Zuzana Koci

List of Publications by Citations

160 papers	6,774 citations	47 h-index	77 g-index
167 ext. papers	8,019 ext. citations	7.7 avg, IF	6.3 L-index

#	Paper	IF	Citations
160	Influence of freezing rate on pore structure in freeze-dried collagen-GAG scaffolds. *Biomaterials*, **2004**, 25, 1077-86	15.6	588
159	The effect of pore size on permeability and cell attachment in collagen scaffolds for tissue engineering. *Technology and Health Care*, **2006**, 15, 3-17	1.1	229
158	A biomimetic multi-layered collagen-based scaffold for osteochondral repair. *Acta Biomaterialia*, **2014**, 10, 1996-2004	10.8	187
157	The effect of dehydrothermal treatment on the mechanical and structural properties of collagen-GAG scaffolds. *Journal of Biomedical Materials Research - Part A*, **2009**, 89, 363-9	5.4	184
156	Microcrack accumulation at different intervals during fatigue testing of compact bone. *Journal of Biomechanics*, **2003**, 36, 973-80	2.9	177
155	Hypoxia-mimicking bioactive glass/collagen glycosaminoglycan composite scaffolds to enhance angiogenesis and bone repair. *Biomaterials*, **2015**, 52, 358-66	15.6	158
154	Development of collagen-hydroxyapatite scaffolds incorporating PLGA and alginate microparticles for the controlled delivery of rhBMP-2 for bone tissue engineering. *Journal of Controlled Release*, **2015**, 198, 71-9	11.7	152
153	Multi-layered collagen-based scaffolds for osteochondral defect repair in rabbits. *Acta Biomaterialia*, **2016**, 32, 149-160	10.8	144
152	The effect of bone microstructure on the initiation and growth of microcracks. *Journal of Orthopaedic Research*, **2005**, 23, 475-80	3.8	142
151	Staphylococcal Osteomyelitis: Disease Progression, Treatment Challenges, and Future Directions. *Clinical Microbiology Reviews*, **2018**, 31,	34	127
150	Combinatorial gene therapy accelerates bone regeneration: non-viral dual delivery of VEGF and BMP2 in a collagen-nanohydroxyapatite scaffold. *Advanced Healthcare Materials*, **2015**, 4, 223-7	10.1	123
149	Material stiffness influences the polarization state, function and migration mode of macrophages. *Acta Biomaterialia*, **2019**, 89, 47-59	10.8	120
148	Comparison of biomaterial delivery vehicles for improving acute retention of stem cells in the infarcted heart. *Biomaterials*, **2014**, 35, 6850-6858	15.6	119
147	Cell-free multi-layered collagen-based scaffolds demonstrate layer specific regeneration of functional osteochondral tissue in caprine joints. *Biomaterials*, **2016**, 87, 69-81	15.6	106
146	The benefits and limitations of animal models for translational research in cartilage repair. *Journal of Experimental Orthopaedics*, **2016**, 3, 1	2.3	102
145	Multifunctional biomaterials from the sea: Assessing the effects of chitosan incorporation into collagen scaffolds on mechanical and biological functionality. *Acta Biomaterialia*, **2016**, 43, 160-169	10.8	101
144	Injectable Extracellular Matrix Hydrogels as Scaffolds for Spinal Cord Injury Repair. *Tissue Engineering - Part A*, **2016**, 22, 306-17	3.9	100

143	A collagen-hydroxyapatite scaffold allows for binding and co-delivery of recombinant bone morphogenetic proteins and bisphosphonates. *Acta Biomaterialia*, **2014**, 10, 2250-8	10.8	97
142	An improved labelling technique for monitoring microcrack growth in compact bone. *Journal of Biomechanics*, **2002**, 35, 523-6	2.9	94
141	The shape and size of hydroxyapatite particles dictate inflammatory responses following implantation. *Scientific Reports*, **2017**, 7, 2922	4.9	90
