Michael S Detamore

List of Publications by Citations

122 papers	4,755 citations	44 h-index	64 g-index
129 ext. papers	5,394 ext. citations	5.5 avg, IF	5.86 L-index

#	Paper	IF	Citations
122	Strategies and applications for incorporating physical and chemical signal gradients in tissue engineering. *Tissue Engineering - Part B: Reviews*, **2008**, 14, 341-66	7.9	153
121	A comparison of human bone marrow-derived mesenchymal stem cells and human umbilical cord-derived mesenchymal stromal cells for cartilage tissue engineering. *Tissue Engineering - Part A*, **2009**, 15, 2259-66	3.9	139
120	A comparison of human umbilical cord matrix stem cells and temporomandibular joint condylar chondrocytes for tissue engineering temporomandibular joint condylar cartilage. *Tissue Engineering* , **2007**, 13, 2003-10		123
119	Continuous gradients of material composition and growth factors for effective regeneration of the osteochondral interface. *Tissue Engineering - Part A*, **2011**, 17, 2845-55	3.9	122
118	Structure and function of the temporomandibular joint disc: implications for tissue engineering. *Journal of Oral and Maxillofacial Surgery*, **2003**, 61, 494-506	1.8	117
117	Hierarchically designed agarose and poly(ethylene glycol) interpenetrating network hydrogels for cartilage tissue engineering. *Tissue Engineering - Part C: Methods*, **2010**, 16, 1533-42	2.9	116
116	Physical non-viral gene delivery methods for tissue engineering. *Annals of Biomedical Engineering*, **2013**, 41, 446-68	4.7	115
115	PLGA-chitosan/PLGA-alginate nanoparticle blends as biodegradable colloidal gels for seeding human umbilical cord mesenchymal stem cells. *Journal of Biomedical Materials Research - Part A*, **2011**, 96, 520-7	5.4	113
114	Osteochondral interface tissue engineering using macroscopic gradients of bioactive signals. *Annals of Biomedical Engineering*, **2010**, 38, 2167-82	4.7	102
113	Microsphere-based seamless scaffolds containing macroscopic gradients of encapsulated factors for tissue engineering. *Tissue Engineering - Part C: Methods*, **2008**, 14, 299-309	2.9	96
112	The bioactivity of cartilage extracellular matrix in articular cartilage regeneration. *Advanced Healthcare Materials*, **2015**, 4, 29-39	10.1	95
111	Quantitative analysis and comparative regional investigation of the extracellular matrix of the porcine temporomandibular joint disc. *Matrix Biology*, **2005**, 24, 45-57	11.4	94
110	Decellularized cartilage may be a chondroinductive material for osteochondral tissue engineering. *PLoS ONE*, **2015**, 10, e0121966	3.7	93
109	Tensile properties of the porcine temporomandibular joint disc. *Journal of Biomechanical Engineering*, **2003**, 125, 558-65	2.1	90
108	Approaching the compressive modulus of articular cartilage with a decellularized cartilage-based hydrogel. *Acta Biomaterialia*, **2016**, 38, 94-105	10.8	86
107	Motivation, characterization, and strategy for tissue engineering the temporomandibular joint disc. *Tissue Engineering*, **2003**, 9, 1065-87		83
106	Musculoskeletal tissue engineering with human umbilical cord mesenchymal stromal cells. *Regenerative Medicine*, **2011**, 6, 95-109	2.5	74

105	Nanoengineered biomaterials for repair and regeneration of orthopedic tissue interfaces. *Acta Biomaterialia*, **2016**, 42, 2-17	10.8	73
104	Microsphere-based scaffolds for cartilage tissue engineering: using subcritical CO(2) as a sintering agent. *Acta Biomaterialia*, **2010**, 6, 137-43	10.8	73
