Ivan Martin

List of Publications by Citations

311 papers	21,362 citations	77 h-index	137 g-index
397 ext. papers	23,614 ext. citations	6.9 avg, IF	6.57 L-index

#	Paper	IF	Citations
311	The role of bioreactors in tissue engineering. *Trends in Biotechnology*, **2004**, 22, 80-6	15.1	879
310	Silk matrix for tissue engineered anterior cruciate ligaments. *Biomaterials*, **2002**, 23, 4131-41	15.6	726
309	Bioreactor cultivation conditions modulate the composition and mechanical properties of tissue-engineered cartilage. *Journal of Orthopaedic Research*, **1999**, 17, 130-8	3.8	599
308	Cell differentiation by mechanical stress. *FASEB Journal*, **2002**, 16, 270-2	0.9	506
307	Angiogenesis in tissue engineering: breathing life into constructed tissue substitutes. *Tissue Engineering*, **2006**, 12, 2093-104		448
306	Dynamic cell seeding of polymer scaffolds for cartilage tissue engineering. *Biotechnology Progress*, **1998**, 14, 193-202	2.8	420
305	Chondrogenesis in a cell-polymer-bioreactor system. *Experimental Cell Research*, **1998**, 240, 58-65	4.2	383
304	Specific growth factors during the expansion and redifferentiation of adult human articular chondrocytes enhance chondrogenesis and cartilaginous tissue formation in vitro. *Journal of Cellular Biochemistry*, **2001**, 81, 368-77	4.7	358
303	Fibroblast growth factor-2 supports ex vivo expansion and maintenance of osteogenic precursors from human bone marrow. *Endocrinology*, **1997**, 138, 4456-62	4.8	357
302	Recapitulation of endochondral bone formation using human adult mesenchymal stem cells as a paradigm for developmental engineering. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 7251-6	11.5	352
301	Oscillating perfusion of cell suspensions through three-dimensional scaffolds enhances cell seeding efficiency and uniformity. *Biotechnology and Bioengineering*, **2003**, 84, 205-14	4.9	352
300	Tissue engineering of cartilage in space. *Proceedings of the National Academy of Sciences of the United States of America*, **1997**, 94, 13885-90	11.5	336
299	Early detection of aging cartilage and osteoarthritis in mice and patient samples using atomic force microscopy. *Nature Nanotechnology*, **2009**, 4, 186-92	28.7	318
298	Osteochondral tissue engineering. *Journal of Biomechanics*, **2007**, 40, 750-65	2.9	299
297	Plasticity of clonal populations of dedifferentiated adult human articular chondrocytes. *Arthritis and Rheumatism*, **2003**, 48, 1315-25		298
296	Quantitative analysis of gene expression in human articular cartilage from normal and osteoarthritic joints. *Osteoarthritis and Cartilage*, **2001**, 9, 112-8	6.2	294
295	Age related changes in human articular chondrocyte yield, proliferation and post-expansion chondrogenic capacity. *Osteoarthritis and Cartilage*, **2004**, 12, 476-84	6.2	284

294	International Society for Cellular Therapy perspective on immune functional assays for mesenchymal stromal cells as potency release criterion for advanced phase clinical trials. *Cytotherapy*, **2016**, 18, 151-9	4.8	278
293	Real-time quantitative RT-PCR analysis of human bone marrow stromal cells during osteogenic differentiation in vitro. *Journal of Cellular Biochemistry*, **2002**, 85, 737-46	4.7	269
292	Tissue-engineered composites for the repair of large osteochondral defects. *Arthritis and Rheumatism*, **2002**, 46, 2524-34		265
291	Three-dimensional culture of melanoma cells profoundly affects gene expression profile: a high density oligonucleotide array study. *Journal of Cellular Physiology*, **2005**, 204, 522-31	7	241
290	Effects of bisphosphonates on proliferation and osteoblast differentiation of human bone marrow stromal cells. *Biomaterials*, **2005**, 26, 6941-9	15.6	231
289	Engineering of a functional bone organ through endochondral ossification. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 3997-4002	11.5	230
