Conor T. Buckley

List of Publications by Year
in descending order

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126858
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times ranked

3227
citing authors

#	ARTICLE	IF	CITATIONS
1	The Response of Bone Marrow-Derived Mesenchymal Stem Cells to Dynamic Compression Following TGF-Î²3 Induced Chondrogenic Differentiation. Annals of Biomedical Engineering, 2010, 38, 2896-2909.	1.3	165
2	A Comparison of the Functionality and<i>In Vivo</i>Phenotypic Stability of Cartilaginous Tissues Engineered from Different Stem Cell Sources. Tissue Engineering - Part A, 2012, 18, 1161-1170.	1.6	148
3	Oxygen tension regulates the osteogenic, chondrogenic and endochondral phenotype of bone marrow derived mesenchymal stem cells. Biochemical and Biophysical Research Communications, 2012, 417, 305-310.	1.0	128
4	The effect of concentration, thermal history and cell seeding density on the initial mechanical properties of agarose hydrogels. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 512-521.	1.5	127
5	Engineering osteochondral constructs through spatial regulation of endochondral ossification. Acta Biomaterialia, 2013, 9, 5484-5492.	4.1	106
6	Functional properties of cartilaginous tissues engineered from infrapatellar fat pad-derived mesenchymal stem cells. Journal of Biomechanics, 2010, 43, 920-926.	0.9	105
7	Dynamic compression can inhibit chondrogenesis of mesenchymal stem cells. Biochemical and Biophysical Research Communications, 2008, 377, 458-462.	1.0	103
8	Oxygen tension differentially regulates the functional properties of cartilaginous tissues engineered from infrapatellar fat pad derived MSCs and articular chondrocytes. Osteoarthritis and Cartilage, 2010, 18, 1345-1354.	0.6	94
9	Low oxygen tension is a more potent promoter of chondrogenic differentiation than dynamic compression. Journal of Biomechanics, 2010, 43, 2516-2523.	0.9	92
10	Controlled release of transforming growth factor-Î²3 from cartilage-extra-cellular-matrix-derived scaffolds to promote chondrogenesis of human-joint-tissue-derived stem cells. Acta Biomaterialia, 2014, 10, 4400-4409.	4.1	86
11	Cellâ€"matrix interactions regulate mesenchymal stem cell response to hydrostatic pressure. Acta Biomaterialia, 2012, 8, 2153-2159.	4.1	80
12	Critical aspects and challenges for intervertebral disc repair and regenerationâ€"Harnessing advances in tissue engineering. JOR Spine, 2018, 1, e1029.	1.5	79
13	Cyclic hydrostatic pressure promotes a stable cartilage phenotype and enhances the functional development of cartilaginous grafts engineered using multipotent stromal cells isolated from bone marrow and infrapatellar fat pad. Journal of Biomechanics, 2014, 47, 2115-2121.	0.9	77
14	Advancing cell therapies for intervertebral disc regeneration from the lab to the clinic: Recommendations of the ORS spine section. JOR Spine, 2018, 1, e1036.	1.5	74
15	The effect of cyclic hydrostatic pressure on the functional development of cartilaginous tissues engineered using bone marrow derived mesenchymal stem cells. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1257-1265.	1.5	69
16	Hydrostatic pressure acts to stabilise a chondrogenic phenotype in porcine joint tissue derived stem cells. , 2012, 23, 121-134.		68
17	Coupling Freshly Isolated CD44⁺ Infrapatellar Fat Padâ€Derived Stromal Cells with a TGFâ€Î²3 Eluting Cartilage ECMâ€Derived Scaffold as a Singleâ€Stage Strategy for Promoting Chondrogenesis. Advanced Healthcare Materials, 2015, 4, 1043-1053.	3.9	67
18	Living Cell Factories â€•Electrosprayed Microcapsules and Microcarriers for Minimally Invasive Delivery. Advanced Materials, 2016, 28, 5662-5671.	11.1	62

