

# Fergal O'Brien

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

280  
papers

18,508  
citations

70  
h-index

129  
g-index

302  
ext. papers

21,067  
ext. citations

6.7  
avg, IF

7.4  
L-index

#	Paper	IF	Citations
280	A highly porous type II collagen containing scaffold for the treatment of cartilage defects enhances MSC chondrogenesis and early cartilaginous matrix deposition.. <i>Biomaterials Science</i> , <b>2022</b> ,	7.4	1
279	Multi-Factorial Nerve Guidance Conduit Engineering Improves Outcomes in Inflammation, Angiogenesis and Large Defect Nerve Repair.. <i>Matrix Biology</i> , <b>2022</b> , 106, 34-34	11.4	2
278	Development of a Gene-Activated Scaffold Incorporating Multifunctional Cell-Penetrating Peptides for pSDF-1 Delivery for Enhanced Angiogenesis in Tissue Engineering Applications.. <i>International Journal of Molecular Sciences</i> , <b>2022</b> , 23,	6.3	1
277	The role of mechanobiology in bone and cartilage model systems in characterizing initiation and progression of osteoarthritis. <i>APL Bioengineering</i> , <b>2022</b> , 6, 011501	6.6	1
276	Highly Porous Type II Collagen-Containing Scaffolds for Enhanced Cartilage Repair with Reduced Hypertrophic Cartilage Formation. <i>Bioengineering</i> , <b>2022</b> , 9, 232	5.3	1
275	Biomaterial and Therapeutic Approaches for the Manipulation of Macrophage Phenotype in Peripheral and Central Nerve Repair.. <i>Pharmaceutics</i> , <b>2021</b> , 13,	6.4	2
274	Substrate Stiffness Modulates the Crosstalk Between Mesenchymal Stem Cells and Macrophages. <i>Journal of Biomechanical Engineering</i> , <b>2021</b> , 143,	2.1	5
273	Layer-specific stem cell differentiation in tri-layered tissue engineering biomaterials: Towards development of a single-stage cell-based approach for osteochondral defect repair.. <i>Materials Today Bio</i> , <b>2021</b> , 12, 100173	9.9	2
272	Biomimetic Scaffolds for Spinal Cord Applications Exhibit Stiffness-Dependent Immunomodulatory and Neurotrophic Characteristics. <i>Advanced Healthcare Materials</i> , <b>2021</b> , e2101663	10.1	2
271	Anti-Aging Klotho Gene-Activated Scaffold Promotes Rejuvenative Wound Healing Response in Human Adipose-Derived Stem Cells. <i>Pharmaceutics</i> , <b>2021</b> , 14,	5.2	1
270	Incorporation of hydroxyapatite into collagen scaffolds enhances the therapeutic efficacy of rhBMP-2 in a weight-bearing femoral defect model. <i>Materials Today Communications</i> , <b>2021</b> , 29, 102933	2.5	1
269	SDF-1 $\alpha$ gene-activated collagen scaffold enhances provasculogenic response in a coculture of human endothelial cells with human adipose-derived stromal cells. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2021</b> , 32, 26	4.5	1
268	Contemporary trends for urological training and management of stress urinary incontinence in Ireland. <i>International Urogynecology Journal</i> , <b>2021</b> , 32, 2841-2846	2	1
267	The role of synovial fluid constituents in the lubrication of collagen-glycosaminoglycan scaffolds for cartilage repair. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2021</b> , 118, 104445	4.1	1
266	A Tissue-Engineered Tracheobronchial In Vitro Co-Culture Model for Determining Epithelial Toxicological and Inflammatory Responses. <i>Biomedicines</i> , <b>2021</b> , 9,	4.8	1
265	Mechanobiology-informed regenerative medicine: Dose-controlled release of placental growth factor from a functionalized collagen-based scaffold promotes angiogenesis and accelerates bone defect healing. <i>Journal of Controlled Release</i> , <b>2021</b> , 334, 96-105	11.7	8
264	Bone biomaterials for overcoming antimicrobial resistance: Advances in non-antibiotic antimicrobial approaches for regeneration of infected osseous tissue. <i>Materials Today</i> , <b>2021</b> , 46, 136-154	21.8	11

263	3D-Printed Gelatin Methacrylate Scaffolds with Controlled Architecture and Stiffness Modulate the Fibroblast Phenotype towards Dermal Regeneration. <i>Polymers</i> , <b>2021</b> , 13,	4.5	8
262	Development of collagen-poly(caprolactone)-based core-shell scaffolds supplemented with proteoglycans and glycosaminoglycans for ligament repair. <i>Materials Science and Engineering C</i> , <b>2021</b> , 120, 111657	8.3	5
261	SDF-1 $\beta$ gene-activated collagen scaffold drives functional differentiation of human Schwann cells for wound healing applications. <i>Biotechnology and Bioengineering</i> , <b>2021</b> , 118, 725-736	4.9	8
260	The lubricating effect of iPS-reprogrammed fibroblasts on collagen-GAG scaffolds for cartilage repair applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2021</b> , 114, 104174	4.1	3
259	Comparison of synthetic mesh erosion and chronic pain rates after surgery for pelvic organ prolapse and stress urinary incontinence: a systematic review. <i>International Urogynecology Journal</i> , <b>2021</b> , 32, 573-580	2	9
258	Accelerating bone healing in vivo by harnessing the age-altered activation of c-Jun N-terminal kinase 3. <i>Biomaterials</i> , <b>2021</b> , 268, 120540	15.6	3
257	A step closer to elastogenesis on demand; Inducing mature elastic fibre deposition in a natural biomaterial scaffold. <i>Materials Science and Engineering C</i> , <b>2021</b> , 120, 111788	8.3	0
256	In vitro vascularization of tissue engineered constructs by non-viral delivery of pro-angiogenic genes. <i>Biomaterials Science</i> , <b>2021</b> , 9, 2067-2081	7.4	2
255	The Development of Tissue Engineering Scaffolds Using Matrix from iPS-Reprogrammed Fibroblasts. <i>Methods in Molecular Biology</i> , <b>2021</b> , 1	1.4	2
254	Gene activated scaffolds incorporating star-shaped polypeptide-pDNA nanomedicines accelerate bone tissue regeneration. <i>Biomaterials Science</i> , <b>2021</b> , 9, 4984-4999	7.4	5
253	Mechanical, compositional and morphological characterisation of the human male urethra for the development of a biomimetic tissue engineered urethral scaffold. <i>Biomaterials</i> , <b>2021</b> , 269, 120651	15.6	4
252	SDF-1 $\beta$ Gene-Activated Collagen Scaffold Restores Pro-Angiogenic Wound Healing Features in Human Diabetic Adipose-Derived Stem Cells. <i>Biomedicines</i> , <b>2021</b> , 9,	4.8	10
251	The use of nanovibration to discover specific and potent bioactive metabolites that stimulate osteogenic differentiation in mesenchymal stem cells. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	10
250	Systematic Comparison of Biomaterials-Based Strategies for Osteochondral and Chondral Repair in Large Animal Models. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2100878	10.1	0
249	Influences of the 3D microenvironment on cancer cell behaviour and treatment responsiveness: A recent update on lung, breast and prostate cancer models. <i>Acta Biomaterialia</i> , <b>2021</b> , 132, 360-378	10.8	11
248	Antimicrobial and degradable triazolinedione (TAD) crosslinked polypeptide hydrogels. <i>Journal of Materials Chemistry B</i> , <b>2021</b> , 9, 5456-5464	7.3	5
247	Mechanosignalling in cartilage: an emerging target for the treatment of osteoarthritis.. <i>Nature Reviews Rheumatology</i> , <b>2021</b> ,	8.1	9
246	Non-viral Gene Delivery of Interleukin-1 Receptor Antagonist Using Collagen-Hydroxyapatite Scaffold Protects Rat BM-MSCs From IL-1 $\beta$ Mediated Inhibition of Osteogenesis. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 582012	5.8	5

