Lawrence J Bonassar

List of Publications by Year
in descending order

267	14,627	17776 65	30277 107
papers	citations	h-index	g-index

273	273	273	13692
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Polyacrylamide hydrogel lubricates cartilage after biochemical degradation and mechanical injury. Journal of Orthopaedic Research, 2023, 41, 63-71.	1.2	5
2	Mechanical performance of collagen gels is dependent on purity, Î±1/Î±2 ratio, and telopeptides. Journal of Biomedical Materials Research - Part A, 2022, 110, 11-20.	2.1	7
3	Intra-articular Hyaluronic Acid Injections. , 2022, , 109-122.		0
4	Innovative Biological Treatment Methods for Degenerative Disc Disease. World Neurosurgery, 2022, 157, 282-299.	0.7	5
5	Rigidity and fracture of biopolymer double networks. Soft Matter, 2022, 18, 322-327.	1.2	7
6	Structural origins of cartilage shear mechanics. Science Advances, 2022, 8, eabk2805.	4.7	8
7	The degenerative impact of hyperglycemia on the structure and mechanics of developing murine intervertebral discs. JOR Spine, 2022, 5, e1191.	1.5	8
8	Off-the-Shelf Nipple Engineering. Annals of Plastic Surgery, 2022, 88, S302-S308.	0.5	1
9	Efficient engineering of human auricular cartilage through mesenchymal stem cell chaperoning. Journal of Tissue Engineering and Regenerative Medicine, 2022, 16, 825-835.	1.3	7
10	Simple synthesis of soft, tough, and cytocompatible biohybrid composites. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	4
11	Cartilage articulation exacerbates chondrocyte damage and death after impact injury. Journal of Orthopaedic Research, 2021, 39, 2130-2140.	1.2	13
12	Combining TGF-Î²1 and Mechanical Anchoring to Enhance Collagen Fiber Formation and Alignment in Tissue-Engineered Menisci. ACS Biomaterials Science and Engineering, 2021, 7, 1608-1620.	2.6	11
13	Nipple Engineering: Maintaining Nipple Geometry with Externally Scaffolded Processed Autologous Costal Cartilage. Journal of Plastic, Reconstructive and Aesthetic Surgery, 2021, 74, 2596-2603.	0.5	8
14	Pathomechanism and Biomechanics of Degenerative Disc Disease: Features of Healthy and Degenerated Discs. International Journal of Spine Surgery, 2021, 15, 10-25.	0.7	18
15	The role of SLRPs and large aggregating proteoglycans in collagen fibrillogenesis, extracellular matrix assembly, and mechanical function of fibrocartilage. Connective Tissue Research, 2021, , 1-18.	1.1	8
16	Targeting calcium-related mechanotransduction in early OA. Nature Reviews Rheumatology, 2021, 17, 445-446.	3.5	16
17	The influence of chondrocyte source on the manufacturing reproducibility of human tissue engineered cartilage. Acta Biomaterialia, 2021, 131, 276-285.	4.1	0
18	Microscale strain mapping demonstrates the importance of interface slope in the mechanics of cartilage repair. Journal of Biomechanics, 2021, 114, 110159.	0.9	6

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19	Three-Dimensional-Printed External Scaffolds Mitigate Loss of Volume and Topography in Engineered Elastic Cartilage Constructs. Cartilage, 2021, 13, 1780S-1789S.	1.4	7
20	Depth-dependent patterns in shear modulus of temporomandibular joint cartilage correspond to tissue structure and anatomic location. Journal of Biomechanics, 2021, 129, 110815.	0.9	0
21	Non-Destructive Spatial Mapping of Glycosaminoglycan Loss in Native and Degraded Articular Cartilage Using Confocal Raman Microspectroscopy. Frontiers in Bioengineering and Biotechnology, 2021, 9, 744197.	2.0	10
22	Mitoprotective therapy prevents rapid, strainâ€dependent mitochondrial dysfunction after articular cartilage injury. Journal of Orthopaedic Research, 2020, 38, 1257-1267.	1.2	31
23	Influence of Block Length on Articular Cartilage Lubrication with a Diblock Bottle-Brush Copolymer. ACS Applied Materials & Interfaces, 2020, 12, 330-337.	4.0	8
24	Imaging the local biochemical content of native and injured intervertebral disc using Fourier transform infrared microscopy. JOR Spine, 2020, 3, e1121.	1.5	4
25	Mineral Distribution Spatially Patterns Bone Marrow Stromal Cell Behavior on Monolithic Bone Scaffolds. Acta Biomaterialia, 2020, 112, 274-285.	4.1	19
26	Combined nucleus pulposus augmentation and annulus fibrosus repair prevents acute intervertebral disc degeneration after discectomy. Science Translational Medicine, 2020, 12, .	5.8	79
27	Multiscale mechanics of tissueâ€engineered cartilage grown from human chondrocytes and humanâ€induced pluripotent stem cells. Journal of Orthopaedic Research, 2020, 38, 1965-1973.	1.2	12
28	Distinct tribological endotypes of pathological human synovial fluid reveal characteristic biomarkers and variation in efficacy of viscosupplementation at reducing local strains in articular cartilage. Osteoarthritis and Cartilage, 2020, 28, 492-501.	0.6	8
29	Effect of Lubricin Mimetics on the Inhibition of Osteoarthritis in a Rat Anterior Cruciate Ligament Transection Model. American Journal of Sports Medicine, 2020, 48, 624-634.	1.9	17
30	Integrin Î±10Î²1-Selected Mesenchymal Stem Cells Mitigate the Progression of Osteoarthritis in an Equine Talar Impact Model. American Journal of Sports Medicine, 2020, 48, 612-623.	1.9	33
31	Heterogeneous matrix deposition in human tissue engineered cartilage changes the local shear modulus and resistance to local construct buckling. Journal of Biomechanics, 2020, 105, 109760.	0.9	11
32	Interaction with Cartilage Increases the Viscosity of Hyaluronic Acid Solutions. ACS Biomaterials Science and Engineering, 2020, 6, 2787-2795.	2.6	17
33	A Century of Cartilage Tribology Research Is Informing Lubrication Therapies. Journal of Biomechanical Engineering, 2020, 142, .	0.6	9
34	Inflammatory and Noninflammatory Synovial Fluids Exhibit New and Distinct Tribological Endotypes. Journal of Biomechanical Engineering, 2020, 142, .	0.6	4
35	Understanding the Stiff-to-Compliant Transition of the Meniscal Attachments by Spatial Correlation of Composition, Structure, and Mechanics. ACS Applied Materials & Interfaces, 2019, 11, 26559-26570.	4.0	27
36	High density cell seeding affects the rheology and printability of collagen bioinks. Biofabrication, 2019, 11, 045016.	3.7	80

