

# Karen M Lyons

## List of Publications by Year in descending order

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106  
papers

9,044  
citations

36271

51  
h-index

40954

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. <i>Development (Cambridge)</i> , 2003, 130, 2779-2791.	1.2	637
2	Colocalization of BMP 7 and BMP 2 RNAs suggests that these factors cooperatively mediate tissue interactions during murine development. <i>Mechanisms of Development</i> , 1995, 50, 71-83.	1.7	412
3	Bmpr1a and Bmpr1b have overlapping functions and are essential for chondrogenesis in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 5062-5067.	3.3	403
4	Bone morphogenetic protein-3 is a negative regulator of bone density. <i>Nature Genetics</i> , 2001, 27, 84-88.	9.4	365
5	Epithelial Bmpr1a regulates differentiation and proliferation in postnatal hair follicles and is essential for tooth development. <i>Development (Cambridge)</i> , 2004, 131, 2257-2268.	1.2	344
6	Mice lacking Bmp6 function. <i>Genesis</i> , 1998, 22, 321-339.	3.3	319
7	BMP canonical Smad signaling through <i>Smad1</i> and <i>Smad5</i> is required for endochondral bone formation. <i>Development (Cambridge)</i> , 2009, 136, 1093-1104.	1.2	304
8	Multiple functions of BMPs in chondrogenesis. <i>Journal of Cellular Biochemistry</i> , 2004, 93, 93-103.	1.2	276
9	Bone Morphogenetic Protein-2. <i>Clinical Orthopaedics and Related Research</i> , 1996, 324, 39-46.	0.7	261
10	TGF $\beta$ 2 signaling in cartilage development and maintenance. <i>Birth Defects Research Part C: Embryo Today Reviews</i> , 2014, 102, 37-51.	3.6	217
11	BMPs regulate multiple aspects of growth-plate chondrogenesis through opposing actions on FGF pathways. <i>Development (Cambridge)</i> , 2006, 133, 4667-4678.	1.2	186
12	Cell mixing at a neural crest-mesoderm boundary and deficient ephrin-Eph signaling in the pathogenesis of craniosynostosis. <i>Human Molecular Genetics</i> , 2006, 15, 1319-1328.	1.4	184
13	BMP signaling is required for septation of the outflow tract of the mammalian heart. <i>Development (Cambridge)</i> , 2003, 130, 209-220.	1.2	181
14	Whole-Mount Skeletal Staining. <i>Methods in Molecular Biology</i> , 2014, 1130, 113-121.	0.4	172
15	BMP signaling stimulates cellular differentiation at multiple steps during cartilage development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 18023-18027.	3.3	160
16	CCN2 (Connective Tissue Growth Factor) Promotes Fibroblast Adhesion to Fibronectin. <i>Molecular Biology of the Cell</i> , 2004, 15, 5635-5646.	0.9	152
17	Müllerian Inhibiting Substance Signaling Uses a Bone Morphogenetic Protein (BMP)-Like Pathway Mediated by ALK2 and Induces Smad6 Expression. <i>Molecular Endocrinology</i> , 2001, 15, 946-959.	3.7	148
18	BMP Signaling Is Necessary for Patterning the Sensory and Nonsensory Regions of the Developing Mammalian Cochlea. <i>Journal of Neuroscience</i> , 2010, 30, 15044-15051.	1.7	143

