Megan L Mccain

List of Publications by Year
in descending order

48 papers	3,377 citations	331670 21 h-index	276875 41 g-index
50 all docs	50 docs citations	50 times ranked	5046 citing authors

#	Article	IF	Citations
1	Heterogeneous <i>pdgfrb+</i> cells regulate coronary vessel development and revascularization during heart regeneration. Development (Cambridge), 2022, 149, .	2.5	6
2	Modeling Patient-Specific Muscular Dystrophy Phenotypes and Therapeutic Responses in Reprogrammed Myotubes Engineered on Micromolded Gelatin Hydrogels. Frontiers in Cell and Developmental Biology, 2022, 10, 830415.	3.7	4
3	Optical Clearing of Skeletal Muscle Bundles Engineered in 3-D Printed Templates. Annals of Biomedical Engineering, 2021, 49, 523-535.	2.5	8
4	Mitochondrial architecture in cardiac myocytes depends on cell shape and matrix rigidity. Journal of Molecular and Cellular Cardiology, 2021, 150, 32-43.	1.9	11
5	Contact photolithography-free integration of patterned and semi-transparent indium tin oxide stimulation electrodes into polydimethylsiloxane-based heart-on-a-chip devices for streamlining physiological recordings. Lab on A Chip, 2021, 21, 674-687.	6.0	7
6	Characterization of Gelatin Hydrogels Cross-Linked with Microbial Transglutaminase as Engineered Skeletal Muscle Substrates. Bioengineering, 2021, 8, 6.	3.5	27
7	Tools, techniques, and future opportunities for characterizing the mechanobiology of uterine myometrium. Experimental Biology and Medicine, 2021, 246, 1025-1035.	2.4	4
8	An Engineered Myocardial Infarct Borderâ€Zoneâ€onâ€aâ€Chip Demonstrates an Oxygen Gradient Alters Cardiomyocyte Calcium Handling. FASEB Journal, 2021, 35, .	0.5	0
9	Engineering the Cellular Microenvironment of Post-infarct Myocardium on a Chip. Frontiers in Cardiovascular Medicine, 2021, 8, 709871.	2.4	11
10	Engineering skeletal muscle tissues with advanced maturity improves synapse formation with human induced pluripotent stem cell-derived motor neurons. APL Bioengineering, 2021, 5, 036101.	6.2	13
11	Engineering Shape-Controlled Microtissues on Compliant Hydrogels with Tunable Rigidity and Extracellular Matrix Ligands. Methods in Molecular Biology, 2021, 2258, 57-72.	0.9	2
12	Extended culture and imaging of normal and regenerating adult zebrafish hearts in a fluidic device. Lab on A Chip, 2020, 20, 274-284.	6.0	11
13	Mitochondrial division inhibitor 1 (mdiviâ€1) increases oxidative capacity and contractile stress generated by engineered skeletal muscle. FASEB Journal, 2020, 34, 11562-11576.	0.5	9
14	Neuromuscular disease modeling on a chip. DMM Disease Models and Mechanisms, 2020, 13, .	2.4	23
15	Regulation of calcium dynamics and propagation velocity by tissue microstructure in engineered strands of cardiac tissue. Integrative Biology (United Kingdom), 2020, 12, 34-46.	1.3	9
16	Drilling down in the fight against bacterial superbugs. Science Translational Medicine, 2020, 12, .	12.4	0
17	Matrix-guided control of mitochondrial function in cardiac myocytes. Acta Biomaterialia, 2019, 97, 281-295.	8.3	11
18	Cardiac tissue models. , 2019, , 209-248.		0