288	In vitro generation of osteochondral composites. *Biomaterials*, **2000**, 21, 2599-606	15.6	226
287	Mesenchymal stem versus stromal cells: International Society for Cell & Gene Therapy (ISCT) Mesenchymal Stromal Cell committee position statement on nomenclature. *Cytotherapy*, **2019**, 21, 1019-1024	4.8	220
286	Design of graded biomimetic osteochondral composite scaffolds. *Biomaterials*, **2008**, 29, 3539-46	15.6	218
285	Mammalian chondrocytes expanded in the presence of fibroblast growth factor 2 maintain the ability to differentiate and regenerate three-dimensional cartilaginous tissue. *Experimental Cell Research*, **1999**, 253, 681-8	4.2	218
284	Integration of engineered cartilage. *Journal of Orthopaedic Research*, **2001**, 19, 1089-97	3.8	196
283	Cartilage tissue engineering for degenerative joint disease. *Advanced Drug Delivery Reviews*, **2006**, 58, 300-22	18.5	183
282	Three-dimensional tissue engineering of hyaline cartilage: comparison of adult nasal and articular chondrocytes. *Tissue Engineering*, **2002**, 8, 817-26		183
281	Enhanced chondrocyte proliferation and mesenchymal stromal cells chondrogenesis in coculture pellets mediate improved cartilage formation. *Journal of Cellular Physiology*, **2012**, 227, 88-97	7	179
280	Macroporous polymer foams by hydrocarbon templating. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 1970-5	11.5	174
279	Advanced bioreactor with controlled application of multi-dimensional strain for tissue engineering. *Journal of Biomechanical Engineering*, **2002**, 124, 742-9	2.1	170
278	Three-dimensional perfusion culture of human adipose tissue-derived endothelial and osteoblastic progenitors generates osteogenic constructs with intrinsic vascularization capacity. *Stem Cells*, **2007**, 25, 1823-9	5.8	165
277	Enhanced cartilage tissue engineering by sequential exposure of chondrocytes to FGF-2 during 2D expansion and BMP-2 during 3D cultivation. *Journal of Cellular Biochemistry*, **2001**, 83, 121-8	4.7	164

276	Three-dimensional perfusion culture of human bone marrow cells and generation of osteoinductive grafts. *Stem Cells*, **2005**, 23, 1066-72	5.8	163
275	In vitro and in vivo evaluation of differentially demineralized cancellous bone scaffolds combined with human bone marrow stromal cells for tissue engineering. *Biomaterials*, **2005**, 26, 3173-85	15.6	156
274	Orderly osteochondral regeneration in a sheep model using a novel nano-composite multilayered biomaterial. *Journal of Orthopaedic Research*, **2010**, 28, 116-24	3.8	155
273	Visual histological grading system for the evaluation of in vitro-generated neocartilage. *Tissue Engineering*, **2006**, 12, 2141-9		151
272	Nasal chondrocyte-based engineered autologous cartilage tissue for repair of articular cartilage defects: an observational first-in-human trial. *Lancet, The*, **2016**, 388, 1985-1994	40	146
271	Erodible conducting polymers for potential biomedical applications. *Angewandte Chemie - International Edition*, **2002**, 41, 141-4	16.4	145
270	Dynamic compression of cartilage constructs engineered from expanded human articular chondrocytes. *Biochemical and Biophysical Research Communications*, **2003**, 310, 580-8	3.4	144
269	Immunomodulatory properties of mesenchymal stem cells: a review based on an interdisciplinary meeting held at the Kennedy Institute of Rheumatology Division, London, UK, 31 October 2005. *Arthritis Research and Therapy*, **2007**, 9, 301	5.7	137
268	Effects of scaffold composition and architecture on human nasal chondrocyte redifferentiation and cartilaginous matrix deposition. *Biomaterials*, **2005**, 26, 2479-89	15.6	137
267	Cell yield, proliferation, and postexpansion differentiation capacity of human ear, nasal, and rib chondrocytes. *Tissue Engineering*, **2004**, 10, 762-70		133