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19	CCN2 Is Necessary for Adhesive Responses to Transforming Growth Factor- $\beta$ 1 in Embryonic Fibroblasts. <i>Journal of Biological Chemistry</i> , 2006, 281, 10715-10726.	1.6	140
20	The Bone Morphogenetic Protein 15 Gene Is X-Linked and Expressed in Oocytes. <i>Molecular Endocrinology</i> , 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. <i>Development (Cambridge)</i> , 2004, 131, 5393-5403.	1.2	135
22	Smad signaling in skeletal development and regeneration. <i>Cytokine and Growth Factor Reviews</i> , 2009, 20, 379-388.	3.2	132
23	Osteogenic differentiation of mouse adipose-derived adult stromal cells requires retinoic acid and bone morphogenetic protein receptor type IB signaling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 12335-12340.	3.3	130
24	CTGF Inhibits BMP-7 Signaling in Diabetic Nephropathy. <i>Journal of the American Society of Nephrology: JASN</i> , 2008, 19, 2098-2107.	3.0	123
25	A phylogenetically conserved cis-regulatory module in the Msx2 promoter is sufficient for BMP-dependent transcription in murine and <i>Drosophila</i> embryos. <i>Development (Cambridge)</i> , 2004, 131, 5153-5165.	1.2	114
26	CCN2/Connective Tissue Growth Factor Is Essential for Pericyte Adhesion and Endothelial Basement Membrane Formation during Angiogenesis. <i>PLoS ONE</i> , 2012, 7, e30562.	1.1	114
27	Human Developmental Chondrogenesis as a Basis for Engineering Chondrocytes from Pluripotent Stem Cells. <i>Stem Cell Reports</i> , 2013, 1, 575-589.	2.3	113
28	Cooperative Regulation of Chondrocyte Differentiation by CCN2 and CCN3 Shown by a Comprehensive Analysis of the CCN Family Proteins in Cartilage. <i>Journal of Bone and Mineral Research</i> , 2008, 23, 1751-1764.	3.1	107
29	Distinct developmental programs require different levels of Bmp signaling during mouse retinal development. <i>Development (Cambridge)</i> , 2005, 132, 913-923.	1.2	104
30	BMP Signaling in the Cartilage Growth Plate. <i>Current Topics in Developmental Biology</i> , 2006, 76, 1-48.	1.0	104
31	Granulosa Cell-Expressed BMPRI1A and BMPRI1B Have Unique Functions in Regulating Fertility but Act Redundantly to Suppress Ovarian Tumor Development. <i>Molecular Endocrinology</i> , 2010, 24, 1251-1266.	3.7	97
32	Roles for CCN2 in normal physiological processes. <i>Cellular and Molecular Life Sciences</i> , 2011, 68, 3209-3217.	2.4	96
33	Connective tissue growth factor expression and Smad signaling during mouse heart development and myocardial infarction. <i>Developmental Dynamics</i> , 2004, 231, 542-550.	0.8	95
34	A New Model for Growth Factor Activation: Type II Receptors Compete with the Prodomain for BMP-7. <i>Journal of Molecular Biology</i> , 2008, 381, 1025-1039.	2.0	94
35	NELL-1 in the treatment of osteoporotic bone loss. <i>Nature Communications</i> , 2015, 6, 7362.	5.8	93
36	Connective Tissue Growth Factor Is Required for Normal Follicle Development and Ovulation. <i>Molecular Endocrinology</i> , 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. <i>Journal of Cell Communication and Signaling</i> , 2007, 1, 45-58.	1.8	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. <i>Journal of Biochemistry</i> , 2008, 145, 207-216.	0.9	82
39	WNT1-induced Secreted Protein-1 (WISP1), a Novel Regulator of Bone Turnover and Wnt Signaling. <i>Journal of Biological Chemistry</i> , 2015, 290, 14004-14018.	1.6	79
40	Connective Tissue Growth Factor (CTGF) Inactivation Leads to Defects in Islet Cell Lineage Allocation and $\beta$ -Cell Proliferation during Embryogenesis. <i>Molecular Endocrinology</i> , 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. <i>Blood</i> , 2013, 122, 357-366.	0.6	77
42	Loss of KDM4B exacerbates bone-fat imbalance and mesenchymal stromal cell exhaustion in skeletal aging. <i>Cell Stem Cell</i> , 2021, 28, 1057-1073.e7.	5.2	77
43	A genetic signature of the evolution of loss of flight in the Galapagos cormorant. <i>Science</i> , 2017, 356, .	6.0	76
44	Sirenomelia in Bmp7 and Tsg compound mutant mice: requirement for Bmp signaling in the development of ventral posterior mesoderm. <i>Development (Cambridge)</i> , 2005, 132, 2489-2499.	1.2	75
45	CCN family 2/connective tissue growth factor (CCN2/CTGF) promotes osteoclastogenesis via induction of and interaction with dendritic cell-specific transmembrane protein (DC-STAMP). <i>Journal of Bone and Mineral Research</i> , 2011, 26, 351-363.	3.1	70
46	Repression of Sox9 by Jag1 Is Continuously Required to Suppress the Default Chondrogenic Fate of Vascular Smooth Muscle Cells. <i>Developmental Cell</i> , 2014, 31, 707-721.	3.1	65
47	Tempting fate: BMP signals for cardiac morphogenesis. <i>Cytokine and Growth Factor Reviews</i> , 2003, 14, 1-4.	3.2	62
48	BMP3: To Be or Not To Be a BMP. <i>Journal of Bone and Joint Surgery - Series A</i> , 2001, 83, S1-56â€“S1â€“62.	1.4	61
49	Smad6 is essential to limit BMP signaling during cartilage development. <i>Journal of Bone and Mineral Research</i> , 2011, 26, 2498-2510.	3.1	60
50	The Type I BMP Receptor ACVR1/ALK2 is Required for Chondrogenesis During Development. <i>Journal of Bone and Mineral Research</i> , 2015, 30, 733-741.	3.1	59
51	Connective Tissue Growth Factor Is Necessary for Retinal Capillary Basal Lamina Thickening in Diabetic Mice. <i>Journal of Histochemistry and Cytochemistry</i> , 2008, 56, 785-792.	1.3	56
52	Functional requirement of CCN2 for intramembranous bone formation in embryonic mice. <i>Biochemical and Biophysical Research Communications</i> , 2008, 366, 450-456.	1.0	50
53	BMP Signaling and Podocyte Markers are Decreased in Human Diabetic Nephropathy in Association with CTGF Overexpression. <i>Journal of Histochemistry and Cytochemistry</i> , 2009, 57, 623-631.	1.3	50
54	Focal Adhesion Kinase/Src Suppresses Early Chondrogenesis. <i>Journal of Biological Chemistry</i> , 2008, 283, 9239-9247.	1.6	49

