James C Iatridis

List of Publications by Year
in descending order

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163 papers	10,170 citations	25034 57 h-index	40979 93 g-index
167 all docs	167 docs citations	167 times ranked	5673 citing authors

#	Article	IF	Citations
1	Mechanical Conditions That Accelerate Intervertebral Disc Degeneration: Overload Versus Immobilization. Spine, 2004, 29, 2724-2732.	2.0	295
2	Is the Nucleus Pulposus a Solid or a Fluid? Mechanical Behaviors of the Nucleus Pulposus of the Human Intervertebral Disc. Spine, 1996, 21, 1174-1184.	2.0	293
3	Degeneration affects the anisotropic and nonlinear behaviors of human anulus fibrosus in compression. Journal of Biomechanics, 1998, 31, 535-544.	2.1	284
4	Molecular mechanisms of biological aging in intervertebral discs. Journal of Orthopaedic Research, 2016, 34, 1289-1306.	2.3	270
5	Role of biomechanics in intervertebral disc degeneration and regenerative therapies: what needs repairing in the disc and what are promising biomaterials for its repair?. Spine Journal, 2013, 13, 243-262.	1.3	252
6	Compression-Induced Changes in Intervertebral Disc Properties in a Rat Tail Model. Spine, 1999, 24, 996-1002.	2.0	249
7	Tensile Properties of Nondegenerate Human Lumbar Anulus Fibrosus. Spine, 1996, 21, 452-461.	2.0	242
8	Alterations in the mechanical behavior of the human lumbar nucleus pulposus with degeneration and aging. Journal of Orthopaedic Research, 1997, 15, 318-322.	2.3	230
9	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
10	Effects of Mechanical Loading on Intervertebral Disc Metabolism In Vivo. Journal of Bone and Joint Surgery - Series A, 2006, 88, 41-46.	3.0	188
11	Mechanisms for mechanical damage in the intervertebral disc annulus fibrosus. Journal of Biomechanics, 2004, 37, 1165-1175.	2.1	184
12	Painful intervertebral disc degeneration and inflammation: from laboratory evidence to clinical interventions. Bone Research, 2021, 9, 7.	11.4	184
13	The viscoelastic behavior of the non-degenerate human lumbar nucleus pulposus in shear. Journal of Biomechanics, 1997, 30, 1005-1013.	2.1	170
14	Anabolic and catabolic mRNA levels of the intervertebral disc vary with the magnitude and frequency of in vivo dynamic compression. Journal of Orthopaedic Research, 2004, 22, 1193-1200.	2.3	163
15	Genetic polymorphisms associated with intervertebral disc degeneration. Spine Journal, 2013, 13, 299-317.	1.3	158
16	Dynamic fibroblast cytoskeletal response to subcutaneous tissue stretch ex vivo and in vivo. American Journal of Physiology - Cell Physiology, 2005, 288, C747-C756.	4.6	156
17	Behavior of Mesenchymal Stem Cells in the Chemical Microenvironment of the Intervertebral Disc. Spine, 2008, 33, 1843-1849.	2.0	145
18	Measurements of Proteoglycan and Water Content Distribution in Human Lumbar Intervertebral Discs. Spine, 2007, 32, 1493-1497.	2.0	141

#	Article	IF	Citations
19	Introduction. Spine, 2004, 29, 2677-2678.	2.0	140
20	In vivo remodeling of intervertebral discs in response to shortâ€•and longâ€term dynamic compression. Journal of Orthopaedic Research, 2009, 27, 1235-1242.	2.3	138
21	Effects of Immobilization and Dynamic Compression on Intervertebral Disc Cell Gene Expression In Vivo. Spine, 2003, 28, 973-981.	2.0	135
22	Needle Puncture Injury Affects Intervertebral Disc Mechanics and Biology in an Organ Culture Model. Spine, 2008, 33, 235-241.	2.0	131
23	The effects of short-term load duration on anabolic and catabolic gene expression in the rat tail intervertebral disc. Journal of Orthopaedic Research, 2005, 23, 1120-1127.	2.3	129
24	Confined compression experiments on bovine nucleus pulposus and annulus fibrosus: sensitivity of the experiment in the determination of compressive modulus and hydraulic permeability. Journal of Biomechanics, 2005, 38, 2164-2171.	2.1	129