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37	Dynamics of Synovial Fluid Aggregation under Shear. Langmuir, 2019, 35, 15887-15896.	1.6	13
38	The clot thickens: Autologous and allogeneic fibrin sealants are mechanically equivalent in an ex vivo model of cartilage repair. PLoS ONE, 2019, 14, e0224756.	1.1	21
39	Proteoglycan removal by chondroitinase ABC improves injectable collagen gel adhesion to annulus fibrosus. Acta Biomaterialia, 2019, 97, 428-436.	4.1	23
40	Regulation of proteoglycan production by varying glucose concentrations controls fiber formation in tissue engineered menisci. Acta Biomaterialia, 2019, 100, 173-183.	4.1	12
41	Stable recombinant production of codonâ€scrambled lubricin and mucin in human cells. Biotechnology and Bioengineering, 2019, 116, 1292-1303.	1.7	9
42	Boundary mode lubrication of articular cartilage with a biomimetic diblock copolymer. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12437-12441.	3.3	31
43	Interfaces: Cellular and Chemical Gradients to Engineer the Meniscusâ€toâ€Bone Insertion (Adv.) Tj ETQq1 1 0.784314 rgBT /Overloc	3.9	0
44	Top-Down Fabrication of Spatially Controlled Mineral-Gradient Scaffolds for Interfacial Tissue Engineering. ACS Biomaterials Science and Engineering, 2019, 5, 2988-2997.	2.6	17
45	Frictional characterization of injectable hyaluronic acids is more predictive of clinical outcomes than traditional rheological or viscoelastic characterization. PLoS ONE, 2019, 14, e0216702.	1.1	28
46	Glycation of collagen matrices promotes breast tumor cell invasion. Integrative Biology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 38	0.6	19
47	Temporal changes in synovial fluid composition and elastoviscous lubrication in the equine carpal fracture model. Journal of Orthopaedic Research, 2019, 37, 1071-1079.	1.2	13
48	Mesenchymal Stem Cell-Seeded High-Density Collagen Gel for Annular Repair: 6-Week Results From In Vivo Sheep Models. Neurosurgery, 2019, 85, E350-E359.	0.6	34
49	The Effect of Charge and Mechanical Loading on Antibody Diffusion Through the Articular Surface of Cartilage. Journal of Biomechanical Engineering, 2019, 141, .	0.6	6
50	Measurement of local diffusion and composition in degraded articular cartilage reveals the unique role of surface structure in controlling macromolecular transport. Journal of Biomechanics, 2019, 82, 38-45.	0.9	13
51	Cellular and Chemical Gradients to Engineer the Meniscusâ€toâ€Bone Insertion. Advanced Healthcare Materials, 2019, 8, 1800806.	3.9	19
52	Stribeck Curve Analysis of Temporomandibular Joint Condylar Cartilage and Disc. Journal of Biomechanical Engineering, 2019, 141, .	0.6	4
53	Mitochondrial dysfunction is an acute response of articular chondrocytes to mechanical injury. Journal of Orthopaedic Research, 2018, 36, 739-750.	1.2	47
54	Mitoprotective therapy preserves chondrocyte viability and prevents cartilage degeneration in an ex vivo model of posttraumatic osteoarthritis. Journal of Orthopaedic Research, 2018, 36, 2147-2156.	1.2	38

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55	Clinical doses of radiation reduce collagen matrix stiffness. APL Bioengineering, 2018, 2, 031901.	3.3	36
56	Microscale frictional strains determine chondrocyte fate in loaded cartilage. Journal of Biomechanics, 2018, 74, 72-78.	0.9	47
57	Local and global measurements show that damage initiation in articular cartilage is inhibited by the surface layer and has significant rate dependence. Journal of Biomechanics, 2018, 72, 63-70.	0.9	15
58	Tissue Engineering Auricular Cartilage Using Late Passage Human Auricular Chondrocytes. Annals of Plastic Surgery, 2018, 80, S168-S173.	0.5	15
59	Annulus Fibrosus Repair Using High-Density Collagen Gel. Spine, 2018, 43, E208-E215.	1.0	46
60	Degradation alters the lubrication of articular cartilage by high viscosity, hyaluronic acidâ€based lubricants. Journal of Orthopaedic Research, 2018, 36, 1456-1464.	1.2	19
61	Biologic Annulus Fibrosus Repair: A Review of Preclinical In Vivo Investigations. Tissue Engineering - Part B: Reviews, 2018, 24, 179-190.	2.5	47
62	Resorbable plating system stabilizes tissueâ€engineered intervertebral discs implanted ex vivo in canine cervical spines. JOR Spine, 2018, 1, e1031.	1.5	11
63	Tissue engineering the human auricle by auricular chondrocyte-mesenchymal stem cell co-implantation. PLoS ONE, 2018, 13, e0202356.	1.1	40
64	How can 50 years of solute transport data in articular cartilage inform the design of arthritis therapeutics?. Osteoarthritis and Cartilage, 2018, 26, 1438-1446.	0.6	20
65	In vivo annular repair using high-density collagen gel seeded with annulus fibrosus cells. Acta Biomaterialia, 2018, 79, 230-238.	4.1	46
66	Molecular transport in articular cartilage â€" what have we learned from the past 50 years?. Nature Reviews Rheumatology, 2018, 14, 393-403.	3.5	79
67	Heat Shock Factor 1 Reprograms the DLBCL Microenvironment to Evade Immune Surveillance and Support Tumor Growth. Blood, 2018, 132, 2854-2854.	0.6	0
68	The effect of hypoxia on thermosensitive poly(N -vinylcaprolactam) hydrogels with tunable mechanical integrity for cartilage tissue engineering. , 2017, 105, 1863-1873.		21
69	Multiscale Strain as a Predictor of Impact-Induced Fissuring in Articular Cartilage. Journal of Biomechanical Engineering, 2017, 139, .	0.6	14
70	Mechanical properties and structureâ€function relationships of human chondrocyteâ€seeded cartilage constructs after in vitro culture. Journal of Orthopaedic Research, 2017, 35, 2298-2306.	1.2	20
71	Cyclic Mechanical Loading Enhances Transport of Antibodies Into Articular Cartilage. Journal of Biomechanical Engineering, 2017, 139, .	0.6	23
72	Customized biomaterials to augment chondrocyte gene therapy. Acta Biomaterialia, 2017, 53, 260-267.	4.1	10