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19	Shape-memory porous alginate scaffolds for regeneration of the annulus fibrosus: Effect of TGF-Î²3 supplementation and oxygen culture conditions. Acta Biomaterialia, 2014, 10, 1985-1995.	4.1	60
20	Chondrogenesis and Integration of Mesenchymal Stem Cells Within an InÂVitro Cartilage Defect Repair Model. Annals of Biomedical Engineering, 2009, 37, 2556-2565.	1.3	59
21	Anisotropic Shape-Memory Alginate Scaffolds Functionalized with Either Type I or Type II Collagen for Cartilage Tissue Engineering. Tissue Engineering - Part A, 2017, 23, 55-68.	1.6	57
22	Expansion in the presence of FGF-2 enhances the functional development of cartilaginous tissues engineered using infrapatellar fat pad derived MSCs. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 11, 102-111.	1.5	56
23	Decellularized grafts with axially aligned channels for peripheral nerve regeneration. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 41, 124-135.	1.5	54
24	The use of the reamer-irrigator-aspirator to harvest mesenchymal stem cells. Journal of Bone and Joint Surgery: British Volume, 2011, 93-B, 517-524.	3.4	52
25	High abundance of CD271+ multipotential stromal cells (MSCs) in intramedullary cavities of long bones. Bone, 2012, 50, 510-517.	1.4	48
26	Chondrocytes and bone marrow-derived mesenchymal stem cells undergoing chondrogenesis in agarose hydrogels of solid and channelled architectures respond differentially to dynamic culture conditions. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 747-758.	1.3	44
27	European Society of Biomechanics S.M. Perren Award 2012: The external mechanical environment can override the influence of local substrate in determining stem cell fate. Journal of Biomechanics, 2012, 45, 2483-2492.	0.9	44
28	Composition-function relations of cartilaginous tissues engineered from chondrocytes and mesenchymal stem cells isolated from bone marrow and infrapatellar fat pad. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 673-683.	1.3	43
29	A growth factor delivery system for chondrogenic induction of infrapatellar fat padâ€derived stem cells in fibrin hydrogels. Biotechnology and Applied Biochemistry, 2011, 58, 345-352.	1.4	42
30	Extracellular matrix production by nucleus pulposus and bone marrow stem cells in response to altered oxygen and glucose microenvironments. Journal of Anatomy, 2015, 227, 757-766.	0.9	42
31	Cellâ€based therapies for intervertebral disc and cartilage regenerationâ€” Current concepts, parallels, and perspectives. Journal of Orthopaedic Research, 2017, 35, 8-22.	1.2	42
32	Tissue Engineering Whole Bones Through Endochondral Ossification: Regenerating the Distal Phalanx. BioResearch Open Access, 2015, 4, 229-241.	2.6	39
33	Glyoxal crossâ€linking of solubilized extracellular matrix to produce highly porous, elastic, and chondroâ€permissive scaffolds for orthopedic tissue engineering. Journal of Biomedical Materials Research - Part A, 2019, 107, 2222-2234.	2.1	39
34	Engineering of Large Cartilaginous Tissues Through the Use of Microchanneled Hydrogels and Rotational Culture. Tissue Engineering - Part A, 2009, 15, 3213-3220.	1.6	38
35	Injectable Disc-Derived ECM Hydrogel Functionalised with Chondroitin Sulfate for Intervertebral Disc Regeneration. Acta Biomaterialia, 2020, 117, 142-155.	4.1	37
36	The Influence of Construct Scale on the Composition and Functional Properties of Cartilaginous Tissues Engineered Using Bone Marrow-Derived Mesenchymal Stem Cells. Tissue Engineering - Part A, 2012, 18, 382-396.	1.6	36