25	Measurement of local strains in intervertebral disc anulus fibrosus tissue under dynamic shear: Contributions of matrix fiber orientation and elastin content. Journal of Biomechanics, 2009, 42, 2279-2285.	2.1	122
26	Notochordal cell conditioned medium stimulates mesenchymal stem cell differentiation toward a young nucleus pulposus phenotype. Stem Cell Research and Therapy, 2010, 1, 18.	5.5	116
27	Accumulation and localization of macrophage phenotypes with human intervertebral disc degeneration. Spine Journal, 2018, 18, 343-356.	1.3	116
28	Discogenic Back Pain: Literature Review of Definition, Diagnosis, and Treatment. JBMR Plus, 2019, 3, e10180.	2.7	114
29	Frequency-Dependent Behavior of the Intervertebral Disc in Response to Each of Six Degree of Freedom Dynamic Loading. Spine, 2008, 33, 1731-1738.	2.0	107
30	Shear mechanical properties of human lumbar annulus fibrosus. Journal of Orthopaedic Research, 1999, 17, 732-737.	2.3	105
31	Dynamic Compression Effects on Intervertebral Disc Mechanics and Biology. Spine, 2008, 33, 1403-1409.	2.0	104
32	Outcomes and Complications of Diabetes Mellitus on Patients Undergoing Degenerative Lumbar Spine Surgery. Spine, 2014, 39, 1596-1604.	2.0	103
33	ENLARGEMENT OF GROWTH PLATE CHONDROCYTES MODULATED BY SUSTAINED MECHANICAL LOADING. Journal of Bone and Joint Surgery - Series A, 2002, 84, 1842-1848.	3.0	103
34	Notochordal conditioned media from tissue increases proteoglycan accumulation and promotes a healthy nucleus pulposus phenotype in human mesenchymal stem cells. Arthritis Research and Therapy, 2011, 13, R81.	3.5	101
35	Quantitative MRI as a diagnostic tool of intervertebral disc matrix composition and integrity. European Spine Journal, 2008, 17, 432-440.	2.2	99
36	In Vitro Organ Culture of the Bovine Intervertebral Disc. Spine, 2006, 31, 515-522.	2.0	98

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37	MSC response to pH levels found in degenerating intervertebral discs. Biochemical and Biophysical Research Communications, 2009, 379, 824-829.	2.1	98
38	Influence of Fixed Charge Density Magnitude and Distribution on the Intervertebral Disc: Applications of a Poroelastic and Chemical Electric (PEACE) Model. Journal of Biomechanical Engineering, 2003, 125, 12-24.	1.3	96
39	Combined Anti-Inflammatory and Anti-AGE Drug Treatments Have a Protective Effect on Intervertebral Discs in Mice with Diabetes. PLoS ONE, 2013, 8, e64302.	2.5	96
40	Mechanical modulation of growth for the correction of vertebral wedge deformities. Journal of Orthopaedic Research, 1999, 17, 518-524.	2.3	91
41	Mechanical damage to the intervertebral disc annulus fibrosus subjected to tensile loading. Journal of Biomechanics, 2005, 38, 557-565.	2.1	89
42	3D printing a mechanically-tunable acrylate resin on a commercial DLP-SLA printer. Additive Manufacturing, 2018, 23, 374-380.	3.0	84
43	Subcutaneous Tissue Mechanical Behavior is Linear and Viscoelastic Under Uniaxial Tension. Connective Tissue Research, 2003, 44, 208-217.	2.3	81
44	Critical aspects and challenges for intervertebral disc repair and regenerationâ€"Harnessing advances in tissue engineering. JOR Spine, 2018, 1, e1029.	3.2	79
45	The effects of needle puncture injury on microscale shear strain in the intervertebral disc annulus fibrosus. Spine Journal, 2010, 10, 1098-1105.	1.3	78
46	Organ Culture Bioreactors â€“ Platforms to Study Human Intervertebral Disc Degeneration and Regenerative Therapy. Current Stem Cell Research and Therapy, 2015, 10, 339-352.	1.3	78
47	Intervertebral disc cell response to dynamic compression is age and frequency dependent. Journal of Orthopaedic Research, 2009, 27, 800-806.	2.3	76
48	Design Requirements for Annulus Fibrosus Repair: Review of Forces, Displacements, and Material Properties of the Intervertebral Disk and a Summary of Candidate Hydrogels for Repair. Journal of Biomechanical Engineering, 2016, 138, 021007.	1.3	76
