Conor T. Buckley

List of Publications by Citations

70 papers	2,470 citations	32 h-index	48 g-index
77 ext. papers	2,800 ext. citations	4.6 avg, IF	5.29 L-index

#	Paper	IF	Citations
70	The response of bone marrow-derived mesenchymal stem cells to dynamic compression following TGF-beta3 induced chondrogenic differentiation. *Annals of Biomedical Engineering*, **2010**, 38, 2896-909	4.7	140
69	A comparison of the functionality and in vivo phenotypic stability of cartilaginous tissues engineered from different stem cell sources. *Tissue Engineering - Part A*, **2012**, 18, 1161-70	3.9	132
68	Oxygen tension regulates the osteogenic, chondrogenic and endochondral phenotype of bone marrow derived mesenchymal stem cells. *Biochemical and Biophysical Research Communications*, **2012**, 417, 305-10	3.4	109
67	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, 512-21	4.1	103
66	Functional properties of cartilaginous tissues engineered from infrapatellar fat pad-derived mesenchymal stem cells. *Journal of Biomechanics*, **2010**, 43, 920-6	2.9	95
65	Engineering osteochondral constructs through spatial regulation of endochondral ossification. *Acta Biomaterialia*, **2013**, 9, 5484-92	10.8	91
64	Dynamic compression can inhibit chondrogenesis of mesenchymal stem cells. *Biochemical and Biophysical Research Communications*, **2008**, 377, 458-462	3.4	91
63	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, 1345-54	6.2	83
62	Low oxygen tension is a more potent promoter of chondrogenic differentiation than dynamic compression. *Journal of Biomechanics*, **2010**, 43, 2516-23	2.9	83
61	Controlled release of transforming growth factor-ß from cartilage-extra-cellular-matrix-derived scaffolds to promote chondrogenesis of human-joint-tissue-derived stem cells. *Acta Biomaterialia*, **2014**, 10, 4400-9	10.8	74
60	Cell-matrix interactions regulate mesenchymal stem cell response to hydrostatic pressure. *Acta Biomaterialia*, **2012**, 8, 2153-9	10.8	67
59	Coupling Freshly Isolated CD44(+) Infrapatellar Fat Pad-Derived Stromal Cells with a TGF-ß Eluting Cartilage ECM-Derived Scaffold as a Single-Stage Strategy for Promoting Chondrogenesis. *Advanced Healthcare Materials*, **2015**, 4, 1043-53	10.1	61
58	Hydrostatic pressure acts to stabilise a chondrogenic phenotype in porcine joint tissue derived stem cells. *European Cells and Materials*, **2012**, 23, 121-32; discussion 133-4	4.3	58
57	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, 2115-21	2.9	57
56	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, 102-11	4.1	55
55	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, 1257-65	4.1	54
54	Chondrogenesis and integration of mesenchymal stem cells within an in vitro cartilage defect repair model. *Annals of Biomedical Engineering*, **2009**, 37, 2556-65	4.7	53

53	Shape-memory porous alginate scaffolds for regeneration of the annulus fibrosus: effect of TGF-β supplementation and oxygen culture conditions. *Acta Biomaterialia*, **2014**, 10, 1985-95	10.8	48
52	Decellularized grafts with axially aligned channels for peripheral nerve regeneration. *Journal of the Mechanical Behavior of Biomedical Materials*, **2015**, 41, 124-35	4.1	46
51	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	3.9	45
50	Advancing cell therapies for intervertebral disc regeneration from the lab to the clinic: Recommendations of the ORS spine section. *JOR Spine*, **2018**, 1, e1036	3.7	45
49	The use of the reamer-irrigator-aspirator to harvest mesenchymal stem cells. *Journal of Bone and Joint Surgery: British Volume*, **2011**, 93, 517-24		44
48	Living Cell Factories - Electrosprayed Microcapsules and Microcarriers for Minimally Invasive Delivery. *Advanced Materials*, **2016**, 28, 5662-71	24	42
47	Critical aspects and challenges for intervertebral disc repair and regeneration-Harnessing advances in tissue engineering. *JOR Spine*, **2018**, 1, e1029	3.7	42
46	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, 2483-92	2.9	41
45	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, 673-83	4.4	41
44	High abundance of CD271(+) multipotential stromal cells (MSCs) in intramedullary cavities of long bones. *Bone*, **2012**, 50, 510-7	4.7	40
43	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, 747-58	4.4	37
42	A growth factor delivery system for chondrogenic induction of infrapatellar fat pad-derived stem cells in fibrin hydrogels. *Biotechnology and Applied Biochemistry*, **2011**, 58, 345-52	2.8	37
41	Extracellular matrix production by nucleus pulposus and bone marrow stem cells in response to altered oxygen and glucose microenvironments. *Journal of Anatomy*, **2015**, 227, 757-66	2.9	32
40	Tissue Engineering Whole Bones Through Endochondral Ossification: Regenerating the Distal Phalanx. *BioResearch Open Access*, **2015**, 4, 229-41	2.4	32
39	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, 382-96	3.9	32
38	Engineering of large cartilaginous tissues through the use of microchanneled hydrogels and rotational culture. *Tissue Engineering - Part A*, **2009**, 15, 3213-20	3.9	32
37	The role of environmental factors in regulating the development of cartilaginous grafts engineered using osteoarthritic human infrapatellar fat pad-derived stem cells. *Tissue Engineering - Part A*, **2012**, 18, 1531-41	3.9	28
36	Cell-based therapies for intervertebral disc and cartilage regeneration- Current concepts, parallels, and perspectives. *Journal of Orthopaedic Research*, **2017**, 35, 8-22	3.8	27