103	Osteochondral interface regeneration of the rabbit knee with macroscopic gradients of bioactive signals. *Journal of Biomedical Materials Research - Part A*, **2012**, 100, 162-70	5.4	72
102	Flow Behavior Prior to Crosslinking: The Need for Precursor Rheology for Placement of Hydrogels in Medical Applications and for 3D Bioprinting. *Progress in Polymer Science*, **2019**, 91, 126-140	29.6	70
101	Emerging techniques in stratified designs and continuous gradients for tissue engineering of interfaces. *Annals of Biomedical Engineering*, **2010**, 38, 2121-41	4.7	67
100	Evaluation of three growth factors for TMJ disc tissue engineering. *Annals of Biomedical Engineering*, **2005**, 33, 383-90	4.7	67
99	Development and quantitative characterization of the precursor rheology of hyaluronic acid hydrogels for bioprinting. *Acta Biomaterialia*, **2019**, 95, 176-187	10.8	65
98	Hybrid hydroxyapatite nanoparticle colloidal gels are injectable fillers for bone tissue engineering. *Tissue Engineering - Part A*, **2013**, 19, 2586-93	3.9	65
97	The bioactivity of agarose-PEGDA interpenetrating network hydrogels with covalently immobilized RGD peptides and physically entrapped aggrecan. *Biomaterials*, **2014**, 35, 3558-70	15.6	64
96	Osteogenic differentiation of human umbilical cord mesenchymal stromal cells in polyglycolic acid scaffolds. *Tissue Engineering - Part A*, **2010**, 16, 1937-48	3.9	64
95	Cell type and distribution in the porcine temporomandibular joint disc. *Journal of Oral and Maxillofacial Surgery*, **2006**, 64, 243-8	1.8	64
94	Effect of initial seeding density on human umbilical cord mesenchymal stromal cells for fibrocartilage tissue engineering. *Tissue Engineering - Part A*, **2009**, 15, 1009-17	3.9	62
93	Leveraging "raw materials" as building blocks and bioactive signals in regenerative medicine. *Tissue Engineering - Part B: Reviews*, **2012**, 18, 341-62	7.9	62
92	Tissue engineering the mandibular condyle. *Tissue Engineering*, **2007**, 13, 1955-71		62
91	Microsphere-Based Scaffolds in Regenerative Engineering. *Annual Review of Biomedical Engineering* , **2017**, 19, 135-161	12	61
90	Signalling strategies for osteogenic differentiation of human umbilical cord mesenchymal stromal cells for 3D bone tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine*, **2009**, 3, 398-404	4.4	61
89	Tuning mechanical performance of poly(ethylene glycol) and agarose interpenetrating network hydrogels for cartilage tissue engineering. *Biomaterials*, **2013**, 34, 8241-57	15.6	58
88	Recellularization of decellularized heart valves: Progress toward the tissue-engineered heart valve. *Journal of Tissue Engineering*, **2017**, 8, 2041731417726327	7.5	56

87	Incorporation of aggrecan in interpenetrating network hydrogels to improve cellular performance for cartilage tissue engineering. *Tissue Engineering - Part A*, **2013**, 19, 1349-59	3.9	55
86	Lubrication of the temporomandibular joint. *Annals of Biomedical Engineering*, **2008**, 36, 14-29	4.7	55
85	Osteochondral interface regeneration of rabbit mandibular condyle with bioactive signal gradients. *Journal of Oral and Maxillofacial Surgery*, **2011**, 69, e50-7	1.8	52
84	Effects of growth factors on temporomandibular joint disc cells. *Archives of Oral Biology*, **2004**, 49, 577-83	2.8	52
83	Endochondral ossification for enhancing bone regeneration: converging native extracellular matrix biomaterials and developmental engineering in vivo. *Tissue Engineering - Part B: Reviews*, **2015**, 21, 247-66	7.9	50
