Makarand V Risbud

List of Publications by Year
in descending order

140 papers	12,778 citations	30070 54 h-index	25787 108 g-index
144 all docs	144 docs citations	144 times ranked	10827 citing authors

#	Article	IF	Citations
1	Chitosan: A versatile biopolymer for orthopaedic tissue-engineering. Biomaterials, 2005, 26, 5983-5990.	11.4	1,447
2	Role of cytokines in intervertebral disc degeneration: pain and disc content. Nature Reviews Rheumatology, 2014, 10, 44-56.	8.0	1,134
3	Scaffold-based tissue engineering: rationale for computer-aided design and solid free-form fabrication systems. Trends in Biotechnology, 2004, 22, 354-362.	9.3	995
4	pH-sensitive freeze-dried chitosanâ€“polyvinyl pyrrolidone hydrogels as controlled release system for antibiotic delivery. Journal of Controlled Release, 2000, 68, 23-30.	9.9	433
5	Exhaustion of nucleus pulposus progenitor cells with ageing and degeneration of the intervertebral disc. Nature Communications, 2012, 3, 1264.	12.8	357
6	Differentiation of Mesenchymal Stem Cells Towards a Nucleus Pulposus-like Phenotype In Vitro: Implications for Cell-Based Transplantation Therapy. Spine, 2004, 29, 2627-2632.	2.0	283
7	Molecular mechanisms of biological aging in intervertebral discs. Journal of Orthopaedic Research, 2016, 34, 1289-1306.	2.3	270
8	Evidence for Skeletal Progenitor Cells in the Degenerate Human Intervertebral Disc. Spine, 2007, 32, 2537-2544.	2.0	256
9	Tissue engineering: advances in in vitro cartilage generation. Trends in Biotechnology, 2002, 20, 351-356.	9.3	234
10	Nucleus pulposus cells express HIF-1Î± under normoxic culture conditions: A metabolic adaptation to the intervertebral disc microenvironment. Journal of Cellular Biochemistry, 2006, 98, 152-159.	2.6	227
11	Defining the phenotype of young healthy nucleus pulposus cells: Recommendations of the Spine Research Interest Group at the 2014 annual ORS meeting. Journal of Orthopaedic Research, 2015, 33, 283-293.	2.3	226
12	TNF-Î± and IL-1Î² Promote a Disintegrin-like and Metalloprotease with Thrombospondin Type I Motif-5-mediated Aggrecan Degradation through Syndecan-4 in Intervertebral Disc. Journal of Biological Chemistry, 2011, 286, 39738-39749.	3.4	225
13	Inflammatory Cytokines Associated with Degenerative Disc Disease Control Aggrecanase-1 (ADAMTS-4) Expression in Nucleus Pulposus Cells through MAPK and NF-ÎºB. American Journal of Pathology, 2013, 182, 2310-2321.	3.8	171
14	Current strategies for cell delivery in cartilage and bone regeneration. Current Opinion in Biotechnology, 2004, 15, 411-418.	6.6	169
15	Normoxic stabilization of HIF-1Î± drives glycolytic metabolism and regulates aggrecan gene expression in nucleus pulposus cells of the rat intervertebral disk. American Journal of Physiology - Cell Physiology, 2007, 293, C621-C631.	4.6	157
16	Phenotypic characteristics of the nucleus pulposus: expression of hypoxia inducing factor-1, glucose transporter-1 and MMP-2. Cell and Tissue Research, 2002, 308, 401-407.	2.9	154
17	Matrix vesicles: Are they anchored exosomes?. Bone, 2015, 79, 29-36.	2.9	148
18	Long-term treatment with senolytic drugs Dasatinib and Quercetin ameliorates age-dependent intervertebral disc degeneration in mice. Nature Communications, 2021, 12, 5213.	12.8	148

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19	Tumor necrosis factor Î±â€“ and interleukinâ€1Î²â€“dependent induction of CCL3 expression by nucleus pulposus cells promotes macrophage migration through CCR1. Arthritis and Rheumatism, 2013, 65, 832-842.	6.7	144
