require thrombospondin-2 for normal platelet formation and function. Blood, 2003, 101, 3915-3923.	1.4	45
52	Thrombospondin-2 regulates matrix mineralization in MC3T3-E1 pre-osteoblasts. Bone, 2010, 46, 464-471.	2.9	41
53	Ectopic expression of Wnt10b decreases adiposity and improves glucose homeostasis in obese rats. American Journal of Physiology - Endocrinology and Metabolism, 2007, 293, E726-E736.	3.5	39
54	Intraoperative delivery of the Notch ligand Jagged-1 regenerates appendicular and craniofacial bone defects. Npj Regenerative Medicine, 2017, 2, 32.	5.2	39

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55	R-spondin-2 is a Wnt agonist that regulates osteoblast activity and bone mass. Bone Research, 2018, 6, 24.	11.4	39
56	Disruption of cellâ€“matrix interactions by heparin enhances mesenchymal progenitor adipocyte differentiation. Experimental Cell Research, 2008, 314, 3382-3391.	2.6	38
57	R-spondins: Novel matricellular regulators of the skeleton. Matrix Biology, 2014, 37, 157-161.	3.6	38
58	Thrombospondins and Novel TSR-containing Proteins, R-spondins, Regulate Bone Formation and Remodeling. Current Osteoporosis Reports, 2010, 8, 68-76.	3.6	37
59	Osseointegrative Properties of Electrospun Hydroxyapatite-Containing Nanofibrous Chitosan Scaffolds. Tissue Engineering - Part A, 2015, 21, 970-981.	3.1	36
60	Megakaryocytes are mechanically responsive and influence osteoblast proliferation and differentiation. Bone, 2014, 66, 111-120.	2.9	35
61	THBS2 Is a Candidate Modifier of Liver Disease Severity in Alagille Syndrome. Cellular and Molecular Gastroenterology and Hepatology, 2016, 2, 663-675.e2.	4.5	35
62	Bone healing in an aged murine fracture model is characterized by sustained callus inflammation and decreased cell proliferation. Journal of Orthopaedic Research, 2018, 36, 149-158.	2.3	34
63	The Muenke syndrome mutation (<i>FgfR3^{P244R}</i>) causes cranial base shortening associated with growth plate dysfunction and premature perichondrial ossification in murine basicranial synchondroses. Developmental Dynamics, 2011, 240, 2584-2596.	1.8	33
64	Huntingtin Interacting Protein 1 mutations lead to abnormal hematopoiesis, spinal defects and cataracts. Human Molecular Genetics, 2004, 13, 851-867.	2.9	32
65	The role of oxygen as a regulator of stem cell fate during fracture repair in TSP2â€null mice. Journal of Orthopaedic Research, 2013, 31, 1585-1596.	2.3	32
66	Mutation in Osteoactivin Promotes Receptor Activator of NFÎºB Ligand (RANKL)-mediated Osteoclast Differentiation and Survival but Inhibits Osteoclast Function. Journal of Biological Chemistry, 2015, 290, 20128-20146.	3.4	32
67	Zoledronic acid inhibits macrophage SOCS3 expression and enhances cytokine production. Journal of Cellular Biochemistry, 2011, 112, 3364-3372.	2.6	31
68	Mouse models of telomere dysfunction phenocopy skeletal changes found in human age-related osteoporosis. DMM Disease Models and Mechanisms, 2014, 7, 583-92.	2.4	30
69	Thrombospondin-2 is an endogenous adipocyte inhibitor. Matrix Biology, 2010, 29, 549-556.	3.6	29
70	Review of Animal Models of Comorbidities in Fractureâ€Healing Research. Journal of Orthopaedic Research, 2019, 37, 2491-2498.	2.3	27
71	Biological constraints on GWAS SNPs at suggestive significance thresholds reveal additional BMI loci. ELife, 2021, 10, .	6.0	27
72	Lipolysis of bone marrow adipocytes is required to fuel bone and the marrow niche during energy deficits. ELife, 0, 11, .	6.0	27

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73	Stimulating Fracture Healing in Ischemic Environments: Does Oxygen Direct Stem Cell Fate during Fracture Healing?. Frontiers in Cell and Developmental Biology, 2017, 5, 45.	3.7	26
74	Type III collagen modulates fracture callus bone formation and early remodeling. Journal of Orthopaedic Research, 2015, 33, 675-684.	2.3	24
75	Osteopathology in the Equine Distal Phalanx Associated With the Development and Progression of Laminitis. Veterinary Pathology, 2015, 52, 928-944.	1.7	24
76	Modulation of Notch1 signaling regulates bone fracture healing. Journal of Orthopaedic Research, 2020, 38, 2350-2361.	2.3	24
