Karen M Lyons

List of Publications by Year
in descending order

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106 papers	9,044 citations	36303 51 h-index	40979 93 g-index
116 all docs	116 docs citations	116 times ranked	9994 citing authors

#	Article	IF	Citations
1	Connective tissue growth factor coordinates chondrogenesis and angiogenesis during skeletal development. Development (Cambridge), 2003, 130, 2779-2791.	2.5	637
2	Colocalization of BMP 7 and BMP 2 RNAs suggests that these factors cooperatively mediate tissue interactions during murine development. Mechanisms of Development, 1995, 50, 71-83.	1.7	412
3	Bmpr1a and Bmpr1b have overlapping functions and are essential for chondrogenesis in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5062-5067.	7.1	403
4	Bone morphogenetic protein-3 is a negative regulator of bone density. Nature Genetics, 2001, 27, 84-88.	21.4	365
5	Epithelial Bmpr1a regulates differentiation and proliferation in postnatal hair follicles and is essential for tooth development. Development (Cambridge), 2004, 131, 2257-2268.	2.5	344
6	Mice lackingBmp6 function. Genesis, 1998, 22, 321-339.	2.1	319
7	BMP canonical Smad signaling throughSmad1andSmad5is required for endochondral bone formation. Development (Cambridge), 2009, 136, 1093-1104.	2.5	304
8	Multiple functions of BMPs in chondrogenesis. Journal of Cellular Biochemistry, 2004, 93, 93-103.	2.6	276
9	Bone Morphogenetic Protein-2. Clinical Orthopaedics and Related Research, 1996, 324, 39-46.	1.5	261
10	TGFÎ² signaling in cartilage development and maintenance. Birth Defects Research Part C: Embryo Today Reviews, 2014, 102, 37-51.	3.6	217
11	BMPs regulate multiple aspects of growth-plate chondrogenesis through opposing actions on FGF pathways. Development (Cambridge), 2006, 133, 4667-4678.	2.5	186
12	Cell mixing at a neural crest-mesoderm boundary and deficient ephrin-Eph signaling in the pathogenesis of craniosynostosis. Human Molecular Genetics, 2006, 15, 1319-1328.	2.9	184
13	BMP signaling is required for septation of the outflow tract of the mammalian heart. Development (Cambridge), 2003, 130, 209-220.	2.5	181
14	Whole-Mount Skeletal Staining. Methods in Molecular Biology, 2014, 1130, 113-121.	0.9	172
15	BMP signaling stimulates cellular differentiation at multiple steps during cartilage development. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18023-18027.	7.1	160
16	CCN2 (Connective Tissue Growth Factor) Promotes Fibroblast Adhesion to Fibronectin. Molecular Biology of the Cell, 2004, 15, 5635-5646.	2.1	152
17	Mul̂llerian Inhibiting Substance Signaling Uses a Bone Morphogenetic Protein (BMP)-Like Pathway Mediated by ALK2 and Induces Smad6 Expression. Molecular Endocrinology, 2001, 15, 946-959.	3.7	148
18	BMP Signaling Is Necessary for Patterning the Sensory and Nonsensory Regions of the Developing Mammalian Cochlea. Journal of Neuroscience, 2010, 30, 15044-15051.	3.6	143