245	Pristine graphene induces innate immune training. <i>Nanoscale</i> , <b>2020</b> , 12, 11192-11200	7.7	16
244	Collagen/GAG scaffolds activated by RALA-siMMP-9 complexes with potential for improved diabetic foot ulcer healing. <i>Materials Science and Engineering C</i> , <b>2020</b> , 114, 111022	8.3	7
243	Effect of cross-linking and hydration on microscale flat punch indentation contact to collagen-hyaluronic acid films in the viscoelastic limit. <i>Acta Biomaterialia</i> , <b>2020</b> , 111, 279-289	10.8	5
242	Hierarchical biofabrication of biomimetic collagen-elastin vascular grafts with controllable properties via lyophilisation. <i>Acta Biomaterialia</i> , <b>2020</b> , 112, 52-61	10.8	6
241	Pre-culture of mesenchymal stem cells within RGD-modified hyaluronic acid hydrogel improves their resilience to ischaemic conditions. <i>Acta Biomaterialia</i> , <b>2020</b> , 107, 78-90	10.8	12
240	Stress Urinary Incontinence and Pelvic Organ Prolapse: Biologic Graft Materials Revisited. <i>Tissue Engineering - Part B: Reviews</i> , <b>2020</b> , 26, 475-483	7.9	4
239	Scaffolds Functionalized with Matrix from Induced Pluripotent Stem Cell Fibroblasts for Diabetic Wound Healing. <i>Advanced Healthcare Materials</i> , <b>2020</b> , 9, e2000307	10.1	10
238	The Use of Genipin as an Effective, Biocompatible, Anti-Inflammatory Cross-Linking Method for Nerve Guidance Conduits. <i>Advanced Biology</i> , <b>2020</b> , 4, e1900212	3.5	9
237	Activation of the SOX-5, SOX-6, and SOX-9 Trio of Transcription Factors Using a Gene-Activated Scaffold Stimulates Mesenchymal Stromal Cell Chondrogenesis and Inhibits Endochondral Ossification. <i>Advanced Healthcare Materials</i> , <b>2020</b> , 9, e1901827	10.1	18
236	Rapid bone repair with the recruitment of CD206M2-like macrophages using non-viral scaffold-mediated miR-133a inhibition of host cells. <i>Acta Biomaterialia</i> , <b>2020</b> , 109, 267-279	10.8	16
235	Anti-Ageing Protein Klotho Rejuvenates Diabetic Stem Cells for Improved Gene-Activated Scaffold Based Wound Healing. <i>Journal of Personalized Medicine</i> , <b>2020</b> , 11,	3.6	2
234	The Incorporation of Marine Coral Microparticles into Collagen-Based Scaffolds Promotes Osteogenesis of Human Mesenchymal Stromal Cells via Calcium Ion Signalling. <i>Marine Drugs</i> , <b>2020</b> , 18,	6	7
233	microRNA Modulation <b>2020</b> , 511-576		
232	Extracellular Vesicles Enhance the Remodeling of Cell-Free Silk Vascular Scaffolds in Rat Aortae. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 26955-26965	9.5	14
231	The development of natural polymer scaffold-based therapeutics for osteochondral repair. <i>Biochemical Society Transactions</i> , <b>2020</b> , 48, 1433-1445	5.1	4
230	Biocompatible polypeptide-based interpenetrating network (IPN) hydrogels with enhanced mechanical properties. <i>Journal of Materials Chemistry B</i> , <b>2020</b> , 8, 7785-7791	7.3	6
229	Hydroxyapatite Particle Shape and Size Influence MSC Osteogenesis by Directing the Macrophage Phenotype in Collagen-Hydroxyapatite Scaffolds.. <i>ACS Applied Bio Materials</i> , <b>2020</b> , 3, 7562-7574	4.1	4
228	Layered Double Hydroxide as a Potent Non-viral Vector for Nucleic Acid Delivery Using Gene-Activated Scaffolds for Tissue Regeneration Applications. <i>Pharmaceutics</i> , <b>2020</b> , 12,	6.4	9

227	The Fabrication and Evaluation of Retinoic Acid-Loaded Electrospun Composite Biomaterials for Tracheal Tissue Regeneration. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 190	5.8	9
226	Collagen scaffolds functionalised with copper-eluting bioactive glass reduce infection and enhance osteogenesis and angiogenesis both in vitro and in vivo. <i>Biomaterials</i> , <b>2019</b> , 197, 405-416	15.6	87
225	Highly versatile cell-penetrating peptide loaded scaffold for efficient and localised gene delivery to multiple cell types: From development to application in tissue engineering. <i>Biomaterials</i> , <b>2019</b> , 216, 119277	15.6	31
224	Transfection of autologous host cells in vivo using gene activated collagen scaffolds incorporating star-polypeptides. <i>Journal of Controlled Release</i> , <b>2019</b> , 304, 191-203	11.7	21
223	microRNA Modulation <b>2019</b> , 1-66		
222	Controlling the dose-dependent, synergistic and temporal effects of NGF and GDNF by encapsulation in PLGA microparticles for use in nerve guidance conduits for the repair of large peripheral nerve defects. <i>Journal of Controlled Release</i> , <b>2019</b> , 304, 51-64	11.7	25
221	Scaffold-Based Delivery of Nucleic Acid Therapeutics for Enhanced Bone and Cartilage Repair. <i>Journal of Orthopaedic Research</i> , <b>2019</b> , 37, 1671-1680	3.8	22
220	Pore-forming bioinks to enable spatio-temporally defined gene delivery in bioprinted tissues. <i>Journal of Controlled Release</i> , <b>2019</b> , 301, 13-27	11.7	50
219	Rapid healing of a critical-sized bone defect using a collagen-hydroxyapatite scaffold to facilitate low dose, combinatorial growth factor delivery. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2019</b> , 13, 1843-1853	4.4	22
218	The rationale and emergence of electroconductive biomaterial scaffolds in cardiac tissue engineering. <i>APL Bioengineering</i> , <b>2019</b> , 3, 041501	6.6	47
217	Material stiffness influences the polarization state, function and migration mode of macrophages. <i>Acta Biomaterialia</i> , <b>2019</b> , 89, 47-59	10.8	120
216	Functionalising Collagen-Based Scaffolds With Platelet-Rich Plasma for Enhanced Skin Wound Healing Potential. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2019</b> , 7, 371	5.8	34
215	Macrophage Polarization in Response to Collagen Scaffold Stiffness Is Dependent on Cross-Linking Agent Used To Modulate the Stiffness. <i>ACS Biomaterials Science and Engineering</i> , <b>2019</b> , 5, 544-552	5.5	40
214	Tissue-specific extracellular matrix scaffolds for the regeneration of spatially complex musculoskeletal tissues. <i>Biomaterials</i> , <b>2019</b> , 188, 63-73	15.6	62
213	Harnessing an Inhibitory Role of miR-16 in Osteogenesis by Human Mesenchymal Stem Cells for Advanced Scaffold-Based Bone Tissue Engineering. <i>Tissue Engineering - Part A</i> , <b>2019</b> , 25, 24-33	3.9	29
212	Platelet-derived growth factor stabilises vascularisation in collagen-glycosaminoglycan scaffolds in vitro. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2019</b> , 13, 261-273	4.4	4
211	A physiologically relevant 3D collagen-based scaffold-neuroblastoma cell system exhibits chemosensitivity similar to orthotopic xenograft models. <i>Acta Biomaterialia</i> , <b>2018</b> , 70, 84-97	10.8	35
210	Electroconductive Biohybrid Collagen/Pristine Graphene Composite Biomaterials with Enhanced Biological Activity. <i>Advanced Materials</i> , <b>2018</b> , 30, e1706442	24	60

