Kara L Spiller

List of Publications by Year
in descending order

79 papers	4,748 citations	136950 32 h-index	138484 58 g-index
83 all docs	83 docs citations	83 times ranked	6526 citing authors

#	Article	IF	Citations
1	The role of macrophage phenotype in vascularization of tissue engineering scaffolds. Biomaterials, 2014, 35, 4477-4488.	11.4	728
2	Sequential delivery of immunomodulatory cytokines to facilitate the M1-to-M2 transition of macrophages and enhance vascularization of bone scaffolds. Biomaterials, 2015, 37, 194-207.	11.4	568
3	Hydrogels for the Repair of Articular Cartilage Defects. Tissue Engineering - Part B: Reviews, 2011, 17, 281-299.	4.8	385
4	Macrophage-based therapeutic strategies in regenerative medicine. Advanced Drug Delivery Reviews, 2017, 122, 74-83.	13.7	234
5	Macrophage and Fibroblast Interactions in Biomaterialâ€Mediated Fibrosis. Advanced Healthcare Materials, 2019, 8, e1801451.	7.6	211
6	Macrophages of diverse phenotypes drive vascularization of engineered tissues. Science Advances, 2020, 6, eaay6391.	10.3	152
7	Transcriptome analysis of IL-10-stimulated (M2c) macrophages by next-generation sequencing. Immunobiology, 2017, 222, 847-856.	1.9	142
8	Kinetics and mechanics of clot contraction are governed by the molecular and cellular composition of the blood. Blood, 2016, 127, 149-159.	1.4	133
9	Differential gene expression in human, murine, and cell line-derived macrophages upon polarization. Experimental Cell Research, 2016, 347, 1-13.	2.6	131
10	Immunomodulatory Biomaterials for Tissue Repair. Chemical Reviews, 2021, 121, 11305-11335.	47.7	121
11	Accumulation and localization of macrophage phenotypes with human intervertebral disc degeneration. Spine Journal, 2018, 18, 343-356.	1.3	116
12	Controlled release of cytokines using silk-biomaterials for macrophage polarization. Biomaterials, 2015, 73, 272-283.	11.4	110
13	Regulation of extracellular matrix assembly and structure by hybrid M1/M2 macrophages. Biomaterials, 2021, 269, 120667.	11.4	106
14	Superporous hydrogels for cartilage repair: Evaluation of the morphological and mechanical properties. Acta Biomaterialia, 2008, 4, 17-25.	8.3	104
15	A novel method for the direct fabrication of growth factor-loaded microspheres within porous nondegradable hydrogels: Controlled release for cartilage tissue engineering. Journal of Controlled Release, 2012, 157, 39-45.	9.9	100
16	Relative Expression of Proinflammatory and Antiinflammatory Genes Reveals Differences between Healing and Nonhealing Human Chronic Diabetic Foot Ulcers. Journal of Investigative Dermatology, 2015, 135, 1700-1703.	0.7	85
17	Macrophage Transcriptional Profile Identifies Lipid Catabolic Pathways That Can Be Therapeutically Targeted after Spinal Cord Injury. Journal of Neuroscience, 2017, 37, 2362-2376.	3.6	82
18	Sequential drug delivery to modulate macrophage behavior and enhance implant integration. Advanced Drug Delivery Reviews, 2019, 149-150, 85-94.	13.7	82