82	Biomimetic method for combining the nucleus pulposus and annulus fibrosus for intervertebral disc tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine*, **2011**, 5, e179-87	4.4	48
81	The future of carbon dioxide for polymer processing in tissue engineering. *Tissue Engineering - Part B: Reviews*, **2013**, 19, 221-32	7.9	46
80	Mechanical testing of hydrogels in cartilage tissue engineering: beyond the compressive modulus. *Tissue Engineering - Part B: Reviews*, **2013**, 19, 403-12	7.9	46
79	Use of a rotating bioreactor toward tissue engineering the temporomandibular joint disc. *Tissue Engineering*, **2005**, 11, 1188-97		46
78	Using chondroitin sulfate to improve the viability and biosynthesis of chondrocytes encapsulated in interpenetrating network (IPN) hydrogels of agarose and poly(ethylene glycol) diacrylate. *Journal of Materials Science: Materials in Medicine*, **2012**, 23, 157-70	4.5	42
77	Overview of tracheal tissue engineering: clinical need drives the laboratory approach. *Annals of Biomedical Engineering*, **2011**, 39, 2091-113	4.7	42
76	The potential of encapsulating "raw materials" in 3D osteochondral gradient scaffolds. *Biotechnology and Bioengineering*, **2014**, 111, 829-41	4.9	40
75	Chondroinduction from Naturally Derived Cartilage Matrix: A Comparison Between Devitalized and Decellularized Cartilage Encapsulated in Hydrogel Pastes. *Tissue Engineering - Part A*, **2016**, 22, 665-79	3.9	39
74	Cartilage extracellular matrix as a biomaterial for cartilage regeneration. *Annals of the New York Academy of Sciences*, **2016**, 1383, 139-159	6.5	38
73	Osteogenic media and rhBMP-2-induced differentiation of umbilical cord mesenchymal stem cells encapsulated in alginate microbeads and integrated in an injectable calcium phosphate-chitosan fibrous scaffold. *Tissue Engineering - Part A*, **2011**, 17, 969-79	3.9	36
72	Human umbilical cord mesenchymal stromal cells in a sandwich approach for osteochondral tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine*, **2011**, 5, 712-21	4.4	36
71	Decellularized WhartonS Jelly from human umbilical cord as a novel 3D scaffolding material for tissue engineering applications. *PLoS ONE*, **2017**, 12, e0172098	3.7	36
70	Effects of growth factors and glucosamine on porcine mandibular condylar cartilage cells and hyaline cartilage cells for tissue engineering applications. *Archives of Oral Biology*, **2009**, 54, 1-5	2.8	34

69	Insulin-like growth factor-I improves chondrogenesis of predifferentiated human umbilical cord mesenchymal stromal cells. *Journal of Orthopaedic Research*, **2009**, 27, 1109-15	3.8	32
68	Three-dimensional macroscopic scaffolds with a gradient in stiffness for functional regeneration of interfacial tissues. *Journal of Biomedical Materials Research - Part A*, **2010**, 94, 870-6	5.4	32
67	Human platelet lysate-based nanocomposite bioink for bioprinting hierarchical fibrillar structures. *Biofabrication*, **2019**, 12, 015012	10.5	32
66	Umbilical cord stem cell seeding on fast-resorbable calcium phosphate bone cement. *Tissue Engineering - Part A*, **2010**, 16, 2743-53	3.9	30
65	Engineering and commercialization of human-device interfaces, from bone to brain. *Biomaterials*, **2016**, 95, 35-46	15.6	29