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19	CCN2 Is Necessary for Adhesive Responses to Transforming Growth Factor-Î²1 in Embryonic Fibroblasts. Journal of Biological Chemistry, 2006, 281, 10715-10726.	3.4	140
20	The Bone Morphogenetic Protein 15 Gene Is X-Linked and Expressed in Oocytes. Molecular Endocrinology, 1998, 12, 1809-1817.	3.7	140
21	Signaling through BMP type 1 receptors is required for development of interneuron cell types in the dorsal spinal cord. Development (Cambridge), 2004, 131, 5393-5403.	2.5	135
22	Smad signaling in skeletal development and regeneration. Cytokine and Growth Factor Reviews, 2009, 20, 379-388.	7.2	132
23	Osteogenic differentiation of mouse adipose-derived adult stromal cells requires retinoic acid and bone morphogenetic protein receptor type IB signaling. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 12335-12340.	7.1	130
24	CTGF Inhibits BMP-7 Signaling in Diabetic Nephropathy. Journal of the American Society of Nephrology: JASN, 2008, 19, 2098-2107.	6.1	123
25	A phylogenetically conserved cis-regulatory module in the Msx2promoter is sufficient for BMP-dependent transcription in murine and Drosophila embryos. Development (Cambridge), 2004, 131, 5153-5165.	2.5	114
26	CCN2/Connective Tissue Growth Factor Is Essential for Pericyte Adhesion and Endothelial Basement Membrane Formation during Angiogenesis. PLoS ONE, 2012, 7, e30562.	2.5	114
27	Human Developmental Chondrogenesis as a Basis for Engineering Chondrocytes from Pluripotent Stem Cells. Stem Cell Reports, 2013, 1, 575-589.	4.8	113
28	Cooperative Regulation of Chondrocyte Differentiation by CCN2 and CCN3 Shown by a Comprehensive Analysis of the CCN Family Proteins in Cartilage. Journal of Bone and Mineral Research, 2008, 23, 1751-1764.	2.8	107
29	Distinct developmental programs require different levels of Bmp signaling during mouse retinal development. Development (Cambridge), 2005, 132, 913-923.	2.5	104
30	BMP Signaling in the Cartilage Growth Plate. Current Topics in Developmental Biology, 2006, 76, 1-48.	2.2	104
31	Granulosa Cell-Expressed BMPR1A and BMPR1B Have Unique Functions in Regulating Fertility but Act Redundantly to Suppress Ovarian Tumor Development. Molecular Endocrinology, 2010, 24, 1251-1266.	3.7	97
32	Roles for CCN2 in normal physiological processes. Cellular and Molecular Life Sciences, 2011, 68, 3209-3217.	5.4	96
33	Connective tissue growth factor expression and Smad signaling during mouse heart development and myocardial infarction. Developmental Dynamics, 2004, 231, 542-550.	1.8	95
34	A New Model for Growth Factor Activation: Type II Receptors Compete with the Prodomain for BMP-7. Journal of Molecular Biology, 2008, 381, 1025-1039.	4.2	94
35	NELL-1 in the treatment of osteoporotic bone loss. Nature Communications, 2015, 6, 7362.	12.8	93
36	Connective Tissue Growth Factor Is Required for Normal Follicle Development and Ovulation. Molecular Endocrinology, 2011, 25, 1740-1759.	3.7	85

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37	CCN2 (Connective Tissue Growth Factor) is essential for extracellular matrix production and integrin signaling in chondrocytes. Journal of Cell Communication and Signaling, 2007, 1, 45-58.	3.4	83
38	CCN Family 2/Connective Tissue Growth Factor Modulates BMP Signalling as a Signal Conductor, Which Action Regulates the Proliferation and Differentiation of Chondrocytes. Journal of Biochemistry, 2008, 145, 207-216.	1.7	82
39	WNT1-induced Secreted Protein-1 (WISP1), a Novel Regulator of Bone Turnover and Wnt Signaling. Journal of Biological Chemistry, 2015, 290, 14004-14018.	3.4	79
40	Connective Tissue Growth Factor (CTGF) Inactivation Leads to Defects in Islet Cell Lineage Allocation and Î²-Cell Proliferation during Embryogenesis. Molecular Endocrinology, 2009, 23, 324-336.	3.7	77
41	Connective tissue growth factor regulates adipocyte differentiation of mesenchymal stromal cells and facilitates leukemia bone marrow engraftment. Blood, 2013, 122, 357-366.	1.4	77
42	Loss of KDM4B exacerbates bone-fat imbalance and mesenchymal stromal cell exhaustion in skeletal aging. Cell Stem Cell, 2021, 28, 1057-1073.e7.	11.1	77
43	A genetic signature of the evolution of loss of flight in the Galapagos cormorant. Science, 2017, 356, .	12.6	76
44	Sirenomelia in Bmp7 and Tsg compound mutant mice:requirement for Bmp signaling in the development of ventral posterior mesoderm. Development (Cambridge), 2005, 132, 2489-2499.	2.5	75
45	CCN family 2/connective tissue growth factor (CCN2/CTGF) promotes osteoclastogenesis via induction of and interaction with dendritic cellâ€“specific transmembrane protein (DC-STAMP). Journal of Bone and Mineral Research, 2011, 26, 351-363.	2.8	70
46	Repression of Sox9 by Jag1 Is Continuously Required to Suppress the Default Chondrogenic Fate of Vascular Smooth Muscle Cells. Developmental Cell, 2014, 31, 707-721.	7.0	65
47	Tempting fate: BMP signals for cardiac morphogenesis. Cytokine and Growth Factor Reviews, 2003, 14, 1-4.	7.2	62
48	BMP3: To Be or Not To Be a BMP. Journal of Bone and Joint Surgery - Series A, 2001, 83, S1-56â€“S1â€“62.	3.0	61
49	Smad6 is essential to limit BMP signaling during cartilage development. Journal of Bone and Mineral Research, 2011, 26, 2498-2510.	2.8	60
50	The Type I BMP Receptor ACVR1/ALK2 is Required for Chondrogenesis During Development. Journal of Bone and Mineral Research, 2015, 30, 733-741.	2.8	59
51	Connective Tissue Growth Factor Is Necessary for Retinal Capillary Basal Lamina Thickening in Diabetic Mice. Journal of Histochemistry and Cytochemistry, 2008, 56, 785-792.	2.5	56
52	Functional requirement of CCN2 for intramembranous bone formation in embryonic mice. Biochemical and Biophysical Research Communications, 2008, 366, 450-456.	2.1	50
53	BMP Signaling and Podocyte Markers are Decreased in Human Diabetic Nephropathy in Association with CTGF Overexpression. Journal of Histochemistry and Cytochemistry, 2009, 57, 623-631.	2.5	50
54	Focal Adhesion Kinase/Src Suppresses Early Chondrogenesis. Journal of Biological Chemistry, 2008, 283, 9239-9247.	3.4	49

