

Matthew J Hilton

List of Publications by Year in descending order

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76
papers

5,422
citations

117453

34
h-index

82410

72
g-index

87
all docs

87
docs citations

87
times ranked

7213
citing authors

#	ARTICLE	IF	CITATIONS
1	Sequential roles of Hedgehog and Wnt signaling in osteoblast development. <i>Development (Cambridge)</i> , 2005, 132, 49-60.	1.2	593
2	Notch signaling maintains bone marrow mesenchymal progenitors by suppressing osteoblast differentiation. <i>Nature Medicine</i> , 2008, 14, 306-314.	15.2	532
3	Rac1 Activation Controls Nuclear Localization of β -catenin during Canonical Wnt Signaling. <i>Cell</i> , 2008, 133, 340-353.	13.5	433
4	Suppression of CXCL12 production by bone marrow osteoblasts is a common and critical pathway for cytokine-induced mobilization. <i>Blood</i> , 2009, 114, 1331-1339.	0.6	211
5	BMP2, but not BMP4, is crucial for chondrocyte proliferation and maturation during endochondral bone development. <i>Journal of Cell Science</i> , 2011, 124, 3428-3440.	1.2	211
6	NOTCH1 Regulates Osteoclastogenesis Directly in Osteoclast Precursors and Indirectly via Osteoblast Lineage Cells. <i>Journal of Biological Chemistry</i> , 2008, 283, 6509-6518.	1.6	202
7	Regulation of chondrogenesis and chondrocyte differentiation by stress. <i>Journal of Clinical Investigation</i> , 2008, 118, 429-438.	3.9	194
8	Ihh controls cartilage development by antagonizing Gli3, but requires additional effectors to regulate osteoblast and vascular development. <i>Development (Cambridge)</i> , 2005, 132, 4339-4351.	1.2	172
9	Glutamine Metabolism Regulates Proliferation and Lineage Allocation in Skeletal Stem Cells. <i>Cell Metabolism</i> , 2019, 29, 966-978.e4.	7.2	170
10	RBPj β -dependent Notch signaling regulates mesenchymal progenitor cell proliferation and differentiation during skeletal development. <i>Development (Cambridge)</i> , 2010, 137, 1461-1471.	1.2	154
11	Teriparatide as a Chondroregenerative Therapy for Injury-Induced Osteoarthritis. <i>Science Translational Medicine</i> , 2011, 3, 101ra93.	5.8	145
12	An FGF β -WNT gene regulatory network controls lung mesenchyme development. <i>Developmental Biology</i> , 2008, 319, 426-436.	0.9	127
13	Cartilage-specific β -catenin signaling regulates chondrocyte maturation, generation of ossification centers, and perichondrial bone formation during skeletal development. <i>Journal of Bone and Mineral Research</i> , 2012, 27, 1680-1694.	3.1	116
14	Impact of Smad3 loss of function on scarring and adhesion formation during tendon healing. <i>Journal of Orthopaedic Research</i> , 2011, 29, 684-693.	1.2	103
15	Tamoxifen-inducible gene deletion reveals a distinct cell type associated with trabecular bone, and direct regulation of PTHrP expression and chondrocyte morphology by Ihh in growth region cartilage. <i>Developmental Biology</i> , 2007, 308, 93-105.	0.9	97
16	NOTCH signaling in skeletal progenitors is critical for fracture repair. <i>Journal of Clinical Investigation</i> , 2016, 126, 1471-1481.	3.9	96
17	Suppressive Effects of Insulin on Tumor Necrosis Factor α -Dependent Early Osteoarthritic Changes Associated With Obesity and Type 2 Diabetes Mellitus. <i>Arthritis and Rheumatology</i> , 2016, 68, 1392-1402.	2.9	91
18	PD-1 blockade inhibits osteoclast formation and murine bone cancer pain. <i>Journal of Clinical Investigation</i> , 2020, 130, 3603-3620.	3.9	90