266	Toward modeling the bone marrow niche using scaffold-based 3D culture systems. *Biomaterials*, **2011**, 32, 321-9	15.6	128
265	Method for quantitative analysis of glycosaminoglycan distribution in cultured natural and engineered cartilage. *Annals of Biomedical Engineering*, **1999**, 27, 656-62	4.7	128
264	Micro- and nanomechanical analysis of articular cartilage by indentation-type atomic force microscopy: validation with a gel-microfiber composite. *Biophysical Journal*, **2010**, 98, 2731-40	2.9	127
263	Selective differentiation of mammalian bone marrow stromal cells cultured on three-dimensional polymer foams. *Journal of Biomedical Materials Research Part B*, **2001**, 55, 229-35		125
262	In vitro differentiation of chick embryo bone marrow stromal cells into cartilaginous and bone-like tissues. *Journal of Orthopaedic Research*, **1998**, 16, 181-9	3.8	119
261	Frontiers in Tissue Engineering. *Clinical Orthopaedics and Related Research*, **1999**, 367, S46-S58	2.2	118
260	Engineered autologous cartilage tissue for nasal reconstruction after tumour resection: an observational first-in-human trial. *Lancet, The*, **2014**, 384, 337-46	40	115
259	The influence of the scaffold design on the distribution of adhering cells after perfusion cell seeding. *Biomaterials*, **2011**, 32, 2878-84	15.6	115

258	Bioreactor-based roadmap for the translation of tissue engineering strategies into clinical products. *Trends in Biotechnology*, **2009**, 27, 495-502	15.1	111
257	Tissue-engineered dermo-epidermal skin grafts prevascularized with adipose-derived cells. *Biomaterials*, **2014**, 35, 5065-78	15.6	109
256	A nude mouse model for human bone formation in unloaded conditions. *Bone*, **1998**, 22, 131S-134S	4.7	109
255	Reconstruction of extensive long-bone defects in sheep using porous hydroxyapatite sponges. *Calcified Tissue International*, **1999**, 64, 83-90	3.9	108
254	Platelet autologous growth factors decrease the osteochondral regeneration capability of a collagen-hydroxyapatite scaffold in a sheep model. *BMC Musculoskeletal Disorders*, **2010**, 11, 220	2.8	107
253	New dimensions in tumor immunology: what does 3D culture reveal?. *Trends in Molecular Medicine*, **2008**, 14, 333-40	11.5	104
252	Identification of markers to characterize and sort human articular chondrocytes with enhanced in vitro chondrogenic capacity. *Arthritis and Rheumatism*, **2007**, 56, 586-95		100
251	Meniscus repair and regeneration: review on current methods and research potential. *European Cells and Materials*, **2013**, 26, 150-70	4.3	100
250	The multipotency of luteinizing granulosa cells collected from mature ovarian follicles. *Stem Cells*, **2009**, 27, 210-9	5.8	98
249	Tissue engineering for total meniscal substitution: animal study in sheep model. *Tissue Engineering - Part A*, **2008**, 14, 1067-80	3.9	98
248	Enhancing the biological performance of synthetic polymeric materials by decoration with engineered, decellularized extracellular matrix. *Biomaterials*, **2012**, 33, 5085-93	15.6	92
247	Tissue engineering strategies to study cartilage development, degeneration and regeneration. *Advanced Drug Delivery Reviews*, **2015**, 84, 107-22	18.5	89
246	Tissue engineering for total meniscal substitution: animal study in sheep model--results at 12 months. *Tissue Engineering - Part A*, **2012**, 18, 1573-82	3.9	88
245	Towards an intraoperative engineering of osteogenic and vasculogenic grafts from the stromal vascular fraction of human adipose tissue. *European Cells and Materials*, **2010**, 19, 127-35	4.3	85
244	Engineered cartilage generated by nasal chondrocytes is responsive to physical forces resembling joint loading. *Arthritis and Rheumatism*, **2008**, 58, 197-208		84