64	Fabrication of a Double-Cross-Linked Interpenetrating Polymeric Network (IPN) Hydrogel Surface Modified with Polydopamine to Modulate the Osteogenic Differentiation of Adipose-Derived Stem Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 24955-24962	9.5	29
63	Bioactive Microsphere-Based Scaffolds Containing Decellularized Cartilage. *Macromolecular Bioscience*, **2015**, 15, 979-89	5.5	28
62	Osteogenic differentiation of human bone marrow stromal cells in hydroxyapatite-loaded microsphere-based scaffolds. *Tissue Engineering - Part A*, **2012**, 18, 757-67	3.9	28
61	Microsphere-based gradient implants for osteochondral regeneration: a long-term study in sheep. *Regenerative Medicine*, **2015**, 10, 709-28	2.5	27
60	Chondroinductive Hydrogel Pastes Composed of Naturally Derived Devitalized Cartilage. *Annals of Biomedical Engineering*, **2016**, 44, 1863-80	4.7	26
59	Increasing Cross-Linking Efficiency of Methacrylated Chondroitin Sulfate Hydrogels by Copolymerization with Oligo(Ethylene Glycol) Diacrylates. *Macromolecules*, **2013**, 46, 9609-9617	5.5	26
58	Preclinical Animal Models for Temporomandibular Joint Tissue Engineering. *Tissue Engineering - Part B: Reviews*, **2018**, 24, 171-178	7.9	26
57	Colloidal Gels with Extracellular Matrix Particles and Growth Factors for Bone Regeneration in Critical Size Rat Calvarial Defects. *AAPS Journal*, **2017**, 19, 703-711	3.7	25
56	Superior calvarial bone regeneration using pentenoate-functionalized hyaluronic acid hydrogels with devitalized tendon particles. *Acta Biomaterialia*, **2018**, 71, 148-155	10.8	25
55	Potential Indications for Tissue Engineering in Temporomandibular Joint Surgery. *Journal of Oral and Maxillofacial Surgery*, **2016**, 74, 705-11	1.8	25
54	Reinforced Electrospun Polycaprolactone Nanofibers for Tracheal Repair in an In Vivo Ovine Model. *Tissue Engineering - Part A*, **2018**, 24, 1301-1308	3.9	22
53	Promoting catalysis and high-value product streams by in situ hydroxyapatite crystallization during hydrothermal liquefaction of microalgae cultivated with reclaimed nutrients. *Green Chemistry*, **2015** , 17, 2560-2569	10	22
52	Hyaluronic-Acid-Hydroxyapatite Colloidal Gels Combined with Micronized Native ECM as Potential Bone Defect Fillers. *Langmuir*, **2017**, 33, 206-218	4	21

51	Mechanical evaluation of gradient electrospun scaffolds with 3D printed ring reinforcements for tracheal defect repair. *Biomedical Materials (Bristol)*, **2016**, 11, 025020	3.5	21
50	Effect of different sintering methods on bioactivity and release of proteins from PLGA microspheres. *Materials Science and Engineering C*, **2013**, 33, 4343-51	8.3	20
49	Subcritical CO2 sintering of microspheres of different polymeric materials to fabricate scaffolds for tissue engineering. *Materials Science and Engineering C*, **2013**, 33, 4892-9	8.3	20
48	Human umbilical cord mesenchymal stromal cells in regenerative medicine. *Stem Cell Research and Therapy*, **2013**, 4, 142	8.3	19
47	Species-specific effects of aortic valve decellularization. *Acta Biomaterialia*, **2017**, 50, 249-258	10.8	18
46	Microsphere-Based Scaffolds Carrying Opposing Gradients of Chondroitin Sulfate and Tricalcium Phosphate. *Frontiers in Bioengineering and Biotechnology*, **2015**, 3, 96	5.8	17
45	Enabling Surgical Placement of Hydrogels Through Achieving Paste-Like Rheological Behavior in Hydrogel Precursor Solutions. *Annals of Biomedical Engineering*, **2015**, 43, 2569-76	4.7	16