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19	The effect of mesenchymal stem cell sheets on structural allograft healing of critical sized femoral defects in mice. <i>Biomaterials</i> , 2014, 35, 2752-2759.	5.7	89
20	Cartilage-specific RBPj ^{ΔE} -dependent and -independent Notch signals regulate cartilage and bone development. <i>Development (Cambridge)</i> , 2012, 139, 1198-1212.	1.2	88
21	Delayed Fracture Healing and Increased Callus Adiposity in a C57BL/6J Murine Model of Obesity-Associated Type 2 Diabetes Mellitus. <i>PLoS ONE</i> , 2014, 9, e99656.	1.1	88
22	A dual role for NOTCH signaling in joint cartilage maintenance and osteoarthritis. <i>Science Signaling</i> , 2015, 8, ra71.	1.6	83
23	TAK1 regulates cartilage and joint development via the MAPK and BMP signaling pathways. <i>Journal of Bone and Mineral Research</i> , 2010, 25, 1784-1797.	3.1	79
24	NOTCH inhibits osteoblast formation in inflammatory arthritis via noncanonical NF- κ B. <i>Journal of Clinical Investigation</i> , 2014, 124, 3200-3214.	3.9	67
25	EXT1 regulates chondrocyte proliferation and differentiation during endochondral bone development. <i>Bone</i> , 2005, 36, 379-386.	1.4	62
26	Mechanism of shortened bones in mucopolysaccharidosis VII. <i>Molecular Genetics and Metabolism</i> , 2009, 97, 202-211.	0.5	61
27	Chondrocyte-Specific RUNX2 Overexpression Accelerates Post-traumatic Osteoarthritis Progression in Adult Mice. <i>Journal of Bone and Mineral Research</i> , 2019, 34, 1676-1689.	3.1	51
28	STING suppresses bone cancer pain via immune and neuronal modulation. <i>Nature Communications</i> , 2021, 12, 4558.	5.8	50
29	Establishment of an index with increased sensitivity for assessing murine arthritis. <i>Journal of Orthopaedic Research</i> , 2011, 29, 1145-1151.	1.2	45
30	RBPj ^{ΔE} -Dependent Notch Signaling Is Required for Murine Articular Cartilage and Joint Maintenance. <i>Arthritis and Rheumatism</i> , 2013, 65, 2623-2633.	6.7	44
31	TAK1 regulates SOX9 expression in chondrocytes and is essential for postnatal development of the growth plate and articular cartilages. <i>Journal of Cell Science</i> , 2013, 126, 5704-13.	1.2	44
32	The Notch Ligand Jagged1 Regulates the Osteoblastic Lineage by Maintaining the Osteoprogenitor Pool. <i>Journal of Bone and Mineral Research</i> , 2017, 32, 1320-1331.	3.1	44
33	Notch signaling controls chondrocyte hypertrophy via indirect regulation of Sox9. <i>Bone Research</i> , 2015, 3, 15021.	5.4	41
34	Axin2 regulates chondrocyte maturation and axial skeletal development. <i>Journal of Orthopaedic Research</i> , 2010, 28, 89-95.	1.2	38
35	Increased Ca ²⁺ signaling through CaV1.2 promotes bone formation and prevents estrogen deficiency-induced bone loss. <i>JCI Insight</i> , 2017, 2, .	2.3	38
36	Daily oral consumption of hydrolyzed type 1 collagen is chondroprotective and anti-inflammatory in murine posttraumatic osteoarthritis. <i>PLoS ONE</i> , 2017, 12, e0174705.	1.1	38

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37	Ski inhibits TGF β ¹ /phospho β Smad3 signaling and accelerates hypertrophic differentiation in chondrocytes. <i>Journal of Cellular Biochemistry</i> , 2012, 113, 2156-2166.	1.2	34
38	NOTCH-Mediated Maintenance and Expansion of Human Bone Marrow Stromal/Stem Cells: A Technology Designed for Orthopedic Regenerative Medicine. <i>Stem Cells Translational Medicine</i> , 2014, 3, 1456-1466.	1.6	33
39	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.	3.1	33
40	Efficacy of colistin α -impregnated beads to prevent multidrug α -resistant <i>A. baumannii</i> implant α -associated osteomyelitis. <i>Journal of Orthopaedic Research</i> , 2009, 27, 1008-1015.	1.2	32
41	Notch signaling in postnatal joint chondrocytes, but not subchondral osteoblasts, is required for articular cartilage and joint maintenance. <i>Osteoarthritis and Cartilage</i> , 2016, 24, 740-751.	0.6	28
42	Hypertrophic chondrocytes serve as a reservoir for marrow-associated skeletal stem and progenitor cells, osteoblasts, and adipocytes during skeletal development. <i>ELife</i> , 2022, 11, .	2.8	28
43	Notch signaling indirectly promotes chondrocyte hypertrophy via regulation of BMP signaling and cell cycle arrest. <i>Scientific Reports</i> , 2016, 6, 25594.	1.6	26
44	Cell type α -specific effects of Notch signaling activation on intervertebral discs: Implications for intervertebral disc degeneration. <i>Journal of Cellular Physiology</i> , 2018, 233, 5431-5440.	2.0	26
45	Isolation and Culture of Murine Primary Chondrocytes. <i>Methods in Molecular Biology</i> , 2014, 1130, 267-277.	0.4	25
46	Engineering superficial zone features in tissue engineered cartilage. <i>Biotechnology and Bioengineering</i> , 2013, 110, 1476-1486.	1.7	24
47	HES factors regulate specific aspects of chondrogenesis and chondrocyte hypertrophy during cartilage development. <i>Journal of Cell Science</i> , 2016, 129, 2145-55.	1.2	24
48	Dysregulation of STAT3 signaling is associated with endplate-oriented herniations of the intervertebral disc in <i>Adgrg6</i> mutant mice. <i>PLoS Genetics</i> , 2019, 15, e1008096.	1.5	24
49	Identification of distinct non-myogenic skeletal-muscle-resident mesenchymal cell populations. <i>Cell Reports</i> , 2022, 39, 110785.	2.9	23
50	CCN1 Regulates Chondrocyte Maturation and Cartilage Development. <i>Journal of Bone and Mineral Research</i> , 2016, 31, 549-559.	3.1	22
51	Multiple hereditary exostoses (MHE): elucidating the pathogenesis of a rare skeletal disorder through interdisciplinary research. <i>Connective Tissue Research</i> , 2014, 55, 80-88.	1.1	21
52	Transient gamma-secretase inhibition accelerates and enhances fracture repair likely via Notch signaling modulation. <i>Bone</i> , 2015, 73, 77-89.	1.4	21
53	Diffusion tractography of the rat knee at microscopic resolution. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 3775-3786.	1.9	21
54	Troponin T3 expression in skeletal and smooth muscle is required for growth and postnatal survival: Characterization of <i>Tnnt3^{tm2a(KOMP)Wtsi}</i> mice. <i>Genesis</i> , 2013, 51, 667-675.	0.8	20