243	Engineering of large osteogenic grafts with rapid engraftment capacity using mesenchymal and endothelial progenitors from human adipose tissue. *Biomaterials*, **2011**, 32, 5801-9	15.6	83
242	Challenges for mesenchymal stromal cell therapies. *Science Translational Medicine*, **2019**, 11,	17.5	83
241	Differential cartilaginous tissue formation by human synovial membrane, fat pad, meniscus cells and articular chondrocytes. *Osteoarthritis and Cartilage*, **2007**, 15, 48-58	6.2	82

240	Hyperphysiological compression of articular cartilage induces an osteoarthritic phenotype in a cartilage-on-a-chip model. *Nature Biomedical Engineering*, **2019**, 3, 545-557	19	80
239	Adult human neural crest-derived cells for articular cartilage repair. *Science Translational Medicine*, **2014**, 6, 251ra119	17.5	80
238	Assessment of nerve damage using a novel ultrasonic device for bone cutting. *Journal of Oral and Maxillofacial Surgery*, **2008**, 66, 593-6	1.8	80
237	Limited acquisition of chromosomal aberrations in human adult mesenchymal stromal cells. *Cell Stem Cell*, **2012**, 10, 9-10; author reply 10-1	18	78
236	British Society for Matrix Biology Autumn Meeting Joint with the UK Tissue & Cell Engineering Society, University of Bristol, UK. *International Journal of Experimental Pathology*, **2005**, 86, A1-A56	2.8	78
235	FGF-2 enhances TGF-beta1-induced periosteal chondrogenesis. *Journal of Orthopaedic Research*, **2004**, 22, 1114-9	3.8	77
234	Multipotential nestin and Isl-1 positive mesenchymal stem cells isolated from human pancreatic islets. *Biochemical and Biophysical Research Communications*, **2006**, 345, 1167-76	3.4	76
233	Computational evaluation of oxygen and shear stress distributions in 3D perfusion culture systems: macro-scale and micro-structured models. *Journal of Biomechanics*, **2008**, 41, 2918-25	2.9	75
232	Bioreactor-based engineering of osteochondral grafts: from model systems to tissue manufacturing. *Journal of Bioscience and Bioengineering*, **2005**, 100, 489-94	3.3	75
231	The role of 3D structure and protein conformation on the innate and adaptive immune responses to silk-based biomaterials. *Biomaterials*, **2013**, 34, 8161-71	15.6	73
230	A 3D in vitro bone organ model using human progenitor cells. *European Cells and Materials*, **2011**, 21, 445-58; discussion 458	4.3	73
229	The regulation of expanded human nasal chondrocyte re-differentiation capacity by substrate composition and gas plasma surface modification. *Biomaterials*, **2006**, 27, 1043-53	15.6	72
228	Expansion of human mesenchymal stromal cells from fresh bone marrow in a 3D scaffold-based system under direct perfusion. *PLoS ONE*, **2014**, 9, e102359	3.7	71
227	TGF-□nduced differentiation into myofibroblasts involves specific regulation of two MKL1 isoforms. *Journal of Cell Science*, **2014**, 127, 1079-91	5.3	71
226	Three-dimensional cell culture and tissue engineering in a T-CUP (tissue culture under perfusion). *Tissue Engineering*, **2007**, 13, 2021-8		68
225	Fibroblast growth factor 2 and platelet-derived growth factor, but not platelet lysate, induce proliferation-dependent, functional class II major histocompatibility complex antigen in human mesenchymal stem cells. *Arthritis and Rheumatism*, **2010**, 62, 3815-25		66
224	Adipose tissue-derived progenitors for engineering osteogenic and vasculogenic grafts. *Journal of Cellular Physiology*, **2010**, 225, 348-53	7	66
223	In vitro biomimetic engineering of a human hematopoietic niche with functional properties. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E5688-E5695	11.5	65

222	Multiple mechanisms underlie defective recognition of melanoma cells cultured in three-dimensional architectures by antigen-specific cytotoxic T lymphocytes. *British Journal of Cancer*, **2007**, 96, 1072-82	8.7	65
