Frank Beier

List of Publications by Year
in descending order

138	6,666	38660 50	74018 75
papers	citations	h-index	g-index
180	180	180	6986
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	RhoA/ROCK Signaling Regulates Sox9 Expression and Actin Organization during Chondrogenesis. Journal of Biological Chemistry, 2005, 280, 11626-11634.	1.6	256
2	Regulation of chondrocyte differentiation by the actin cytoskeleton and adhesive interactions. Journal of Cellular Physiology, 2007, 213, 1-8.	2.0	227
3	Cartilage biology in osteoarthritisâ€"lessons from developmental biology. Nature Reviews Rheumatology, 2011, 7, 654-663.	3.5	200
4	RhoA/ROCK Signaling Regulates Chondrogenesis in a Context-dependent Manner. Journal of Biological Chemistry, 2006, 281, 13134-13140.	1.6	161
5	Mouse models of osteoarthritis: modelling risk factors and assessing outcomes. Nature Reviews Rheumatology, 2014, 10, 413-421.	3.5	154
6	MAP kinases in chondrocyte differentiation. Developmental Biology, 2003, 263, 165-175.	0.9	143
7	CCN2 Is Necessary for Adhesive Responses to Transforming Growth Factor-Î²1 in Embryonic Fibroblasts. Journal of Biological Chemistry, 2006, 281, 10715-10726.	1.6	140
8	p38 MAP kinase signalling is required for hypertrophic chondrocyte differentiation. Biochemical Journal, 2004, 378, 53-62.	1.7	128
9	Early Changes of Articular Cartilage and Subchondral Bone in The DMM Mouse Model of Osteoarthritis. Scientific Reports, 2018, 8, 2855.	1.6	128
10	TGFÎ² and PTHrP Control Chondrocyte Proliferation by Activating Cyclin D1 Expression. Molecular Biology of the Cell, 2001, 12, 3852-3863.	0.9	127
11	Microarray Analyses of Gene Expression during Chondrocyte Differentiation Identifies Novel Regulators of Hypertrophy. Molecular Biology of the Cell, 2005, 16, 5316-5333.	0.9	126
12	Biology and pathology of Rho GTPase, PIâ€3 kinaseâ€Akt, and MAP kinase signaling pathways in chondrocytes. Journal of Cellular Biochemistry, 2010, 110, 573-580.	1.2	121
13	RhoA/ROCK Signaling Suppresses Hypertrophic Chondrocyte Differentiation. Journal of Biological Chemistry, 2004, 279, 13205-13214.	1.6	116
14	Forced mobilization accelerates pathogenesis: characterization of a preclinical surgical model of osteoarthritis. Arthritis Research and Therapy, 2007, 9, R13.	1.6	115
15	Chondrocyte hypertrophy in skeletal development, growth, and disease. Birth Defects Research Part C: Embryo Today Reviews, 2014, 102, 74-82.	3.6	107
16	Rho/ROCK and MEK/ERK activation by transforming growth factor-Î± induces articular cartilage degradation. Laboratory Investigation, 2010, 90, 20-30.	1.7	103
17	Rac1 Signaling Stimulates N-cadherin Expression, Mesenchymal Condensation, and Chondrogenesis. Journal of Biological Chemistry, 2007, 282, 23500-23508.	1.6	101
18	Atrx deficiency induces telomere dysfunction, endocrine defects, and reduced life span. Journal of Clinical Investigation, 2013, 123, 2049-2063.	3.9	99

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19	Rac1/Cdc42 and RhoA GTPases Antagonistically Regulate Chondrocyte Proliferation, Hypertrophy, and Apoptosis. Journal of Bone and Mineral Research, 2005, 20, 1022-1031.	3.1	91
20	Genetic ablation of Rac1 in cartilage results in chondrodysplasia. Developmental Biology, 2007, 306, 612-623.	0.9	91
21	Interplay between genetics and epigenetics in osteoarthritis. Nature Reviews Rheumatology, 2020, 16, 268-281.	3.5	91
22	p38 MAPK signaling during murine preimplantation development. Developmental Biology, 2004, 268, 76-88.	0.9	90
23	Cell-cycle control and the cartilage growth plate. Journal of Cellular Physiology, 2005, 202, 1-8.	2.0	85