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37	The effects of dynamic compression on the development of cartilage grafts engineered using bone marrow and infrapatellar fat pad derived stem cells. Biomedical Materials (Bristol), 2015, 10, 055011.	1.7	35
38	The Role of Environmental Factors in Regulating the Development of Cartilaginous Grafts Engineered Using Osteoarthritic Human Infrapatellar Fat Padâ€“Derived Stem Cells. Tissue Engineering - Part A, 2012, 18, 1531-1541.	1.6	33
39	Cyclic Tensile Strain Can Play a Role in Directing both Intramembranous and Endochondral Ossification of Mesenchymal Stem Cells. Frontiers in Bioengineering and Biotechnology, 2017, 5, 73.	2.0	33
40	Fabrication and characterization of a porous multidomain hydroxyapatite scaffold for bone tissue engineering investigations. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 93B, 459-467.	1.6	29
41	Altering the Architecture of Tissue Engineered Hypertrophic Cartilaginous Grafts Facilitates Vascularisation and Accelerates Mineralisation. PLoS ONE, 2014, 9, e90716.	1.1	29
42	A Comparison of Self-Assembly and Hydrogel Encapsulation as a Means to Engineer Functional Cartilaginous Grafts Using Culture Expanded Chondrocytes. Tissue Engineering - Part C: Methods, 2014, 20, 52-63.	1.1	29
43	Bilayered extracellular matrix derived scaffolds with anisotropic pore architecture guide tissue organization during osteochondral defect repair. Acta Biomaterialia, 2022, 143, 266-281.	4.1	26
44	Bone Marrow Stem Cells in Response to Intervertebral Disc-Like Matrix Acidity and Oxygen Concentration. Spine, 2016, 41, 743-750.	1.0	25
45	Influence of key processing parameters and seeding density effects of microencapsulated chondrocytes fabricated using electrohydrodynamic spraying. Biofabrication, 2018, 10, 035011.	3.7	23
46	Rapid Chondrocyte Isolation for Tissue Engineering Applications: The Effect of Enzyme Concentration and Temporal Exposure on the Matrix Forming Capacity of Nasal Derived Chondrocytes. BioMed Research International, 2017, 2017, 1-12.	0.9	22
47	The application of plastic compression to modulate fibrin hydrogel mechanical properties. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 16, 66-72.	1.5	20
48	Engineering cartilaginous grafts using chondrocyte-laden hydrogels supported by a superficial layer of stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 1343-1353.	1.3	17
49	Biomechanical Evaluation of Different Numbers, Sizes and Placement Configurations of Ligaclips Required to Secure Cellophane Bands. Veterinary Surgery, 2010, 39, 59-64.	0.5	16
50	Combining BMP-6, TGF-Î²3 and hydrostatic pressure stimulation enhances the functional development of cartilage tissues engineered using human infrapatellar fat pad derived stem cells. Biomaterials Science, 2013, 1, 745.	2.6	16
51	Scaffold architecture determines chondrocyte response to externally applied dynamic compression. Biomechanics and Modeling in Mechanobiology, 2013, 12, 889-899.	1.4	15
52	Recapitulating Aspects of the Oxygen and Substrate Environment of the Damaged Joint Milieu for Stem Cell-Based Cartilage Tissue Engineering. Tissue Engineering - Part C: Methods, 2013, 19, 117-127.	1.1	15
53	Engineering articular cartilageâ€·like grafts by selfâ€·assembly of infrapatellar fat padâ€·derived stem cells. Biotechnology and Bioengineering, 2014, 111, 1686-1698.	1.7	14
54	Multi-factorial nerve guidance conduit engineering improves outcomes in inflammation, angiogenesis and large defect nerve repair. Matrix Biology, 2022, 106, 34-57.	1.5	14