221	High-Throughput Microfluidic Platform for 3D Cultures of Mesenchymal Stem Cells, Towards Engineering Developmental Processes. *Scientific Reports*, **2015**, 5, 10288	4.9	64
220	Anabolic and catabolic responses of human articular chondrocytes to varying oxygen percentages. *Arthritis Research and Therapy*, **2010**, 12, R34	5.7	64
219	Nanoscale Engineering of Biomaterial Surfaces. *Advanced Materials*, **2007**, 19, 553-557	24	64
218	Tendon healing: an overview of physiology, biology, and pathology of tendon healing and systematic review of state of the art in tendon bioengineering. *Knee Surgery, Sports Traumatology, Arthroscopy*, **2015**, 23, 2097-105	5.5	63
217	"In vitro" 3D models of tumor-immune system interaction. *Advanced Drug Delivery Reviews*, **2014**, 79-80, 145-54	18.5	63
216	Potential and bottlenecks of bioreactors in 3D cell culture and tissue manufacturing. *Advanced Materials*, **2009**, 21, 3352-67	24	62
215	Osteogenic graft vascularization and bone resorption by VEGF-expressing human mesenchymal progenitors. *Biomaterials*, **2013**, 34, 5025-35	15.6	60
214	Oriented lamellar silk fibrous scaffolds to drive cartilage matrix orientation: towards annulus fibrosus tissue engineering. *Acta Biomaterialia*, **2012**, 8, 3313-25	10.8	59
213	Prefabricated engineered bone flaps: an experimental model of tissue reconstruction in plastic surgery. *Plastic and Reconstructive Surgery*, **1998**, 101, 577-81	2.7	59
212	Effects of in vitro preculture on in vivo development of human engineered cartilage in an ectopic model. *Tissue Engineering*, **2005**, 11, 1421-8		58
211	Bioreactor based engineering of large-scale human cartilage grafts for joint resurfacing. *Biomaterials*, **2010**, 31, 8946-52	15.6	57
210	Use of multicellular tumor spheroids to dissect endothelial cell-tumor cell interactions: a role for T-cadherin in tumor angiogenesis. *FEBS Letters*, **2007**, 581, 4523-8	3.8	57
209	Enzymatic digestion of adult human articular cartilage yields a small fraction of the total available cells. *Connective Tissue Research*, **2003**, 44, 173-80	3.3	57
208	Engineering of osteoinductive grafts by isolation and expansion of ovine bone marrow stromal cells directly on 3D ceramic scaffolds. *Biotechnology and Bioengineering*, **2006**, 93, 181-7	4.9	53
207	Expansion on specific substrates regulates the phenotype and differentiation capacity of human articular chondrocytes. *Journal of Cellular Biochemistry*, **2006**, 98, 1140-9	4.7	53
206	Osteoinductivity of engineered cartilaginous templates devitalized by inducible apoptosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 17426-31	11.5	52
205	Response of human engineered cartilage based on articular or nasal chondrocytes to interleukin-1 and low oxygen. *Tissue Engineering - Part A*, **2012**, 18, 362-72	3.9	52

204	Interleukin-1□modulates endochondral ossification by human adult bone marrow stromal cells. *European Cells and Materials*, **2012**, 24, 224-36	4.3	52
203	Tissue decellularization by activation of programmed cell death. *Biomaterials*, **2013**, 34, 6099-108	15.6	51
202	Manufacturing challenges in regenerative medicine. *Science Translational Medicine*, **2014**, 6, 232fs16	17.5	50
201	Magnetic nanocomposite hydrogels and static magnetic field stimulate the osteoblastic and vasculogenic profile of adipose-derived cells. *Biomaterials*, **2019**, 223, 119468	15.6	49
200	Implantation of Stromal Vascular Fraction Progenitors at Bone Fracture Sites: From a Rat Model to a First-in-Man Study. *Stem Cells*, **2016**, 34, 2956-2966	5.8	49
199	Engineering human cell-based, functionally integrated osteochondral grafts by biological bonding of engineered cartilage tissues to bony scaffolds. *Biomaterials*, **2010**, 31, 2252-9	15.6	49
198	Cartilage tissue engineering using pre-aggregated human articular chondrocytes. *European Cells and Materials*, **2008**, 16, 92-9	4.3	49