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73	Tunable Lubricin-mimetics for Boundary Lubrication of Cartilage. Biotribology, 2017, 9, 18-23.	0.9	19
74	Optimizing cell sourcing for clinical translation of tissue engineered ears. Biofabrication, 2017, 9, 015004.	3.7	18
75	Hypoxic Expansion of Human Mesenchymal Stem Cells Enhances Three-Dimensional Maturation of Tissue-Engineered Intervertebral Discs. Tissue Engineering - Part A, 2017, 23, 293-300.	1.6	19
76	Matrix stiffening promotes a tumor vasculature phenotype. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 492-497.	3.3	295
77	Sub-critical impact inhibits the lubricating mechanisms of articular cartilage. Journal of Biomechanics, 2017, 53, 64-70.	0.9	23
78	Fiber development and matrix production in tissue-engineered menisci using bovine mesenchymal stem cells and fibrochondrocytes. Connective Tissue Research, 2017, 58, 329-341.	1.1	34
79	In vitro culture increases mechanical stability of human tissue engineered cartilage constructs by prevention of microscale scaffold buckling. Journal of Biomechanics, 2017, 64, 77-84.	0.9	14
80	Next generation tissue engineering of orthopedic soft tissue-to-bone interfaces. MRS Communications, 2017, 7, 289-308.	0.8	43
81	The Effect of Antibody Size and Mechanical Loading on Solute Diffusion Through the Articular Surface of Cartilage. Journal of Biomechanical Engineering, 2017, 139, .	0.6	19
82	Correlating rheological properties and printability of collagen bioinks: the effects of riboflavin photocrosslinking and pH. Biofabrication, 2017, 9, 034102.	3.7	178
83	Degenerative changes of the canine cervical spine after discectomy procedures, an in vivo study. BMC Veterinary Research, 2017, 13, 193.	0.7	13
84	Initial investigation of individual and combined annulus fibrosus and nucleus pulposus repair ex vivo. Acta Biomaterialia, 2017, 59, 192-199.	4.1	27
85	Postâ€traumatic osteoarthritis of the ankle: A distinct clinical entity requiring new research approaches. Journal of Orthopaedic Research, 2017, 35, 440-453.	1.2	96
86	A model system for developing a tissue engineered meniscal enthesis. Acta Biomaterialia, 2017, 56, 110-117.	4.1	19
87	Three-Dimensional Bioprinting and Its Potential in the Field of Articular Cartilage Regeneration. Cartilage, 2017, 8, 327-340.	1.4	90
88	Binding and lubrication of biomimetic boundary lubricants on articular cartilage. Journal of Orthopaedic Research, 2017, 35, 548-557.	1.2	38
89	Synergistic Interactions of a Synthetic Lubricin-Mimetic with Fibronectin for Enhanced Wear Protection. Frontiers in Bioengineering and Biotechnology, 2017, 5, 36.	2.0	13
90	Total disc replacement using tissue-engineered intervertebral discs in the canine cervical spine. PLoS ONE, 2017, 12, e0185716.	1.1	44