20	Toward an understanding of the role of notochordal cells in the adult intervertebral disc: From discord to accord. Developmental Dynamics, 2010, 239, 2141-2148.	1.8	141
21	Notochordal Cells in the Adult Intervertebral Disc: New Perspective on an Old Question. Critical Reviews in Eukaryotic Gene Expression, 2011, 21, 29-41.	0.9	141
22	Enhancement of intervertebral disc cell senescence by WNT/Î²â€catenin signalingâ€“induced matrix metalloproteinase expression. Arthritis and Rheumatism, 2010, 62, 3036-3047.	6.7	129
23	Nucleus Pulposus Cells Upregulate PI3K/Akt and MEK/ERK Signaling Pathways Under Hypoxic Conditions and Resist Apoptosis Induced by Serum Withdrawal. Spine, 2005, 30, 882-889.	2.0	115
24	Discogenic Back Pain: Literature Review of Definition, Diagnosis, and Treatment. JBMR Plus, 2019, 3, e10180.	2.7	114
25	Tumor Necrosis Factor-Î±â€“ and Interleukin-1Î²â€“Dependent Matrix Metalloproteinase-3 Expression in Nucleus Pulposus Cells Requires Cooperative Signaling via Syndecan 4 and Mitogen-Activated Protein Kinaseâ€“NF-ÎºB Axis. American Journal of Pathology, 2014, 184, 2560-2572.	3.8	112
26	Expression and Relationship of Proinflammatory Chemokine RANTES/CCL5 and Cytokine IL-1Î² in Painful Human Intervertebral Discs. Spine, 2013, 38, 873-880.	2.0	110
27	Extracellular osmolarity regulates matrix homeostasis in the intervertebral disc and articular cartilage: Evolving role of TonEBP. Matrix Biology, 2014, 40, 10-16.	3.6	102
28	Hypoxic Regulation of Nucleus Pulposus Cell Survival. American Journal of Pathology, 2010, 176, 1577-1583.	3.8	101
29	Toward an Optimum System for Intervertebral Disc Organ Culture. Spine, 2006, 31, 884-890.	2.0	97
30	MEK/ERK Signaling Controls Osmoregulation of Nucleus Pulposus Cells of the Intervertebral Disc by Transactivation of TonEBP/OREBP. Journal of Bone and Mineral Research, 2007, 22, 965-974.	2.8	96
31	A novel mouse model of intervertebral disc degeneration shows altered cell fate and matrix homeostasis. Matrix Biology, 2018, 70, 102-122.	3.6	94
32	Inflammatory Cytokines Induce NOTCH Signaling in Nucleus Pulposus Cells. Journal of Biological Chemistry, 2013, 288, 16761-16774.	3.4	93
33	Glycosaminoglycan synthesis in the nucleus pulposus: Dysregulation and the pathogenesis of disc degeneration. Matrix Biology, 2018, 71-72, 368-379.	3.6	91
34	TonEBP/OREBP Is a Regulator of Nucleus Pulposus Cell Function and Survival in the Intervertebral Disc. Journal of Biological Chemistry, 2006, 281, 25416-25424.	3.4	90
35	HIF-1Î± Is a Regulator of Galectin-3 Expression in the Intervertebral Disc. Journal of Bone and Mineral Research, 2007, 22, 1851-1861.	2.8	89
36	Hypoxia promotes noncanonical autophagy in nucleus pulposus cells independent of MTOR and HIF1A signaling. Autophagy, 2016, 12, 1631-1646.	9.1	89

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37	Substance P Stimulates Production of Inflammatory Cytokines in Human Disc Cells. Spine, 2013, 38, E1291-E1299.	2.0	84
38	Loss of HIF-1Î± in the Notochord Results in Cell Death and Complete Disappearance of the Nucleus Pulposus. PLoS ONE, 2014, 9, e110768.	2.5	83
39	Hypoxia Activates MAPK Activity in Rat Nucleus Pulposus Cells. Spine, 2005, 30, 2503-2509.	2.0	82
40	Expression of Prolyl Hydroxylases (PHDs) Is Selectively Controlled by HIF-1 and HIF-2 Proteins in Nucleus Pulposus Cells of the Intervertebral Disc. Journal of Biological Chemistry, 2012, 287, 16975-16986.	3.4	76
41	HIF-1Î± and HIF-2Î± degradation is differentially regulated in nucleus pulposus cells of the intervertebral disc. Journal of Bone and Mineral Research, 2012, 27, 401-412.	2.8	75
