Michael S Detamore

List of Publications by Year
in descending order

127 papers	5,957 citations	44066 48 h-index	82542 72 g-index
129 all docs	129 docs citations	129 times ranked	6836 citing authors

#	Article	IF	Citations
1	Strategies and Applications for Incorporating Physical and Chemical Signal Gradients in Tissue Engineering. Tissue Engineering - Part B: Reviews, 2008, 14, 341-366.	4.8	170
2	A Comparison of Human Bone Marrowâ€"Derived Mesenchymal Stem Cells and Human Umbilical Cordâ€"Derived Mesenchymal Stromal Cells for Cartilage Tissue Engineering. Tissue Engineering - Part A, 2009, 15, 2259-2266.	3.1	162
3	Structure and function of the temporomandibular joint disc: Implications for tissue engineering. Journal of Oral and Maxillofacial Surgery, 2003, 61, 494-506.	1.2	151
4	Approaching the compressive modulus of articular cartilage with a decellularized cartilage-based hydrogel. Acta Biomaterialia, 2016, 38, 94-105.	8.3	146
5	Physical Non-Viral Gene Delivery Methods for Tissue Engineering. Annals of Biomedical Engineering, 2013, 41, 446-468.	2.5	140
6	The Bioactivity of Cartilage Extracellular Matrix in Articular Cartilage Regeneration. Advanced Healthcare Materials, 2015, 4, 29-39.	7.6	136
7	Continuous Gradients of Material Composition and Growth Factors for Effective Regeneration of the Osteochondral Interface. Tissue Engineering - Part A, 2011, 17, 2845-2855.	3.1	132
8	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, 2003-2010.	4.6	131
9	Hierarchically Designed Agarose and Poly(Ethylene Glycol) Interpenetrating Network Hydrogels for Cartilage Tissue Engineering. Tissue Engineering - Part C: Methods, 2010, 16, 1533-1542.	2.1	131
10	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.	24.7	129
11	PLGAâ€chitosan/PLGAâ€alginate nanoparticle blends as biodegradable colloidal gels for seeding human umbilical cord mesenchymal stem cells. Journal of Biomedical Materials Research - Part A, 2011, 96A, 520-527.	4.0	126
12	Decellularized Cartilage May Be a Chondroinductive Material for Osteochondral Tissue Engineering. PLoS ONE, 2015, 10, e0121966.	2.5	118
13	Development and quantitative characterization of the precursor rheology of hyaluronic acid hydrogels for bioprinting. Acta Biomaterialia, 2019, 95, 176-187.	8.3	116
14	Osteochondral Interface Tissue Engineering Using Macroscopic Gradients of Bioactive Signals. Annals of Biomedical Engineering, 2010, 38, 2167-2182.	2.5	110
15	Nanoengineered biomaterials for repair and regeneration of orthopedic tissue interfaces. Acta Biomaterialia, 2016, 42, 2-17.	8.3	107
16	Microsphere-Based Seamless Scaffolds Containing Macroscopic Gradients of Encapsulated Factors for Tissue Engineering. Tissue Engineering - Part C: Methods, 2008, 14, 299-309.	2.1	106
17	Quantitative analysis and comparative regional investigation of the extracellular matrix of the porcine temporomandibular joint disc. Matrix Biology, 2005, 24, 45-57.	3.6	103
18	Tensile Properties of the Porcine Temporomandibular Joint Disc. Journal of Biomechanical Engineering, 2003, 125, 558-565.	1.3	99