24	The PI3K pathway regulates endochondral bone growth through control of hypertrophic chondrocyte differentiation. BMC Developmental Biology, 2008, 8, 40.	2.1	85
25	The Raf-1/MEK/ERK Pathway Regulates the Expression of the p21Cip1/Waf1 Gene in Chondrocytes. Journal of Biological Chemistry, 1999, 274, 30273-30279.	1.6	84
26	The role of Akt1 in terminal stages of endochondral bone formation: Angiogenesis and ossification. Bone, 2009, 45, 1133-1145.	1.4	84
27	The Critical Role of the Epidermal Growth Factor Receptor in Endochondral Ossification. Journal of Bone and Mineral Research, 2011, 26, 2622-2633.	3.1	84
28	Targeting cartilage EGFR pathway for osteoarthritis treatment. Science Translational Medicine, 2021, 13, .	5.8	83
29	C-type natriuretic peptide regulates endochondral bone growth through p38 MAP kinase-dependent and â€“ independent pathways. BMC Developmental Biology, 2007, 7, 18.	2.1	79
30	The transcription factor ATF3 is upregulated during chondrocyte differentiation and represses cyclin D1 and A gene transcription. BMC Molecular Biology, 2006, 7, 30.	3.0	78
31	Activating Transcription Factor 2 Is Necessary for Maximal Activity and Serum Induction of the Cyclin A Promoter in Chondrocytes. Journal of Biological Chemistry, 2000, 275, 12948-12953.	1.6	68
32	Transforming growth factor Î± suppression of articular chondrocyte phenotype and <i>Sox9</i> expression in a rat model of osteoarthritis. Arthritis and Rheumatism, 2007, 56, 3693-3705.	6.7	68
33	Emerging Frontiers in cartilage and chondrocyte biology. Best Practice and Research in Clinical Rheumatology, 2011, 25, 751-766.	1.4	64
34	ADAMTS-7 forms a positive feedback loop with TNF-Î± in the pathogenesis of osteoarthritis. Annals of the Rheumatic Diseases, 2014, 73, 1575-1584.	0.5	64
35	Expression profiling of Dexamethasone-treated primary chondrocytes identifies targets of glucocorticoid signalling in endochondral bone development. BMC Genomics, 2007, 8, 205.	1.2	63
36	Adult Cartilage-Specific Peroxisome Proliferatorâ€“Activated Receptor Gamma Knockout Mice Exhibit the Spontaneous Osteoarthritis Phenotype. American Journal of Pathology, 2013, 182, 1099-1106.	1.9	63

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37	Reduction in Disease Progression by Inhibition of Transforming Growth Factor Î±â€“CCL2 Signaling in Experimental Posttraumatic Osteoarthritis. Arthritis and Rheumatology, 2015, 67, 2691-2701.	2.9	61
38	Nitric oxide, C-type natriuretic peptide and cGMP as regulators of endochondral ossification. Developmental Biology, 2008, 319, 171-178.	0.9	60
39	Transforming growth factor alpha controls the transition from hypertrophic cartilage to bone during endochondral bone growth. Bone, 2012, 51, 131-141.	1.4	60
40	An in vivo investigation of the initiation and progression of subchondral cysts in a rodent model of secondary osteoarthritis. Arthritis Research and Therapy, 2012, 14, R26.	1.6	60
41	Characterization of Human Type X Procollagen and Its NC-1 Domain Expressed as Recombinant Proteins in HEK293 Cells. Journal of Biological Chemistry, 1998, 273, 4547-4555.	1.6	59
42	Recent developments in emerging therapeutic targets of osteoarthritis. Current Opinion in Rheumatology, 2017, 29, 96-102.	2.0	57
43	Fâ€spondin, a neuroregulatory protein, is upâ€regulated in osteoarthritis and regulates cartilage metabolism <i>via</i> TGFâ€Î² activation. FASEB Journal, 2009, 23, 79-89.	0.2	56
44	TGF-Î² and osteoarthritisâ€"the good and the bad. Nature Medicine, 2013, 19, 667-669.	15.2	56
45	Repeated Exposure to Highâ€Frequency Lowâ€Amplitude Vibration Induces Degeneration of Murine Intervertebral Discs and Knee Joints. Arthritis and Rheumatology, 2015, 67, 2164-2175.	2.9	56