209	Investigating the interplay between substrate stiffness and ligand chemistry in directing mesenchymal stem cell differentiation within 3D macro-porous substrates. <i>Biomaterials</i> , <b>2018</b> , 171, 23-33	15.6	46
208	Staphylococcal Osteomyelitis: Disease Progression, Treatment Challenges, and Future Directions. <i>Clinical Microbiology Reviews</i> , <b>2018</b> , 31,	34	127
207	An endochondral ossification approach to early stage bone repair: Use of tissue-engineered hypertrophic cartilage constructs as primordial templates for weight-bearing bone repair. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2018</b> , 12, e2147-e2150	4.4	14
206	Bioinspired Star-Shaped Poly(L-lysine) Polypeptides: Efficient Polymeric Nanocarriers for the Delivery of DNA to Mesenchymal Stem Cells. <i>Molecular Pharmaceutics</i> , <b>2018</b> , 15, 1878-1891	5.6	31
205	Pro-angiogenic impact of SDF-1 $\alpha$ -gene-activated collagen-based scaffolds in stem cell driven angiogenesis. <i>International Journal of Pharmaceutics</i> , <b>2018</b> , 544, 372-379	6.5	29
204	A collagen cardiac patch incorporating alginate microparticles permits the controlled release of hepatocyte growth factor and insulin-like growth factor-1 to enhance cardiac stem cell migration and proliferation. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2018</b> , 12, e384-e394	4.4	37
203	Innovations in gene and growth factor delivery systems for diabetic wound healing. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2018</b> , 12, e296-e312	4.4	50
202	Scaffold-Based microRNA Therapies in Regenerative Medicine and Cancer. <i>Advanced Healthcare Materials</i> , <b>2018</b> , 7, 1700695	10.1	40
201	Raman spectroscopy predicts the link between claw keratin and bone collagen structure in a rodent model of oestrogen deficiency. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , <b>2018</b> , 1864, 398-406	6.9	15
200	Future Perspectives on the Role of Stem Cells and Extracellular Vesicles in Vascular Tissue Regeneration. <i>Frontiers in Cardiovascular Medicine</i> , <b>2018</b> , 5, 86	5.4	28
199	Staphylococcus aureus protein A causes osteoblasts to hyper-mineralise in a 3D extra-cellular matrix environment. <i>PLoS ONE</i> , <b>2018</b> , 13, e0198837	3.7	10
198	Collagen-based biomaterials for tissue regeneration and repair <b>2018</b> , 127-150		21
197	Facile Approach to Covalent Copolypeptide Hydrogels and Hybrid Organohydrogels. <i>ACS Macro Letters</i> , <b>2018</b> , 7, 944-949	6.6	10
196	Controlled Non-Viral Gene Delivery in Cartilage and Bone Repair: Current Strategies and Future Directions. <i>Advanced Therapeutics</i> , <b>2018</b> , 1, 1800038	4.9	11
195	In vitro efficacy of a gene-activated nerve guidance conduit incorporating non-viral PEI-pDNA nanoparticles carrying genes encoding for NGF, GDNF and c-Jun. <i>Acta Biomaterialia</i> , <b>2018</b> , 75, 115-128	10.8	29
194	Tissue engineered extracellular matrices (ECMs) in urology: Evolution and future directions. <i>Journal of the Royal College of Surgeons of Edinburgh</i> , <b>2018</b> , 16, 55-65	2.5	24
193	Delivery of the improved BMP-2-Advanced plasmid DNA within a gene-activated scaffold accelerates mesenchymal stem cell osteogenesis and critical size defect repair. <i>Journal of Controlled Release</i> , <b>2018</b> , 283, 20-31	11.7	40
192	Controlled release of vascular endothelial growth factor from spray-dried alginate microparticles in collagen-hydroxyapatite scaffolds for promoting vascularization and bone repair. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2017</b> , 11, 1097-1109	4.4	66

191	Repair of large osteochondritis dissecans lesions using a novel multilayered tissue engineered construct in an equine athlete. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2017</b> , 11, 2785-2795	4.4	13
190	Identification of the mechanisms by which age alters the mechanosensitivity of mesenchymal stromal cells on substrates of differing stiffness: Implications for osteogenesis and angiogenesis. <i>Acta Biomaterialia</i> , <b>2017</b> , 53, 59-69	10.8	28
189	Retinoic Acid-Loaded Collagen-Hyaluronate Scaffolds: A Bioactive Material for Respiratory Tissue Regeneration. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1381-1393	5.5	12
188	Mesenchymal stem cell fate following non-viral gene transfection strongly depends on the choice of delivery vector. <i>Acta Biomaterialia</i> , <b>2017</b> , 55, 226-238	10.8	50
187	Porous Scaffolds Derived from Devitalized Tissue Engineered Cartilaginous Matrix Support Chondrogenesis of Adult Stem Cells. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1075-1082	5.5	6
186	Advances in Nerve Guidance Conduit-Based Therapeutics for Peripheral Nerve Repair. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1221-1235	5.5	58
185	Olfactory Derived Stem Cells Delivered in a Biphasic Conduit Promote Peripheral Nerve Repair In Vivo. <i>Stem Cells Translational Medicine</i> , <b>2017</b> , 6, 1894-1904	6.9	14
184	A Physicochemically Optimized and Neuroconductive Biphasic Nerve Guidance Conduit for Peripheral Nerve Repair. <i>Advanced Healthcare Materials</i> , <b>2017</b> , 6, 1700954	10.1	35
183	Translating the role of osteogenic-angiogenic coupling in bone formation: Highly efficient chitosan-pDNA activated scaffolds can accelerate bone regeneration in critical-sized bone defects. <i>Biomaterials</i> , <b>2017</b> , 149, 116-127	15.6	82
182	Development of magnetically active scaffolds as intrinsically-deformable bioreactors. <i>MRS Communications</i> , <b>2017</b> , 7, 367-374	2.7	3
181	Identification of stiffness-induced signalling mechanisms in cells from patent and fused sutures associated with craniosynostosis. <i>Scientific Reports</i> , <b>2017</b> , 7, 11494	4.9	15
180	Advances in polymeric islet cell encapsulation technologies to limit the foreign body response and provide immunoisolation. <i>Current Opinion in Pharmacology</i> , <b>2017</b> , 36, 66-71	5.1	21
179	An efficient, non-viral dendritic vector for gene delivery in tissue engineering. <i>Gene Therapy</i> , <b>2017</b> , 24, 681-691	4	17
178	Freeze-Drying as a Novel Biofabrication Method for Achieving a Controlled Microarchitecture within Large, Complex Natural Biomaterial Scaffolds. <i>Advanced Healthcare Materials</i> , <b>2017</b> , 6, 1700598	10.1	55
177	The shape and size of hydroxyapatite particles dictate inflammatory responses following implantation. <i>Scientific Reports</i> , <b>2017</b> , 7, 2922	4.9	90
176	A Natural, Calcium-Rich Marine Multi-mineral Complex Preserves Bone Structure, Composition and Strength in an Ovariectomised Rat Model of Osteoporosis. <i>Calcified Tissue International</i> , <b>2017</b> , 101, 445-455	3.9	10
175	Formulation and Evaluation of Anisamide-Targeted Amphiphilic Cyclodextrin Nanoparticles To Promote Therapeutic Gene Silencing in a 3D Prostate Cancer Bone Metastases Model. <i>Molecular Pharmaceutics</i> , <b>2017</b> , 14, 42-52	5.6	34
174	A stimuli responsive liposome loaded hydrogel provides flexible on-demand release of therapeutic agents. <i>Acta Biomaterialia</i> , <b>2017</b> , 48, 110-119	10.8	43