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19	Microsphere-Based Scaffolds in Regenerative Engineering. Annual Review of Biomedical Engineering, 2017, 19, 135-161.	12.3	98
20	Motivation, Characterization, and Strategy for Tissue Engineering the Temporomandibular Joint Disc. Tissue Engineering, 2003, 9, 1065-1087.	4.6	93
21	Microsphere-based scaffolds for cartilage tissue engineering: Using subcritical CO2 as a sintering agent. Acta Biomaterialia, 2010, 6, 137-143.	8.3	85
22	Recellularization of decellularized heart valves: Progress toward the tissue-engineered heart valve. Journal of Tissue Engineering, 2017, 8, 204173141772632.	5.5	84
23	Musculoskeletal tissue engineering with human umbilical cord mesenchymal stromal cells. Regenerative Medicine, 2011, 6, 95-109.	1.7	83
24	The bioactivity of agaroseâ€“PEGDA interpenetrating network hydrogels with covalently immobilized RGD peptides and physically entrapped aggrecan. Biomaterials, 2014, 35, 3558-3570.	11.4	83
25	Osteochondral interface regeneration of the rabbit knee with macroscopic gradients of bioactive signals. Journal of Biomedical Materials Research - Part A, 2012, 100A, 162-170.	4.0	80
26	Emerging Techniques in Stratified Designs and Continuous Gradients for Tissue Engineering of Interfaces. Annals of Biomedical Engineering, 2010, 38, 2121-2141.	2.5	78
27	Evaluation of Three Growth Factors for TMJ Disc Tissue Engineering. Annals of Biomedical Engineering, 2005, 33, 383-390.	2.5	76
28	Effect of Initial Seeding Density on Human Umbilical Cord Mesenchymal Stromal Cells for Fibrocartilage Tissue Engineering. Tissue Engineering - Part A, 2009, 15, 1009-1017.	3.1	73
29	Cell Type and Distribution in the Porcine Temporomandibular Joint Disc. Journal of Oral and Maxillofacial Surgery, 2006, 64, 243-248.	1.2	69
30	Osteogenic Differentiation of Human Umbilical Cord Mesenchymal Stromal Cells in Polyglycolic Acid Scaffolds. Tissue Engineering - Part A, 2010, 16, 1937-1948.	3.1	69
31	Hybrid Hydroxyapatite Nanoparticle Colloidal Gels are Injectable Fillers for Bone Tissue Engineering. Tissue Engineering - Part A, 2013, 19, 2586-2593.	3.1	69
32	Tuning mechanical performance of poly(ethylene glycol) and agarose interpenetrating network hydrogels for cartilage tissue engineering. Biomaterials, 2013, 34, 8241-8257.	11.4	69
33	Tissue Engineering the Mandibular Condyle. Tissue Engineering, 2007, 13, 1955-1971.	4.6	68
34	Leveraging â€œRaw Materialsâ€•as Building Blocks and Bioactive Signals in Regenerative Medicine. Tissue Engineering - Part B: Reviews, 2012, 18, 341-362.	4.8	68
35	Endochondral Ossification for Enhancing Bone Regeneration: Converging Native Extracellular Matrix Biomaterials and Developmental Engineering <i>In Vivo</i>. Tissue Engineering - Part B: Reviews, 2015, 21, 247-266.	4.8	68
36	Cartilage extracellular matrix as a biomaterial for cartilage regeneration. Annals of the New York Academy of Sciences, 2016, 1383, 139-159.	3.8	66

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37	Lubrication of the Temporomandibular Joint. Annals of Biomedical Engineering, 2008, 36, 14-29.	2.5	65
38	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.	2.7	64
39	Incorporation of Aggrecan in Interpenetrating Network Hydrogels to Improve Cellular Performance for Cartilage Tissue Engineering. Tissue Engineering - Part A, 2013, 19, 1349-1359.	3.1	63
40	Decellularized Whartonâ€™s Jelly from human umbilical cord as a novel 3D scaffolding material for tissue engineering applications. PLoS ONE, 2017, 12, e0172098.	2.5	63
41	Osteochondral Interface Regeneration of Rabbit Mandibular Condyle With Bioactive Signal Gradients. Journal of Oral and Maxillofacial Surgery, 2011, 69, e50-e57.	1.2	62
42	Effects of growth factors on temporomandibular joint disc cells. Archives of Oral Biology, 2004, 49, 577-583.	1.8	60
43	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-e187.	2.7	59
44	Mechanical Testing of Hydrogels in Cartilage Tissue Engineering: Beyond the Compressive Modulus. Tissue Engineering - Part B: Reviews, 2013, 19, 403-412.	4.8	56
45	Chondroinduction from Naturally Derived Cartilage Matrix: A Comparison Between Devitalized and Decellularized Cartilage Encapsulated in Hydrogel Pastes. Tissue Engineering - Part A, 2016, 22, 665-679.	3.1	54
46	Human platelet lysate-based nanocomposite bioink for bioprinting hierarchical fibrillar structures. Biofabrication, 2020, 12, 015012.	7.1	53
47	Use of a Rotating Bioreactor toward Tissue Engineering the Temporomandibular Joint Disc. Tissue Engineering, 2005, 11, 1188-1197.	4.6	52
48	Preclinical Animal Models for Temporomandibular Joint Tissue Engineering. Tissue Engineering - Part B: Reviews, 2018, 24, 171-178.	4.8	51
49	Overview of Tracheal Tissue Engineering: Clinical Need Drives the Laboratory Approach. Annals of Biomedical Engineering, 2011, 39, 2091-2113.	2.5	50
50	The Future of Carbon Dioxide for Polymer Processing in Tissue Engineering. Tissue Engineering - Part B: Reviews, 2013, 19, 221-232.	4.8	50
51	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.	8.0	49
52	The potential of encapsulating â€œraw materialsâ€•in 3D osteochondral gradient scaffolds. Biotechnology and Bioengineering, 2014, 111, 829-841.	3.3	47
53	Regenerative rehabilitation with conductive biomaterials for spinal cord injury. Acta Biomaterialia, 2022, 139, 43-64.	8.3	47
54	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, 157-170.	3.6	45