46	Elevated expression of periostin in human osteoarthritic cartilage and its potential role in matrix degradation <i>via</i> matrix metalloproteinaseâ€13. FASEB Journal, 2015, 29, 4107-4121.	0.2	56
47	Targeting oxidative stress to reduce osteoarthritis. Arthritis Research and Therapy, 2016, 18, 32.	1.6	56
48	Timeâ€series transcriptional profiling yields new perspectives on susceptibility to murine osteoarthritis. Arthritis and Rheumatism, 2012, 64, 3256-3266.	6.7	54
49	Genomic organization and full-length cDNA sequence of human collagen X. FEBS Letters, 1992, 311, 305-310.	1.3	53
50	The Pattern Recognition Receptor CD36 Is a Chondrocyte Hypertrophy Marker Associated with Suppression of Catabolic Responses and Promotion of Repair Responses to Inflammatory Stimuli. Journal of Immunology, 2009, 182, 5024-5031.	0.4	53
51	Association of cartilageâ€specific deletion of peroxisome proliferatorâ€“activated receptor Î³ with abnormal endochondral ossification and impaired cartilage growth and development in a murine model. Arthritis and Rheumatism, 2012, 64, 1551-1561.	6.7	53
52	Deletion of Panx3 Prevents the Development of Surgically Induced Osteoarthritis. Journal of Molecular Medicine, 2015, 93, 845-856.	1.7	53
53	Transcriptional regulators of chondrocyte hypertrophy. Birth Defects Research Part C: Embryo Today Reviews, 2008, 84, 123-130.	3.6	49
54	Focal Adhesion Kinase/Src Suppresses Early Chondrogenesis. Journal of Biological Chemistry, 2008, 283, 9239-9247.	1.6	49

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55	Cartilage-specific deletion of Mig-6 results in osteoarthritis-like disorder with excessive articular chondrocyte proliferation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2590-2595.	3.3	49
56	p38 MAP kinase signaling is necessary for rat chondrosarcoma cell proliferation. Oncogene, 2004, 23, 3726-3731.	2.6	47
57	Disturbed Cartilage and Joint Homeostasis Resulting From a Loss of Mitogenâ€Inducible Gene 6 in a Mouse Model of Joint Dysfunction. Arthritis and Rheumatology, 2014, 66, 2816-2827.	2.9	47
58	Reduced EGFR signaling enhances cartilage destruction in a mouse osteoarthritis model. Bone Research, 2014, 2, 14015.	5.4	47
59	Genome-Wide Analyses of Gene Expression during Mouse Endochondral Ossification. PLoS ONE, 2010, 5, e8693.	1.1	47
60	Role of Interleukinâ€10 in Endochondral Bone Formation in Mice: Anabolic Effect via the Bone Morphogenetic Protein/Smad Pathway. Arthritis and Rheumatism, 2013, 65, 3153-3164.	6.7	45
61	Osteopontin mediates mineralization and not osteogenic cell development <i>inÂvitro</i>. Biochemical Journal, 2014, 464, 355-364.	1.7	44
62	Loss of bone sialoprotein leads to impaired endochondral bone development and mineralization. Bone, 2015, 71, 145-154.	1.4	44
63	Cell cycle genes in chondrocyte proliferation and differentiation. Matrix Biology, 1999, 18, 109-120.	1.5	43
64	Role of c-fos in the regulation of type X collagen gene expression by PTH and PTHrP: Localization of a PTH/PTHrP-responsive region in the human COL10A1 enhancer. Journal of Cellular Biochemistry, 2002, 86, 688-699.	1.2	43
65	The Cyclin D1 and Cyclin A Genes Are Targets of Activated PTH/PTHrP Receptors in Jansenâ€™s Metaphyseal Chondrodysplasia. Molecular Endocrinology, 2002, 16, 2163-2173.	3.7	40
66	C-Type Natriuretic Peptide Regulates Cellular Condensation and Glycosaminoglycan Synthesis during Chondrogenesis. Endocrinology, 2007, 148, 5030-5041.	1.4	40