173	Anisotropic Shape-Memory Alginate Scaffolds Functionalized with Either Type I or Type II Collagen for Cartilage Tissue Engineering. <i>Tissue Engineering - Part A</i> , <b>2017</b> , 23, 55-68	3.9	45
172	Stem cells display a donor dependent response to escalating levels of growth factor release from extracellular matrix-derived scaffolds. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2017</b> , 11, 2979-2987	4.4	14
171	Infrapatellar Fat Pad Stem Cells: From Developmental Biology to Cell Therapy. <i>Stem Cells International</i> , <b>2017</b> , 2017, 6843727	5	26
170	Growth plate extracellular matrix-derived scaffolds for large bone defect healing. <i>European Cells and Materials</i> , <b>2017</b> , 33, 130-142	4.3	21
169	In vitro Vascularization: Tissue Engineering Constructs <b>2017</b> , 723-742		
168	Content-Dependent Osteogenic Response of Nanohydroxyapatite: An in Vitro and in Vivo Assessment within Collagen-Based Scaffolds. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 23477-88	9.5	55
167	Nanoparticle-mediated siRNA delivery assessed in a 3D co-culture model simulating prostate cancer bone metastasis. <i>International Journal of Pharmaceutics</i> , <b>2016</b> , 511, 1058-69	6.5	27
166	Next generation bone tissue engineering: non-viral miR-133a inhibition using collagen-nanohydroxyapatite scaffolds rapidly enhances osteogenesis. <i>Scientific Reports</i> , <b>2016</b> , 6, 27941	4.9	57
165	Biomaterial-Enhanced Cell and Drug Delivery: Lessons Learned in the Cardiac Field and Future Perspectives. <i>Advanced Materials</i> , <b>2016</b> , 28, 5648-61	24	51
164	Delivering Nucleic-Acid Based Nanomedicines on Biomaterial Scaffolds for Orthopedic Tissue Repair: Challenges, Progress and Future Perspectives. <i>Advanced Materials</i> , <b>2016</b> , 28, 5447-69	24	75
163	Towards 3D in vitro models for the study of cardiovascular tissues and disease. <i>Drug Discovery Today</i> , <b>2016</b> , 21, 1437-1445	8.8	22
162	Differentiation of Vascular Stem Cells Contributes to Ectopic Calcification of Atherosclerotic Plaque. <i>Stem Cells</i> , <b>2016</b> , 34, 913-23	5.8	28
161	Multi-layered collagen-based scaffolds for osteochondral defect repair in rabbits. <i>Acta Biomaterialia</i> , <b>2016</b> , 32, 149-160	10.8	144
160	An Endochondral Ossification-Based Approach to Bone Repair: Chondrogenically Primed Mesenchymal Stem Cell-Laden Scaffolds Support Greater Repair of Critical-Sized Cranial Defects Than Osteogenically Stimulated Constructs In Vivo. <i>Tissue Engineering - Part A</i> , <b>2016</b> , 22, 556-67	3.9	53
159	Cell-free multi-layered collagen-based scaffolds demonstrate layer specific regeneration of functional osteochondral tissue in caprine joints. <i>Biomaterials</i> , <b>2016</b> , 87, 69-81	15.6	106
158	The development of a tissue-engineered tracheobronchial epithelial model using a bilayered collagen-hyaluronate scaffold. <i>Biomaterials</i> , <b>2016</b> , 85, 111-27	15.6	44
157	The benefits and limitations of animal models for translational research in cartilage repair. <i>Journal of Experimental Orthopaedics</i> , <b>2016</b> , 3, 1	2.3	102
156	Fibrin hydrogels functionalized with cartilage extracellular matrix and incorporating freshly isolated stromal cells as an injectable for cartilage regeneration. <i>Acta Biomaterialia</i> , <b>2016</b> , 36, 55-62	10.8	100