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55	Human umbilical cord mesenchymal stromal cells in a sandwich approach for osteochondral tissue engineering. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 712-721.	2.7	40
56	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.	1.8	39
57	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, 969-979.	3.1	39
58	Superior calvarial bone regeneration using pentenoate-functionalized hyaluronic acid hydrogels with devitalized tendon particles. Acta Biomaterialia, 2018, 71, 148-155.	8.3	39
59	Threeâ€dimensional macroscopic scaffolds with a gradient in stiffness for functional regeneration of interfacial tissues. Journal of Biomedical Materials Research - Part A, 2010, 94A, 870-876.	4.0	38
60	Bioactive Microsphereâ€Based Scaffolds Containing Decellularized Cartilage. Macromolecular Bioscience, 2015, 15, 979-989.	4.1	37
61	Engineering and commercialization of human-device interfaces, from bone to brain. Biomaterials, 2016, 95, 35-46.	11.4	34
62	Insulinâ€like growth factorâ€I improves chondrogenesis of predifferentiated human umbilical cord mesenchymal stromal cells. Journal of Orthopaedic Research, 2009, 27, 1109-1115.	2.3	33
63	Umbilical Cord Stem Cell Seeding on Fast-Resorbable Calcium Phosphate Bone Cement. Tissue Engineering - Part A, 2010, 16, 2743-2753.	3.1	33
64	Chondroinductive Hydrogel Pastes Composed of Naturally Derived Devitalized Cartilage. Annals of Biomedical Engineering, 2016, 44, 1863-1880.	2.5	33
65	Potential Indications for Tissue Engineering in Temporomandibular Joint Surgery. Journal of Oral and Maxillofacial Surgery, 2016, 74, 705-711.	1.2	32
66	Colloidal Gels with Extracellular Matrix Particles and Growth Factors for Bone Regeneration in Critical Size Rat Calvarial Defects. AAPS Journal, 2017, 19, 703-711.	4.4	32
67	Reinforced Electrospun Polycaprolactone Nanofibers for Tracheal Repair in an <i>In Vivo</i> Ovine Model. Tissue Engineering - Part A, 2018, 24, 1301-1308.	3.1	30
68	Osteogenic Differentiation of Human Bone Marrow Stromal Cells in Hydroxyapatite-Loaded Microsphere-Based Scaffolds. Tissue Engineering - Part A, 2012, 18, 757-767.	3.1	29
69	Microsphere-based gradient implants for osteochondral regeneration: a long-term study in sheep. Regenerative Medicine, 2015, 10, 709-728.	1.7	29
70	Hyaluronic-Acidâ€"Hydroxyapatite Colloidal Gels Combined with Micronized Native ECM as Potential Bone Defect Fillers. Langmuir, 2017, 33, 206-218.	3.5	29
71	Increasing Cross-Linking Efficiency of Methacrylated Chondroitin Sulfate Hydrogels by Copolymerization with Oligo(Ethylene Glycol) Diacrylates. Macromolecules, 2013, 46, 9609-9617.	4.8	28
72	Thiolated bone and tendon tissue particles covalently bound in hydrogels for in vivo calvarial bone regeneration. Acta Biomaterialia, 2020, 104, 66-75.	8.3	26