140	Long-term controlled delivery of rhBMP-2 from collagen-hydroxyapatite scaffolds for superior bone tissue regeneration. *Journal of Controlled Release*, **2015**, 207, 112-9	11.7	88
139	Collagen scaffolds functionalised with copper-eluting bioactive glass reduce infection and enhance osteogenesis and angiogenesis both in vitro and in vivo. *Biomaterials*, **2019**, 197, 405-416	15.6	87
138	Recapitulating endochondral ossification: a promising route to in vivo bone regeneration. *Journal of Tissue Engineering and Regenerative Medicine*, **2015**, 9, 889-902	4.4	87
137	Insoluble elastin reduces collagen scaffold stiffness, improves viscoelastic properties, and induces a contractile phenotype in smooth muscle cells. *Biomaterials*, **2015**, 73, 296-307	15.6	86
136	Gene Delivery of TGF-β and BMP2 in an MSC-Laden Alginate Hydrogel for Articular Cartilage and Endochondral Bone Tissue Engineering. *Tissue Engineering - Part A*, **2016**, 22, 776-87	3.9	84
135	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. *Biomaterials*, **2017**, 149, 116-127	15.6	82
134	The effect of pore size on permeability and cell attachment in collagen scaffolds for tissue engineering. *Technology and Health Care*, **2007**, 15, 3-17	1.1	82
133	Development of a gene-activated scaffold platform for tissue engineering applications using chitosan-pDNA nanoparticles on collagen-based scaffolds. *Journal of Controlled Release*, **2015**, 210, 84-94	11.7	79
132	Delivering Nucleic-Acid Based Nanomedicines on Biomaterial Scaffolds for Orthopedic Tissue Repair: Challenges, Progress and Future Perspectives. *Advanced Materials*, **2016**, 28, 5447-69	24	75
131	Controlled release of transforming growth factor-β 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
130	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. *Journal of Controlled Release*, **2015**, 200, 42-51	11.7	69
129	The use of collagen-based scaffolds to simulate prostate cancer bone metastases with potential for evaluating delivery of nanoparticulate gene therapeutics. *Biomaterials*, **2015**, 66, 53-66	15.6	67
128	Controlled release of vascular endothelial growth factor from spray-dried alginate microparticles in collagen-hydroxyapatite scaffolds for promoting vascularization and bone repair. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 1097-1109	4.4	66
127	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. *Microbiology (United Kingdom)*, **2013**, 159, 147-154	2.9	63
126	Tissue-specific extracellular matrix scaffolds for the regeneration of spatially complex musculoskeletal tissues. *Biomaterials*, **2019**, 188, 63-73	15.6	62

125	Coupling Freshly Isolated CD44(+) Infrapatellar Fat Pad-Derived Stromal Cells with a TGF-β Eluting Cartilage ECM-Derived Scaffold as a Single-Stage Strategy for Promoting Chondrogenesis. *Advanced Healthcare Materials*, **2015**, 4, 1043-53	10.1	61
124	Electroconductive Biohybrid Collagen/Pristine Graphene Composite Biomaterials with Enhanced Biological Activity. *Advanced Materials*, **2018**, 30, e1706442	24	60
123	Advances in Nerve Guidance Conduit-Based Therapeutics for Peripheral Nerve Repair. *ACS Biomaterials Science and Engineering*, **2017**, 3, 1221-1235	5.5	58
122	Next generation bone tissue engineering: non-viral miR-133a inhibition using collagen-nanohydroxyapatite scaffolds rapidly enhances osteogenesis. *Scientific Reports*, **2016**, 6, 27941	4.9	57
121	Effect of collagen-glycosaminoglycan scaffold pore size on matrix mineralization and cellular behavior in different cell types. *Journal of Biomedical Materials Research - Part A*, **2016**, 104, 291-304	5.4	56