49	Localized Intervertebral Disc Injury Leads to Organ Level Changes in Structure, Cellularity, and Biosynthesis. Cellular and Molecular Bioengineering, 2009, 2, 437-447.	2.1	74
50	Needle puncture injury of the rat intervertebral disc affects torsional and compressive biomechanics differently. European Spine Journal, 2010, 19, 2110-2116.	2.2	74
51	Fibroblast cytoskeletal remodeling contributes to connective tissue tension. Journal of Cellular Physiology, 2011, 226, 1166-1175.	4.1	74
52	Height and torsional stiffness are most sensitive to annular injury in large animal intervertebral discs. Spine Journal, 2012, 12, 425-432.	1.3	70
53	Correlating Material Properties with Tissue Composition in Enzymatically Digested Bovine Annulus Fibrosus and Nucleus Pulposus Tissue. Annals of Biomedical Engineering, 2006, 34, 769-777.	2.5	67
54	Characterization of an in vitro intervertebral disc organ culture system. European Spine Journal, 2007, 16, 1029-1037.	2.2	66

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55	Annulus fibrosus cell phenotypes in homeostasis and injury: implications for regenerative strategies. Annals of the New York Academy of Sciences, 2019, 1442, 61-78.	3.8	66
56	The Impact of Diabetes Mellitus on Patients Undergoing Degenerative Cervical Spine Surgery. Spine, 2014, 39, 1656-1665.	2.0	64
57	Chronic Ingestion of Advanced Glycation End Products Induces Degenerative Spinal Changes and Hypertrophy in Aging Pre-Diabetic Mice. PLoS ONE, 2015, 10, e0116625.	2.5	64
58	Annular puncture with tumor necrosis factor-alpha injection enhances painful behavior with disc degeneration in vivo. Spine Journal, 2016, 16, 420-431.	1.3	64
59	Cellular bone matrices: viable stem cell-containing bone graft substitutes. Spine Journal, 2014, 14, 2763-2772.	1.3	61
60	Association Between BMP-2 and Carcinogenicity. Spine, 2015, 40, 1862-1871.	2.0	59
61	Assessment of functional and behavioral changes sensitive to painful disc degeneration. Journal of Orthopaedic Research, 2015, 33, 755-764.	2.3	56
62	Determination of collagen-proteoglycan interactions in vitro. Journal of Biomechanics, 1996, 29, 773-783.	2.1	55
63	Mechanical restoration and failure analyses of a hydrogel and scaffold composite strategy for annulus fibrosus repair. Acta Biomaterialia, 2016, 30, 116-125.	8.3	55
64	Role of endplates in contributing to compression behaviors of motion segments and intervertebral discs. Journal of Biomechanics, 2007, 40, 55-63.	2.1	54
65	Analysis of quantitative magnetic resonance imaging and biomechanical parameters on human discs with different grades of degeneration. Journal of Magnetic Resonance Imaging, 2013, 38, 1402-1414.	3.4	52
66	Characterization of Mechanics and Cytocompatibility of Fibrin-Genipin Annulus Fibrosus Sealant with the Addition of Cell Adhesion Molecules. Tissue Engineering - Part A, 2014, 20, 2536-2545.	3.1	52
67	Inhibiting tumor necrosis factorâ€alpha at time of induced intervertebral disc injury limits longâ€term pain and degeneration in a rat model. JOR Spine, 2018, 1, e1014.	3.2	50
68	Development of a standardized histopathology scoring system for intervertebral disc degeneration in rat models: An initiative of the <scp>ORS</scp> spine section. JOR Spine, 2021, 4, e1150.	3.2	49
69	Effect of mechanical loading on mRNA levels of common endogenous controls in articular chondrocytes and intervertebral disk. Analytical Biochemistry, 2005, 341, 372-375.	2.4	48
70	Effects of Torsion on Intervertebral Disc Gene Expression and Biomechanics, Using a Rat Tail Model. Spine, 2011, 36, 607-614.	2.0	48
71	Extracellular Vesicles as an Emerging Treatment Option for Intervertebral Disc Degeneration: Therapeutic Potential, Translational Pathways, and Regulatory Considerations. Advanced Healthcare Materials, 2022, 11, e2100596.	7.6	47
72	Different Effects of Static Versus Cyclic Compressive Loading on Rat Intervertebral Disc Height and Water Loss In Vitro. Spine, 2007, 32, 1974-1979.	2.0	45