42	Hypoxia activates the notch signaling pathway in cells of the intervertebral disc: Implications in degenerative disc disease. Arthritis and Rheumatism, 2011, 63, 1355-1364.	6.7	74
43	Expression of Acid-Sensing Ion Channel 3 (ASIC3) in Nucleus Pulposus Cells of the Intervertebral Disc Is Regulated by p75NTR and ERK Signaling. Journal of Bone and Mineral Research, 2007, 22, 1996-2006.	2.8	73
44	Cited2 modulates hypoxiaâ€inducible factorâ€"dependent expression of vascular endothelial growth factor in nucleus pulposus cells of the rat intervertebral disc. Arthritis and Rheumatism, 2008, 58, 3798-3808.	6.7	71
45	Hypoxic Regulation of Mitochondrial Metabolism and Mitophagy in Nucleus Pulposus Cells Is Dependent on <scp>HIF</scp>â€1Î±â€"<scp>BNIP3</scp> Axis. Journal of Bone and Mineral Research, 2020, 35, 1504-1524.	2.8	71
46	PI3K/AKT regulates aggrecan gene expression by modulating Sox9 expression and activity in nucleus pulposus cells of the intervertebral disc. Journal of Cellular Physiology, 2009, 221, 668-676.	4.1	70
47	Growth modulation of fibroblasts by chitosan-polyvinyl pyrrolidone hydrogel: Implications for wound management?. Journal of Biosciences, 2000, 25, 25-30.	1.1	69
48	p16Ink4a deletion in cells of the intervertebral disc affects their matrix homeostasis and senescence associated secretory phenotype without altering onset of senescence. Matrix Biology, 2019, 82, 54-70.	3.6	68
49	Transgenic mice overexpressing human TNF-Î± experience early onset spontaneous intervertebral disc herniation in the absence of overt degeneration. Cell Death and Disease, 2019, 10, 7.	6.3	67
50	Prolyl Hydroxylase 3 (PHD3) Modulates Catabolic Effects of Tumor Necrosis Factor-Î± (TNF-Î±) on Cells of the Nucleus Pulposus through Co-activation of Nuclear Factor ÎºB (NF-ÎºB)/p65 Signaling. Journal of Biological Chemistry, 2012, 287, 39942-39953.	3.4	66
51	Sox9 deletion causes severe intervertebral disc degeneration characterized by apoptosis, matrix remodeling, and compartment-specific transcriptomic changes. Matrix Biology, 2020, 94, 110-133.	3.6	66
52	Biocompatible hydrogel supports the growth of respiratory epithelial cells: Possibilities in tracheal tissue engineering. Journal of Biomedical Materials Research Part B, 2001, 56, 120-127.	3.1	63
53	An Organ Culture System for the Study of the Nucleus Pulposus: Description of the System and Evaluation of the Cells. Spine, 2003, 28, 2652-2658.	2.0	62
54	Osteogenic Potential of Adult Human Stem Cells of the Lumbar Vertebral Body and the Iliac Crest. Spine, 2006, 31, 83-89.	2.0	61

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55	Understanding Nucleus Pulposus Cell Phenotype: A Prerequisite for Stem Cell Based Therapies to Treat Intervertebral Disc Degeneration. Current Stem Cell Research and Therapy, 2015, 10, 307-316.	1.3	61
56	An organ culture system to model early degenerative changes of the intervertebral disc. Arthritis Research and Therapy, 2011, 13, R171.	3.5	57
57	BMP-2 and TGF-Î² stimulate expression of Î²1,3-glucuronosyl transferase 1 (GlcAT-1) in nucleus pulposus cells through AP1, TonEBP, and Sp1: Role of MAPKs. Journal of Bone and Mineral Research, 2010, 25, 1179-1190.	2.8	56
58	Regulation of CCN2/Connective tissue growth factor expression in the nucleus pulposus of the intervertebral disc: Role of Smad and activator protein 1 signaling. Arthritis and Rheumatism, 2010, 62, 1983-1992.	6.7	54
59	Cell-based therapy for disc repair. Spine Journal, 2005, 5, S297-S303.	1.3	53
60	Fibroblast Growth Factor-2 Maintains the Differentiation Potential of Nucleus Pulposus Cells In Vitro. Spine, 2007, 32, 495-502.	2.0	53