120	Content-Dependent Osteogenic Response of Nanohydroxyapatite: An in Vitro and in Vivo Assessment within Collagen-Based Scaffolds. *ACS Applied Materials & Interfaces*, **2016**, 8, 23477-88	9.5	55
119	Freeze-Drying as a Novel Biofabrication Method for Achieving a Controlled Microarchitecture within Large, Complex Natural Biomaterial Scaffolds. *Advanced Healthcare Materials*, **2017**, 6, 1700598	10.1	55
118	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. *Tissue Engineering - Part A*, **2016**, 22, 556-67	3.9	53
117	Biomaterial-Enhanced Cell and Drug Delivery: Lessons Learned in the Cardiac Field and Future Perspectives. *Advanced Materials*, **2016**, 28, 5648-61	24	51
116	Innovations in gene and growth factor delivery systems for diabetic wound healing. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, e296-e312	4.4	50
115	Microcracks in cortical bone: how do they affect bone biology?. *Current Osteoporosis Reports*, **2005**, 3, 39-45	5.4	50
114	Extracellular Matrix Hydrogel Derived from Human Umbilical Cord as a Scaffold for Neural Tissue Repair and Its Comparison with Extracellular Matrix from Porcine Tissues. *Tissue Engineering - Part C: Methods*, **2017**, 23, 333-345	2.9	48
113	Porous decellularized tissue engineered hypertrophic cartilage as a scaffold for large bone defect healing. *Acta Biomaterialia*, **2015**, 23, 82-90	10.8	47
112	Investigating the interplay between substrate stiffness and ligand chemistry in directing mesenchymal stem cell differentiation within 3D macro-porous substrates. *Biomaterials*, **2018**, 171, 23-33	15.6	46
111	Genipin and EDC crosslinking of extracellular matrix hydrogel derived from human umbilical cord for neural tissue repair. *Scientific Reports*, **2019**, 9, 10674	4.9	45
110	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
109	The development of a tissue-engineered tracheobronchial epithelial model using a bilayered collagen-hyaluronate scaffold. *Biomaterials*, **2016**, 85, 111-27	15.6	44
108	Mechanically stimulated bone cells secrete paracrine factors that regulate osteoprogenitor recruitment, proliferation, and differentiation. *Biochemical and Biophysical Research Communications*, **2015**, 459, 118-23	3.4	43

107	A stimuli responsive liposome loaded hydrogel provides flexible on-demand release of therapeutic agents. *Acta Biomaterialia*, **2017**, 48, 110-119	10.8	43
106	DNA Origami: Folded DNA-Nanodevices That Can Direct and Interpret Cell Behavior. *Advanced Materials*, **2016**, 28, 5509-24	24	42
105	Scaffold-Based microRNA Therapies in Regenerative Medicine and Cancer. *Advanced Healthcare Materials*, **2018**, 7, 1700695	10.1	40
104	Macrophage Polarization in Response to Collagen Scaffold Stiffness Is Dependent on Cross-Linking Agent Used To Modulate the Stiffness. *ACS Biomaterials Science and Engineering*, **2019**, 5, 544-552	5.5	40
103	Delivery of the improved BMP-2-Advanced plasmid DNA within a gene-activated scaffold accelerates mesenchymal stem cell osteogenesis and critical size defect repair. *Journal of Controlled Release*, **2018**, 283, 20-31	11.7	40
102	Incorporation of fibrin into a collagen-glycosaminoglycan matrix results in a scaffold with improved mechanical properties and enhanced capacity to resist cell-mediated contraction. *Acta Biomaterialia*, **2015**, 26, 205-14	10.8	38
101	Thermally triggered release of a pro-osteogenic peptide from a functionalized collagen-based scaffold using thermosensitive liposomes. *Journal of Controlled Release*, **2014**, 187, 158-66	11.7	38