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91	Galectin-3 Binds to Lubricin and Reinforces the Lubricating Boundary Layer of Articular Cartilage. Scientific Reports, 2016, 6, 25463.	1.6	33
92	Long-Term Morphological and Microarchitectural Stability of Tissue-Engineered, Patient-Specific AuriclesIn Vivo. Tissue Engineering - Part A, 2016, 22, 461-468.	1.6	35
93	Biological Treatment Approaches for Degenerative Disk Disease: A Literature Review of in Vivo Animal and Clinical Data. Global Spine Journal, 2016, 6, 497-518.	1.2	62
94	Physiologically Distributed Loading Patterns Drive the Formation of Zonally Organized Collagen Structures in Tissue-Engineered Meniscus. Tissue Engineering - Part A, 2016, 22, 907-916.	1.6	60
95	Mechanical properties and structureâ€"function relationships in articular cartilage repaired using IGFâ€‐geneâ€enhanced chondrocytes. Journal of Orthopaedic Research, 2016, 34, 149-153.	1.2	33
96	Human talar and femoral cartilage have distinct mechanical properties near the articular surface. Journal of Biomechanics, 2016, 49, 3320-3327.	0.9	26
97	Mesenchymal Stem Cells Enhance Lubrication of Engineered Meniscus Through Lubricin Localization in Collagen Gels. Biotribology, 2016, 8, 26-32.	0.9	4
98	3D Bioprinting of Spatially Heterogeneous Collagen Constructs for Cartilage Tissue Engineering. ACS Biomaterials Science and Engineering, 2016, 2, 1800-1805.	2.6	303
99	Biomechanical and biochemical characterization of porcine tracheal cartilage. Laryngoscope, 2016, 126, E325-E331.	1.1	25
100	Hyaline Articular Matrix Formed by Dynamic Self-Regenerating Cartilage and Hydrogels. Tissue Engineering - Part A, 2016, 22, 962-970.	1.6	6
101	Characterization of mesenchymal stem cells and fibrochondrocytes in three-dimensional co-culture: analysis of cell shape, matrix production, and mechanical performance. Stem Cell Research and Therapy, 2016, 7, 39.	2.4	59
102	Structure-Function Relations and Rigidity Percolation in Biopolymer Networks in Live Tissue under Shear: Bovine Articular Cartilage as a Model System. Biophysical Journal, 2015, 108, 115a.	0.2	0
103	Adhesion and integration of tissue engineered cartilage to porous polyethylene for composite ear reconstruction. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2015, 103, 983-991.	1.6	15
104	Elastoviscous Transitions of Articular Cartilage Reveal a Mechanism of Synergy between Lubricin and Hyaluronic Acid. PLoS ONE, 2015, 10, e0143415.	1.1	105
105	Injectable, highâ€density collagen gels for annulus fibrosus repair: An in vitro rat tail model. Journal of Biomedical Materials Research - Part A, 2015, 103, 2571-2581.	2.1	55
106	Joint-dependent response to impact and implications for post-traumatic osteoarthritis. Osteoarthritis and Cartilage, 2015, 23, 1130-1137.	0.6	27
107	Comparison of Efficacy of Endogenous and Exogenous IGF-I in Stimulating Matrix Production in Neonatal and Mature Chondrocytes. Cartilage, 2015, 6, 264-272.	1.4	5
108	Fibronectin mediates enhanced wear protection of lubricin during shear. Biomacromolecules, 2015, 16, 2884-2894.	2.6	29

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109	Measuring microscale strain fields in articular cartilage during rapid impact reveals thresholds for chondrocyte death and a protective role for the superficial layer. Journal of Biomechanics, 2015, 48, 3440-3446.	0.9	64
110	Riboflavin crosslinked high-density collagen gel for the repair of annular defects in intervertebral discs: An in vivo study. Acta Biomaterialia, 2015, 26, 215-224.	4.1	55
111	Characterization of Tissue Response to Impact Loads Delivered Using a Hand-Held Instrument for Studying Articular Cartilage Injury. Cartilage, 2015, 6, 226-232.	1.4	27
112	Induction of fiber alignment and mechanical anisotropy in tissue engineered menisci with mechanical anchoring. Journal of Biomechanics, 2015, 48, 1436-1443.	0.9	62
113	Mechanically aided transport of antibodies through articular cartilage. Osteoarthritis and Cartilage, 2015, 23, A287-A288.	0.6	0
114	Mechanical characterization of matrix-induced autologous chondrocyte implantation (MACIÂ®) grafts in an equine model at 53 weeks. Journal of Biomechanics, 2015, 48, 1944-1949.	0.9	46
115	Dose-Dependent Response of Tissue-Engineered Intervertebral Discs to Dynamic Unconfined Compressive Loading. Tissue Engineering - Part A, 2015, 21, 564-572.	1.6	15
116	Annular Repair Using High-Density Collagen Gel. Spine, 2014, 39, 198-206.	1.0	52
117	Effects of enzymatic treatments on the depth-dependent viscoelastic shear properties of articular cartilage. Journal of Orthopaedic Research, 2014, 32, 1652-1657.	1.2	53
118	Computed Tomography-Guided Tissue Engineering of Upper Airway Cartilage. Tissue Engineering - Part C: Methods, 2014, 20, 506-513.	1.1	9
119	Identification of cartilage injury using quantitative multiphoton microscopy. Osteoarthritis and Cartilage, 2014, 22, 355-362.	0.6	24
120	Tissue-engineered intervertebral discs: MRI results and histology in the rodent spine. Journal of Neurosurgery: Spine, 2014, 20, 443-451.	0.9	22
121	Structure-Function Relations and Rigidity Percolation in the Shear Properties of Articular Cartilage. Biophysical Journal, 2014, 107, 1721-1730.	0.2	68
122	Enhanced boundary lubrication properties of engineered menisci by lubricin localization with insulin-like growth factor I treatment. Journal of Biomechanics, 2014, 47, 2183-2188.	0.9	24
123	Assessment of Intervertebral Disc Degeneration Based on Quantitative Magnetic Resonance Imaging Analysis. Spine, 2014, 39, E369-E378.	1.0	29
124	Quantitative characterization of mesenchymal stem cell adhesion to the articular cartilage surface. Journal of Biomedical Materials Research - Part A, 2013, 101, 3592-3598.	2.1	13
125	Recent advances in biological therapies for disc degeneration: tissue engineering of the annulus fibrosus, nucleus pulposus and whole intervertebral discs. Current Opinion in Biotechnology, 2013, 24, 872-879.	3.3	87
126	Anatomic variation of depthâ€dependent mechanical properties in neonatal bovine articular cartilage. Journal of Orthopaedic Research, 2013, 31, 686-691.	1.2	31