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55	The CaV1.2 L-type calcium channel regulates bone homeostasis in the middle and inner ear. <i>Bone</i> , 2019, 125, 160-168.	1.4	19
56	An Integrated Physical Map of 8q22-q24: Use in Positional Cloning and Deletion Analysis of Langer-Giedion Syndrome. <i>Genomics</i> , 2001, 71, 192-199.	1.3	18
57	Intracellular biosynthesis of lipids and cholesterol by Scap and Insig in mesenchymal cells regulates long bone growth and chondrocyte homeostasis. <i>Development (Cambridge)</i> , 2018, 145, .	1.2	18
58	Suppression of CXCL12 Production by Bone Marrow Osteoblasts Is a Common and Critical Pathway for Cytokine-Induced Mobilization.. <i>Blood</i> , 2007, 110, 220-220.	0.6	18
59	Characterization complex collagen fiber architecture in knee joint using high-resolution diffusion imaging. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 908-919.	1.9	13
60	Chronic axial compression of the mouse tail segment induces MRI bone marrow edema changes that correlate with increased marrow vasculature and cellularity. <i>Journal of Orthopaedic Research</i> , 2010, 28, 1220-1228.	1.2	12
61	Whole-Exome Sequencing of Radiation-Induced Thymic Lymphoma in Mouse Models Identifies Notch1 Activation as a Driver of p53 Wild-Type Lymphoma. <i>Cancer Research</i> , 2021, 81, 3777-3790.	0.4	10
62	Demineralized Murine Skeletal Histology. <i>Methods in Molecular Biology</i> , 2014, 1130, 165-183.	0.4	10
63	Use of Hes1 -GFP reporter mice to assess activity of the Hes1 promoter in bone cells under chronic inflammation. <i>Bone</i> , 2016, 90, 80-89.	1.4	9
64	Effect of surface topography on in vitro osteoblast function and mechanical performance of 3D printed titanium. <i>Journal of Biomedical Materials Research - Part A</i> , 2021, 109, 1792-1802.	2.1	9
65	TNF is required for the induction but not the maintenance of compression-induced BME signals in murine tail vertebrae: Limitations of anti-TNF therapy for degenerative disc disease. <i>Journal of Orthopaedic Research</i> , 2011, 29, 1367-1374.	1.2	5
66	Hypoxia depletes contaminating CD45+ hematopoietic cells from murine bone marrow stromal cell (BMSC) cultures: Methods for BMSC culture purification. <i>Stem Cell Research</i> , 2021, 53, 102317.	0.3	5
67	Isolation and Culture of Murine Primary Chondrocytes: Costal and Growth Plate Cartilage. <i>Methods in Molecular Biology</i> , 2021, 2230, 415-423.	0.4	5
68	HES1 is a novel downstream modifier of the SHH-GLI3 Axis in the development of preaxial polydactyly. <i>PLoS Genetics</i> , 2021, 17, e1009982.	1.5	5
69	Whole-Mount In Situ Hybridization on Murine Skeletogenic Tissues. <i>Methods in Molecular Biology</i> , 2014, 1130, 193-201.	0.4	4
70	Demineralized Murine Skeletal Histology. <i>Methods in Molecular Biology</i> , 2021, 2230, 283-302.	0.4	2
71	Magic angle effect on diffusion tensor imaging in ligament and brain. <i>Magnetic Resonance Imaging</i> , 2022, 92, 243-250.	1.0	2
72	HES factors regulate specific aspects of chondrogenesis and chondrocyte hypertrophy during cartilage development. <i>Development (Cambridge)</i> , 2016, 143, e1.1-e1.1.	1.2	1

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73	G protein-coupled receptor kinase 3 modulates mesenchymal stem cell proliferation and differentiation through sphingosine-1-phosphate receptor regulation. Stem Cell Research and Therapy, 2022, 13, 37.	2.4	1
74	Application of genetically modified animals in bone research. , 2020, , 1787-1800.		0
75	Notch Signaling in Cartilage Development and Disease. , 2020, , 589-604.		0
76	Whole Mount In Situ Hybridization in Murine Tissues. Methods in Molecular Biology, 2021, 2230, 367-376.	0.4	0