155	Multifunctional biomaterials from the sea: Assessing the effects of chitosan incorporation into collagen scaffolds on mechanical and biological functionality. <i>Acta Biomaterialia</i> , <b>2016</b> , 43, 160-169	10.8	101
154	DNA Origami: Folded DNA-Nanodevices That Can Direct and Interpret Cell Behavior. <i>Advanced Materials</i> , <b>2016</b> , 28, 5509-24	24	42
153	Gene Delivery of TGF- $\beta$ and BMP2 in an MSC-Laden Alginate Hydrogel for Articular Cartilage and Endochondral Bone Tissue Engineering. <i>Tissue Engineering - Part A</i> , <b>2016</b> , 22, 776-87	3.9	84
152	Effect of collagen-glycosaminoglycan scaffold pore size on matrix mineralization and cellular behavior in different cell types. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2016</b> , 104, 291-304	5.4	56
151	Respiratory Tissue Engineering: Current Status and Opportunities for the Future. <i>Tissue Engineering - Part B: Reviews</i> , <b>2015</b> , 21, 323-44	7.9	19
150	Biomaterial based modulation of macrophage polarization: a review and suggested design principles. <i>Materials Today</i> , <b>2015</b> , 18, 313-325	21.8	467
149	Life in 3D is never flat: 3D models to optimise drug delivery. <i>Journal of Controlled Release</i> , <b>2015</b> , 215, 39-54	11.7	149
148	The use of collagen-based scaffolds to simulate prostate cancer bone metastases with potential for evaluating delivery of nanoparticulate gene therapeutics. <i>Biomaterials</i> , <b>2015</b> , 66, 53-66	15.6	67
147	Staphylococcus epidermidis serine--aspartate repeat protein G (SdrG) binds to osteoblast integrin alpha V beta 3. <i>Microbes and Infection</i> , <b>2015</b> , 17, 395-401	9.3	9
146	Chondrogenically primed mesenchymal stem cell-seeded alginate hydrogels promote early bone formation in critically-sized defects. <i>European Polymer Journal</i> , <b>2015</b> , 72, 464-472	5.2	26
145	Porous decellularized tissue engineered hypertrophic cartilage as a scaffold for large bone defect healing. <i>Acta Biomaterialia</i> , <b>2015</b> , 23, 82-90	10.8	47
144	Incorporation of the natural marine multi-mineral dietary supplement Aquamin enhances osteogenesis and improves the mechanical properties of a collagen-based bone graft substitute. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2015</b> , 47, 114-123	4.1	12
143	Long-term controlled delivery of rhBMP-2 from collagen-hydroxyapatite scaffolds for superior bone tissue regeneration. <i>Journal of Controlled Release</i> , <b>2015</b> , 207, 112-9	11.7	88
142	Development of a gene-activated scaffold platform for tissue engineering applications using chitosan-pDNA nanoparticles on collagen-based scaffolds. <i>Journal of Controlled Release</i> , <b>2015</b> , 210, 84-94	11.7	79
141	Mechanically stimulated bone cells secrete paracrine factors that regulate osteoprogenitor recruitment, proliferation, and differentiation. <i>Biochemical and Biophysical Research Communications</i> , <b>2015</b> , 459, 118-23	3.4	43
140	Hypoxia-mimicking bioactive glass/collagen glycosaminoglycan composite scaffolds to enhance angiogenesis and bone repair. <i>Biomaterials</i> , <b>2015</b> , 52, 358-66	15.6	158
139	Incorporation of TGF-beta 3 within collagen-hyaluronic acid scaffolds improves their chondrogenic potential. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 1175-9	10.1	30
138	Insoluble elastin reduces collagen scaffold stiffness, improves viscoelastic properties, and induces a contractile phenotype in smooth muscle cells. <i>Biomaterials</i> , <b>2015</b> , 73, 296-307	15.6	86

137	Incorporation of fibrin into a collagen-glycosaminoglycan matrix results in a scaffold with improved mechanical properties and enhanced capacity to resist cell-mediated contraction. <i>Acta Biomaterialia</i> , <b>2015</b> , 26, 205-14	10.8	38
136	The pre-vascularisation of a collagen-chondroitin sulphate scaffold using human amniotic fluid-derived stem cells to enhance and stabilise endothelial cell-mediated vessel formation. <i>Acta Biomaterialia</i> , <b>2015</b> , 26, 263-73	10.8	23
135	Development of collagen-hydroxyapatite scaffolds incorporating PLGA and alginate microparticles for the controlled delivery of rhBMP-2 for bone tissue engineering. <i>Journal of Controlled Release</i> , <b>2015</b> , 198, 71-9	11.7	152
134	Scaffold mean pore size influences mesenchymal stem cell chondrogenic differentiation and matrix deposition. <i>Tissue Engineering - Part A</i> , <b>2015</b> , 21, 486-97	3.9	149
133	Effect of different hydroxyapatite incorporation methods on the structural and biological properties of porous collagen scaffolds for bone repair. <i>Journal of Anatomy</i> , <b>2015</b> , 227, 732-45	2.9	30
132	Recapitulating endochondral ossification: a promising route to in vivo bone regeneration. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2015</b> , 9, 889-902	4.4	87
131	Combinatorial gene therapy accelerates bone regeneration: non-viral dual delivery of VEGF and BMP2 in a collagen-nanohydroxyapatite scaffold. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 223-7	10.1	123
130	Functionalization of a Collagen-Hydroxyapatite Scaffold with Osteostatin to Facilitate Enhanced Bone Regeneration. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 2649-56	10.1	16
129	Platelet-rich plasma releasate differently stimulates cellular commitment toward the chondrogenic lineage according to concentration. <i>Journal of Tissue Engineering</i> , <b>2015</b> , 6, 2041731415594127	7.5	20
128	Coupling Freshly Isolated CD44(+) Infrapatellar Fat Pad-Derived Stromal Cells with a TGF- $\beta$ Eluting Cartilage ECM-Derived Scaffold as a Single-Stage Strategy for Promoting Chondrogenesis. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 1043-53	10.1	61
127	Investigating the effect of hypoxic culture on the endothelial differentiation of human amniotic fluid-derived stem cells. <i>Journal of Anatomy</i> , <b>2015</b> , 227, 767-80	2.9	6
126	Enhanced bone healing using collagen-hydroxyapatite scaffold implantation in the treatment of a large multiloculated mandibular aneurysmal bone cyst in a thoroughbred filly. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2015</b> , 9, 1193-9	4.4	33
125	A novel collagen-nanohydroxyapatite microRNA-activated scaffold for tissue engineering applications capable of efficient delivery of both miR-mimics and antagomiRs to human mesenchymal stem cells. <i>Journal of Controlled Release</i> , <b>2015</b> , 200, 42-51	11.7	69
124	Incorporation of polymeric microparticles into collagen-hydroxyapatite scaffolds for the delivery of a pro-osteogenic peptide for bone tissue engineering. <i>APL Materials</i> , <b>2015</b> , 3, 014910	5.7	17
123	Novel microhydroxyapatite particles in a collagen scaffold: a bioactive bone void filler?. <i>Clinical Orthopaedics and Related Research</i> , <b>2014</b> , 472, 1318-28	2.2	61
122	A biomimetic multi-layered collagen-based scaffold for osteochondral repair. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 1996-2004	10.8	187
121	A collagen-hydroxyapatite scaffold allows for binding and co-delivery of recombinant bone morphogenetic proteins and bisphosphonates. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 2250-8	10.8	97
120	Comparison of biomaterial delivery vehicles for improving acute retention of stem cells in the infarcted heart. <i>Biomaterials</i> , <b>2014</b> , 35, 6850-6858	15.6	119