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127	Effects of Chitosan Coatings on Polypropylene Mesh for Implantation in a Rat Abdominal Wall Model. Tissue Engineering - Part A, 2013, 19, 2713-2723.	1.6	32
128	The Effect of IGF-I on Anatomically Shaped Tissue-Engineered Menisci. Tissue Engineering - Part A, 2013, 19, 1443-1450.	1.6	27
129	Cell(MC3T3â€E1)â€Printed Poly(Ïµâ€caprolactone)/Alginate Hybrid Scaffolds for Tissue Regeneration. Macromolecular Rapid Communications, 2013, 34, 142-149.	2.0	88
130	High density type I collagen gels for tissue engineering of whole menisci. Acta Biomaterialia, 2013, 9, 7787-7795.	4.1	71
131	Tuning three-dimensional collagen matrix stiffness independently of collagen concentration modulates endothelial cell behavior. Acta Biomaterialia, 2013, 9, 4635-4644.	4.1	300
132	Early cartilage injury quantified and characterized with multiphoton microscopy imaging. Osteoarthritis and Cartilage, 2013, 21, S182-S183.	0.6	0
133	Spatial periodicity in growth plate shear mechanical properties is disrupted by vitamin D deficiency. Journal of Biomechanics, 2013, 46, 1597-1603.	0.9	12
134	Cell-Laden Poly(É›-caprolactone)/Alginate Hybrid Scaffolds Fabricated by an Aerosol Cross-Linking Process for Obtaining Homogeneous Cell Distribution: Fabrication, Seeding Efficiency, and Cell Proliferation and Distribution. Tissue Engineering - Part C: Methods, 2013, 19, 784-793.	1.1	42
135	Localization of Viscous Behavior and Shear Energy Dissipation in Articular Cartilage Under Dynamic Shear Loading. Journal of Biomechanical Engineering, 2013, 135, 31002.	0.6	46
136	In vivo tibial compression decreases osteolysis and tumor formation in a human metastatic breast cancer model. Journal of Bone and Mineral Research, 2013, 28, 2357-2367.	3.1	88
137	3D Cell and Scaffold Patterning Strategies in Tissue Engineering. Recent Patents on Biomedical Engineering, 2013, 6, 3-21.	0.5	16
138	High-Fidelity Tissue Engineering of Patient-Specific Auricles for Reconstruction of Pediatric Microtia and Other Auricular Deformities. PLoS ONE, 2013, 8, e56506.	1.1	158
139	The Effect of the Duration of Mechanical Stimulation and Post-Stimulation Culture on the Structure and Properties of Dynamically Compressed Tissue-Engineered Menisci. Tissue Engineering - Part A, 2012, 18, 1365-1375.	1.6	43
140	Mathematical Modeling and Frequency Gradient Analysis of Cellular and Vascular Invasion into Integra and Strattice. Plastic and Reconstructive Surgery, 2012, 129, 89-99.	0.7	22
141	Properties of Cartilage Engineered from Elderly Human Chondrocytes for Articular Surface Repair. Tissue Engineering - Part A, 2012, 18, 1490-1499.	1.6	3
142	Fabrication of cell-laden three-dimensional alginate-scaffolds with an aerosol cross-linking process. Journal of Materials Chemistry, 2012, 22, 18735.	6.7	49
143	Cells (MC3T3-E1)-Laden Alginate Scaffolds Fabricated by a Modified Solid-Freeform Fabrication Process Supplemented with an Aerosol Spraying. Biomacromolecules, 2012, 13, 2997-3003.	2.6	101
144	Novel Model-Based Inquiry of Ionic Bonding in Alginate Hydrogels Used in Tissue Engineering for High School Students. Journal of Chemical Education, 2012, 89, 1308-1311.	1.1	9

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145	Calcium signaling in response to fluid flow by chondrocytes in 3D alginate culture. Journal of Orthopaedic Research, 2012, 30, 793-799.	1.2	19
146	Insights into interstitial flow, shear stress, and mass transport effects on ECM heterogeneity in bioreactor-cultivated engineered cartilage hydrogels. Biomechanics and Modeling in Mechanobiology, 2012, 11, 689-702.	1.4	40
147	Imageâ€based tissue engineering of a total intervertebral disc implant for restoration of function to the rat lumbar spine. NMR in Biomedicine, 2012, 25, 443-451.	1.6	39
148	Porous Poly(Vinyl Alcohol)-Hydrogel Matrix-Engineered Biosynthetic Cartilage. Tissue Engineering - Part A, 2011, 17, 301-309.	1.6	43
149	Increased Mixing Improves Hydrogel Homogeneity and Quality of Three-Dimensional Printed Constructs. Tissue Engineering - Part C: Methods, 2011, 17, 239-248.	1.1	76
150	Methods for Photocrosslinking Alginate Hydrogel Scaffolds with High Cell Viability. Tissue Engineering - Part C: Methods, 2011, 17, 173-179.	1.1	167
151	Chondrocyte calcium signaling in response to fluid flow is regulated by matrix adhesion in 3-D alginate scaffolds. Archives of Biochemistry and Biophysics, 2011, 505, 112-117.	1.4	38
152	Biomechanical characterisation of equine laryngeal cartilage. Equine Veterinary Journal, 2011, 43, 592-598.	0.9	8
153	Frictional Properties of the Meniscus Improve After Scaffold-augmented Repair of Partial Meniscectomy: A Pilot Study. Clinical Orthopaedics and Related Research, 2011, 469, 2817-2823.	0.7	35
154	A Pre-Clinical Test Platform for the Functional Evaluation of Scaffolds for Musculoskeletal Defects: The Meniscus. HSS Journal, 2011, 7, 157-163.	0.7	22
155	Microstructured templates for directed growth and vascularization of soft tissue inÂvivo. Biomaterials, 2011, 32, 5391-5401.	5.7	47
156	Dynamic compressive loading of image-guided tissue engineered meniscal constructs. Journal of Biomechanics, 2011, 44, 509-516.	0.9	63
157	Biological intervertebral disc replacement: an in vivo model and comparison of two surgical techniques to approach the rat caudal disc. Evidence-based Spine-care Journal, 2011, 2, 29-35.	0.9	8
158	Tissue-engineered total disc replacement: final outcomes of a murine caudal disc in vivo study. Evidence-based Spine-care Journal, 2011, 2, 55-56.	0.9	11
159	Tissue-engineered intervertebral discs produce new matrix, maintain disc height, and restore biomechanical function to the rodent spine. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13106-13111.	3.3	166
160	Processing of type I collagen gels using nonenzymatic glycation. Journal of Biomedical Materials Research - Part A, 2010, 93A, 843-851.	2.1	66
161	Effect of media mixing on ECM assembly and mechanical properties of anatomically-shaped tissue engineered meniscus. Biomaterials, 2010, 31, 6756-6763.	5.7	47
162	Effects of Seeding Density on Proteoglycan Assembly of Passaged Mesenchymal Stem Cells. Cellular and Molecular Bioengineering, 2010, 3, 197-206.	1.0	11