#	Article	IF	Citations
19	From mini-brains to neural networks. Science Translational Medicine, 2019, 11, .	12.4	1
20	Organs-on-chips take baby steps. Science Translational Medicine, 2019, 11, .	12.4	0
21	Placing skin cells on the assembly line for cardiac repair. Science Translational Medicine, 2019, 11, .	12.4	0
22	Cyborg fibroblasts: Cardiac pacemakers of the future?. Science Translational Medicine, 2019, 11, .	12.4	0
23	Featured Article: TGF-Î²1 dominates extracellular matrix rigidity for inducing differentiation of human cardiac fibroblasts to myofibroblasts. Experimental Biology and Medicine, 2018, 243, 601-612.	2.4	48
24	Microenvironmental Modulation of Calcium Wave Propagation Velocity in Engineered Cardiac Tissues. Cellular and Molecular Bioengineering, 2018, 11, 337-352.	2.1	21
25	Engineering cardiac microphysiological systems to model pathological extracellular matrix remodeling. American Journal of Physiology - Heart and Circulatory Physiology, 2018, 315, H771-H789.	3.2	24
26	Toward improved myocardial maturity in an organ-on-chip platform with immature cardiac myocytes. Experimental Biology and Medicine, 2017, 242, 1643-1656.	2.4	38
27	Engineering micromyocardium to delineate cellular and extracellular regulation of myocardial tissue contractility. Integrative Biology (United Kingdom), 2017, 9, 730-741.	1.3	21
28	Mitochondrial function in engineered cardiac tissues is regulated by extracellular matrix elasticity and tissue alignment. American Journal of Physiology - Heart and Circulatory Physiology, 2017, 313, H757-H767.	3.2	48
29	Fabrication of Micromolded Gelatin Hydrogels for Long-Term Culture of Aligned Skeletal Myotubes. Methods in Molecular Biology, 2017, 1668, 147-163.	0.9	13
30	Angiotensin II Induced Cardiac Dysfunction on a Chip. PLoS ONE, 2016, 11, e0146415.	2.5	24
31	Prolonged Culture of Aligned Skeletal Myotubes on Micromolded Gelatin Hydrogels. Scientific Reports, 2016, 6, 28855.	3.3	106
32	Coupling primary and stem cellâ€"derived cardiomyocytes in an in vitro model of cardiac cell therapy. Journal of Cell Biology, 2016, 212, 389-397.	5.2	45
33	Cytoskeletal prestress regulates nuclear shape and stiffness in cardiac myocytes. Experimental Biology and Medicine, 2015, 240, 1543-1554.	2.4	33
34	Abstract 308: An in vitro Model of Cardiac Stem Cell Therapy to Study the Coupling of Primary and Stem Cell-derived Cardiomyocytes. Circulation Research, 2015, 117, .	4.5	0
35	Engineering Cardiac Cell Junctions<i>In Vitro</i>to Study the Intercalated Disc. Cell Communication and Adhesion, 2014, 21, 181-191.	1.0	4
36	Matrix elasticity regulates the optimal cardiac myocyte shape for contractility. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 306, H1525-H1539.	3.2	93

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37	Modeling the mitochondrial cardiomyopathy of Barth syndrome with induced pluripotent stem cell and heart-on-chip technologies. Nature Medicine, 2014, 20, 616-623.	30.7	733
38	Micromolded gelatin hydrogels for extended culture of engineered cardiac tissues. Biomaterials, 2014, 35, 5462-5471.	11.4	182
39	Recapitulating maladaptive, multiscale remodeling of failing myocardium on a chip. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9770-9775.	7.1	133
40	Cell-to-cell coupling in engineered pairs of rat ventricular cardiomyocytes: relation between Cx43 immunofluorescence and intercellular electrical conductance. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 302, H443-H450.	3.2	58
41	Cooperative coupling of cell-matrix and cellâ€"cell adhesions in cardiac muscle. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 9881-9886.	7.1	143
42	Electrical Coupling and Propagation in Engineered Ventricular Myocardium With Heterogeneous Expression of Connexin43. Circulation Research, 2012, 110, 1445-1453.	4.5	46
43	Connexin43 ablation in foetal atrial myocytes decreases electrical coupling, partner connexins, and sodium current. Cardiovascular Research, 2012, 94, 58-65.	3.8	64
44	A tissue-engineered jellyfish with biomimetic propulsion. Nature Biotechnology, 2012, 30, 792-797.	17.5	536
45	Muscle on a chip: In vitro contractility assays for smooth and striated muscle. Journal of Pharmacological and Toxicological Methods, 2012, 65, 126-135.	0.7	147
46	Ensembles of engineered cardiac tissues for physiological and pharmacological study: Heart on a chip. Lab on A Chip, 2011, 11, 4165.	6.0	452
47	Mechanotransduction: the role of mechanical stress, myocyte shape, and cytoskeletal architecture on cardiac function. Pflugers Archiv European Journal of Physiology, 2011, 462, 89-104.	2.8	184
48	Tumor-Associated Embryonic Antigen-Expressing Vaccines that Target CCR6 Elicit Potent CD8+ T Cell-Mediated Protective and Therapeutic Antitumor Immunity. Journal of Immunology, 2007, 179, 1381-1388.	0.8	24