77	Evaluation of equine peripheral blood apheresis product, bone marrow, and adipose tissue as sources of mesenchymal stem cells and their differentation potential. American Journal of Veterinary Research, 2011, 72, 127-133.	0.6	23
78	Ectopic Expression of Col2.3 and Col3.6 Promoters in the Brain and Association with Leptin Signaling. Cells Tissues Organs, 2011, 194, 268-273.	2.3	23
79	A computational model to explore the role of angiogenic impairment on endochondral ossification during fracture healing. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1279-1294.	2.8	23
80	Microtox assay of trinitrotoluene, diaminonitrotoluene, and dinitromethylaniline mixtures. Bulletin of Environmental Contamination and Toxicology, 1991, 46, 550-553.	2.7	22
81	Increased osteoblastogenesis and decreased bone resorption protect against ovariectomy-induced bone loss in thrombospondin-2-null mice. Matrix Biology, 2005, 24, 362-370.	3.6	22
82	Mice lacking thrombospondin 2 show an atypical pattern of endocortical and periosteal bone formation in response to mechanical loading. Bone, 2006, 38, 310-316.	2.9	22
83	Brief Report: Long-Term Functional Engraftment of Mesenchymal Progenitor Cells in a Mouse Model of Accelerated Aging. Stem Cells, 2013, 31, 607-611.	3.2	22
84	Canonical Notch signaling is required for bone morphogenetic protein-mediated human osteoblast differentiation. Stem Cells, 2020, 38, 1332-1347.	3.2	22
85	Disruption of thrombospondinâ€2 accelerates ischemic fracture healing. Journal of Orthopaedic Research, 2013, 31, 935-943.	2.3	21
86	An Injured <i>Psittacosaurus</i> (Dinosauria: Ceratopsia) From the Yixian Formation (Liaoning, China): Implications for <i>Psittacosaurus</i> Biology. Anatomical Record, 2016, 299, 897-906.	1.4	21
87	Deficiency of the pattern-recognition receptor CD14 protects against joint pathology and functional decline in a murine model of osteoarthritis. PLoS ONE, 2018, 13, e0206217.	2.5	21
88	Silver-doped bioactive glass particles for in vivo bone tissue regeneration and enhanced methicillin-resistant Staphylococcus aureus (MRSA) inhibition. Materials Science and Engineering C, 2021, 120, 111693.	7.3	21
89	Novel explant model to study mechanotransduction and cellâ€"cell communication. Journal of Orthopaedic Research, 2006, 24, 1687-1698.	2.3	19
90	Bone Regeneration. , 2015, , 313-333.		19

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91	Chemokine receptorâ€7 (CCR7) deficiency leads to delayed development of joint damage and functional deficits in a murine model of osteoarthritis. Journal of Orthopaedic Research, 2018, 36, 864-875.	2.3	19
92	Notch Signaling in Mesenchymal Stem Cells Harvested From Geriatric Mice. Journal of Orthopaedic Trauma, 2014, 28, S20-S23.	1.4	18
93	Implicating candidate genes at GWAS signals by leveraging topologically associating domains. European Journal of Human Genetics, 2017, 25, 1286-1289.	2.8	18
94	Reduced Expression of Thrombospondins and Craniofacial Dysmorphism in Mice Overexpressing Fra1. Journal of Bone and Mineral Research, 2005, 21, 596-604.	2.8	17
95	A ChIP-seq-Defined Genome-Wide Map of MEF2C Binding Reveals Inflammatory Pathways Associated with Its Role in Bone Density Determination. Calcified Tissue International, 2014, 94, 396-402.	3.1	17
96	Solâ€"Gel-Derived Bioactive and Antibacterial Multi-Component Thin Films by the Spin-Coating Technique. ACS Biomaterials Science and Engineering, 2020, 6, 5549-5562.	5.2	17
97	Time series gene expression profiling and temporal regulatory pathway analysis of BMP6 induced osteoblast differentiation and mineralization. BMC Systems Biology, 2011, 5, 82.	3.0	16
98	A Potential Role for the Myeloid Lineage in Leptin-regulated Bone Metabolism. Hormone and Metabolic Research, 2012, 44, 01-05.	1.5	16
99	Ethical use of animal models in musculoskeletal research. Journal of Orthopaedic Research, 2017, 35, 740-751.	2.3	15
100	Porcine Anterior Cruciate Ligament Fibroblasts are Similar to Cells Derived from the Ligamentum Teres, Another Non-healing Intra-articular Ligament. Connective Tissue Research, 1999, 40, 13-21.	2.3	12