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163	Analysis of frictional behavior and changes in morphology resulting from cartilage articulation with porous polyurethane foams. Journal of Orthopaedic Research, 2010, 28, 1292-1299.	1.2	23
164	High-resolution spatial mapping of shear properties in cartilage. Journal of Biomechanics, 2010, 43, 796-800.	0.9	68
165	Dense type I collagen matrices that support cellular remodeling and microfabrication for studies of tumor angiogenesis and vasculogenesis in vitro. Biomaterials, 2010, 31, 8596-8607.	5.7	306
166	An Optical Method for Evaluation of Geometric Fidelity for Anatomically Shaped Tissue-Engineered Constructs. Tissue Engineering - Part C: Methods, 2010, 16, 693-703.	1.1	40
167	Total disc replacement using a tissue-engineered intervertebral disc in vivo: new animal model and initial results. Evidence-based Spine-care Journal, 2010, 1, 62-66.	0.9	22
168	Self-Assembly of Aligned Tissue-Engineered Annulus Fibrosus and Intervertebral Disc Composite Via Collagen Gel Contraction. Tissue Engineering - Part A, 2010, 16, 1339-1348.	1.6	147
169	Control of the Electromechanical Properties of Alginate Hydrogels via Ionic and Covalent Cross-Linking and Microparticle Doping. Biomacromolecules, 2010, 11, 2184-2189.	2.6	8
170	The effects of needle puncture injury on microscale shear strain in the intervertebral disc annulus fibrosus. Spine Journal, 2010, 10, 1098-1105.	0.6	78
171	Additive manufacturing for in situ repair of osteochondral defects. Biofabrication, 2010, 2, 035004.	3.7	137
172	Parametric Finite Element Analysis of Physical Stimuli Resulting From Mechanical Stimulation of Tissue Engineered Cartilage. Journal of Biomechanical Engineering, 2009, 131, 061014.	0.6	26
173	Imageâ€guided tissue engineering. Journal of Cellular and Molecular Medicine, 2009, 13, 1428-1436.	1.6	36
174	Conditions affecting cell seeding onto threeâ€dimensional scaffolds for cellularâ€based biodegradable implants. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2009, 91B, 80-87.	1.6	55
175	Boundary mode lubrication of articular cartilage by recombinant human lubricin. Journal of Orthopaedic Research, 2009, 27, 771-777.	1.2	90
176	Modulation of lubricin biosynthesis and tissue surface properties following cartilage mechanical injury. Arthritis and Rheumatism, 2009, 60, 133-142.	6.7	49
177	Alteration of articular cartilage frictional properties by transforming growth factor Î², interleukinâ€1Î², and oncostatin M. Arthritis and Rheumatism, 2009, 60, 440-449.	6.7	17
178	Prevention of cartilage degeneration in a rat model of osteoarthritis by intraarticular treatment with recombinant lubricin. Arthritis and Rheumatism, 2009, 60, 840-847.	6.7	183
179	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.	0.9	122
180	Effect of Sustained-Release PDGF and TGF-Î² on Cyclophosphamide-Induced Impaired Wound Healing. Plastic and Reconstructive Surgery, 2009, 124, 1118-1124.	0.7	18

#	Article	IF	Citations
181	Measurement of Local Strains in Intervertebral Disc Anulus Fibrosus Tissue Under Dynamic Shear: Contributions of Matrix Fiber Orientation and Elastin Content. , 2009, , .		1
182	Microvascular Structure and Function in Vitro. , 2009, , .		0
183	Nonâ€enzymatic glycation of chondrocyteâ€seeded collagen gels for cartilage tissue engineering. Journal of Orthopaedic Research, 2008, 26, 1434-1439.	1.2	36
184	Adhesive properties of laminated alginate gels for tissue engineering of layered structures. Journal of Biomedical Materials Research - Part A, 2008, 85A, 611-618.	2.1	32
185	Lubrication mode analysis of articular cartilage using Stribeck surfaces. Journal of Biomechanics, 2008, 41, 1910-1918.	0.9	148
186	Mapping the depth dependence of shear properties in articular cartilage. Journal of Biomechanics, 2008, 41, 2430-2437.	0.9	131
187	Image-Guided Tissue Engineering of Anatomically Shaped Implants via MRI and Micro-CT Using Injection Molding. Tissue Engineering - Part A, 2008, 14, 1195-1202.	1.6	112
188	Role of TGF-Î² and FGF in the Treatment of Radiation-Impaired Wounds Using a Novel Drug Delivery System. Plastic and Reconstructive Surgery, 2008, 122, 1036-1045.	0.7	33
189	A Mechanical Composite Spheres Analysis of Engineered Cartilage Dynamics. Journal of Biomechanical Engineering, 2007, 129, 473-480.	0.6	15
190	Binding and localization of recombinant lubricin to articular cartilage surfaces. Journal of Orthopaedic Research, 2007, 25, 283-292.	1.2	124
191	Integration of layered chondrocyte-seeded alginate hydrogel scaffolds. Biomaterials, 2007, 28, 2987-2993.	5.7	91
192	Microfluidic scaffolds for tissue engineering. Nature Materials, 2007, 6, 908-915.	13.3	550
193	Regeneration and Replacement of the Intervertebral Disc. , 2007, , 877-896.		9
194	Review of Injectable Cartilage Engineering Using Fibrin Gel in Mice and Swine Models. Tissue Engineering, 2006, 12, 1151-1168.	4.9	134
195	Tissue-Engineered Lung: An In Vivo and In Vitro Comparison of Polyglycolic Acid and Pluronic F-127 Hydrogel/Somatic Lung Progenitor Cell Constructs to Support Tissue Growth. Tissue Engineering, 2006, 12, 1213-1225.	4.9	161
196	An Allogenic Cellâ€"Based Implant for Meniscal Lesions. American Journal of Sports Medicine, 2006, 34, 1779-1789.	1.9	67
197	Tissue Engineering Cartilage with Aged Articular Chondrocytes In Vivo. Plastic and Reconstructive Surgery, 2006, 118, 41-49.	0.7	35
198	Tissue-Engineered Calcium Alginate Patches in the Repair of Chronic Chinchilla Tympanic Membrane Perforations. Laryngoscope, 2006, 116, 700-704.	1.1	61