67	The retinoic acid binding protein CRABP2 is increased in murine models of degenerative joint disease. Arthritis Research and Therapy, 2009, 11, R14.	1.6	40
68	ECM signaling in cartilage development and endochondral ossification. Current Topics in Developmental Biology, 2019, 133, 25-47.	1.0	38
69	Molecular and Histological Analysis of a New Rat Model of Experimental Knee Osteoarthritis. Annals of the New York Academy of Sciences, 2007, 1117, 165-174.	1.8	37
70	Upregulation of type X collagen expression in osteoarthritic cartilage. Acta Orthopaedica, 1995, 66, 125-129.	1.4	36
71	EGFR Signaling: Friend or Foe for Cartilage?. JBMR Plus, 2019, 3, e10177.	1.3	36
72	Src kinase inhibition promotes the chondrocyte phenotype. Arthritis Research and Therapy, 2007, 9, R105.	1.6	35

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73	Localization of silencer and enhancer elements in the human type X collagen gene. Journal of Cellular Biochemistry, 1997, 66, 210-218.	1.2	34
74	Human stanniocalcin-1 or -2 expressed in mice reduces bone size and severely inhibits cranial intramembranous bone growth. Transgenic Research, 2010, 19, 1017-1039.	1.3	34
75	Type X collagen expression and hypertrophic differentiation in chondrogenic neoplasias. Histochemistry and Cell Biology, 1997, 107, 435-440.	0.8	33
76	Nuclear receptors regulate lipid metabolism and oxidative stress markers in chondrocytes. Journal of Molecular Medicine, 2017, 95, 431-444.	1.7	32
77	Control of chondrocyte gene expression by actin dynamics: a novel role of cholesterol/Ror-Î± signalling in endochondral bone growth. Journal of Cellular and Molecular Medicine, 0, 13, 3497-3516.	1.6	31
78	Inhibition of p38 MAPK signaling in chondrocyte cultures results in enhanced osteogenic differentiation of perichondral cells. Experimental Cell Research, 2007, 313, 146-155.	1.2	30
79	Global deletion of <i>Panx3</i> produces multiple phenotypic effects in mouse humeri and femora. Journal of Anatomy, 2016, 228, 746-756.	0.9	30
80	Regulator of G-protein signaling (RGS) proteins differentially control chondrocyte differentiation. Journal of Cellular Physiology, 2006, 207, 735-745.	2.0	29
81	Loss of ATRX in Chondrocytes Has Minimal Effects on Skeletal Development. PLoS ONE, 2009, 4, e7106.	1.1	29
82	Control of chondrocyte gene expression by actin dynamics: a novel role of cholesterol/Ror-Î± signalling in endochondral bone growth. Journal of Cellular and Molecular Medicine, 2009, 13, 3497-3516.	1.6	29
83	Endothelial nitric oxide synthase deficiency in mice results in reduced chondrocyte proliferation and endochondral bone growth. Arthritis and Rheumatism, 2010, 62, 2013-2022.	6.7	29
84	Activating transcription factor 2 controls Bcl-2 promoter activity in growth plate chondrocytes. Journal of Cellular Biochemistry, 2007, 101, 477-487.	1.2	28
85	Loss of the Mammalian DREAM Complex Deregulates Chondrocyte Proliferation. Molecular and Cellular Biology, 2014, 34, 2221-2234.	1.1	28
86	Novel Insights into Osteoarthritis Joint Pathology from Studies in Mice. Current Rheumatology Reports, 2015, 17, 50.	2.1	27
87	Context-specific protection of TGFÎ± null mice from osteoarthritis. Scientific Reports, 2016, 6, 30434.	1.6	27
88	Regulation of Gene Expression by PI3K in Mouse Growth Plate Chondrocytes. PLoS ONE, 2010, 5, e8866.	1.1	25
89	Inducible nitric oxide synthaseâ€“nitric oxide signaling mediates the mitogenic activity of Rac1 during endochondral bone growth. Journal of Cell Science, 2011, 124, 3405-3413.	1.2	24
90	Choline kinase beta is required for normal endochondral bone formation. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 2112-2122.	1.1	24