100	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. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, e384-e394	4.4	37
99	Characterization of human adipose tissue-derived stromal cells isolated from diabetic patientR distal limbs with critical ischemia. *Cell Biochemistry and Function*, **2014**, 32, 597-604	4.2	36
98	A Physicochemically Optimized and Neuroconductive Biphasic Nerve Guidance Conduit for Peripheral Nerve Repair. *Advanced Healthcare Materials*, **2017**, 6, 1700954	10.1	35
97	Formulation and Evaluation of Anisamide-Targeted Amphiphilic Cyclodextrin Nanoparticles To Promote Therapeutic Gene Silencing in a 3D Prostate Cancer Bone Metastases Model. *Molecular Pharmaceutics*, **2017**, 14, 42-52	5.6	34
96	Functionalising Collagen-Based Scaffolds With Platelet-Rich Plasma for Enhanced Skin Wound Healing Potential. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 371	5.8	34
95	The Effect of Human Mesenchymal Stem Cells Derived from WhartonR Jelly in Spinal Cord Injury Treatment Is Dose-Dependent and Can Be Facilitated by Repeated Application. *International Journal of Molecular Sciences*, **2018**, 19,	6.3	33
94	Enhanced bone healing using collagen-hydroxyapatite scaffold implantation in the treatment of a large multiloculated mandibular aneurysmal bone cyst in a thoroughbred filly. *Journal of Tissue Engineering and Regenerative Medicine*, **2015**, 9, 1193-9	4.4	33
93	The behaviour of microcracks in compact bone. *European Journal of Morphology*, **2005**, 42, 71-9		33
92	Highly versatile cell-penetrating peptide loaded scaffold for efficient and localised gene delivery to multiple cell types: From development to application in tissue engineering. *Biomaterials*, **2019**, 216, 119277	15.6	31
91	Bioinspired Star-Shaped Poly(l-lysine) Polypeptides: Efficient Polymeric Nanocarriers for the Delivery of DNA to Mesenchymal Stem Cells. *Molecular Pharmaceutics*, **2018**, 15, 1878-1891	5.6	31
90	Incorporation of TGF-beta 3 within collagen-hyaluronic acid scaffolds improves their chondrogenic potential. *Advanced Healthcare Materials*, **2015**, 4, 1175-9	10.1	30

89	Effect of different hydroxyapatite incorporation methods on the structural and biological properties of porous collagen scaffolds for bone repair. *Journal of Anatomy*, **2015**, 227, 732-45	2.9	30
88	Pro-angiogenic impact of SDF-1 gene-activated collagen-based scaffolds in stem cell driven angiogenesis. *International Journal of Pharmaceutics*, **2018**, 544, 372-379	6.5	29
87	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. *Acta Biomaterialia*, **2018**, 75, 115-128	10.8	29
86	Harnessing an Inhibitory Role of miR-16 in Osteogenesis by Human Mesenchymal Stem Cells for Advanced Scaffold-Based Bone Tissue Engineering. *Tissue Engineering - Part A*, **2019**, 25, 24-33	3.9	29
85	Identification of the mechanisms by which age alters the mechanosensitivity of mesenchymal stromal cells on substrates of differing stiffness: Implications for osteogenesis and angiogenesis. *Acta Biomaterialia*, **2017**, 53, 59-69	10.8	28
84	Differentiation of Vascular Stem Cells Contributes to Ectopic Calcification of Atherosclerotic Plaque. *Stem Cells*, **2016**, 34, 913-23	5.8	28
83	Future Perspectives on the Role of Stem Cells and Extracellular Vesicles in Vascular Tissue Regeneration. *Frontiers in Cardiovascular Medicine*, **2018**, 5, 86	5.4	28
82	Infrapatellar Fat Pad Stem Cells: From Developmental Biology to Cell Therapy. *Stem Cells International*, **2017**, 2017, 6843727	5	26