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55	TGFÎ² and BMP Dependent Cell Fate Changes Due to Loss of Filamin B Produces Disc Degeneration and Progressive Vertebral Fusions. PLoS Genetics, 2016, 12, e1005936.	3.5	47
56	Expression of connective tissue growth factor (CTGF/CCN2) in breast cancer cells is associated with increased migration and angiogenesis. International Journal of Oncology, 2011, 38, 1741-7.	3.3	43
57	Smad2 and Smad3 Regulate Chondrocyte Proliferation and Differentiation in the Growth Plate. PLoS Genetics, 2016, 12, e1006352.	3.5	43
58	CCN family 2/connective tissue growth factor (CCN2/CTGF) regulates the expression of Vegf through Hif-1Î± expression in a chondrocytic cell line, HCS-2/8, under hypoxic condition. Bone, 2009, 44, 24-31.	2.9	42
59	ATP6V1H Deficiency Impairs Bone Development through Activation of MMP9 and MMP13. PLoS Genetics, 2017, 13, e1006481.	3.5	42
60	Angiogenesis Is Not Impaired in Connective Tissue Growth Factor (CTGF) Knock-out Mice. Journal of Histochemistry and Cytochemistry, 2007, 55, 1139-1147.	2.5	41
61	Hypoxia-inducible Factor (HIF)-1Î± and CCN2 Form a Regulatory Circuit in Hypoxic Nucleus Pulposus Cells. Journal of Biological Chemistry, 2013, 288, 12654-12666.	3.4	40
62	Signaling Pathways in Skeletal Formation: A Role for BMP Receptors. Annals of the New York Academy of Sciences, 1996, 785, 59-69.	3.8	39
63	Smad7 regulates terminal maturation of chondrocytes in the growth plate. Developmental Biology, 2013, 382, 375-384.	2.0	35
64	GATA4 Is Essential for Bone Mineralization via ERÎ± and TGFÎ²/BMP Pathways. Journal of Bone and Mineral Research, 2014, 29, 2676-2687.	2.8	35
65	Connective tissue growth factor/CCN2-null mouse embryonic fibroblasts retain intact transforming growth factor-Î² responsiveness. Experimental Cell Research, 2008, 314, 1094-1104.	2.6	34
66	Stage-specific Control of Connective Tissue Growth Factor (CTGF/CCN2) Expression in Chondrocytes by Sox9 and Î²-Catenin. Journal of Biological Chemistry, 2010, 285, 27702-27712.	3.4	34
67	Deletion of BMP receptor type IB decreased bone mass in association with compromised osteoblastic differentiation of bone marrow mesenchymal progenitors. Scientific Reports, 2016, 6, 24256.	3.3	32
68	The TGFÎ² type I receptor TGFÎ²RI functions as an inhibitor of BMP signaling in cartilage. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15570-15579.	7.1	29
69	Hemizygous deletion of CTGF/CCN2 does not suffice to prevent fibrosis of the severely injured kidney. Matrix Biology, 2012, 31, 421-431.	3.6	27
70	CCN2/CTGF is required for matrix organization and to protect growth plate chondrocytes from cellular stress. Journal of Cell Communication and Signaling, 2013, 7, 219-230.	3.4	27
71	CYR61/CCN1 Regulates Sclerostin Levels and Bone Maintenance. Journal of Bone and Mineral Research, 2018, 33, 1076-1089.	2.8	27
72	CCN family protein 2 (CCN2) promotes the early differentiation, but inhibits the terminal differentiation of skeletal myoblasts. Journal of Biochemistry, 2015, 157, 91-100.	1.7	25