119	Controlled release of transforming growth factor- $\beta$ from cartilage-extra-cellular-matrix-derived scaffolds to promote chondrogenesis of human-joint-tissue-derived stem cells. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 4400-9	10.8	74
118	Thermally triggered release of a pro-osteogenic peptide from a functionalized collagen-based scaffold using thermosensitive liposomes. <i>Journal of Controlled Release</i> , <b>2014</b> , 187, 158-66	11.7	38
117	Enamel Matrix Derivative has No Effect on the Chondrogenic Differentiation of Mesenchymal Stem Cells. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2014</b> , 2, 29	5.8	5
116	Estrogen withdrawal from osteoblasts and osteocytes causes increased mineralization and apoptosis. <i>Hormone and Metabolic Research</i> , <b>2014</b> , 46, 537-45	3.1	27
115	Flexor tendon repair: a comparative study between a knotless barbed suture repair and a traditional four-strand monofilament suture repair. <i>Journal of Hand Surgery: European Volume</i> , <b>2014</b> , 39, 40-5	1.4	32
114	An experimental investigation of the effect of mechanical and biochemical stimuli on cell migration within a decellularized vascular construct. <i>Annals of Biomedical Engineering</i> , <b>2014</b> , 42, 2029-38	4.7	10
113	The osteogenic potential of the marine-derived multi-mineral formula aquamin is enhanced by the presence of vitamin D. <i>Phytotherapy Research</i> , <b>2014</b> , 28, 678-84	6.7	7
112	Hyperthermia-induced drug delivery from thermosensitive liposomes encapsulated in an injectable hydrogel for local chemotherapy. <i>Advanced Healthcare Materials</i> , <b>2014</b> , 3, 854-9	10.1	49
111	Effects of ageing, prolonged estrogen deficiency and zoledronate on bone tissue mineral distribution. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2014</b> , 29, 161-70	4.1	26
110	Orchestrating osteogenic differentiation of mesenchymal stem cells--identification of placental growth factor as a mechanosensitive gene with a pro-osteogenic role. <i>Stem Cells</i> , <b>2013</b> , 31, 2420-31	5.8	37
109	The delayed addition of human mesenchymal stem cells to pre-formed endothelial cell networks results in functional vascularization of a collagen-glycosaminoglycan scaffold in vivo. <i>Acta Biomaterialia</i> , <b>2013</b> , 9, 9303-16	10.8	96
108	Subchondral osteopenia and accelerated bone remodelling post-ovariectomy - a possible mechanism for subchondral microfractures in the aetiology of spontaneous osteonecrosis of the knee?. <i>Journal of Anatomy</i> , <b>2013</b> , 222, 231-8	2.9	8
107	High levels of ephrinB2 over-expression increases the osteogenic differentiation of human mesenchymal stem cells and promotes enhanced cell mediated mineralisation in a polyethyleneimine-ephrinB2 gene-activated matrix. <i>Journal of Controlled Release</i> , <b>2013</b> , 165, 173-82	11.7	43
106	Chitosan for gene delivery and orthopedic tissue engineering applications. <i>Molecules</i> , <b>2013</b> , 18, 5611-47	4.8	113
105	Advanced Strategies for Articular Cartilage Defect Repair. <i>Materials</i> , <b>2013</b> , 6, 637-668	3.5	69
104	Examination of osteoarthritis and subchondral bone alterations within the stifle joint of an ovariectomised ovine model. <i>Journal of Anatomy</i> , <b>2013</b> , 222, 588-97	2.9	8
103	Non-viral gene-activated matrices: next generation constructs for bone repair. <i>Organogenesis</i> , <b>2013</b> , 9, 22-8	1.7	33
102	Staphylococcus aureus protein A binding to osteoblast tumour necrosis factor receptor 1 results in activation of nuclear factor kappa B and release of interleukin-6 in bone infection. <i>Microbiology (United Kingdom)</i> , <b>2013</b> , 159, 147-154	2.9	63

101	Cell-scaffold interactions in the bone tissue engineering triad. <i>European Cells and Materials</i> , <b>2013</b> , 26, 120-32	4.3	181
100	Distribution of microcrack lengths in bone in vivo and in vitro. <i>Journal of Theoretical Biology</i> , <b>2012</b> , 304, 164-71	2.3	9
99	The development of non-viral gene-activated matrices for bone regeneration using polyethyleneimine (PEI) and collagen-based scaffolds. <i>Journal of Controlled Release</i> , <b>2012</b> , 158, 304-11	11.7	79
98	Development of a thermoresponsive chitosan gel combined with human mesenchymal stem cells and desferrioxamine as a multimodal pro-angiogenic therapeutic for the treatment of critical limb ischaemia. <i>Journal of Controlled Release</i> , <b>2012</b> , 161, 73-80	11.7	60
97	Mesenchymal stem cell fate is regulated by the composition and mechanical properties of collagen-glycosaminoglycan scaffolds. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2012</b> , 11, 53-62	4.1	192
96	Addition of hyaluronic acid improves cellular infiltration and promotes early-stage chondrogenesis in a collagen-based scaffold for cartilage tissue engineering. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2012</b> , 11, 41-52	4.1	111
95	Innovative collagen nano-hydroxyapatite scaffolds offer a highly efficient non-viral gene delivery platform for stem cell-mediated bone formation. <i>Advanced Materials</i> , <b>2012</b> , 24, 749-54	24	151
94	Evaluation of the ability of collagen-glycosaminoglycan scaffolds with or without mesenchymal stem cells to heal bone defects in Wistar rats. <i>Oral and Maxillofacial Surgery</i> , <b>2012</b> , 16, 47-55	1.6	18
93	The Hounsfield value for cortical bone geometry in the proximal humerus--an in vitro study. <i>Skeletal Radiology</i> , <b>2012</b> , 41, 557-68	2.7	23
92	Temporal changes in bone composition, architecture, and strength following estrogen deficiency in osteoporosis. <i>Calcified Tissue International</i> , <b>2012</b> , 91, 440-9	3.9	30
91	Staphylococcus aureus protein A plays a critical role in mediating bone destruction and bone loss in osteomyelitis. <i>PLoS ONE</i> , <b>2012</b> , 7, e40586	3.7	88
90	Osteomimicry of mammary adenocarcinoma cells in vitro; increased expression of bone matrix proteins and proliferation within a 3D collagen environment. <i>PLoS ONE</i> , <b>2012</b> , 7, e41679	3.7	49
89	The marine-derived, multi-mineral formula, Aquamin, enhances mineralisation of osteoblast cells in vitro. <i>Phytotherapy Research</i> , <b>2012</b> , 26, 375-80	6.7	22
88	Influence of flow rate and scaffold pore size on cell behavior during mechanical stimulation in a flow perfusion bioreactor. <i>Biotechnology and Bioengineering</i> , <b>2012</b> , 109, 1583-94	4.9	76
87	Visualizing feasible operating ranges within tissue engineering systems using a "windows of operation" approach: a perfusion-scaffold bioreactor case study. <i>Biotechnology and Bioengineering</i> , <b>2012</b> , 109, 3161-71	4.9	13
86	Estrogen plus estrogen receptor antagonists alter mineral production by osteoblasts in vitro. <i>Hormone and Metabolic Research</i> , <b>2012</b> , 44, 47-53	3.1	16
85	Estrogen Plus Estrogen Receptor Antagonists Alter Mineral Production by Osteoblasts In Vitro. <i>Hormone and Metabolic Research</i> , <b>2012</b> , 44, 154-154	3.1	1
84	Primary cilia-mediated mechanotransduction in human mesenchymal stem cells. <i>Stem Cells</i> , <b>2012</b> , 30, 2561-70	5.8	127