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73	Fibrin-genipin annulus fibrosus sealant as a delivery system for anti-TNFÎ± drug. Spine Journal, 2015, 15, 2045-2054.	1.3	45
74	Cell-Seeded Adhesive Biomaterial for Repair of Annulus Fibrosus Defects in Intervertebral Discs. Tissue Engineering - Part A, 2018, 24, 187-198.	3.1	45
75	Effects of enzymatic digestion on compressive properties of rat intervertebral discs. Journal of Biomechanics, 2010, 43, 1067-1073.	2.1	44
76	Evaluation of quantitative magnetic resonance imaging, biochemical and mechanical properties of trypsinâ€treated intervertebral discs under physiological compression loading. Journal of Magnetic Resonance Imaging, 2008, 27, 563-573.	3.4	43
77	Dynamic pressurization induces transition of notochordal cells to a mature phenotype while retaining production of important patterning ligands from development. Arthritis Research and Therapy, 2013, 15, R122.	3.5	43
78	Development of a bovine decellularized extracellular matrix-biomaterial for nucleus pulposus regeneration. Journal of Orthopaedic Research, 2016, 34, 876-888.	2.3	43
79	Nonoperative Management of Discogenic Back Pain. Spine, 2014, 39, 1314-1324.	2.0	42
80	Mechanical Modulation of Intervertebral Disc Thickness in Growing Rat Tails. Journal of Spinal Disorders, 1998, 11, 261???265.	1.1	41
81	TNFÎ± Transport Induced by Dynamic Loading Alters Biomechanics of Intact Intervertebral Discs. PLoS ONE, 2015, 10, e0118358.	2.5	41
82	Looking beyond the intervertebral disc: the need for behavioral assays in models of discogenic pain. Annals of the New York Academy of Sciences, 2017, 1409, 51-66.	3.8	41
83	Animal models for studying the etiology and treatment of low back pain. Journal of Orthopaedic Research, 2018, 36, 1305-1312.	2.3	41
84	Inflammatory Kinetics and Efficacy of Anti-inflammatory Treatments on Human Nucleus Pulposus Cells. Spine, 2015, 40, 955-963.	2.0	40
85	Intact glycosaminoglycans from intervertebral disc-derived notochordal cell-conditioned media inhibit neurite growth while maintaining neuronal cell viability. Spine Journal, 2015, 15, 1060-1069.	1.3	39
86	Development of a two-part biomaterial adhesive strategy for annulus fibrosus repair and ex vivo evaluation of implant herniation risk. Biomaterials, 2020, 258, 120309.	11.4	38
87	Loss of tenomodulin expression is a risk factor for ageâ€related intervertebral disc degeneration. Aging Cell, 2020, 19, e13091.	6.7	36
88	Mechanisms and clinical implications of intervertebral disc calcification. Nature Reviews Rheumatology, 2022, 18, 352-362.	8.0	33
89	Does type 2 diabetes mellitus promote intervertebral disc degeneration?. European Spine Journal, 2016, 25, 2716-2720.	2.2	32
90	Injectable cellulose-based hydrogels as nucleus pulposus replacements: Assessment of in vitro structural stability, ex vivo herniation risk, and in vivo biocompatibility. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 96, 204-213.	3.1	32

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91	Sex Differences in Rat Intervertebral Disc Structure and Function Following Annular Puncture Injury. Spine, 2019, 44, 1257-1269.	2.0	32
92	Neonatal mouse intervertebral discs heal with restored function following herniation injury. FASEB Journal, 2018, 32, 4753-4762.	0.5	30
93	Do mechanical strain and TNF-Î± interact to amplify pro-inflammatory cytokine production in human annulus fibrosus cells?. Journal of Biomechanics, 2016, 49, 1214-1220.	2.1	29
94	Structural and Chemical Modification to Improve Adhesive and Material Properties of Fibrin-Genipin for Repair of Annulus Fibrosus Defects in Intervertebral Disks. Journal of Biomechanical Engineering, 2017, 139, .	1.3	29
95	Males and females exhibit distinct relationships between intervertebral disc degeneration and pain in a rat model. Scientific Reports, 2020, 10, 15120.	3.3	29