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73	Human umbilical cord mesenchymal stromal cells in regenerative medicine. Stem Cell Research and Therapy, 2013, 4, 142.	5.5	25
74	Subcritical CO2 sintering of microspheres of different polymeric materials to fabricate scaffolds for tissue engineering. Materials Science and Engineering C, 2013, 33, 4892-4899.	7.3	25
75	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.	9.0	24
76	Mechanical evaluation of gradient electrospun scaffolds with 3D printed ring reinforcements for tracheal defect repair. Biomedical Materials (Bristol), 2016, 11, 025020.	3.3	23
77	Effect of different sintering methods on bioactivity and release of proteins from PLGA microspheres. Materials Science and Engineering C, 2013, 33, 4343-4351.	7.3	22
78	Species-specific effects of aortic valve decellularization. Acta Biomaterialia, 2017, 50, 249-258.	8.3	22
79	Effects of tissue processing on bioactivity of cartilage matrix-based hydrogels encapsulating osteoconductive particles. Biomedical Materials (Bristol), 2018, 13, 034108.	3.3	22
80	Assessing nanoparticle colloidal stability with single-particle inductively coupled plasma mass spectrometry (SP-ICP-MS). Analytical and Bioanalytical Chemistry, 2020, 412, 5205-5216.	3.7	22
81	Microsphere-Based Scaffolds Carrying Opposing Gradients of Chondroitin Sulfate and Tricalcium Phosphate. Frontiers in Bioengineering and Biotechnology, 2015, 3, 96.	4.1	21
82	Enabling Surgical Placement of Hydrogels Through Achieving Paste-Like Rheological Behavior in Hydrogel Precursor Solutions. Annals of Biomedical Engineering, 2015, 43, 2569-2576.	2.5	20
83	Designing crosslinked hyaluronic acid hydrogels with tunable mechanical properties for biomedical applications. Journal of Applied Polymer Science, 2015, 132, .	2.6	19
84	Microsphere-based scaffolds encapsulating tricalcium phosphate and hydroxyapatite for bone regeneration. Journal of Materials Science: Materials in Medicine, 2016, 27, 121.	3.6	19
85	Microsphere-Based Osteochondral Scaffolds Carrying Opposing Gradients Of Decellularized Cartilage And Demineralized Bone Matrix. ACS Biomaterials Science and Engineering, 2017, 3, 1955-1963.	5.2	19
86	Material characterization of microsphere-based scaffolds with encapsulated raw materials. Materials Science and Engineering C, 2016, 63, 422-428.	7.3	18
87	A Road Map to Commercialization of Cartilage Therapy in the United States of America. Tissue Engineering - Part B: Reviews, 2016, 22, 15-33.	4.8	18
88	Stem Cells in Aggregate Form to Enhance Chondrogenesis in Hydrogels. PLoS ONE, 2015, 10, e0141479.	2.5	18
89	Tailoring of processing parameters for sintering microsphereâ€based scaffolds with denseâ€phase carbon dioxide. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101B, 330-337.	3.4	17
90	Exploiting decellularized cochleae as scaffolds for inner ear tissue engineering. Stem Cell Research and Therapy, 2017, 8, 41.	5.5	17

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91	Adenovector-Mediated Gene Delivery to Human Umbilical Cord Mesenchymal Stromal Cells Induces Inner Ear Cell Phenotype. Cellular Reprogramming, 2013, 15, 43-54.	0.9	16
92	Mapping Glycosaminoglycanâ€"Hydroxyapatite Colloidal Gels as Potential Tissue Defect Fillers. Langmuir, 2014, 30, 3528-3537.	3.5	16
93	Functional Reconstruction of Tracheal Defects by Protein-Loaded, Cell-Seeded, Fibrous Constructs in Rabbits. Tissue Engineering - Part A, 2015, 21, 2390-2403.	3.1	15
94	Microsphere-based scaffolds encapsulating chondroitin sulfate or decellularized cartilage. Journal of Biomaterials Applications, 2016, 31, 328-343.	2.4	14
95	Nonviral Reprogramming of Human Wharton's Jelly Cells Reveals Differences Between<i>ATOH1</i>Homologues. Tissue Engineering - Part A, 2015, 21, 1795-1809.	3.1	13
96	Biodegradable electrospun patch containing cell adhesion or antimicrobial compounds for trachea repair in vivo. Biomedical Materials (Bristol), 2020, 15, 025003.	3.3	13
97	Conductive and injectable hyaluronic acid/gelatin/gold nanorod hydrogels for enhanced surgical translation and bioprinting. Journal of Biomedical Materials Research - Part A, 2022, 110, 365-382.	4.0	13
98	Chondrogenic differentiation of stem cells in human umbilical cord stroma with PGA and PLLA scaffolds. Journal of Biomedical Science and Engineering, 2010, 03, 1041-1049.	0.4	12
99	Generating CK19-Positive Cells with Hair-Like Structures from Wharton's Jelly Mesenchymal Stromal Cells. Stem Cells and Development, 2013, 22, 18-26.	2.1	12
100	The effect of extended passaging on the phenotype and osteogenic potential of human umbilical cord mesenchymal stem cells. Molecular and Cellular Biochemistry, 2015, 401, 155-164.	3.1	12
101	Evaluation of apparent fracture toughness of articular cartilage and hydrogels. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 121-128.	2.7	11
102	Tissue Engineering of Temporomandibular Joint Cartilage. Synthesis Lectures on Tissue Engineering, 2009, 1, 1-122.	0.3	10
103	Improving Viability and Transfection Efficiency with Human Umbilical Cord Wharton's Jelly Cells Through Use of a ROCK Inhibitor. Cellular Reprogramming, 2014, 16, 91-97.	0.9	10
104	A Review of Gene Delivery and Stem Cell Based Therapies for Regenerating Inner Ear Hair Cells. Journal of Functional Biomaterials, 2011, 2, 249-270.	4.4	8
105	Generating Chondromimetic Mesenchymal Stem Cell Spheroids by Regulating Media Composition and Surface Coating. Cellular and Molecular Bioengineering, 2018, 11, 99-115.	2.1	8
106	Effects of a Bioactive SPPEPS Peptide on Chondrogenic Differentiation of Mesenchymal Stem Cells. Annals of Biomedical Engineering, 2019, 47, 2308-2321.	2.5	8
107	Emerging Trends in Biomaterials Research. Annals of Biomedical Engineering, 2016, 44, 1861-1862.	2.5	7
108	In vivo evaluation of stem cell aggregates on osteochondral regeneration. Journal of Orthopaedic Research, 2017, 35, 1606-1616.	2.3	7