83	ENHANCED ENDOCHONDRAL OSSIFICATION IN VESSEL DERIVED STEM CELLS BY ATHEROSCLEROTIC ENVIRONMENT. <i>Heart</i> , <b>2012</b> , 98, A9.3-A9	5.1	
82	Scaffold Considerations for Osteochondral Tissue Engineering <b>2012</b> , 779-801		
81	Bioreactors in tissue engineering. <i>Technology and Health Care</i> , <b>2011</b> , 19, 55-69	1.1	59
80	Subchondral trabecular structural changes in the proximal tibia in an ovine model of increased bone turnover. <i>Journal of Anatomy</i> , <b>2011</b> , 218, 619-24	2.9	8
79	Crosslinking and mechanical properties significantly influence cell attachment, proliferation, and migration within collagen glycosaminoglycan scaffolds. <i>Tissue Engineering - Part A</i> , <b>2011</b> , 17, 1201-8	3.9	226
78	Evaluation of early healing events around mesenchymal stem cell-seeded collagen-glycosaminoglycan scaffold. An experimental study in Wistar rats. <i>Oral and Maxillofacial Surgery</i> , <b>2011</b> , 15, 31-9	1.6	23
77	Collagen scaffolds for orthopedic regenerative medicine. <i>Jom</i> , <b>2011</b> , 63, 66-73	2.1	34
76	In-vivo generation of bone via endochondral ossification by in-vitro chondrogenic priming of adult human and rat mesenchymal stem cells. <i>BMC Musculoskeletal Disorders</i> , <b>2011</b> , 12, 31	2.8	161
75	Biomaterials & scaffolds for tissue engineering. <i>Materials Today</i> , <b>2011</b> , 14, 88-95	21.8	2110
74	Effects of estrogen deficiency and bisphosphonate therapy on osteocyte viability and microdamage accumulation in an ovine model of osteoporosis. <i>Journal of Orthopaedic Research</i> , <b>2011</b> , 29, 419-24	3.8	29
73	Three hours of perfusion culture prior to 28 days of static culture, enhances osteogenesis by human cells in a collagen GAG scaffold. <i>Biotechnology and Bioengineering</i> , <b>2011</b> , 108, 1203-10	4.9	20
72	The effects of estrogen deficiency and bisphosphonate treatment on tissue mineralisation and stiffness in an ovine model of osteoporosis. <i>Journal of Biomechanics</i> , <b>2011</b> , 44, 386-90	2.9	20
71	Staphylococcus aureus protein A binds to osteoblasts and triggers signals that weaken bone in osteomyelitis. <i>PLoS ONE</i> , <b>2011</b> , 6, e18748	3.7	101
70	Towards in vitro vascularisation of collagen-GAG scaffolds. <i>European Cells and Materials</i> , <b>2011</b> , 21, 15-30	4.3	66
69	Osteoblast response to rest periods during bioreactor culture of collagen-glycosaminoglycan scaffolds. <i>Tissue Engineering - Part A</i> , <b>2010</b> , 16, 943-51	3.9	36
68	Understanding the effect of mean pore size on cell activity in collagen-glycosaminoglycan scaffolds. <i>Cell Adhesion and Migration</i> , <b>2010</b> , 4, 377-81	3.2	335
67	Novel freeze-drying methods to produce a range of collagen-glycosaminoglycan scaffolds with tailored mean pore sizes. <i>Tissue Engineering - Part C: Methods</i> , <b>2010</b> , 16, 887-94	2.9	181
66	Influence of shear stress in perfusion bioreactor cultures for the development of three-dimensional bone tissue constructs: a review. <i>Tissue Engineering - Part B: Reviews</i> , <b>2010</b> , 16, 587-601	7.9	151

65	A prediction of cell differentiation and proliferation within a collagen-glycosaminoglycan scaffold subjected to mechanical strain and perfusive fluid flow. <i>Journal of Biomechanics</i> , <b>2010</b> , 43, 618-26	2.9	66
64	A novel collagen scaffold supports human osteogenesis--applications for bone tissue engineering. <i>Cell and Tissue Research</i> , <b>2010</b> , 340, 169-77	4.2	67
63	The response of bone marrow-derived mesenchymal stem cells to dynamic compression following TGF-beta3 induced chondrogenic differentiation. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 2896-909	4.7	140
62	Development and characterisation of a collagen nano-hydroxyapatite composite scaffold for bone tissue engineering. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2010</b> , 21, 2293-8	4.5	132
61	Stimulation of osteoblasts using rest periods during bioreactor culture on collagen-glycosaminoglycan scaffolds. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2010</b> , 21, 2325-30	4.5	22
60	Tissue differentiation in an in vivo bioreactor: in silico investigations of scaffold stiffness. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2010</b> , 21, 2331-6	4.5	21
59	The synthesis and characterization of nanophase hydroxyapatite using a novel dispersant-aided precipitation method. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2010</b> , 95, 1142-9	5.4	77
58	Structural adaptation and intracortical bone turnover in an ovine model of osteoporosis. <i>Journal of Orthopaedic Research</i> , <b>2010</b> , 28, 248-51	3.8	12
57	Local and regional mechanical characterisation of a collagen-glycosaminoglycan scaffold using high-resolution finite element analysis. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2010</b> , 3, 292-302	4.1	12
56	The effect of mean pore size on cell attachment, proliferation and migration in collagen-glycosaminoglycan scaffolds for bone tissue engineering. <i>Biomaterials</i> , <b>2010</b> , 31, 461-6	15.6	1304
55	Substrate stiffness and contractile behaviour modulate the functional maturation of osteoblasts on a collagen-GAG scaffold. <i>Acta Biomaterialia</i> , <b>2010</b> , 6, 4305-13	10.8	92
54	The healing of bony defects by cell-free collagen-based scaffolds compared to stem cell-seeded tissue engineered constructs. <i>Biomaterials</i> , <b>2010</b> , 31, 9232-43	15.6	177
53	A comparative study of shear stresses in collagen-glycosaminoglycan and calcium phosphate scaffolds in bone tissue-engineering bioreactors. <i>Tissue Engineering - Part A</i> , <b>2009</b> , 15, 1141-9	3.9	65
52	The effect of dehydrothermal treatment on the mechanical and structural properties of collagen-GAG scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2009</b> , 89, 363-9	5.4	184
51	Osteoblast activity on collagen-GAG scaffolds is affected by collagen and GAG concentrations. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2009</b> , 91, 92-101	5.4	81
50	Development of a biomimetic collagen-hydroxyapatite scaffold for bone tissue engineering using a SBF immersion technique. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2009</b> , 90, 584-91	3.5	134
49	Effects of ovariectomy on bone turnover, porosity, and biomechanical properties in ovine compact bone 12 months postsurgery. <i>Journal of Orthopaedic Research</i> , <b>2009</b> , 27, 303-9	3.8	37
48	Deformation simulation of cells seeded on a collagen-GAG scaffold in a flow perfusion bioreactor using a sequential 3D CFD-elastostatics model. <i>Medical Engineering and Physics</i> , <b>2009</b> , 31, 420-7	2.4	72