96	Hyperosmolarity induces notochordal cell differentiation with aquaporin3 upregulation and reduced Nâ€cadherin expression. Journal of Orthopaedic Research, 2018, 36, 788-798.	2.3	28
97	In vitro and biomechanical screening of polyethylene glycol and poly(trimethylene carbonate) block copolymers for annulus fibrosus repair. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e727-e736.	2.7	28
98	Singleâ€cell RNAâ€sequencing atlas of bovine caudal intervertebral discs: Discovery of heterogeneous cell populations with distinct roles in homeostasis. FASEB Journal, 2021, 35, e21919.	0.5	28
99	Function follows form. Nature Materials, 2009, 8, 923-924.	27.5	27
100	Abnormal fetal muscle forces result in defects in spinal curvature and alterations in vertebral segmentation and shape. Journal of Orthopaedic Research, 2017, 35, 2135-2144.	2.3	27
101	Dietary advanced glycation end-product consumption leads to mechanical stiffening of murine intervertebral discs. DMM Disease Models and Mechanisms, 2018, 11, .	2.4	27
102	Stress and matrixâ€responsive cytoskeletal remodeling in fibroblasts. Journal of Cellular Physiology, 2013, 228, 50-57.	4.1	26
103	Degenerative Grade Affects the Responses of Human Nucleus Pulposus Cells to Link-N, CTGF, and TGFÎ²3. Journal of Spinal Disorders and Techniques, 2013, 26, E86-E94.	1.9	26
104	Genipin-crosslinked fibrin seeded with oxidized alginate microbeads as a novel composite biomaterial strategy for intervertebral disc cell therapy. Biomaterials, 2022, 287, 121641.	11.4	26
105	In vivo intervertebral disc remodeling: Kinetics of mRNA expression in response to a single loading event. Journal of Orthopaedic Research, 2008, 26, 579-588.	2.3	25
106	Dietary Advanced Glycation End Products Have Sex- and Age-Dependent Effects on Vertebral Bone Microstructure and Mechanical Function in Mice. Journal of Bone and Mineral Research, 2018, 33, 437-448.	2.8	25
107	Subcutaneous tissue mechanical behavior is linear and viscoelastic under uniaxial tension. Connective Tissue Research, 2003, 44, 208-17.	2.3	25
108	Limitation of Finite Element Analysis of Poroelastic Behavior of Biological Tissues Undergoing Rapid Loading. Annals of Biomedical Engineering, 2010, 38, 1780-1788.	2.5	23

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109	Refinement of Elastic, Poroelastic, and Osmotic Tissue Properties of Intervertebral Disks to Analyze Behavior in Compression. Annals of Biomedical Engineering, 2011, 39, 122-131.	2.5	23
110	Phlpp1 is associated with human intervertebral disc degeneration and its deficiency promotes healing after needle puncture injury in mice. Cell Death and Disease, 2019, 10, 754.	6.3	22
111	Composite biomaterial repair strategy to restore biomechanical function and reduce herniation risk in an ex vivo large animal model of intervertebral disc herniation with varying injury severity. PLoS ONE, 2019, 14, e0217357.	2.5	22
112	Fibrin-Genipin Hydrogel for Cartilage Tissue Engineering in Nasal Reconstruction. Annals of Otology, Rhinology and Laryngology, 2019, 128, 640-646.	1.1	22
113	Effect of the CCL5-Releasing Fibrin Gel for Intervertebral Disc Regeneration. Cartilage, 2020, 11, 169-180.	2.7	22
114	Morphological and biomechanical effects of annulus fibrosus injury and repair in an ovine cervical model. JOR Spine, 2020, 3, e1074.	3.2	22
115	Subcutaneous Tissue Mechanical Behavior is Linear and Viscoelastic Under Uniaxial Tension. Connective Tissue Research, 2003, 44, 208-217.	2.3	22
116	A numerical study to determine pericellular matrix modulus and evaluate its effects on the micromechanical environment of chondrocytes. Journal of Biomechanics, 2007, 40, 1405-1409.	2.1	21
117	Detrimental effects of discectomy on intervertebral disc biology can be decelerated by growth factor treatment during surgery: a large animal organ culture model. Spine Journal, 2014, 14, 2724-2732.	1.3	21