#	Article	IF	Citations
199	Biomechanical and biochemical characterization of composite tissue-engineered intervertebral discs. Biomaterials, 2006, 27, 362-370.	5.7	146
200	Direct Freeform Fabrication of Seeded Hydrogels in Arbitrary Geometries. Tissue Engineering, 2006, 12, 1325-1335.	4.9	332
201	A Novel Approach to Regenerating Periodontal Tissue by Grafting Autologous Cultured Periosteum. Tissue Engineering, 2006, 12, 1227-1335.	4.9	74
202	Review of Injectable Cartilage Engineering Using Fibrin Gel in Mice and Swine Models. Tissue Engineering, 2006, .	4.9	0
203	Tissue-Engineered Lung: An In Vivo and In Vitro Comparison of Polyglycolic Acid and Pluronic F-127 Hydrogel/Somatic Lung Progenitor Cell Constructs to Support Tissue Growth. Tissue Engineering, 2006, .	4.9	0
204	Title is missing!. Tissue Engineering, 2006, .	4.9	0
205	Poly(lactide-co-glycolide) microspheres as a moldable scaffold for cartilage tissue engineering. Biomaterials, 2005, 26, 1945-1952.	5.7	99
206	Aerosol delivery of mammalian cells for tissue engineering. Biotechnology and Bioengineering, 2005, 91, 801-807.	1.7	37
207	Role for Interleukin 1Î± in the Inhibition of Chondrogenesis in Autologous Implants Using Polyglycolic Acidâ€“Polylactic Acid Scaffolds. Tissue Engineering, 2005, 11, 192-200.	4.9	55
208	Matrix metalloproteinase activity synergizes with Î±2Î²1 integrins to enhance collagen remodeling. Experimental Cell Research, 2005, 310, 79-87.	1.2	22
209	A Microfluidic Biomaterial. Journal of the American Chemical Society, 2005, 127, 13788-13789.	6.6	211
210	Integrative Repair of Cartilage with Articular and Nonarticular Chondrocytes. Tissue Engineering, 2004, 10, 1308-1315.	4.9	68
211	Fabrication of Tissue Engineered Tympanic Membrane Patches Using Computer-Aided Design and Injection Molding. Laryngoscope, 2004, 114, 1290-1295.	1.1	38
212	A Novel Injectable Approach for Cartilage Formation in Vivo Using PLG Microspheres. Annals of Biomedical Engineering, 2004, 32, 418-429.	1.3	56
213	Analysis of bending behavior of native and engineered auricular and costal cartilage. Journal of Biomedical Materials Research Part B, 2004, 68A, 597-602.	3.0	58
214	A New Histomorphometric Method to Assess Growth Plate Chondrodysplasia and Its Application to		

#	Article	IF	Citations
217	Injectable Tissue-Engineered Cartilage with Different Chondrocyte Sources. Plastic and Reconstructive Surgery, 2004, 113, 1361-1371.	0.7	110
218	Integrative Repair of Cartilage with Articular and Nonarticular Chondrocytes. Tissue Engineering, 2004, 10, 1308-1315.	4.9	3
219	Cell-based bonding of articular cartilage: An extended study. Journal of Biomedical Materials Research Part B, 2003, 64A, 517-524.	3.0	46
220	In Vitro Tissue Engineering to Generate a Human-Sized Auricle and Nasal Tip. Laryngoscope, 2003, 113, 90-94.	1.1	65
221	Fibroblasts regulate contractile force independent of MMP activity in 3D-collagen. Biochemical and Biophysical Research Communications, 2003, 312, 725-732.	1.0	24
222	Comparison of tracheal and nasal chondrocytes for tissue engineering of the trachea. Annals of Thoracic Surgery, 2003, 76, 1884-1888.	0.7	55
223	A role for the interleukin-1 receptor in the pathway linking static mechanical compression to decreased proteoglycan synthesis in surface articular cartilage. Archives of Biochemistry and Biophysics, 2003, 413, 229-235.	1.4	44
224	Normal features of tissue-engineered auricular cartilage by flow cytometry and histology: patient safety. Otolaryngology - Head and Neck Surgery, 2003, 129, 390-396.	1.1	13
225	Characterization of Polylactic Acidâ€“Polyglycolic Acid Composites for Cartilage Tissue Engineering. Tissue Engineering, 2003, 9, 63-70.	4.9	146
226	A composite tissueâ€engineered trachea using sheep nasal chondrocyte and epithelial cells. FASEB Journal, 2003, 17, 823-828.	0.2	125
227	Correlation Between Hearing Loss and Scala Media Area in Guinea Pigs with Long-standing Endolymphatic Hydrops. Otology and Neurotology, 2003, 24, 64-72.	0.7	16
228	Tissue Engineering of Autologous Cartilage for Craniofacial Reconstruction by Injection Molding. Plastic and Reconstructive Surgery, 2003, 112, 793-799.	0.7	101
229	Tissue-Engineered Human Auricular Cartilage Demonstrates Euploidy by Flow Cytometry. Tissue Engineering, 2002, 8, 85-92.	4.9	28
230	Histomorphometric Analysis of a Cell-Based Model of Cartilage Repair. Tissue Engineering, 2002, 8, 839-846.	4.9	16
231	Age-related changes in the composition and mechanical properties of human nasal cartilage. Archives of Biochemistry and Biophysics, 2002, 403, 132-140.	1.4	71
232	Modeling the dynamic composition of engineered cartilage. Archives of Biochemistry and Biophysics, 2002, 408, 246-254.	1.4	69
233	Autologous tissue-engineered trachea with sheep nasal chondrocytes. Journal of Thoracic and Cardiovascular Surgery, 2002, 123, 1177-1184.	0.4	137
234	Age dependence of biochemical and biomechanical properties of tissue-engineered human septal cartilage. Biomaterials, 2002, 23, 3087-3094.	5.7	91