81	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. *Journal of Controlled Release*, **2019**, 304, 51-64	11.7	25
80	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. *Acta Biomaterialia*, **2015**, 26, 263-73	10.8	23
79	Scaffold-Based Delivery of Nucleic Acid Therapeutics for Enhanced Bone and Cartilage Repair. *Journal of Orthopaedic Research*, **2019**, 37, 1671-1680	3.8	22
78	Towards 3D in vitro models for the study of cardiovascular tissues and disease. *Drug Discovery Today*, **2016**, 21, 1437-1445	8.8	22
77	Part 1: Scaffolds and Surfaces. *Technology and Health Care*, **2008**, 16, 305-317	1.1	22
76	Transfection of autologous host cells in vivo using gene activated collagen scaffolds incorporating star-polypeptides. *Journal of Controlled Release*, **2019**, 304, 191-203	11.7	21
75	Advances in polymeric islet cell encapsulation technologies to limit the foreign body response and provide immunoisolation. *Current Opinion in Pharmacology*, **2017**, 36, 66-71	5.1	21
74	Platelet-rich plasma releasate differently stimulates cellular commitment toward the chondrogenic lineage according to concentration. *Journal of Tissue Engineering*, **2015**, 6, 2041731415594127	7.5	20
73	Utilizing Autologous Multipotent Mesenchymal Stromal Cells and Tricalcium Phosphate Scaffold in Human Bone Defects: A Prospective, Controlled Feasibility Trial. *BioMed Research International*, **2016**, 2016, 2076061	3	20
72	Respiratory Tissue Engineering: Current Status and Opportunities for the Future. *Tissue Engineering - Part B: Reviews*, **2015**, 21, 323-44	7.9	19

71	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. *Advanced Healthcare Materials*, **2020**, 9, e1901827	10.1	18
70	Rapid bone repair with the recruitment of CD206M2-like macrophages using non-viral scaffold-mediated miR-133a inhibition of host cells. *Acta Biomaterialia*, **2020**, 109, 267-279	10.8	16
69	Functionalization of a Collagen-Hydroxyapatite Scaffold with Osteostatin to Facilitate Enhanced Bone Regeneration. *Advanced Healthcare Materials*, **2015**, 4, 2649-56	10.1	16
68	Raman spectroscopy predicts the link between claw keratin and bone collagen structure in a rodent model of oestrogen deficiency. *Biochimica Et Biophysica Acta - Molecular Basis of Disease*, **2018**, 1864, 398-406	6.9	15
67	Identification of stiffness-induced signalling mechanisms in cells from patent and fused sutures associated with craniosynostosis. *Scientific Reports*, **2017**, 7, 11494	4.9	15
66	Olfactory Derived Stem Cells Delivered in a Biphasic Conduit Promote Peripheral Nerve Repair In Vivo. *Stem Cells Translational Medicine*, **2017**, 6, 1894-1904	6.9	14
65	An endochondral ossification approach to early stage bone repair: Use of tissue-engineered hypertrophic cartilage constructs as primordial templates for weight-bearing bone repair. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, e2147-e2150	4.4	14
64	Stem cells display a donor dependent response to escalating levels of growth factor release from extracellular matrix-derived scaffolds. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 2979-2987	4.4	14
63	Extracellular Vesicles Enhance the Remodeling of Cell-Free Silk Vascular Scaffolds in Rat Aortae. *ACS Applied Materials & Interfaces*, **2020**, 12, 26955-26965	9.5	14
62	Repair of large osteochondritis dissecans lesions using a novel multilayered tissue engineered construct in an equine athlete. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 2785-2795	4.4	13