118	Advanced glycation end products cause <scp>RAGE</scp>â€dependent annulus fibrosus collagen disruption and loss identified using in situ second harmonic generation imaging in mice intervertebral disk in vivo and in organ culture models. JOR Spine, 2020, 3, e1126.	3.2	21
119	Notochordal Cell-Based Treatment Strategies and Their Potential in Intervertebral Disc Regeneration. Frontiers in Cell and Developmental Biology, 2021, 9, 780749.	3.7	21
120	Commentary: Does needle injection cause disc degeneration? News in the continuing debate regarding pathophysiology associated with intradiscal injections. Spine Journal, 2012, 12, 336-338.	1.3	20
121	Ex-vivo biomechanics of repaired rat intervertebral discs using genipin crosslinked fibrin adhesive hydrogel. Journal of Biomechanics, 2020, 113, 110100.	2.1	20
122	The Functional Role of Interface Tissue Engineering in Annulus Fibrosus Repair: Bridging Mechanisms of Hydrogel Integration with Regenerative Outcomes. ACS Biomaterials Science and Engineering, 2020, 6, 6556-6586.	5.2	19
123	Live free or die: Stretch-induced apoptosis occurs when adaptive reorientation of annulus fibrosus cells is restricted. Biochemical and Biophysical Research Communications, 2012, 421, 361-366.	2.1	18
124	Penetrating Annulus Fibrosus Injuries Affect Dynamic Compressive Behaviors of the Intervertebral Disc Via Altered Fluid Flow: An Analytical Interpretation. Journal of Biomechanical Engineering, 2011, 133, 084502.	1.3	17
125	Neonatal annulus fibrosus regeneration occurs via recruitment and proliferation of Scleraxis-lineage cells. Npj Regenerative Medicine, 2019, 4, 23.	5.2	15
126	Spatial mapping of collagen content and structure in human intervertebral disk degeneration. JOR Spine, 2020, 3, e1129.	3.2	15

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127	Leptin signaling and the intervertebral disc: Sex dependent effects of leptin receptor deficiency and Western diet on the spine in a type 2 diabetes mouse model. PLoS ONE, 2020, 15, e0227527.	2.5	15
128	Effects of Level, Loading Rate, Injury and Repair on Biomechanical Response of Ovine Cervical Intervertebral Discs. Annals of Biomedical Engineering, 2018, 46, 1911-1920.	2.5	13
129	Dietary polyphenols as a safe and novel intervention for modulating pain associated with intervertebral disc degeneration in an in-vivo rat model. PLoS ONE, 2019, 14, e0223435.	2.5	13
130	Biomechanical test protocols to detect minor injury effects in intervertebral discs. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 95, 13-20.	3.1	13
131	Development of a standardized histopathology scoring system for intervertebral disc degeneration and regeneration in rabbit modelsâ€An initiative of the <scp>ORS</scp>spine section. JOR Spine, 2021, 4, e1147.	3.2	11
132	Publication trends in spine research from 2007 to 2016: Comparison of the Orthopaedic Research Society Spine Section and the International Society for the Study of the Lumbar Spine. JOR Spine, 2018, 1, e1006.	3.2	10
133	The importance of diversity, equity, and inclusion in orthopedic research. Journal of Orthopaedic Research, 2020, 38, 1661-1665.	2.3	10
134	Structural, compositional, and biomechanical alterations of the lumbar spine in rats with mucopolysaccharidosis type VI (Maroteauxâ€“Lamy syndrome). Journal of Orthopaedic Research, 2013, 31, 621-631.	2.3	9
135	Measuring the neutral zone of spinal motion segments: Comparison of multiple analysis methods to quantify spinal instability. JOR Spine, 2020, 3, e1088.	3.2	9
136	EFFECTS OF MECHANICAL LOADING ON INTERVERTEBRAL DISC METABOLISM IN VIVO. Journal of Bone and Joint Surgery - Series A, 2006, 88, 41-46.	3.0	9
137	Spatially Resolved Streaming Potentials of Human Intervertebral Disk Motion Segments Under Dynamic Axial Compression. Journal of Biomechanical Engineering, 2009, 131, 031006.	1.3	8