44	Designing crosslinked hyaluronic acid hydrogels with tunable mechanical properties for biomedical applications. *Journal of Applied Polymer Science*, **2015**, 132, n/a-n/a	2.9	15
43	Microsphere-based scaffolds encapsulating tricalcium phosphate and hydroxyapatite for bone regeneration. *Journal of Materials Science: Materials in Medicine*, **2016**, 27, 121	4.5	15
42	Mapping glycosaminoglycan-hydroxyapatite colloidal gels as potential tissue defect fillers. *Langmuir*, **2014**, 30, 3528-37	4	15
41	Tailoring of processing parameters for sintering microsphere-based scaffolds with dense-phase carbon dioxide. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2013**, 101, 330-7	3.5	15
40	Adenovector-mediated gene delivery to human umbilical cord mesenchymal stromal cells induces inner ear cell phenotype. *Cellular Reprogramming*, **2013**, 15, 43-54	2.1	15
39	A Road Map to Commercialization of Cartilage Therapy in the United States of America. *Tissue Engineering - Part B: Reviews*, **2016**, 22, 15-33	7.9	14
38	Functional Reconstruction of Tracheal Defects by Protein-Loaded, Cell-Seeded, Fibrous Constructs in Rabbits. *Tissue Engineering - Part A*, **2015**, 21, 2390-403	3.9	14
37	Stem Cells in Aggregate Form to Enhance Chondrogenesis in Hydrogels. *PLoS ONE*, **2015**, 10, e0141479	3.7	14
36	Material characterization of microsphere-based scaffolds with encapsulated raw materials. *Materials Science and Engineering C*, **2016**, 63, 422-8	8.3	14
35	Exploiting decellularized cochleae as scaffolds for inner ear tissue engineering. *Stem Cell Research and Therapy*, **2017**, 8, 41	8.3	12
34	Nonviral Reprogramming of Human WhartonS Jelly Cells Reveals Differences Between ATOH1 Homologues. *Tissue Engineering - Part A*, **2015**, 21, 1795-809	3.9	12

33	Effects of tissue processing on bioactivity of cartilage matrix-based hydrogels encapsulating osteoconductive particles. *Biomedical Materials (Bristol)*, **2018**, 13, 034108	3.5	11
32	Microsphere-Based Osteochondral Scaffolds Carrying Opposing Gradients Of Decellularized Cartilage And Demineralized Bone Matrix. *ACS Biomaterials Science and Engineering*, **2017**, 3, 1955-1963	5.5	11
31	Generating CK19-positive cells with hair-like structures from WhartonS jelly mesenchymal stromal cells. *Stem Cells and Development*, **2013**, 22, 18-26	4.4	10
30	Improving viability and transfection efficiency with human umbilical cord whartonS jelly cells through use of a ROCK inhibitor. *Cellular Reprogramming*, **2014**, 16, 91-7	2.1	10
29	Assessing nanoparticle colloidal stability with single-particle inductively coupled plasma mass spectrometry (SP-ICP-MS). *Analytical and Bioanalytical Chemistry*, **2020**, 412, 5205-5216	4.4	9
28	The effect of extended passaging on the phenotype and osteogenic potential of human umbilical cord mesenchymal stem cells. *Molecular and Cellular Biochemistry*, **2015**, 401, 155-64	4.2	9
27	Chondrogenic differentiation of stem cells in human umbilical cord stroma with PGA and PLLA scaffolds. *Journal of Biomedical Science and Engineering*, **2010**, 3, 1041-1049	0.7	9
26	Tissue Engineering of Temporomandibular Joint Cartilage **2009**, 1, 1-122		9
25	Microsphere-based scaffolds encapsulating chondroitin sulfate or decellularized cartilage. *Journal of Biomaterials Applications*, **2016**, 31, 328-43	2.9	9
24	Evaluation of apparent fracture toughness of articular cartilage and hydrogels. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 121-128	4.4	8