61	Retinoic Acid-Loaded Collagen-Hyaluronate Scaffolds: A Bioactive Material for Respiratory Tissue Regeneration. *ACS Biomaterials Science and Engineering*, **2017**, 3, 1381-1393	5.5	12
60	Pre-culture of mesenchymal stem cells within RGD-modified hyaluronic acid hydrogel improves their resilience to ischaemic conditions. *Acta Biomaterialia*, **2020**, 107, 78-90	10.8	12
59	Comparative Study on the Application of Mesenchymal Stromal Cells Combined with Tricalcium Phosphate Scaffold into Femoral Bone Defects. *Cell Transplantation*, **2018**, 27, 1459-1468	4	12
58	Controlled Non-Viral Gene Delivery in Cartilage and Bone Repair: Current Strategies and Future Directions. *Advanced Therapeutics*, **2018**, 1, 1800038	4.9	11
57	Influences of the 3D microenvironment on cancer cell behaviour and treatment responsiveness: A recent update on lung, breast and prostate cancer models. *Acta Biomaterialia*, **2021**, 132, 360-378	10.8	11
56	Scaffolds Functionalized with Matrix from Induced Pluripotent Stem Cell Fibroblasts for Diabetic Wound Healing. *Advanced Healthcare Materials*, **2020**, 9, e2000307	10.1	10
55	Staphylococcus aureus protein A causes osteoblasts to hyper-mineralise in a 3D extra-cellular matrix environment. *PLoS ONE*, **2018**, 13, e0198837	3.7	10
54	A Natural, Calcium-Rich Marine Multi-mineral Complex Preserves Bone Structure, Composition and Strength in an Ovariectomised Rat Model of Osteoporosis. *Calcified Tissue International*, **2017**, 101, 445-455	3.9	10

53	SDF-1 Gene-Activated Collagen Scaffold Restores Pro-Angiogenic Wound Healing Features in Human Diabetic Adipose-Derived Stem Cells. *Biomedicines*, **2021**, 9,	4.8	10
52	The use of nanovibration to discover specific and potent bioactive metabolites that stimulate osteogenic differentiation in mesenchymal stem cells. *Science Advances*, **2021**, 7,	14.3	10
51	The Use of Genipin as an Effective, Biocompatible, Anti-Inflammatory Cross-Linking Method for Nerve Guidance Conduits. *Advanced Biology*, **2020**, 4, e1900212	3.5	9
50	Layered Double Hydroxide as a Potent Non-viral Vector for Nucleic Acid Delivery Using Gene-Activated Scaffolds for Tissue Regeneration Applications. *Pharmaceutics*, **2020**, 12,	6.4	9
49	The Fabrication and Evaluation of Retinoic Acid-Loaded Electrospun Composite Biomaterials for Tracheal Tissue Regeneration. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 190	5.8	9
48	Comparison of synthetic mesh erosion and chronic pain rates after surgery for pelvic organ prolapse and stress urinary incontinence: a systematic review. *International Urogynecology Journal*, **2021**, 32, 573-580	2	9
47	Mechanosignalling in cartilage: an emerging target for the treatment of osteoarthritis.. *Nature Reviews Rheumatology*, **2021**,	8.1	9
46	Mechanobiology-informed regenerative medicine: Dose-controlled release of placental growth factor from a functionalized collagen-based scaffold promotes angiogenesis and accelerates bone defect healing. *Journal of Controlled Release*, **2021**, 334, 96-105	11.7	8
45	3D-Printed Gelatin Methacrylate Scaffolds with Controlled Architecture and Stiffness Modulate the Fibroblast Phenotype towards Dermal Regeneration. *Polymers*, **2021**, 13,	4.5	8
44	SDF-1 gene-activated collagen scaffold drives functional differentiation of human Schwann cells for wound healing applications. *Biotechnology and Bioengineering*, **2021**, 118, 725-736	4.9	8
43	Collagen/GAG scaffolds activated by RALA-siMMP-9 complexes with potential for improved diabetic foot ulcer healing. *Materials Science and Engineering C*, **2020**, 114, 111022	8.3	7