61	Suitability of cellulose molecular dialysis membrane for bioartificial pancreas:In vitro biocompatibility studies. Journal of Biomedical Materials Research Part B, 2001, 54, 436-444.	3.1	52
62	Stem cell regeneration of the nucleus pulposus. Spine Journal, 2004, 4, S348-S353.	1.3	52
63	Preparation, characterization and in vitro biocompatibility evaluation of poly(butylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 42	11.4	49
64	CCN2 Suppresses Catabolic Effects of Interleukin-1Î² through Î±5Î²1 and Î±VÎ²3 Integrins in Nucleus Pulposus Cells. Journal of Biological Chemistry, 2014, 289, 7374-7387.	3.4	48
65	Effect of chitosan-polyvinyl pyrrolidone hydrogel on proliferation and cytokine expression of endothelial cells: Implications in islet immunoisolation. Journal of Biomedical Materials Research Part B, 2001, 57, 300-305.	3.1	47
66	Models of pancreatic regeneration in diabetes. Diabetes Research and Clinical Practice, 2002, 58, 155-165.	2.8	47
67	Activation of TonEBP by Calcium Controls Î²1,3-Glucuronosyltransferase-I Expression, a Key Regulator of Glycosaminoglycan Synthesis in Cells of the Intervertebral Disc. Journal of Biological Chemistry, 2009, 284, 9824-9834.	3.4	47
68	TonEBP-deficiency accelerates intervertebral disc degeneration underscored by matrix remodeling, cytoskeletal rearrangements, and changes in proinflammatory gene expression. Matrix Biology, 2020, 87, 94-111.	3.6	47
69	Tissue engineering: implications in the treatment of organ and tissue defects. , 2001, 2, 117-125.		46
70	Prolyl-4-hydroxylase Domain Protein 2 Controls NF-Î°B/p65 Transactivation and Enhances the Catabolic Effects of Inflammatory Cytokines on Cells of the Nucleus Pulposus. Journal of Biological Chemistry, 2015, 290, 7195-7207.	3.4	46
71	N-cadherin is Key to Expression of the Nucleus Pulposus Cell Phenotype under Selective Substrate Culture Conditions. Scientific Reports, 2016, 6, 28038.	3.3	46
72	Bicarbonate Recycling by HIF-1â€"Dependent Carbonic Anhydrase Isoforms 9 and 12 Is Critical in Maintaining Intracellular pH and Viability of Nucleus Pulposus Cells. Journal of Bone and Mineral Research, 2018, 33, 338-355.	2.8	46

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73	A New Understanding of the Role of IL-1 in Age-Related Intervertebral Disc Degeneration in a Murine Model. Journal of Bone and Mineral Research, 2019, 34, 1531-1542.	2.8	46
74	Lactate Efflux From Intervertebral Disc Cells Is Required for Maintenance of Spine Health. Journal of Bone and Mineral Research, 2020, 35, 550-570.	2.8	46
75	Tonicity enhancer binding protein (TonEBP) and hypoxia-inducible factor (HIF) coordinate heat shock protein 70 (Hsp70) expression in hypoxic nucleus pulposus cells: Role of Hsp70 in HIF-1Î± degradation. Journal of Bone and Mineral Research, 2012, 27, 1106-1117.	2.8	45
76	Osmolarity and Intracellular Calcium Regulate Aquaporin2 Expression Through TonEBP in Nucleus Pulposus Cells of the Intervertebral Disc. Journal of Bone and Mineral Research, 2009, 24, 992-1001.	2.8	44
77	The role of HIF proteins in maintaining the metabolic health of the intervertebral disc. Nature Reviews Rheumatology, 2021, 17, 426-439.	8.0	43
78	Reversine Enhances Generation of Progenitor-like Cells by Dedifferentiation of Annulus Fibrosus Cells. Tissue Engineering - Part A, 2010, 16, 1443-1455.	3.1	42
79	Cellular Therapy for Disc Degeneration. Spine, 2005, 30, S14-S19.	2.0	41
80	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
81	Class I and IIa HDACs Mediate HIF-1Î± Stability Through PHD2-Dependent Mechanism, While HDAC6, a Class IIb Member, Promotes HIF-1Î± Transcriptional Activity in Nucleus Pulposus Cells of the Intervertebral Disc. Journal of Bone and Mineral Research, 2016, 31, 1287-1299.	2.8	40