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91	F-Spondin Deficient Mice Have a High Bone Mass Phenotype. PLoS ONE, 2014, 9, e98388.	1.1	22
92	Targeted loss of the ATR-X syndrome protein in the limb mesenchyme of mice causes brachydactyly. Human Molecular Genetics, 2013, 22, 5015-5025.	1.4	19
93	Variability in the upstream promoter and intron sequences of the human, mouse and chick type X collagen genes. Matrix Biology, 1996, 15, 415-422.	1.5	18
94	Raf signaling stimulates and represses the human collagen X promoter through distinguishable elements. , 1999, 72, 549-557.		18
95	Rac1 activation induces tumour necrosis factor-Î± expression and cardiac dysfunction in endotoxemia. Journal of Cellular and Molecular Medicine, 2011, 15, 1109-1121.	1.6	18
96	The CPPDD-Associated <i>ANKH M48T</i> Mutation Interrupts the Interaction of ANKH with the Sodium/Phosphate Cotransporter PiT-1. Journal of Rheumatology, 2009, 36, 1265-1272.	1.0	17
97	The role of bone sialoprotein in the tendonâ€“bone insertion. Matrix Biology, 2016, 52-54, 325-338.	1.5	17
98	Poly(ester amide) particles for controlled delivery of celecoxib. Journal of Biomedical Materials Research - Part A, 2019, 107, 1235-1243.	2.1	17
99	Dicam promotes proliferation and maturation of chondrocyte through Indian hedgehog signaling in primary cilia. Osteoarthritis and Cartilage, 2018, 26, 945-953.	0.6	16
100	Mosaic expression of Atrx in the central nervous system causes memory deficits. DMM Disease Models and Mechanisms, 2017, 10, 119-126.	1.2	15
101	Thermoresponsive and Covalently Cross-Linkable Hydrogels for Intra-Articular Drug Delivery. ACS Applied Bio Materials, 2019, 2, 3498-3507.	2.3	14
102	Serum Induction of the Collagen X Promoter Requires the Raf/MEK/ERK and p38 Pathways. Biochemical and Biophysical Research Communications, 1999, 262, 50-54.	1.0	13
103	Dexamethasone stimulates expression of C-type Natriuretic Peptide in chondrocytes. BMC Musculoskeletal Disorders, 2006, 7, 87.	0.8	13
104	Transforming growth factorâ€alpha induces endothelin receptor A expression in osteoarthritis. Journal of Orthopaedic Research, 2012, 30, 1391-1397.	1.2	13
105	EGFR Signaling Is Required for Maintaining Adult Cartilage Homeostasis and Attenuating Osteoarthritis Progression. Journal of Bone and Mineral Research, 2020, 37, 1012-1023.	3.1	13
106	Rho-ROCK signaling differentially regulates chondrocyte spreading on fibronectin and bone sialoprotein. American Journal of Physiology - Cell Physiology, 2008, 295, C38-C49.	2.1	12
107	PPARÎ³2 expression in growth plate chondrocytes is regulated by p38 and GSKâ€3. Journal of Cellular and Molecular Medicine, 2010, 14, 242-256.	1.6	12
108	The Role of Panx3 in Age-Associated and Injury-Induced Intervertebral Disc Degeneration. International Journal of Molecular Sciences, 2021, 22, 1080.	1.8	10

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109	THE ROLE OF ACTIVATING TRANSCRIPTION FACTOR-2 IN SKELETAL GROWTH CONTROL. Journal of Bone and Joint Surgery - Series A, 2003, 85, 133-136.	1.4	10
110	Nuclear receptors as potential drug targets in osteoarthritis. Current Opinion in Pharmacology, 2018, 40, 81-86.	1.7	9
111	Polymer particles for the intra-articular delivery of drugs to treat osteoarthritis. Biomedical Materials (Bristol), 2021, 16, 042006.	1.7	9
112	Is there such a thing as a cartilage-specific knockout mouse?. Nature Reviews Rheumatology, 2014, 10, 702-704.	3.5	8
113	Overexpression of MIG-6 in the cartilage induces an osteoarthritis-like phenotype in mice. Arthritis Research and Therapy, 2020, 22, 119.	1.6	8