23	Thiolated bone and tendon tissue particles covalently bound in hydrogels for in vivo calvarial bone regeneration. *Acta Biomaterialia*, **2020**, 104, 66-75	10.8	8
22	Regenerative rehabilitation with conductive biomaterials for spinal cord injury. *Acta Biomaterialia*, **2020**,	10.8	7
21	In vivo evaluation of stem cell aggregates on osteochondral regeneration. *Journal of Orthopaedic Research*, **2017**, 35, 1606-1616	3.8	7
20	A review of gene delivery and stem cell based therapies for regenerating inner ear hair cells. *Journal of Functional Biomaterials*, **2011**, 2, 249-70	4.8	7
19	Biodegradable electrospun patch containing cell adhesion or antimicrobial compounds for trachea repair in vivo. *Biomedical Materials (Bristol)*, **2020**, 15, 025003	3.5	7
18	Generating Chondromimetic Mesenchymal Stem Cell Spheroids by Regulating Media Composition and Surface Coating. *Cellular and Molecular Bioengineering*, **2018**, 11, 99-115	3.9	6
17	Structurally diverse and readily tunable photocrosslinked chondroitin sulfate based copolymers. *Journal of Polymer Science, Part B: Polymer Physics*, **2015**, 53, 1070-1079	2.6	4
16	Temporomandibular Joint Bioengineering Conference: Working Together Toward Improving Clinical Outcomes. *Journal of Biomechanical Engineering*, **2020**, 142,	2.1	4

15	Effects of a Bioactive SPPEPS Peptide on Chondrogenic Differentiation of Mesenchymal Stem Cells. *Annals of Biomedical Engineering*, **2019**, 47, 2308-2321	4.7	3
14	A Protocol for Decellularizing Mouse Cochleae for Inner Ear Tissue Engineering. *Journal of Visualized Experiments*, **2018**,	1.6	3
13	Chondroinductive Peptides: Drawing Inspirations from Cell-Matrix Interactions. *Tissue Engineering - Part B: Reviews*, **2019**, 25, 249-257	7.9	3
12	Fluorescent Photo-conversion: A second chance to label unique cells. *Cellular and Molecular Bioengineering*, **2015**, 8, 187-196	3.9	2
11	Unrepaired decompressive craniectomy worsens motor performance in a rat traumatic brain injury model. *Scientific Reports*, **2020**, 10, 22242	4.9	2
10	Manifestations of Apprehension and Anxiety in a Sprague Dawley Cranial Defect Model. *Journal of Craniofacial Surgery*, **2020**, 31, 2364-2367	1.2	2
9	Engineering Graded Tissue Interfaces **2013**, 299-322		2
8	Biomimetic Nanofibers for Musculoskeletal Tissue Engineering **2015**, 57-75		1
7	Novel Hyaluronic Acid Nanocomposite Hydrogel for Cartilage Tissue Engineering: Utilizing Yield Stress for Ease of Implantation **2013**,		1
6	Tissue Engineering the Mandibular Condyle. *Tissue Engineering*, **2007**, 070124172705001		1
5	Recent Patents Pertaining to Immune Modulation and Musculoskeletal Regeneration with WhartonS Jelly Cells. *Recent Patents on Regenerative Medicine*, **2013**, 3, 182-192		1
4	Standardization of Microcomputed Tomography for Tracheal Tissue Engineering Analysis. *Tissue Engineering - Part C: Methods*, **2020**, 26, 590-595	2.9	0
3	Mimicking the Extracellular Matrix: Tuning the Mechanical Properties of Chondroitin Sulfate Hydrogels by Copolymerization with Oligo(ethylene glycol) Diacrylates. *Materials Research Society Symposia Proceedings*, **2014**, 1622, 189-195		
2	A WhartonS Jelly Mesenchymal Stromal Cell Derived 3D Osteogenic Niche Allows for Cord Blood Stem Cell Attachment. *Blood*, **2011**, 118, 4813-4813	2.2	
1	A WhartonS Jelly Mesenchymal Stromal Cell Derived 3D Osteogenic Niche Allows for Cord Blood Stem Cell Expansion Using Cytokine-Free Culture Media. *Blood*, **2011**, 118, 4832-4832	2.2	