82	Chitosanâ€"Polyvinyl Pyrrolidone Hydrogels as Candidate for Islet Immunoisolation: In Vitro Biocompatibility Evaluation. Cell Transplantation, 2000, 9, 25-31.	2.5	39
83	Hypoxic regulation of Î²-1,3-glucuronyltransferase 1 expression in nucleus pulposus cells of the rat intervertebral disc: Role of hypoxia-inducible factor proteins. Arthritis and Rheumatism, 2011, 63, 1950-1960.	6.7	39
84	Is the spinal motion segment a diarthrodial polyaxial joint: What a nice nucleus like you doing in a joint like this?. Bone, 2012, 50, 771-776.	2.9	39
85	TNF-Î± promotes nuclear enrichment of the transcription factor TonEBP/NFAT5 to selectively control inflammatory but not osmoregulatory responses in nucleus pulposus cells. Journal of Biological Chemistry, 2017, 292, 17561-17575.	3.4	39
86	An organ culture system to model early degenerative changes of the intervertebral disc II: profiling global gene expression changes. Arthritis Research and Therapy, 2013, 15, R121.	3.5	38
87	Hydrogel-coated textile scaffolds as candidate in liver tissue engineering: II. Evaluation of spheroid formation and viability of hepatocytes. Journal of Biomaterials Science, Polymer Edition, 2003, 14, 719-731.	3.5	37
88	Expression of Carbonic Anhydrase III, a Nucleus Pulposus Phenotypic Marker, is Hypoxia-responsive and Confers Protection from Oxidative Stress-induced Cell Death. Scientific Reports, 2018, 8, 4856.	3.3	35
89	Comparison of inbred mouse strains shows diverse phenotypic outcomes of intervertebral disc aging. Aging Cell, 2020, 19, e13148.	6.7	35
90	SMAD3 Functions as a Transcriptional Repressor of Acid-Sensing Ion Channel 3 (ASIC3) in Nucleus Pulposus Cells of the Intervertebral Disc. Journal of Bone and Mineral Research, 2008, 23, 1619-1628.	2.8	32

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91	RNA binding protein HuR regulates extracellular matrix gene expression and pH homeostasis independent of controlling HIF-1Î± signaling in nucleus pulposus cells. Matrix Biology, 2019, 77, 23-40.	3.6	32
92	Circadian factors BMAL1 and RORÎ± control HIF-1Î± transcriptional activity in nucleus pulposus cells: implications in maintenance of intervertebral disc health. Oncotarget, 2016, 7, 23056-23071.	1.8	32
93	Hypoxiaâ€inducible factor regulation of ANK expression in nucleus pulposus cells: Possible implications in controlling dystrophic mineralization in the intervertebral disc. Arthritis and Rheumatism, 2010, 62, 2707-2715.	6.7	31
94	HIFâ€1â€PHD2 axis controls expression of syndecan 4 in nucleus pulposus cells. FASEB Journal, 2014, 28, 2455-2465.	0.5	30
95	Syndecan-4 in intervertebral disc and cartilage: Saint or synner?. Matrix Biology, 2016, 52-54, 355-362.	3.6	30
96	Molecular regulation of CCN2 in the intervertebral disc: Lessons learned from other connective tissues. Matrix Biology, 2013, 32, 298-306.	3.6	29
97	Differential Effect of Longâ€Term Systemic Exposure of TNFÎ± on Health of the Annulus Fibrosus and Nucleus Pulposus of the Intervertebral Disc. Journal of Bone and Mineral Research, 2020, 35, 725-737.	2.8	29
98	Role of autophagy in intervertebral disc and cartilage function: implications in health and disease. Matrix Biology, 2021, 100-101, 207-220.	3.6	29
99	Xylosyltransferase-1 Expression Is Refractory to Inhibition by the Inflammatory Cytokines Tumor Necrosis Factor Î± and IL-1Î² in Nucleus Pulposus Cells. American Journal of Pathology, 2015, 185, 485-495.	3.8	27