114	Pannexin 3 deletion reduces fat accumulation and inflammation in a sex-specific manner. International Journal of Obesity, 2022, 46, 726-738.	1.6	8
115	Deletion of Dual Specificity Phosphatase 1 Does Not Predispose Mice to Increased Spontaneous Osteoarthritis. PLoS ONE, 2015, 10, e0142822.	1.1	7
116	Rac1 Dosage Is Crucial for Normal Endochondral Bone Growth. Endocrinology, 2017, 158, 3386-3398.	1.4	7
117	Exposure to the RXR Agonist SR11237 in Early Life Causes Disturbed Skeletal Morphogenesis in a Rat Model. International Journal of Molecular Sciences, 2019, 20, 5198.	1.8	7
118	Glycogen synthase kinase 3 alpha/beta deletion induces precocious growth plate remodeling in mice. Journal of Molecular Medicine, 2021, 99, 831-844.	1.7	7
119	Expansion of myeloid-derived suppressor cells contributes to metabolic osteoarthritis through subchondral bone remodeling. Arthritis Research and Therapy, 2021, 23, 287.	1.6	7
120	The first international workshop on the epigenetics of osteoarthritis. Connective Tissue Research, 2017, 58, 37-48.	1.1	6
121	An approach towards accountability: suggestions for increased reproducibility in surgical destabilization of medial meniscus (DMM) models. Osteoarthritis and Cartilage, 2017, 25, 1747-1750.	0.6	6
122	Diet-induced obesity leads to behavioral indicators of pain preceding structural joint damage in wild-type mice. Arthritis Research and Therapy, 2021, 23, 93.	1.6	6
123	GSK3787-Loaded Poly(Ester Amide) Particles for Intra-Articular Drug Delivery. Polymers, 2020, 12, 736.	2.0	5
124	Identification of the putative collagen X gene from the pufferfish Fugu rubripes. Gene, 2004, 342, 77-83.	1.0	4
125	Loss of ATRX Does Not Confer Susceptibility to Osteoarthritis. PLoS ONE, 2013, 8, e85526.	1.1	4
126	Liver X Receptor activation regulates genes involved in lipid homeostasis in developing chondrocytes. Osteoarthritis and Cartilage Open, 2020, 2, 100030.	0.9	4

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127	A top-notch dilemma: The complex role of NOTCH signaling in osteoarthritis. Science Signaling, 2015, 8, fs14.	1.6	2
128	Cholesterol and cartilage do not mix well. Nature Reviews Rheumatology, 2019, 15, 253-254.	3.5	2
129	Keep your Sox on, chondrocytes!. Nature Reviews Rheumatology, 2021, 17, 383-384.	3.5	2
130	Quantification of joint blood flow by dynamic contrast-enhanced near-infrared spectroscopy: application to monitoring disease activity in a rat model of rheumatoid arthritis. Journal of Biomedical Optics, 2020, 25, 1.	1.4	2
131	Inactivation of hepatic ATRX in Atrx Foxg1cre mice prevents reversal of aging-like phenotypes by thyroxine. Aging, 2018, 10, 1223-1238.	1.4	2
132	Skeletal development and regeneration. Current Opinion in Orthopaedics, 1999, 10, 466-471.	0.3	1
133	Quantifying joint blood flow in a rat model of rheumatoid arthritis with dynamic contrast-enhanced near-infrared spectroscopy. , 2019, , .		1
134	A Na+/K+ ATPase Pump Regulates Chondrocyte Differentiation and Bone Length Variation in Mice. Frontiers in Cell and Developmental Biology, 2021, 9, 708384.	1.8	1
135	Editorial: Changes in Messenger RNA Stability in Chondrocytes: There's More to Osteoarthritis Than Transcription. Arthritis and Rheumatology, 2014, 66, 2921-2923.	2.9	0
136	Cartilage Differentiation and the Actin Cytoskeleton. , 2016, , 253-267.		0
137	Genetic Deletion of Interleukin-15 Is Not Associated with Major Structural Changes Following Experimental Post-Traumatic Knee Osteoarthritis in Rats. Applied Sciences (Switzerland), 2021, 11, 7118.	1.3	0
138	Endothelial Pannexin 3 â€“ B Cell Lymphomaâ€6 Interactions Protect Against Oxidative Stress. FASEB Journal, 2022, 36, .	0.2	0