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19	Controlled M1-to-M2 transition of aged macrophages by calcium phosphate coatings. Biomaterials, 2019, 196, 90-99.	11.4	73
20	Biomimetic Approaches for Bone Tissue Engineering. Tissue Engineering - Part B: Reviews, 2017, 23, 480-493.	4.8	69
21	Analysis of the in vitro swelling behavior of poly(vinyl alcohol) hydrogels in osmotic pressure solution for soft tissue replacement. Acta Biomaterialia, 2011, 7, 2477-2482.	8.3	67
22	Macrophages Modulate Engineered Human Tissues for Enhanced Vascularization and Healing. Annals of Biomedical Engineering, 2015, 43, 616-627.	2.5	64
23	Temporal and spatial distribution of macrophage phenotype markers in the foreign body response to glutaraldehyde-crosslinked gelatin hydrogels. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 721-742.	3.5	63
24	Healing of Chronic Wounds: An Update of Recent Developments and Future Possibilities. Tissue Engineering - Part B: Reviews, 2019, 25, 429-444.	4.8	63
25	Rapid neuroinflammatory response localized to injured neurons after diffuse traumatic brain injury in swine. Experimental Neurology, 2017, 290, 85-94.	4.1	58
26	Response of human macrophages to wound matrices in vitro. Wound Repair and Regeneration, 2016, 24, 514-524.	3.0	55
27	Effect of M1â€“M2 Polarization on the Motility and Traction Stresses of Primary Human Macrophages. Cellular and Molecular Bioengineering, 2016, 9, 455-465.	2.1	48
28	Drug delivery strategies to control macrophages for tissue repair and regeneration. Experimental Biology and Medicine, 2016, 241, 1054-1063.	2.4	43
29	<i>In vitro</i> response of macrophages to ceramic scaffolds used for bone regeneration. Journal of the Royal Society Interface, 2016, 13, 20160346.	3.4	41
30	Clinical translation of controlled protein delivery systems for tissue engineering. Drug Delivery and Translational Research, 2015, 5, 101-115.	5.8	36
31	Cardiovascular protection in females linked to estrogen-dependent inhibition of arterial stiffening and macrophage MMP12. JCI Insight, 2019, 4, .	5.0	35
32	Design of semi-degradable hydrogels based on poly(vinyl alcohol) and poly(lactic-co-glycolic acid) for cartilage tissue engineering. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 636-647.	2.7	34
33	Semi-Degradable Scaffold for Articular Cartilage Replacement. Tissue Engineering - Part A, 2008, 14, 207-213.	3.1	33
34	Anti-inflammatory effects of octadecylamine-functionalized nanodiamond on primary human macrophages. Biomaterials Science, 2017, 5, 2131-2143.	5.4	30
35	Immunomodulatory Effects of Human Cryopreserved Viable Amniotic Membrane in a Pro-Inflammatory Environment In Vitro. Cellular and Molecular Bioengineering, 2017, 10, 451-462.	2.1	27
36	Biomaterial-mediated reprogramming of monocytes via microparticle phagocytosis for sustained modulation of macrophage phenotype. Acta Biomaterialia, 2020, 101, 237-248.	8.3	27

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37	Effects of Non-thermal, Non-cavitational Ultrasound Exposure on Human Diabetic Ulcer Healing and Inflammatory Gene Expression in a Pilot Study. Ultrasound in Medicine and Biology, 2018, 44, 2043-2049.	1.5	25
38	Immunomodulatory nanodiamond aggregate-based platform for the treatment of rheumatoid arthritis. International Journal of Energy Production and Management, 2019, 6, 163-174.	3.7	23
39	Modulation of inflammation in wounds of diabetic patients treated with porcine urinary bladder matrix. Regenerative Medicine, 2019, 14, 269-277.	1.7	22
40	Modulation of macrophage phenotype via phagocytosis of drugâ€•loaded microparticles. Journal of Biomedical Materials Research - Part A, 2019, 107, 1213-1224.	4.0	22
41	Biomaterials and Bioactive Factor Delivery Systems for the Control of Macrophage Activation in Regenerative Medicine. ACS Biomaterials Science and Engineering, 2018, 4, 1137-1148.	5.2	21
42	Supplementation of Exogenous Adenosine 5â€²-Triphosphate Enhances Mechanical Properties of 3D Cellâ€“Agarose Constructs for Cartilage Tissue Engineering. Tissue Engineering - Part A, 2013, 19, 2188-2200.	3.1	20
43	Deconvolution of heterogeneous wound tissue samples into relative macrophage phenotype composition<i>via</i>models based on gene expression. Integrative Biology (United Kingdom), 2017, 9, 328-338.	1.3	20
44	The Role of Macrophages in the Foreign Body Response to Implanted Biomaterials. , 2015, , 17-34.		20
45	Pro-inflammatory polarization primes Macrophages to transition into a distinct M2-like phenotype in response to IL-4. Journal of Leukocyte Biology, 2022, 111, 989-1000.	3.3	17
46	Hostâ€“Biomaterial Interactions in Zebrafish. ACS Biomaterials Science and Engineering, 2018, 4, 1233-1240.	5.2	16
47	In Vitro Model of Macrophage-Biomaterial Interactions. Methods in Molecular Biology, 2018, 1758, 161-176.	0.9	11
48	Small molecule disruption of G protein Î²Î³ subunit signaling reprograms human macrophage phenotype and prevents autoimmune myocarditis in rats. PLoS ONE, 2018, 13, e0200697.	2.5	11
49	Human macrophage response to microbial supernatants from diabetic foot ulcers. Wound Repair and Regeneration, 2019, 27, 598-608.	3.0	9
50	Characterizing the Macrophage Response to Immunomodulatory Biomaterials Through Gene Set Analyses. Tissue Engineering - Part C: Methods, 2020, 26, 156-169.	2.1	8
51	Cardiac Progenitor Cell Recruitment Drives Fetal Cardiac Regeneration by Enhanced Angiogenesis. Annals of Thoracic Surgery, 2017, 104, 1968-1975.	1.3	7
52	Effects of Biotin-Avidin Interactions on Hydrogel Swelling. Frontiers in Chemistry, 2020, 8, 593422.	3.6	7
53	Human Hair Follicle-Derived Mesenchymal Stromal Cells from the Lower Dermal Sheath as a Competitive Alternative for Immunomodulation. Biomedicines, 2022, 10, 253.	3.2	7
54	Nanoparticulate Systems for Controlling Monocyte/Macrophage Behavior. , 2016, , 291-304.		5