101	Identification of osteoconductive and biodegradable polymers from a combinatorial polymer library. Journal of Biomedical Materials Research - Part A, 2010, 93A, 807-816.	4.0	12
102	Suppression of Notch Signaling in Osteoclasts Improves Bone Regeneration and Healing. Journal of Orthopaedic Research, 2019, 37, 2089-2103.	2.3	12
103	Wnt10b and Dkk-1 gene therapy differentially influenced trabecular bone architecture, soft tissue integrity, and osteophytosis in a skeletally mature rat model of osteoarthritis. Connective Tissue Research, 2017, 58, 542-552.	2.3	11
104	Notch signaling enhances bone regeneration in the zebrafish mandible. Development (Cambridge), 2022, 149, .	2.5	10
105	A PDGFRÎ²-PI3K signaling axis mediates periosteal cell activation during fracture healing. PLoS ONE, 2019, 14, e0223846.	2.5	9
106	CTRP3 Regulates Endochondral Ossification and Bone Remodeling During Fracture Healing. Journal of Orthopaedic Research, 2020, 38, 996-1006.	2.3	9
107	Omegaâ€3 Fatty Acids Enhance Ligament Fibroblast Collagen Formation in Association with Changes in Interleukinâ€6â€ƒProduction. Proceedings of the Society for Experimental Biology and Medicine, 2000, 223, 88-95.	1.8	9
108	Thrombospondin-2 Expression During Retinal Vascular Development and Neovascularization. Journal of Ocular Pharmacology and Therapeutics, 2015, 31, 429-444.	1.4	7

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109	Fracture Apparatus Design and Protocol Optimization for Closed-stabilized Fractures in Rodents. Journal of Visualized Experiments, 2018, , .	0.3	7
110	Contextual Regulation of Skeletal Physiology by Notch Signaling. Current Osteoporosis Reports, 2019, 17, 217-225.	3.6	7
111	Skeletal dysplasia and male infertility locus on mouse chromosome 9. Genomics, 2004, 83, 951-960.	2.9	6
112	Multiple Recombinant Adeno-Associated Viral Vector Serotypes Display PersistentIn VivoGene Expression in Vector-Transduced Rat Stifle Joints. Human Gene Therapy Methods, 2013, 24, 185-194.	2.1	6
113	Stimulation of Notch Signaling in Mouse Osteoclast Precursors. Journal of Visualized Experiments, 2017, , .	0.3	6
114	Use of quantitative polymerase chain reaction analysis to compare quantity and stability of isolated murine DNA. Lab Animal, 2010, 39, 283-289.	0.4	5
115	<scp>CRISPRâ€Cas9</scp>â€"Mediated Genome Editing Confirms <scp><i>EPDR1</i></scp> as an Effector Gene at the <scp>BMD GWAS</scp>â€Implicated â€˜<scp><i>STARD3NL</i></scp>â€™ Locus. JBMR Plus, 2021, 5, e10531.	2.7	5
116	Evaluation of global gene expression in regenerate tissues during Masquelet treatment. Journal of Orthopaedic Research, 2020, 38, 2120-2130.	2.3	4
117	Thrombospondinâ€2 spatiotemporal expression in skeletal fractures. Journal of Orthopaedic Research, 2021, 39, 30-41.	2.3	3
118	What Is Your Diagnosis?. Journal of the American Veterinary Medical Association, 2008, 232, 839-840.	0.5	2
119	Calvaria critical-size defects in rats using piezoelectric equipment: a comparison with the classic trephine. Injury, 2020, 51, 1509-1514.	1.7	2
120	Bioactive glass particles as multiâ€functional therapeutic carriers against antibioticâ€resistant bacteria. Journal of the American Ceramic Society, 2022, 105, 1778-1789.	3.8	2
121	Compound deletion of thrombospondin-1 and -2 results in a skeletal phenotype not predicted by the single gene knockouts. Bone, 2021, 153, 116156.	2.9	2
122	Evaluation of the â€œreference toxicantâ€• addition procedure for testing the toxicity of environmental samples. Bulletin of Environmental Contamination and Toxicology, 1991, 47, 540-546.	2.7	1
123	Skeletal Involvement in Alagille Syndrome. , 2018, , 121-135.		1
124	Screening of a Biodegradable Polymer Library for Optimal Scaffolding for Mineralized Tissue Engineering. , 2009, , .		0
125	Systemic Mesenchymal Stem Cell Delivery and Axial Mechanical Stimulation Accelerate Fracture Healing. , 2008, , .		0
126	Notch signaling through the Jaggedâ€1 ligand regulates mesenchymal progenitor differentiation and tissue regeneration. FASEB Journal, 2012, 26, .	0.5	0