35	Altering the architecture of tissue engineered hypertrophic cartilaginous grafts facilitates vascularisation and accelerates mineralisation. *PLoS ONE*, **2014**, 9, e90716	3.7	26
34	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	3.5	25
33	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	2.9	25
32	Fabrication and characterization of a porous multidomain hydroxyapatite scaffold for bone tissue engineering investigations. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2010**, 93, 459-67	3.5	22
31	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	5.8	21
30	Bone Marrow Stem Cells in Response to Intervertebral Disc-Like Matrix Acidity and Oxygen Concentration: Implications for Cell-based Regenerative Therapy. *Spine*, **2016**, 41, 743-50	3.3	20
29	Glyoxal cross-linking of solubilized extracellular matrix to produce highly porous, elastic, and chondro-permissive scaffolds for orthopedic tissue engineering. *Journal of Biomedical Materials Research - Part A*, **2019**, 107, 2222-2234	5.4	17
28	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, 2395138	3	17
27	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	4.4	15
26	The application of plastic compression to modulate fibrin hydrogel mechanical properties. *Journal of the Mechanical Behavior of Biomedical Materials*, **2012**, 16, 66-72	4.1	15
25	Biomechanical evaluation of different numbers, sizes and placement configurations of ligaclips required to secure cellophane bands. *Veterinary Surgery*, **2010**, 39, 59-64	1.7	14
24	Scaffold architecture determines chondrocyte response to externally applied dynamic compression. *Biomechanics and Modeling in Mechanobiology*, **2013**, 12, 889-99	3.8	13
23	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, 117-27	2.9	13
22	Injectable Disc-Derived ECM Hydrogel Functionalised with Chondroitin Sulfate for Intervertebral Disc Regeneration. *Acta Biomaterialia*, **2020**, 117, 142-155	10.8	12
21	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	4.4	11
20	Influence of key processing parameters and seeding density effects of microencapsulated chondrocytes fabricated using electrohydrodynamic spraying. *Biofabrication*, **2018**, 10, 035011	10.5	11
19	Engineering articular cartilage-like grafts by self-assembly of infrapatellar fat pad-derived stem cells. *Biotechnology and Bioengineering*, **2014**, 111, 1686-98	4.9	11
18	Combining BMP-6, TGF-ß and hydrostatic pressure stimulation enhances the functional development of cartilage tissues engineered using human infrapatellar fat pad derived stem cells. *Biomaterials Science*, **2013**, 1, 745-752	7.4	11

17	Intrinsic multipotential mesenchymal stromal cell activity in gelatinous Heberden's nodes in osteoarthritis at clinical presentation. *Arthritis Research and Therapy*, **2014**, 16, R119	5.7	10
16	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, 1731-8	4.5	9
15	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, 723-30	1.7	7
14	Priming and cryopreservation of microencapsulated marrow stromal cells as a strategy for intervertebral disc regeneration. *Biomedical Materials (Bristol)*, **2018**, 13, 034106	3.5	6
13	Incorporation of Collagen and Hyaluronic Acid to Enhance the Bioactivity of Fibrin-Based Hydrogels for Nucleus Pulposus Regeneration. *Journal of Functional Biomaterials*, **2018**, 9,	4.8	6
12	Biomechanical properties of feline ventral abdominal wall and celiotomy closure techniques. *Veterinary Surgery*, **2018**, 47, 193-203	1.7	5
11	Chondrocyte-based intraoperative processing strategies for the biological augmentation of a polyurethane meniscus replacement. *Connective Tissue Research*, **2018**, 59, 381-392	3.3	4
10	Mechanical comparison of loop and crimp configurations for extracapsular stabilization of the cranial cruciate ligament-deficient stifle. *Veterinary Surgery*, **2015**, 44, 50-8	1.7	4
9	Development of magnetically active scaffolds as intrinsically-deformable bioreactors. *MRS Communications*, **2017**, 7, 367-374	2.7	3
8	Synergistic Effects of Acidic pH and Pro-Inflammatory Cytokines IL-1β and TNF-α for Cell-Based Intervertebral Disc Regeneration. *Applied Sciences (Switzerland)*, **2020**, 10, 9009	2.6	3
7	Investigating the physiological relevance of ex vivo disc organ culture nutrient microenvironments using in silico modeling and experimental validation. *JOR Spine*, **2021**, 4, e1141	3.7	3
6	Development of a Hydroxyapatite Bone Tissue Engineering Scaffold with a Trimodal Pore Structure. *Key Engineering Materials*, **2007**, 361-363, 931-934	0.4	2
5	Multi-Factorial Nerve Guidance Conduit Engineering Improves Outcomes in Inflammation, Angiogenesis and Large Defect Nerve Repair.. *Matrix Biology*, **2022**, 106, 34-34	11.4	2
4	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	5.8	2
3	Effects of Growth Factor Combinations TGFβ, GDF5 and GDF6 on the Matrix Synthesis of Nucleus Pulposus and Nasoseptal Chondrocyte Self-Assembled Microtissues. *Applied Sciences (Switzerland)*, **2022**, 12, 1453	2.6	1
2	Consolidating and re-evaluating the human disc nutrient microenvironment.. *JOR Spine*, **2022**, 5, e1192	3.7	1
1	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	