138	New horizons in spine research: Intervertebral disc repair and regeneration. Journal of Orthopaedic Research, 2017, 35, 5-7.	2.3	8
139	New horizons in spine research: Disc biology, tissue engineering, biomechanics, translational, and clinical research. JOR Spine, 2018, 1, e1032.	3.2	8
140	Elevated glycohemoglobin HbA1c is associated with low back pain in nonoverweight diabetics. Spine Journal, 2019, 19, 225-231.	1.3	7
141	Ex vivo biomechanical evaluation of Acute lumbar endplate injury and comparison to annulus fibrosus injury in a rat model. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 131, 105234.	3.1	7
142	Comparison and optimization of sheep in vivo intervertebral disc injury model. JOR Spine, 2022, 5, .	3.2	7
143	Physician Decision-making in Return to Play After Cervical Spine Injury. Clinical Spine Surgery, 2020, 33, E330-E336.	1.3	6
144	High fat diet causes inferior vertebral structure and function without disc degeneration in RAGEâ€KO mice. Journal of Orthopaedic Research, 2022, 40, 1672-1686.	2.3	6

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145	Accelerometry Data Delineate Phases of Recovery and Supplement Patient-Reported Outcome Measures Following Lumbar Laminectomy. World Neurosurgery, 2022, 160, e608-e615.	1.3	5
146	Teaching Principles of Biomaterials to Undergraduate Students During the COVID-19 Pandemic with At-Home Laboratory Experiments. Chemical Engineering Education, 2021, 56, 22-35.	0.2	4
147	Intervertebral Disc Culture Models and Their Applications to Study Pathogenesis and Repair. , 2014, , 353-371.		4
148	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
149	Tenomodulin and Chondromodulin-1 Are Both Required to Maintain Biomechanical Function and Prevent Intervertebral Disc Degeneration. Cartilage, 2021, 13, 604S-614S.	2.7	3
150	A Removable Precision Device for In-Vivo Mechanical Compression of Rat Tail Intervertebral Discs. Journal of Medical Devices, Transactions of the ASME, 2007, 1, 56-61.	0.7	2
151	Homeostasis disrupted by strain mechanosensing. Nature Biomedical Engineering, 2019, 3, 951-952.	22.5	2
152	A perspective on the <scp>ORS Spine Section</scp> initiative to develop a multiâ€species <scp>JOR Spine</scp> histopathology series. JOR Spine, 2021, 4, e1165.	3.2	2
153	Measurement of Local Strains in Intervertebral Disc Anulus Fibrosus Tissue Under Dynamic Shear: Contributions of Matrix Fiber Orientation and Elastin Content. , 2009, , .		1
154	Letter to the Editor: Individual Patient-reported Activity Levels Before and After Joint Arthroplasty Are Neither Accurate nor Reproducible. Clinical Orthopaedics and Related Research, 2020, 478, 2408-2409.	1.5	1
155	Development of an At-home Metal Corrosion Laboratory Experiment for STEM Outreach in Biomaterials During the Covid-19 Pandemic. , 2021, 2021, .		1
156	Bone matrix quality in a developing high-fat diet mouse model is altered by RAGE deletion. Bone, 2022, 162, 116470.	2.9	1
157	Mechanical Damage to the Intervertebral Disc Annulus Fibrosus Subjected to Cyclic Tensile Loading. , 2003, , 391.		0
158	Genipin-Crosslinked Fibrin Hydrogels Modified With Collagen or Fibronectin as an Annulus Fibrosus Sealant. , 2012, , .		0
159	Advancing basic and preclinical spine research: Highlights from the <scp>ORS PSRS</scp> 5th International Spine Research Symposium. JOR Spine, 2020, 3, e1134.	3.2	0
160	An Analytical Model Describing Intervertebral Disc Mechanics Following a Needle Puncture Injury. , 2009, , .		0
161	Asymmetric Loading Promotes Early Signs of Intervertebral Disc Degeneration in Large Animal Organ Culture. , 2009, , .		0
162	Ingenuity during the COVID-19 pandemic: a controlled experiment for respirator mask efficacy testing. BMJ Innovations, 2021, 7, 288-291.	1.7	0

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163	Biomechanical models to study spinal phenotypes. , 2022, , 47-66.		0