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55	TGF $\beta$ 2 and BMP Dependent Cell Fate Changes Due to Loss of Filamin B Produces Disc Degeneration and Progressive Vertebral Fusions. <i>PLoS Genetics</i> , 2016, 12, e1005936.	1.5	47
56	Expression of connective tissue growth factor (CTGF/CCN2) in breast cancer cells is associated with increased migration and angiogenesis. <i>International Journal of Oncology</i> , 2011, 38, 1741-7.	1.4	43
57	Smad2 and Smad3 Regulate Chondrocyte Proliferation and Differentiation in the Growth Plate. <i>PLoS Genetics</i> , 2016, 12, e1006352.	1.5	43
58	CCN family 2/connective tissue growth factor (CCN2/CTGF) regulates the expression of Vegf through Hif-1 $\alpha$ expression in a chondrocytic cell line, HCS-2/8, under hypoxic condition. <i>Bone</i> , 2009, 44, 24-31.	1.4	42
59	ATP6V1H Deficiency Impairs Bone Development through Activation of MMP9 and MMP13. <i>PLoS Genetics</i> , 2017, 13, e1006481.	1.5	42
60	Angiogenesis Is Not Impaired in Connective Tissue Growth Factor (CTGF) Knock-out Mice. <i>Journal of Histochemistry and Cytochemistry</i> , 2007, 55, 1139-1147.	1.3	41
61	Hypoxia-inducible Factor (HIF)-1 $\alpha$ and CCN2 Form a Regulatory Circuit in Hypoxic Nucleus Pulposus Cells. <i>Journal of Biological Chemistry</i> , 2013, 288, 12654-12666.	1.6	40
62	Signaling Pathways in Skeletal Formation: A Role for BMP Receptors. <i>Annals of the New York Academy of Sciences</i> , 1996, 785, 59-69.	1.8	39
63	Smad7 regulates terminal maturation of chondrocytes in the growth plate. <i>Developmental Biology</i> , 2013, 382, 375-384.	0.9	35
64	GATA4 Is Essential for Bone Mineralization via ER $\alpha$ and TGF $\beta$ 2/BMP Pathways. <i>Journal of Bone and Mineral Research</i> , 2014, 29, 2676-2687.	3.1	35
65	Connective tissue growth factor/CCN2-null mouse embryonic fibroblasts retain intact transforming growth factor- $\beta$ responsiveness. <i>Experimental Cell Research</i> , 2008, 314, 1094-1104.	1.2	34
66	Stage-specific Control of Connective Tissue Growth Factor (CTGF/CCN2) Expression in Chondrocytes by Sox9 and $\beta$ -Catenin. <i>Journal of Biological Chemistry</i> , 2010, 285, 27702-27712.	1.6	34
67	Deletion of BMP receptor type 1B decreased bone mass in association with compromised osteoblastic differentiation of bone marrow mesenchymal progenitors. <i>Scientific Reports</i> , 2016, 6, 24256.	1.6	32
68	The TGF $\beta$ 2 type I receptor TGF $\beta$ 2RI functions as an inhibitor of BMP signaling in cartilage. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 15570-15579.	3.3	29
69	Hemizygous deletion of CTGF/CCN2 does not suffice to prevent fibrosis of the severely injured kidney. <i>Matrix Biology</i> , 2012, 31, 421-431.	1.5	27
70	CCN2/CTGF is required for matrix organization and to protect growth plate chondrocytes from cellular stress. <i>Journal of Cell Communication and Signaling</i> , 2013, 7, 219-230.	1.8	27
71	CYR61/CCN1 Regulates Sclerostin Levels and Bone Maintenance. <i>Journal of Bone and Mineral Research</i> , 2018, 33, 1076-1089.	3.1	27
72	CCN family protein 2 (CCN2) promotes the early differentiation, but inhibits the terminal differentiation of skeletal myoblasts. <i>Journal of Biochemistry</i> , 2015, 157, 91-100.	0.9	25