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55	Imparting Immunomodulatory Activity to Scaffolds via Biotinâ€"Avidin Interactions. ACS Biomaterials Science and Engineering, 2021, 7, 5611-5621.	5.2	5
56	Manipulation of Macrophages to Enhance Bone Repair and Regeneration. Mechanical Engineering Series, 2015, , 65-84.	0.2	3
57	Immunomodulation of Acellular Dermal Matrix Through Interleukin 4 Enhances Vascular Infiltration. Annals of Plastic Surgery, 2022, 88, S466-S472.	0.9	3
58	Effects of radical oxygen species and antioxidants on macrophage polarization. , 2015, , .		2
59	Distinct Gene Expression Profile in Patients With Poor Postoperative Outcomes After Rotator Cuff Repair: A Case-Control Study. American Journal of Sports Medicine, 2021, 49, 2760-2770.	4.2	2
60	Regenerative Biomaterials. ACS Biomaterials Science and Engineering, 2018, 4, 1113-1114.	5.2	1
61	Tunable Blood Shunt for Neonates With Complex Congenital Heart Defects. Frontiers in Bioengineering and Biotechnology, 2021, 9, 734310.	4.1	1
62	Engineering Vascular Niche for Bone Tissue Regeneration. , 2017, , 517-529.		0
63	Spotlight on Cancer. Science Translational Medicine, 2014, 6, .	12.4	0
64	How to Build a Better Bone Tumor. Science Translational Medicine, 2014, 6, .	12.4	0
65	A Stroke of Genius. Science Translational Medicine, 2014, 6, .	12.4	0
66	Culture Shock! Brain-Like Tissue Grown in Vitro Has Potential. Science Translational Medicine, 2014, 6, .	12.4	0
67	Elbow Grease. Science Translational Medicine, 2014, 6, .	12.4	0
68	The Clot Thickensâ€¦. Science Translational Medicine, 2014, 6, .	12.4	0
69	Control under pressure. Science Translational Medicine, 2015, 7, .	12.4	0
70	Tissue engineering the origins of life. Science Translational Medicine, 2015, 7, .	12.4	0
71	Shaping up nicely. Science Translational Medicine, 2015, 7, .	12.4	0
72	Heart attack on a plate. Science Translational Medicine, 2015, 7, .	12.4	0

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73	Battle scars: SAP and CRP. Science Translational Medicine, 2015, 7, .	12.4	0
74	Contagious biomaterials. Science Translational Medicine, 2015, 7, .	12.4	0
75	Super model. Science Translational Medicine, 2015, 7, .	12.4	0
76	Wound healing goes green. Science Translational Medicine, 2015, 7, .	12.4	0
77	Efficacy by design. Science Translational Medicine, 2015, 7, .	12.4	0
78	Pigs in a blanket. Science Translational Medicine, 2016, 8, .	12.4	0
79	Temporal Control over Macrophage Phenotype and the Host Response via Magnetically Actuated Scaffolds. ACS Biomaterials Science and Engineering, 2022, 8, 3526-3541.	5.2	0