197	Mesenchymal stromal cells induce epithelial-to-mesenchymal transition in human colorectal cancer cells through the expression of surface-bound TGF-□*International Journal of Cancer*, **2014**, 134, 2583-94	7.5	48
196	Validation of an automated procedure to isolate human adipose tissue-derived cells by using the Sepax□ technology. *Tissue Engineering - Part C: Methods*, **2012**, 18, 575-82	2.9	48
195	Fibroblast growth factor-2 maintains a niche-dependent population of self-renewing highly potent non-adherent mesenchymal progenitors through FGFR2c. *Stem Cells*, **2012**, 30, 1455-64	5.8	48
194	Structural characterization and reliable biomechanical assessment of integrative cartilage repair. *Journal of Biomechanics*, **2005**, 38, 1846-54	2.9	48
193	Growth factors for clinical-scale expansion of human articular chondrocytes: relevance for automated bioreactor systems. *Tissue Engineering*, **2007**, 13, 1227-34		47
192	Ectopic bone formation by aggregated mesenchymal stem cells from bone marrow and adipose tissue: A comparative study. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, e150-e158	4.4	46
191	Characterization of vasculogenic potential of human adipose-derived endothelial cells in a three-dimensional vascularized skin substitute. *Pediatric Surgery International*, **2016**, 32, 17-27	2.1	45
190	Engineered decellularized matrices to instruct bone regeneration processes. *Bone*, **2015**, 70, 66-72	4.7	44
189	In vitro osteogenic differentiation and in vivo bone-forming capacity of human isogenic jaw periosteal cells and bone marrow stromal cells. *Annals of Surgery*, **2005**, 242, 859-67, discussion 867-8	7.8	44
188	Effects of intersyringe processing on adipose tissue and its cellular components: implications in autologous fat grafting. *Plastic and Reconstructive Surgery*, **2015**, 135, 1618-1628	2.7	43
187	Use of hydrodynamic forces to engineer cartilaginous tissues resembling the non-uniform structure and function of meniscus. *Biomaterials*, **2006**, 27, 5927-34	15.6	43

186	Fluorescence microscopy imaging of bone for automated histomorphometry. *Tissue Engineering*, **2002**, 8, 847-52		43
185	Animal models for meniscus repair and regeneration. *Journal of Tissue Engineering and Regenerative Medicine*, **2015**, 9, 512-27	4.4	42
184	Intraoperative engineering of osteogenic grafts combining freshly harvested, human adipose-derived cells and physiological doses of bone morphogenetic protein-2. *European Cells and Materials*, **2012**, 24, 308-19	4.3	42
183	Bioreactor-engineered cancer tissue-like structures mimic phenotypes, gene expression profiles and drug resistance patterns observed "in vivo". *Biomaterials*, **2015**, 62, 138-46	15.6	41
182	Spontaneous In Vivo Chondrogenesis of Bone Marrow-Derived Mesenchymal Progenitor Cells by Blocking Vascular Endothelial Growth Factor Signaling. *Stem Cells Translational Medicine*, **2016**, 5, 1730-1738	6.9	41
181	Precultivation of engineered human nasal cartilage enhances the mechanical properties relevant for use in facial reconstructive surgery. *Annals of Surgery*, **2006**, 244, 978-85; discussion 985	7.8	41
180	Spatially confined induction of endochondral ossification by functionalized hydrogels for ectopic engineering of osteochondral tissues. *Biomaterials*, **2018**, 171, 219-229	15.6	40
179	In vitro platforms for tissue engineering: implications for basic research and clinical translation. *Journal of Tissue Engineering and Regenerative Medicine*, **2011**, 5, e164-7	4.4	40
178	Dual Role of Mesenchymal Stem Cells Allows for Microvascularized Bone Tissue-Like Environments in PEG Hydrogels. *Advanced Healthcare Materials*, **2016**, 5, 489-98	10.1	40