42	The Transplantation of hBM-MSCs Increases Bone Neo-Formation and Preserves Hearing Function in the Treatment of Temporal Bone Defects - on the Experience of Two Month Follow Up. *Stem Cell Reviews and Reports*, **2018**, 14, 860-870	6.4	7
41	The Incorporation of Marine Coral Microparticles into Collagen-Based Scaffolds Promotes Osteogenesis of Human Mesenchymal Stromal Cells via Calcium Ion Signalling. *Marine Drugs*, **2020**, 18,	6	7
40	Porous Scaffolds Derived from Devitalized Tissue Engineered Cartilaginous Matrix Support Chondrogenesis of Adult Stem Cells. *ACS Biomaterials Science and Engineering*, **2017**, 3, 1075-1082	5.5	6
39	Hierarchical biofabrication of biomimetic collagen-elastin vascular grafts with controllable properties via lyophilisation. *Acta Biomaterialia*, **2020**, 112, 52-61	10.8	6
38	Investigating the effect of hypoxic culture on the endothelial differentiation of human amniotic fluid-derived stem cells. *Journal of Anatomy*, **2015**, 227, 767-80	2.9	6
37	Non-viral Gene Delivery of Interleukin-1 Receptor Antagonist Using Collagen-Hydroxyapatite Scaffold Protects Rat BM-MSCs From IL-1 Mediated Inhibition of Osteogenesis. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 582012	5.8	5
36	Effect of cross-linking and hydration on microscale flat punch indentation contact to collagen-hyaluronic acid films in the viscoelastic limit. *Acta Biomaterialia*, **2020**, 111, 279-289	10.8	5

35	Human Multipotent Mesenchymal Stromal Cells in the Treatment of Postoperative Temporal Bone Defect: An Animal Model. *Cell Transplantation*, **2016**, 25, 1405-14	4	5
34	Enamel Matrix Derivative has No Effect on the Chondrogenic Differentiation of Mesenchymal Stem Cells. *Frontiers in Bioengineering and Biotechnology*, **2014**, 2, 29	5.8	5
33	Substrate Stiffness Modulates the Crosstalk Between Mesenchymal Stem Cells and Macrophages. *Journal of Biomechanical Engineering*, **2021**, 143,	2.1	5
32	The Osteogenic Potential of Human Nondifferentiated and Pre-differentiated Mesenchymal Stem Cells Combined with an Osteoconductive Scaffold - Early Stage Healing. *Acta Medica (Hradec Kralove)*, **2017**, 60, 12-18	0.8	5
31	Development and clinical translation of tubular constructs for tracheal tissue engineering: a review. *European Respiratory Review*, **2021**, 30,	9.8	5
30	Development of collagen-poly(caprolactone)-based core-shell scaffolds supplemented with proteoglycans and glycosaminoglycans for ligament repair. *Materials Science and Engineering C*, **2021**, 120, 111657	8.3	5
29	Gene activated scaffolds incorporating star-shaped polypeptide-pDNA nanomedicines accelerate bone tissue regeneration. *Biomaterials Science*, **2021**, 9, 4984-4999	7.4	5
28	Antimicrobial and degradable triazolinedione (TAD) crosslinked polypeptide hydrogels. *Journal of Materials Chemistry B*, **2021**, 9, 5456-5464	7.3	5
27	Stress Urinary Incontinence and Pelvic Organ Prolapse: Biologic Graft Materials Revisited. *Tissue Engineering - Part B: Reviews*, **2020**, 26, 475-483	7.9	4
26	Multipotent mesenchymal stromal cells in otorhinolaryngology. *Medical Hypotheses*, **2014**, 82, 769-73	3.8	4
25	The development of natural polymer scaffold-based therapeutics for osteochondral repair. *Biochemical Society Transactions*, **2020**, 48, 1433-1445	5.1	4
24	Hydroxyapatite Particle Shape and Size Influence MSC Osteogenesis by Directing the Macrophage Phenotype in Collagen-Hydroxyapatite Scaffolds.. *ACS Applied Bio Materials*, **2020**, 3, 7562-7574	4.1	4