100	COX-2 expression mediated by calcium-TonEBP signaling axis under hyperosmotic conditions serves osmoprotective function in nucleus pulposus cells. Journal of Biological Chemistry, 2018, 293, 8969-8981.	3.4	27
101	Development of a standardized histopathology scoring system using machine learning algorithms for intervertebral disc degeneration in the mouse modelâ€"An <scp>ORS</scp> spine section initiative. JOR Spine, 2021, 4, e1164.	3.2	27
102	RNA Sequencing Reveals a Role of TonEBP Transcription Factor in Regulation of Pro-inflammatory Genes in Response to Hyperosmolarity in Healthy Nucleus Pulposus Cells. Journal of Biological Chemistry, 2016, 291, 26686-26697.	3.4	26
103	TGFÎ² regulates Galectin-3 expression through canonical Smad3 signaling pathway in nucleus pulposus cells: implications in intervertebral disc degeneration. Matrix Biology, 2016, 50, 39-52.	3.6	26
104	PHD3 is a transcriptional coactivator of HIFâ€1Î± in nucleus pulposus cells independent of the PKM2â€JMJD5 axis. FASEB Journal, 2017, 31, 3831-3847.	0.5	26
105	Transforming growth factor Î² controls CCN3 expression in nucleus pulposus cells of the intervertebral disc. Arthritis and Rheumatism, 2011, 63, 3022-3031.	6.7	25
106	In vivo biocompatibility evaluation of cellulose macrocapsules for islet immunoisolation: Implications of low molecular weight cut-off. Journal of Biomedical Materials Research Part B, 2003, 66A, 86-92.	3.1	24
107	Understanding embryonic development for cellâ€based therapies of intervertebral disc degeneration: Toward an effort to treat disc degeneration subphenotypes. Developmental Dynamics, 2021, 250, 302-317.	1.8	24
108	Galectin-3 Expression in the Intervertebral Disc: A Useful Marker of the Notochord Phenotype?. Spine, 2007, 32, 9-16.	2.0	23

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109	Transcriptional profiling of the nucleus pulposus: say yes to notochord. Arthritis Research and Therapy, 2010, 12, 117.	3.5	23
110	Arp2/3 inactivation causes intervertebral disc and cartilage degeneration with dysregulated TonEBP-mediated osmoadaptation. JCI Insight, 2020, 5, .	5.0	23
111	Aquaporin 1 and 5 expression decreases during human intervertebral disc degeneration: novel HIF-1-mediated regulation of aquaporins in NP cells. Oncotarget, 2015, 6, 11945-11958.	1.8	22
112	Nonporous Polyurethane Membranes as Islet Immunoisolation Matrices â€“ Biocompatibility Studies. Journal of Biomaterials Applications, 2002, 16, 327-340.	2.4	21
113	FIH-1-Mint3 Axis Does Not Control HIF-1Î± Transcriptional Activity in Nucleus Pulposus Cells. Journal of Biological Chemistry, 2014, 289, 20594-20605.	3.4	21
114	Alterations in ECM signature underscore multiple sub-phenotypes of intervertebral disc degeneration. Matrix Biology Plus, 2020, 6-7, 100036.	3.5	21
115	A simple microcapsule generator design for islet encapsulation. Journal of Biosciences, 1999, 24, 371-376.	1.1	20
116	Radio-frequency plasma treatment improves the growth and attachment of endothelial cells on poly(methyl methacrylate) substrates: implications in tissue engineering. Journal of Biomaterials Science, Polymer Edition, 2002, 13, 1067-1080.	3.5	20
117	Hypoxia and Hypoxia-Inducible Factor-1Î± Regulate Endoplasmic Reticulum Stress in Nucleus Pulposus Cells. American Journal of Pathology, 2021, 191, 487-502.	3.8	20
118	Differential Gene Expression in Anterior and Posterior Annulus Fibrosus. Spine, 2014, 39, 1917-1923.	2.0	18
119	Substance P Receptor Antagonist Suppresses Inflammatory Cytokine Expression in Human Disc Cells. Spine, 2015, 40, 1261-1269.	2.0	16