177	Effect of three-dimensional expansion and cell seeding density on the cartilage-forming capacity of human articular chondrocytes in type II collagen sponges. *Journal of Biomedical Materials Research - Part A*, **2010**, 95, 924-31	5.4	39
176	Cartilage tissue engineering by expanded goat articular chondrocytes. *Journal of Orthopaedic Research*, **2006**, 24, 1078-85	3.8	39
175	MSCs: science and trials. *Nature Medicine*, **2013**, 19, 812	50.5	38
174	Cartilage graft engineering by co-culturing primary human articular chondrocytes with human bone marrow stromal cells. *Journal of Tissue Engineering and Regenerative Medicine*, **2015**, 9, 1394-403	4.4	38
173	Platelet lysate as a serum substitute for 2D static and 3D perfusion culture of stromal vascular fraction cells from human adipose tissue. *Tissue Engineering - Part A*, **2009**, 15, 869-75	3.9	37
172	Developmentally inspired programming of adult human mesenchymal stromal cells toward stable chondrogenesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 4625-4630	11.5	36
171	Scaffold-based delivery of a clinically relevant anti-angiogenic drug promotes the formation of in vivo stable cartilage. *Tissue Engineering - Part A*, **2013**, 19, 1960-71	3.9	36
170	A relativity concept in mesenchymal stromal cell manufacturing. *Cytotherapy*, **2016**, 18, 613-20	4.8	36
169	Engineered Extracellular Matrices as Biomaterials of Tunable Composition and Function. *Advanced Functional Materials*, **2017**, 27, 1605486	15.6	35

168	Interplay between stiffness and degradation of architectured gelatin hydrogels leads to differential modulation of chondrogenesis in vitro and in vivo. *Acta Biomaterialia*, **2018**, 69, 83-94	10.8	34
167	Delivery of cellular factors to regulate bone healing. *Advanced Drug Delivery Reviews*, **2018**, 129, 285-294	18.5	34
166	The osteogenicity of implanted engineered bone constructs is related to the density of clonogenic bone marrow stromal cells. *Journal of Tissue Engineering and Regenerative Medicine*, **2007**, 1, 60-5	4.4	34
165	Culture of melanoma cells in 3-dimensional architectures results in impaired immunorecognition by cytotoxic T lymphocytes specific for Melan-A/MART-1 tumor-associated antigen. *Annals of Surgery*, **2005**, 242, 851-7, discussion 858	7.8	34
164	Generation of a Bone Organ by Human Adipose-Derived Stromal Cells Through Endochondral Ossification. *Stem Cells Translational Medicine*, **2016**, 5, 1090-7	6.9	34
163	Perspective on the evolution of cell-based bone tissue engineering strategies. *European Surgical Research*, **2012**, 49, 1-7	1.1	32
162	The survey on cellular and engineered tissue therapies in Europe in 2009. *Tissue Engineering - Part A* , **2011**, 17, 2221-30	3.9	31
161	The survey on cellular and engineered tissue therapies in Europe in 2012. *Tissue Engineering - Part A* , **2015**, 21, 1-13	3.9	30
160	The survey on cellular and engineered tissue therapies in Europe in 2010. *Tissue Engineering - Part A* , **2012**, 18, 2268-79	3.9	30
159	Notch-inducing hydrogels reveal a perivascular switch of mesenchymal stem cell fate. *EMBO Reports*, **2018**, 19,	6.5	30
158	Modular poly(ethylene glycol) matrices for the controlled 3D-localized osteogenic differentiation of mesenchymal stem cells. *Advanced Healthcare Materials*, **2015**, 4, 550-8	10.1	29
157	Priming 3D cultures of human mesenchymal stromal cells toward cartilage formation via developmental pathways. *Stem Cells and Development*, **2013**, 22, 2849-58	4.4	29
156	Engineered cartilage maturation regulates cytokine production and interleukin-1β response. *Clinical Orthopaedics and Related Research*, **2011**, 469, 2773-84	2.2	29
155	In vitro characterization of immune-related properties of human fetal bone cells for potential tissue engineering applications. *Tissue Engineering - Part A*, **2009**, 15, 1523-32	3.9	29