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73	Tracking Expression of Virally Mediated BMP-2 in Gene Therapy for Bone Repair. <i>Clinical Orthopaedics and Related Research</i> , 2006, 450, 238-245.	0.7	24
74	BMPs, TGF $\beta$ 2, and border security at the interzone. <i>Current Topics in Developmental Biology</i> , 2019, 133, 153-170.	1.0	24
75	CCN2 as a Novel Molecule Supporting Energy Metabolism of Chondrocytes. <i>Journal of Cellular Biochemistry</i> , 2014, 115, 854-865.	1.2	22
76	BmpR1A is a major type 1 BMP receptor for BMP-Smad signaling during skull development. <i>Developmental Biology</i> , 2017, 429, 260-270.	0.9	22
77	Effect of localization, length and orientation of chondrocytic primary cilium on murine growth plate organization. <i>Journal of Theoretical Biology</i> , 2011, 285, 147-155.	0.8	19
78	Connective tissue growth factor is expressed in bone marrow stromal cells and promotes interleukin-7-dependent B lymphopoiesis. <i>Haematologica</i> , 2014, 99, 1149-1156.	1.7	18
79	Dynamic Analysis of the Expression of the TGF $\beta$ 2/SMAD2 Pathway and CCN2/CTGF during Early Steps of Tooth Development. <i>Cells Tissues Organs</i> , 2008, 187, 199-210.	1.3	16
80	Structure and sequence of the mouse bmp6 gene. <i>Mammalian Genome</i> , 1997, 8, 212-214.	1.0	15
81	CTGF/CCN2 facilitates LRP4-mediated formation of the embryonic neuromuscular junction. <i>EMBO Reports</i> , 2020, 21, e48462.	2.0	15
82	Molecular Regulation of Limb Growth. <i>Journal of Bone and Joint Surgery - Series A</i> , 2009, 91, 47-52.	1.4	14
83	Systems genetics analysis of mouse chondrocyte differentiation. <i>Journal of Bone and Mineral Research</i> , 2011, 26, 747-760.	3.1	14
84	Endogenous CCN family member WISP1 inhibits trauma-induced heterotopic ossification. <i>JCI Insight</i> , 2020, 5, .	2.3	12
85	TGF $\beta$ 2 as a gatekeeper of BMP action in the developing growth plate. <i>Bone</i> , 2020, 137, 115439.	1.4	10
86	Fibrosis and Hypoxia-Inducible Factor-1 $\alpha$ -Dependent Tumors of the Soft Tissue on Loss of Von Hippel-Lindau in Mesenchymal Progenitors. <i>American Journal of Pathology</i> , 2015, 185, 3090-3101.	1.9	9
87	Role of CCN2 in Amino Acid Metabolism of Chondrocytes. <i>Journal of Cellular Biochemistry</i> , 2016, 117, 927-937.	1.2	9
88	The 5' untranslated regions (UTRs) of CCN1, CCN2, and CCN4 exhibit cryptic promoter activity. <i>Journal of Cell Communication and Signaling</i> , 2007, 1, 17-32.	1.8	8
89	Characterization of bone morphology in CCN5/WISP5 knockout mice. <i>Journal of Cell Communication and Signaling</i> , 2018, 12, 265-270.	1.8	8
90	Homozygous missense variant in <i>BMPR1A</i> resulting in BMPR signaling disruption and syndromic features. <i>Molecular Genetics &amp; Genomic Medicine</i> , 2019, 7, e969.	0.6	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.	3.1	7
92	gp130/STAT3 signaling is required for homeostatic proliferation and anabolism in postnatal growth plate and articular chondrocytes. Communications Biology, 2022, 5, 64.	2.0	7
93	CCN2 reduction mediates protective effects of BMP7 treatment in obstructive nephropathy. Journal of Cell Communication and Signaling, 2017, 11, 39-48.	1.8	6
94	Report on the 8th international workshop on the CCN family of genes “Nice November 3-8, 2015. Journal of Cell Communication and Signaling, 2016, 10, 77-86.	1.8	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.	1.8	3
96	Design and Analysis of CCN Gene Activity Using CCN Knockout Mice Containing LacZ Reporters. Methods in Molecular Biology, 2017, 1489, 325-345.	0.4	2
97	Automated Cell Detection and Morphometry on Growth Plate Images of Mouse Bone. Applied Mathematics, 2014, 05, 2866-2880.	0.1	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, .	0.2	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.	0.2	0