120	Islet Cryopreservation: Improved Recovery following Taurine Pretreatment. Cell Transplantation, 2001, 10, 247-253.	2.5	15
121	NFAT5/TonEBP controls early acquisition of notochord phenotypic markers, collagen composition, and sonic hedgehog signaling during mouseÂintervertebral disc embryogenesis. Developmental Biology, 2019, 455, 369-381.	2.0	15
122	Lack of evidence for involvement of TonEBP and hyperosmotic stimulus in induction of autophagy in the nucleus pulposus. Scientific Reports, 2017, 7, 4543.	3.3	14
123	Discovery of the drivers of inflammation induced chronic low back pain: from bacteria to diabetes. Discovery Medicine, 2015, 20, 177-84.	0.5	14
124	Islet immunoisolation: experience with biopolymers. Journal of Biomaterials Science, Polymer Edition, 2001, 12, 1243-1252.	3.5	13
125	Smad3 controls Î²â€1,3â€glucuronosyltransferase 1 expression in rat nucleus pulposus cells: Implications of dysregulated expression in disc disease. Arthritis and Rheumatism, 2012, 64, 3324-3333.	6.7	12
126	Introduction to the Structure, Function, and Comparative Anatomy of the Vertebrae and the Intervertebral Disc. , 2014, , 3-15.		12

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127	Biocompatibility assessment of polytetrafluoroethylene/wollastonite composites using endothelial cells and macrophages. Journal of Biomaterials Science, Polymer Edition, 2001, 12, 1177-1189.	3.5	11
128	Modeling of Phosphate Ion Transfer to the Surface of Osteoblasts under Normal Gravity and Simulated Microgravity Conditions. Annals of the New York Academy of Sciences, 2004, 1027, 85-98.	3.8	11
129	New horizons in spine research: Intervertebral disc repair and regeneration. Journal of Orthopaedic Research, 2017, 35, 5-7.	2.3	8
130	New horizons in spine research: Disc biology, tissue engineering, biomechanics, translational, and clinical research. JOR Spine, 2018, 1, e1032.	3.2	8
131	Abcc6 Null Miceâ€"a Model for Mineralization Disorder PXE Shows Vertebral Osteopenia Without Enhanced Intervertebral Disc Calcification With Aging. Frontiers in Cell and Developmental Biology, 2022, 10, 823249.	3.7	8
132	Nucleus pulposus primary cilia alter their length in response to changes in extracellular osmolarity but do not control TonEBP-mediated osmoregulation. Scientific Reports, 2019, 9, 15469.	3.3	6
133	Hydrogel-coated textile scaffolds as three-dimensional growth support for human umbilical vein endothelial cells (HUVECs): possibilities as coculture system in liver tissue engineering. Cell Transplantation, 2002, 11, 369-77.	2.5	5
134	The cGAS-STING Pathway Affects Vertebral Bone but Does Not Promote Intervertebral Disc Cell Senescence or Degeneration. Frontiers in Immunology, 0, 13, .	4.8	5
135	Microenvironmental Control of Disc Cell Function: Influence of Hypoxia and Osmotic Pressure. , 2014, , 93-108.		4
136	New Horizons in Spine Research: Disc biology, spine biomechanics and pathomechanisms of back pain. Journal of Orthopaedic Research, 2016, 34, 1287-1288.	2.3	3
137	Immunocytochemical Localization of Growth Hormone-Releasing Hormone-like Peptide in the Brain of the Tiger Frog, Rana tigrina. General and Comparative Endocrinology, 2002, 126, 200-212.	1.8	1
138	Corrigendum to â€œModels of pancreatic regeneration in diabetesâ€. Diabetes Research and Clinical Practice, 2003, 62, 211.	2.8	0
139	Challenges in Cell-Based Therapies for Intervertebral Disc Regeneration. , 2018, , 149-180.		0
140	Selective cytotoxicity of MIA Pa Ca-2 conditioned medium to acinar cells: a novel approach to reduce acinar cell contaminants in isolated islet preparations from BALB/c mice. Transplant International, 2001, 14, 191-195.	1.6	0