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55	Intrinsic multipotential mesenchymal stromal cell activity in gelatinous Heberdenâ€™s nodes in osteoarthritis at clinical presentation. Arthritis Research and Therapy, 2014, 16, R119.	1.6	13
56	Engineering zonal cartilaginous tissue by modulating oxygen levels and mechanical cues through the depth of infrapatellar fat pad stem cell laden hydrogels. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2613-2628.	1.3	13
57	Promoting endogenous articular cartilage regeneration using extracellular matrix scaffolds. Materials Today Bio, 2022, 16, 100343.	2.6	13
58	Priming and cryopreservation of microencapsulated marrow stromal cells as a strategy for intervertebral disc regeneration. Biomedical Materials (Bristol), 2018, 13, 034106.	1.7	12
59	Knot Security of 5 Metric (USP 2) Sutures: Influence of Knotting Technique, Suture Material, and Incubation Time for 14 and 28 Days in Phosphate Buffered Saline and Inflamed Equine Peritoneal Fluid. Veterinary Surgery, 2015, 44, 723-730.	0.5	11
60	Incorporation of Collagen and Hyaluronic Acid to Enhance the Bioactivity of Fibrin-Based Hydrogels for Nucleus Pulposus Regeneration. Journal of Functional Biomaterials, 2018, 9, 43.	1.8	11
61	Consolidating and reâ€evaluating the human disc nutrient microenvironment. JOR Spine, 2022, 5, e1192.	1.5	11
62	Maintaining cell depth viability: on the efficacy of a trimodal scaffold pore architecture and dynamic rotational culturing. Journal of Materials Science: Materials in Medicine, 2010, 21, 1731-1738.	1.7	10
63	Investigating the physiological relevance of ex vivo disc organ culture nutrient microenvironments using <scp>in silico</scp> modeling and experimental validation. JOR Spine, 2021, 4, e1141.	1.5	8
64	Biomechanical properties of feline ventral abdominal wall and celiotomy closure techniques. Veterinary Surgery, 2018, 47, 193-203.	0.5	7
65	Mechanical Comparison of Loop and Crimp Configurations for Extracapsular Stabilization of the Cranial Cruciate Ligamentâ€Deficient Stifle. Veterinary Surgery, 2015, 44, 50-58.	0.5	6
66	Synergistic Effects of Acidic pH and Pro-Inflammatory Cytokines IL-1Î² and TNF-Î± for Cell-Based Intervertebral Disc Regeneration. Applied Sciences (Switzerland), 2020, 10, 9009.	1.3	6
67	Rat tail models for the assessment of injectable nucleus pulposus regeneration strategies. JOR Spine, 2022, 5, .	1.5	6
68	Chondrocyte-based intraoperative processing strategies for the biological augmentation of a polyurethane meniscus replacement. Connective Tissue Research, 2018, 59, 381-392.	1.1	4
69	Measuring and Modeling Oxygen Transport and Consumption in 3D Hydrogels Containing Chondrocytes and Stem Cells of Different Tissue Origins. Frontiers in Bioengineering and Biotechnology, 2021, 9, 591126.	2.0	4
70	Development of magnetically active scaffolds as intrinsically-deformable bioreactors. MRS Communications, 2017, 7, 367-374.	0.8	3
71	Effects of Growth Factor Combinations TGFÎ²3, GDF5 and GDF6 on the Matrix Synthesis of Nucleus Pulposus and Nasoseptal Chondrocyte Self-Assembled Microtissues. Applied Sciences (Switzerland), 2022, 12, 1453.	1.3	3
72	Development of a Hydroxyapatite Bone Tissue Engineering Scaffold with a Trimodal Pore Structure. Key Engineering Materials, 2007, 361-363, 931-934.	0.4	2

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73	Introducing Microchannels into Chondrocyte-Seeded Agarose Hydrogels Influences Matrix Accumulation in Response to Dynamic Compression and TGF-Î²3 Stimulation. IFMBE Proceedings, 2011, , 26-30.	0.2	1
74	The Effect of Cyclic Hydrostatic Pressure on the Functional Development of Cartilaginous Tissues Engineered Using Bone Marrow Derived Mesenchymal Stem Cells. , 2011, , .		1
75	Can Dynamic Compression in the Absence of Growth Factors Induce Chondrogenic Differentiation of Bone Marrow Derived MSCs Encapsulated in Agarose Hydrogels?. IFMBE Proceedings, 2011, , 43-46.	0.2	0
76	Towards Engineering Whole Bones via Endochondral Ossification. , 2013, , .		0
77	Cell-Matrix Interactions Modulate Mesenchymal Stem Cell Response to Dynamic Compression. , 2011, , .		0