#	Article	IF	Citations
235	Cartilage Reconstruction. , 2002, , 1027-1039.		2
236	Replacement of an Avulsed Phalanx with Tissue-Engineered Bone. New England Journal of Medicine, 2001, 344, 1511-1514.	13.9	305
237	Tissue-engineered spinal cord. Transplantation Proceedings, 2001, 33, 592-598.	0.3	52
238	A Biomechanical Analysis of an Engineered Cell-Scaffold Implant for Cartilage Repair. Annals of Plastic Surgery, 2001, 46, 533-537.	0.5	59
239	Age Dependence of Cellular Properties of Human Septal Cartilage. JAMA Otolaryngology, 2001, 127, 1248.	1.5	41
240	The effect of dynamic compression on the response of articular cartilage to insulin-like growth factor-I. Journal of Orthopaedic Research, 2001, 19, 11-17.	1.2	200
241	Injection molding of chondrocyte/alginate constructs in the shape of facial implants. Journal of Biomedical Materials Research Part B, 2001, 55, 503-511.	3.0	256
242	Identification and initial characterization of spore-like cells in adult mammals. Journal of Cellular Biochemistry, 2001, 80, 455-460.	1.2	90
243	Direct perfusion measurements of cancellous bone anisotropic permeability. Journal of Biomechanics, 2001, 34, 1197-1202.	0.9	102
244	Identification and initial characterization of spore-like cells in adult mammals. , 2001, 80, 455.		11
245	Genetic Manipulation of Adhesion Protein Expression to Regulate Tissue Remodeling. , 2001, , .		0
246	Cell Adhesion to RGD-Alginate Is Modulated by Substrate Mechanics. , 2001, , .		0
247	Injection Molding of Tissue Engineered Tympanic Membrane Patches Utilizing Computer-Aided Design. , 2001, , .		0
248	Modeling the Dynamic Composition of Engineered Cartilage. , 2001, , .		0
249	Comparison of Chondrogensis in Static and Perfused Bioreactor Culture. Biotechnology Progress, 2000, 16, 893-896.	1.3	228
250	Minimally Invasive Technique of Auricular Cartilage Harvest for Tissue Engineering. Tissue Engineering, 2000, 6, 69-74.	4.9	6
251	Mechanical and Physicochemical Regulation of the Action of Insulin-Like Growth Factor-I on Articular Cartilage. Archives of Biochemistry and Biophysics, 2000, 379, 57-63.	1.4	102
252	STRUCTURAL TISSUE ENGINEERING. , 2000, , 671-682.		14

#	Article	IF	Citations
253	Biomechanical Analysis of a Chondrocyte-Based Repair Model of Articular Cartilage. Tissue Engineering, 1999, 5, 317-326.	4.9	64
254	Effect of a Poly(propylene fumarate) Foaming Cement on the Healing of Bone Defects. Tissue Engineering, 1999, 5, 305-316.	4.9	38
255	An Overview of Tissue Engineered Bone. Clinical Orthopaedics and Related Research, 1999, 367, S375-S381.	0.7	101
256	Temporal Bone Fractures: Otic Capsule Sparing versus Otic Capsule Violating Clinical and Radiographic Considerations. Arteriosclerosis, Thrombosis, and Vascular Biology, 1999, 47, 1079.	1.1	162
257	Tissue engineering: The first decade and beyond. , 1998, 72, 297-303.		187
258	Mechanical Properties of Perforated and Partially Demineralized Bone Grafts. Clinical Orthopaedics and Related Research, 1998, 353, 238-246.	0.7	14
259	Inhibition of Cartilage Degradation and Changes in Physical Properties Induced by IL-1Î² and Retinoic Acid Using Matrix Metalloproteinase Inhibitors. Archives of Biochemistry and Biophysics, 1997, 344, 404-412.	1.4	77
260	Interaction of Epidermal Growth Factor and Insulin-like Growth Factor-I in the Regulation of Growth Plate Chondrocytes. Experimental Cell Research, 1997, 234, 1-6.	1.2	28
261	Detection of interleukin-1 in the cartilage of patients with osteoarthritis: a possible autocrine/paracrine role in pathogenesis. Osteoarthritis and Cartilage, 1997, 5, 293-300.	0.6	124
262	Activation and Inhibition of Endogenous Matrix Metalloproteinases in Articular Cartilage: Effects on Composition and Biophysical Properties. Archives of Biochemistry and Biophysics, 1996, 333, 359-367.	1.4	34
263	Changes in cartilage composition and physical properties due to stromelysin degradation. Arthritis and Rheumatism, 1995, 38, 173-183.	6.7	149
264	In vivo effects of stromelysin on the composition and physical properties of rabbit articular cartilage in the presence and absence of a synthetic inhibitor. Arthritis and Rheumatism, 1995, 38, 1678-1686.	6.7	12
265	The role of cartilage streaming potential, fluid flow and pressure in the stimulation of chondrocyte biosynthesis during dynamic compression. Journal of Biomechanics, 1995, 28, 1055-1066.	0.9	230
266	Cartilage degradation and associated changes in biomechanical and electromechanical properties. Acta Orthopaedica, 1995, 66, 38-44.	1.4	48
267	Effects of Matrix Metalloproteinases on Cartilage Biophysical Properties in Vitro and in Vivo. Annals of the New York Academy of Sciences, 1994, 732, 439-443.	1.8	6