47	Variation of trabecular microarchitectural parameters in cranial, caudal and mid-vertebral regions of the ovine L3 vertebra. <i>Journal of Anatomy</i> , <b>2009</b> , 214, 729-35	2.9	10
46	Biomechanical properties across trabeculae from the proximal femur of normal and ovariectomised sheep. <i>Journal of Biomechanics</i> , <b>2009</b> , 42, 498-503	2.9	51
45	Influence of a novel calcium-phosphate coating on the mechanical properties of highly porous collagen scaffolds for bone repair. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2009</b> , 2, 138-46	4.1	58
44	The effects of collagen concentration and crosslink density on the biological, structural and mechanical properties of collagen-GAG scaffolds for bone tissue engineering. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2009</b> , 2, 202-9	4.1	166
43	The effect of concentration, thermal history and cell seeding density on the initial mechanical properties of agarose hydrogels. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , <b>2009</b> , 2, 512-21	4.1	103
42	Chondrogenic priming of human bone marrow stromal cells: a better route to bone repair?. <i>Tissue Engineering - Part C: Methods</i> , <b>2009</b> , 15, 285-95	2.9	102
41	Mechanical stimulation of osteoblasts using steady and dynamic fluid flow. <i>Tissue Engineering - Part A</i> , <b>2008</b> , 14, 1213-23	3.9	69
40	Biomechanics and mechanobiology in osteochondral tissues. <i>Regenerative Medicine</i> , <b>2008</b> , 3, 743-59	2.5	41
39	The effects of increased intracortical remodeling on microcrack behaviour in compact bone. <i>Bone</i> , <b>2008</b> , 43, 889-93	4.7	27
38	Effects of iron oxide incorporation for long term cell tracking on MSC differentiation in vitro and in vivo. <i>Biochemical and Biophysical Research Communications</i> , <b>2008</b> , 369, 1076-81	3.4	116
37	Dynamic compression can inhibit chondrogenesis of mesenchymal stem cells. <i>Biochemical and Biophysical Research Communications</i> , <b>2008</b> , 377, 458-462	3.4	91
36	Design and validation of a dynamic flow perfusion bioreactor for use with compliant tissue engineering scaffolds. <i>Journal of Biotechnology</i> , <b>2008</b> , 133, 490-6	3.7	71
35	Effects of high bone turnover on the biomechanical properties of the L3 vertebra in an ovine model of early stage osteoporosis. <i>Spine</i> , <b>2008</b> , 33, 2518-23	3.3	13
34	Part 1: Scaffolds and Surfaces. <i>Technology and Health Care</i> , <b>2008</b> , 16, 305-317	1.1	22
33	Gene expression by marrow stromal cells in a porous collagen-glycosaminoglycan scaffold is affected by pore size and mechanical stimulation. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2008</b> , 19, 3455-63	4.5	68
32	Heterogeneous linear elastic trabecular bone modelling using micro-CT attenuation data and experimentally measured heterogeneous tissue properties. <i>Journal of Biomechanics</i> , <b>2008</b> , 41, 2589-96	2.9	58
31	Biomechanical comparison of the pullout properties of external skeletal fixation pins in the tibiae of intact and ovariectomised ewes. <i>Veterinary and Comparative Orthopaedics and Traumatology</i> , <b>2008</b> , 21, 418-26	1.2	1
30	Mechanical Stimulation of Osteoblasts Using Steady and Dynamic Fluid Flow. <i>Tissue Engineering - Part A</i> , <b>2008</b> , 080423075413219	3.9	3

29	Development of a collagen calcium-phosphate scaffold as a novel bone graft substitute. <i>Studies in Health Technology and Informatics</i> , <b>2008</b> , 133, 11-20	0.5	16
28	Part 1: scaffolds and surfaces. <i>Technology and Health Care</i> , <b>2008</b> , 16, 305-17	1.1	3
27	Bone as a composite material: The role of osteons as barriers to crack growth in compact bone. <i>International Journal of Fatigue</i> , <b>2007</b> , 29, 1051-1056	5	51
26	How Does Bone Detect Cracks?. <i>Key Engineering Materials</i> , <b>2007</b> , 348-349, 57-60	0.4	
25	The effect of pore size on permeability and cell attachment in collagen scaffolds for tissue engineering. <i>Technology and Health Care</i> , <b>2007</b> , 15, 3-17	1.1	82
24	New embedding medium for sectioning undecalcified bone. <i>Biotechnic and Histochemistry</i> , <b>2006</b> , 81, 99-103	1.8	1
23	A collagen-glycosaminoglycan scaffold supports adult rat mesenchymal stem cell differentiation along osteogenic and chondrogenic routes. <i>Tissue Engineering</i> , <b>2006</b> , 12, 459-68		187
22	The effect of pore size on permeability and cell attachment in collagen scaffolds for tissue engineering. <i>Technology and Health Care</i> , <b>2006</b> , 15, 3-17	1.1	229
21	Osteonal crack barriers in ovine compact bone. <i>Journal of Anatomy</i> , <b>2006</b> , 208, 81-9	2.9	70
20	Microcracks in compact bone: a three-dimensional view. <i>Journal of Anatomy</i> , <b>2006</b> , 209, 119-24	2.9	40
19	Tracking the changes in unloaded bone: Morphology and gene expression. <i>European Journal of Morphology</i> , <b>2005</b> , 42, 208-16		1
18	The effect of pore size on cell adhesion in collagen-GAG scaffolds. <i>Biomaterials</i> , <b>2005</b> , 26, 433-41	15.6	1014
17	The effect of bone microstructure on the initiation and growth of microcracks. <i>Journal of Orthopaedic Research</i> , <b>2005</b> , 23, 475-80	3.8	142
16	Microcracks in cortical bone: how do they affect bone biology?. <i>Current Osteoporosis Reports</i> , <b>2005</b> , 3, 39-45	5.4	50
15	The behaviour of microcracks in compact bone. <i>European Journal of Morphology</i> , <b>2005</b> , 42, 71-9		33
14	Creep does not contribute to fatigue in bovine trabecular bone. <i>Journal of Biomechanical Engineering</i> , <b>2004</b> , 126, 321-9	2.1	31
13	Influence of freezing rate on pore structure in freeze-dried collagen-GAG scaffolds. <i>Biomaterials</i> , <b>2004</b> , 25, 1077-86	15.6	588
12	Microcrack accumulation at different intervals during fatigue testing of compact bone. <i>Journal of Biomechanics</i> , <b>2003</b> , 36, 973-80	2.9	177

11	Detecting microdamage in bone. <i>Journal of Anatomy</i> , <b>2003</b> , 203, 161-72	2.9	157
10	An improved labelling technique for monitoring microcrack growth in compact bone. <i>Journal of Biomechanics</i> , <b>2002</b> , 35, 523-6	2.9	94
9	A Theoretical Model for the Simulation of Microdamage Accumulation and Repair in Compact Bone*. <i>Meccanica</i> , <b>2002</b> , 37, 397-406	2.1	4
8	A Fatigue-Based Model of Disuse Osteoporosis. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2001</b> , 4, 413-420	2.1	1
7	Visualisation of three-dimensional microcracks in compact bone. <i>Journal of Anatomy</i> , <b>2000</b> , 197 Pt 3, 413-20	2.9	109
6	The nature of fatigue damage in bone. <i>International Journal of Fatigue</i> , <b>2000</b> , 22, 847-853	5	39
5	Compression data on bovine bone confirms that a "stressed volume" principle explains the variability of fatigue strength results. <i>Journal of Biomechanics</i> , <b>1999</b> , 32, 1199-203	2.9	47
4	Royal academy of medicine in Ireland section of bioengineering. <i>Irish Journal of Medical Science</i> , <b>1998</b> , 167, 256-276	1.9	
3	3D Printed Scaffolds Incorporated with Platelet-Rich Plasma Show Enhanced Angiogenic Potential while not Inducing Fibrosis. <i>Advanced Functional Materials</i> , 2109915	15.6	1
2	Chondrogenic Priming of Human Bone Marrow Stromal Cells: A Better Route to Bone Repair?. <i>Tissue Engineering - Part A</i> , 110306231138043	3.9	2
1	In Vitro Vascularization: Tissue Engineering Constructs 4043-4062		