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73	Tracking Expression of Virally Mediated BMP-2 in Gene Therapy for Bone Repair. Clinical Orthopaedics and Related Research, 2006, 450, 238-245.	1.5	24
74	BMPs, TGFÎ², and border security at the interzone. Current Topics in Developmental Biology, 2019, 133, 153-170.	2.2	24
75	CCN2 as a Novel Molecule Supporting Energy Metabolism of Chondrocytes. Journal of Cellular Biochemistry, 2014, 115, 854-865.	2.6	22
76	BmpR1A is a major type 1 BMP receptor for BMP-Smad signaling during skull development. Developmental Biology, 2017, 429, 260-270.	2.0	22
77	Effect of localization, length and orientation of chondrocytic primary cilium on murine growth plate organization. Journal of Theoretical Biology, 2011, 285, 147-155.	1.7	19
78	Connective tissue growth factor is expressed in bone marrow stromal cells and promotes interleukin-7-dependent B lymphopoiesis. Haematologica, 2014, 99, 1149-1156.	3.5	18
79	Dynamic Analysis of the Expression of the TGFÎ²/SMAD2 Pathway and CCN2/CTGF during Early Steps of Tooth Development. Cells Tissues Organs, 2008, 187, 199-210.	2.3	16
80	Structure and sequence of the mouse bmp6 gene. Mammalian Genome, 1997, 8, 212-214.	2.2	15
81	CTGF/CCN2 facilitates LRP4â€mediated formation of the embryonic neuromuscular junction. EMBO Reports, 2020, 21, e48462.	4.5	15
82	Molecular Regulation of Limb Growth. Journal of Bone and Joint Surgery - Series A, 2009, 91, 47-52.	3.0	14
83	Systems genetics analysis of mouse chondrocyte differentiation. Journal of Bone and Mineral Research, 2011, 26, 747-760.	2.8	14
84	Endogenous CCN family member WISP1 inhibits trauma-induced heterotopic ossification. JCI Insight, 2020, 5, .	5.0	12
85	TGFÎ² as a gatekeeper of BMP action in the developing growth plate. Bone, 2020, 137, 115439.	2.9	10
86	Fibrosis and Hypoxia-Inducible Factor-1Î±â€“Dependent Tumors of the Soft Tissue on Loss of Von Hippel-Lindau in Mesenchymal Progenitors. American Journal of Pathology, 2015, 185, 3090-3101.	3.8	9
87	Role of CCN2 in Amino Acid Metabolism of Chondrocytes. Journal of Cellular Biochemistry, 2016, 117, 927-937.	2.6	9
88	The 5â€² untranslated regions (UTRs) of CCN1, CCN2, and CCN4 exhibit cryptic promoter activity. Journal of Cell Communication and Signaling, 2007, 1, 17-32.	3.4	8
89	Characterization of bone morphology in CCN5/WISP5 knockout mice. Journal of Cell Communication and Signaling, 2018, 12, 265-270.	3.4	8
90	Homozygous missense variant in BMPR1A resulting in BMPR signaling disruption and syndromic features. Molecular Genetics & Genomic Medicine, 2019, 7, e969.	1.2	8

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91	<scp>CCN1</scp>/Cyr61 Is Required in Osteoblasts for Responsiveness to the Anabolic Activity of <scp>PTH</scp>. Journal of Bone and Mineral Research, 2020, 35, 2289-2300.	2.8	7
92	gp130/STAT3 signaling is required for homeostatic proliferation and anabolism in postnatal growth plate and articular chondrocytes. Communications Biology, 2022, 5, 64.	4.4	7
93	CCN2 reduction mediates protective effects of BMP7 treatment in obstructive nephropathy. Journal of Cell Communication and Signaling, 2017, 11, 39-48.	3.4	6
94	Report on the 8th international workshop on the CCN family of genes â€“ Nice November 3â€“8, 2015. Journal of Cell Communication and Signaling, 2016, 10, 77-86.	3.4	3
95	FoxD1-driven CCN2 deletion causes axial skeletal deformities, pulmonary hypoplasia, and neonatal asphyctic death. Journal of Cell Communication and Signaling, 2019, 13, 573-577.	3.4	3
96	Design and Analysis of CCN Gene Activity Using CCN Knockout Mice Containing LacZ Reporters. Methods in Molecular Biology, 2017, 1489, 325-345.	0.9	2
97	Automated Cell Detection and Morphometry on Growth Plate Images of Mouse Bone. Applied Mathematics, 2014, 05, 2866-2880.	0.4	2
98	Bone Morphogenetic Proteins and the Skeleton. , 2008, , 1167-1175.		1
99	The DVR Gene Family in Embryonic Development. , 1993, , 125-137.		1
100	BMPs in Development. , 2003, , 833-837.		1
101	GENETIC ANALYSIS OF CCN GENE FUNCTION IN MAMMALIAN DEVELOPMENT. , 2005, , 135-152.		1
102	BMPs in Development. , 2010, , 1905-1912.		1
103	BMP Signaling in Skeletogenesis. , 2010, , 125-136.		1
104	A requirement for STAT3 in limb development. FASEB Journal, 2021, 35, .	0.5	0
105	Cooperative Regulation of Cell Proliferation and Differentiation by CCN2 and CCN3. , 2010, , 105-109.		0
106	Members of the CCN Family of Matricellular Proteins are Required for the Formation and Maintenance of Multiple Skeletal Tissues. FASEB Journal, 2015, 29, 92.2.	0.5	0