154	Biologically and mechanically driven design of an RGD-mimetic macroporous foam for adipose tissue engineering applications. *Biomaterials*, **2016**, 104, 65-77	15.6	29
153	Rapid prototyped porous nickel-titanium scaffolds as bone substitutes. *Journal of Tissue Engineering*, **2014**, 5, 2041731414540674	7.5	28
152	Facile fabrication of egg white macroporous sponges for tissue regeneration. *Advanced Healthcare Materials*, **2015**, 4, 2281-90	10.1	28
151	Engraftment of Prevascularized, Tissue Engineered Constructs in a Novel Rabbit Segmental Bone Defect Model. *International Journal of Molecular Sciences*, **2015**, 16, 12616-30	6.3	28

150	On-line monitoring of oxygen as a non-destructive method to quantify cells in engineered 3D tissue constructs. *Journal of Tissue Engineering and Regenerative Medicine*, **2012**, 6, 696-701	4.4	28
149	Anti-inflammatory/tissue repair macrophages enhance the cartilage-forming capacity of human bone marrow-derived mesenchymal stromal cells. *Journal of Cellular Physiology*, **2015**, 230, 1258-69	7	27
148	Three dimensional multi-cellular muscle-like tissue engineering in perfusion-based bioreactors. *Biotechnology and Bioengineering*, **2016**, 113, 226-36	4.9	27
147	Defining properties of neural crest-derived progenitor cells from the apex of human developing tooth. *Tissue Engineering - Part A*, **2008**, 14, 317-30	3.9	27
146	Optimization of hyaluronic acid-tyramine/silk-fibroin composite hydrogels for cartilage tissue engineering and delivery of anti-inflammatory and anabolic drugs. *Materials Science and Engineering C*, **2021**, 120, 111701	8.3	27
145	Regenerative Potential of Tissue-Engineered Nasal Chondrocytes in Goat Articular Cartilage Defects. *Tissue Engineering - Part A*, **2016**, 22, 1286-1295	3.9	26
144	Spatial and temporal patterns of bone formation in ectopically pre-fabricated, autologous cell-based engineered bone flaps in rabbits. *Journal of Cellular and Molecular Medicine*, **2008**, 12, 1238-49	5.6	26
143	Human articular chondrocytes suppress in vitro proliferation of anti-CD3 activated peripheral blood mononuclear cells. *Journal of Cellular Physiology*, **2006**, 209, 732-4	7	26
142	A collagen network phase improves cell seeding of open-pore structure scaffolds under perfusion. *Journal of Tissue Engineering and Regenerative Medicine*, **2013**, 7, 183-91	4.4	25
141	Synthetic niche substrates engineered via two-photon laser polymerization for the expansion of human mesenchymal stromal cells. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 2836-2845	4.4	25
140	Generation of human adult mesenchymal stromal/stem cells expressing defined xenogenic vascular endothelial growth factor levels by optimized transduction and flow cytometry purification. *Tissue Engineering - Part C: Methods*, **2012**, 18, 283-92	2.9	25
139	Characterization of transcript levels for matrix molecules and proteases in ruptured human anterior cruciate ligaments. *Connective Tissue Research*, **2005**, 46, 53-65	3.3	25
138	Nasal chondrocytes as a neural crest-derived cell source for regenerative medicine. *Current Opinion in Biotechnology*, **2017**, 47, 1-6	11.4	24
137	Combination of immortalization and inducible death strategies to generate a human mesenchymal stromal cell line with controlled survival. *Stem Cell Research*, **2014**, 12, 584-98	1.6	24
136	Cell-based therapies for coronavirus disease 2019: proper clinical investigations are essential. *Cytotherapy*, **2020**, 22, 602-605	4.8	23
135	Engineered tissues as customized organ germs. *Tissue Engineering - Part A*, **2014**, 20, 1132-3	3.9	23
134	In vitro and in vivo validation of human and goat chondrocyte labeling by green fluorescent protein lentivirus transduction. *Tissue Engineering - Part C: Methods*, **2010**, 16, 11-21	2.9	23
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