23	Mechanical, compositional and morphological characterisation of the human male urethra for the development of a biomimetic tissue engineered urethral scaffold. *Biomaterials*, **2021**, 269, 120651	15.6	4
22	The lubricating effect of iPS-reprogrammed fibroblasts on collagen-GAG scaffolds for cartilage repair applications. *Journal of the Mechanical Behavior of Biomedical Materials*, **2021**, 114, 104174	4.1	3
21	Accelerating bone healing in vivo by harnessing the age-altered activation of c-Jun N-terminal kinase 3. *Biomaterials*, **2021**, 268, 120540	15.6	3
20	The Current State of Advanced Therapy Medicinal Products in the Czech Republic. *Human Gene Therapy Clinical Development*, **2018**, 29, 132-147	3.2	2
19	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
18	Biomaterial and Therapeutic Approaches for the Manipulation of Macrophage Phenotype in Peripheral and Central Nerve Repair.. *Pharmaceutics*, **2021**, 13,	6.4	2

17	Layer-specific stem cell differentiation in tri-layered tissue engineering biomaterials: Towards development of a single-stage cell-based approach for osteochondral defect repair.. *Materials Today Bio*, **2021**, 12, 100173	9.9	2
16	Biomimetic Scaffolds for Spinal Cord Applications Exhibit Stiffness-Dependent Immunomodulatory and Neurotrophic Characteristics. *Advanced Healthcare Materials*, **2021**, e2101663	10.1	2
15	Three-dimensional In Vitro Biomimetic Model of Neuroblastoma using Collagen-based Scaffolds. *Journal of Visualized Experiments*, **2021**,	1.6	2
14	The Development of Tissue Engineering Scaffolds Using Matrix from iPS-Reprogrammed Fibroblasts. *Methods in Molecular Biology*, **2021**, 1	1.4	2
13	A highly porous type II collagen containing scaffold for the treatment of cartilage defects enhances MSC chondrogenesis and early cartilaginous matrix deposition.. *Biomaterials Science*, **2022**,	7.4	1
12	Development of a Gene-Activated Scaffold Incorporating Multifunctional Cell-Penetrating Peptides for pSDF-1 Delivery for Enhanced Angiogenesis in Tissue Engineering Applications.. *International Journal of Molecular Sciences*, **2022**, 23,	6.3	1
11	3D Printed Scaffolds Incorporated with Platelet-Rich Plasma Show Enhanced Angiogenic Potential while not Inducing Fibrosis. *Advanced Functional Materials*,2109915	15.6	1
10	Anti-Aging Klotho Gene-Activated Scaffold Promotes Rejuvenative Wound Healing Response in Human Adipose-Derived Stem Cells. *Pharmaceuticals*, **2021**, 14,	5.2	1
9	SDF-1 gene-activated collagen scaffold enhances provasculogenic response in a coculture of human endothelial cells with human adipose-derived stromal cells. *Journal of Materials Science: Materials in Medicine*, **2021**, 32, 26	4.5	1
8	Contemporary trends for urological training and management of stress urinary incontinence in Ireland. *International Urogynecology Journal*, **2021**, 32, 2841-2846	2	1
7	The role of synovial fluid constituents in the lubrication of collagen-glycosaminoglycan scaffolds for cartilage repair. *Journal of the Mechanical Behavior of Biomedical Materials*, **2021**, 118, 104445	4.1	1
6	A Tissue-Engineered Tracheobronchial In Vitro Co-Culture Model for Determining Epithelial Toxicological and Inflammatory Responses. *Biomedicines*, **2021**, 9,	4.8	1
5	Mechanical characterization of a biodegradable mesh for the treatment of stress urinary incontinence. *International Journal of Urology*, **2021**, 28, 243-245	2.3	1
4	Inclusivity and diversity: Integrating international perspectives on stem cell challenges and potential. *Stem Cell Reports*, **2021**, 16, 1847-1852	8	1
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