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109	Chondroinductive Peptides: Drawing Inspirations from Cellâ€“Matrix Interactions. Tissue Engineering - Part B: Reviews, 2019, 25, 249-257.	4.8	7
110	Temporomandibular Joint Bioengineering Conference: Working Together Toward Improving Clinical Outcomes. Journal of Biomechanical Engineering, 2020, 142, .	1.3	6
111	The Rheology and Printability of Cartilage Matrix-Only Biomaterials. Biomolecules, 2022, 12, 846.	4.0	6
112	A Protocol for Decellularizing Mouse Cochleae for Inner Ear Tissue Engineering. Journal of Visualized Experiments, 2018, , .	0.3	5
113	Unrepaired decompressive craniectomy worsens motor performance in a rat traumatic brain injury model. Scientific Reports, 2020, 10, 22242.	3.3	5
114	Structurally diverse and readily tunable photocrosslinked chondroitin sulfate based copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 1070-1079.	2.1	4
115	Biomimetic Nanofibers for Musculoskeletal Tissue Engineering. , 2015, , 57-75.		3
116	Fluorescent Photo-conversion: A Second Chance to Label Unique Cells. Cellular and Molecular Bioengineering, 2015, 8, 187-196.	2.1	3
117	Standardization of Microcomputed Tomography for Tracheal Tissue Engineering Analysis. Tissue Engineering - Part C: Methods, 2020, 26, 590-595.	2.1	3
118	Chondroinductive Peptides for Cartilage Regeneration. Tissue Engineering - Part B: Reviews, 2022, 28, 745-765.	4.8	2
119	Engineering Graded Tissue Interfaces. , 2013, , 299-322.		2
120	Manifestations of Apprehension and Anxiety in a Sprague Dawley Cranial Defect Model. Journal of Craniofacial Surgery, 2020, 31, 2364-2367.	0.7	2
121	Novel Hyaluronic Acid Nanocomposite Hydrogel for Cartilage Tissue Engineering: Utilizing Yield Stress for Ease of Implantation. , 2013, , .		1
122	Tissue Engineering the Mandibular Condyle. Tissue Engineering, 2007, .	4.6	1
123	Recent Patents Pertaining to Immune Modulation and Musculoskeletal Regeneration with Wharton’s Jelly Cells. Recent Patents on Regenerative Medicine, 2013, 3, 182-192.	0.4	1
124	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.	0.1	0
125	Polymer-coated microparticle scaffolds engineered for potential use in musculoskeletal tissue regeneration. Biomedical Materials (Bristol), 2021, 16, .	3.3	0
126	A Wharton's Jelly Mesenchymal Stromal Cell Derived 3D Osteogenic Niche Allows for Cord Blood Stem Cell Attachment. Blood, 2011, 118, 4813-4813.	1.4	0

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127	A Wharton's 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.	1.4	0