Lauren D Black

List of Publications by Year
in descending order

54 papers	4,833 citations	218677 26 h-index	197818 49 g-index
57 all docs	57 docs citations	57 times ranked	6925 citing authors

#	Article	IF	Citations
1	Selfâ€Assembled Human Skin Equivalents Model Macrophage Activation of Cutaneous Fibrogenesis in Systemic Sclerosis. Arthritis and Rheumatology, 2022, 74, 1245-1256.	5.6	5
2	RNA sequencing indicates age-dependent shifts in the cardiac fibroblast transcriptome between fetal, neonatal, and adult developmental ages. Physiological Genomics, 2021, 53, 414-429.	2.3	5
3	Systemic Sclerosis Dermal Fibroblasts Induce Cutaneous Fibrosis Through Lysyl Oxidaseâ€“like 4: New Evidence From Threeâ€Dimensional Skinâ€like Tissues. Arthritis and Rheumatology, 2020, 72, 791-801.	5.6	23
4	The effects of membrane potential and extracellular matrix composition on vascular differentiation of cardiac progenitor cells. Biochemical and Biophysical Research Communications, 2020, 530, 240-245.	2.1	1
5	Stimuli-responsive composite biopolymer actuators with selective spatial deformation behavior. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14602-14608.	7.1	63
6	From biomimicry to bioelectronics: Smart materials for cardiac tissue engineering. Nano Research, 2020, 13, 1253-1267.	10.4	25
7	Heart-on-a-Chip Model with Integrated Extra- and Intracellular Bioelectronics for Monitoring Cardiac Electrophysiology under Acute Hypoxia. Nano Letters, 2020, 20, 2585-2593.	9.1	124
8	Cell-Matrix Interactions in Cardiac Development and Disease. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2020, , 311-342.	1.0	1
9	A FRESH SLATE for 3D bioprinting. Science, 2019, 365, 446-447.	12.6	39
10	3D extracellular matrix microenvironment in bioengineered tissue models of primary pediatric and adult brain tumors. Nature Communications, 2019, 10, 4529.	12.8	80
11	Bioengineered <i>in Vitro</i> Tissue Model of Fibroblast Activation for Modeling Pulmonary Fibrosis. ACS Biomaterials Science and Engineering, 2019, 5, 2417-2429.	5.2	40
12	Knockdown of CD44 expression decreases valve interstitial cell calcification in vitro. American Journal of Physiology - Heart and Circulatory Physiology, 2019, 317, H26-H36.	3.2	5
13	Functional maturation of human neural stem cells in a 3D bioengineered brain model enriched with fetal brain-derived matrix. Scientific Reports, 2019, 9, 17874.	3.3	46
14	Lysyl oxidase enzymes mediate TGF-Î²1-induced fibrotic phenotypes in human skin-like tissues. Laboratory Investigation, 2019, 99, 514-527.	3.7	22
15	In Situ Gelling Scaffolds Loaded with Platelet Growth Factors to Improve Cardiomyocyte Survival after Ischemia. ACS Biomaterials Science and Engineering, 2019, 5, 329-338.	5.2	11
16	Engineered cell and tissue models of pulmonary fibrosis. Advanced Drug Delivery Reviews, 2018, 129, 78-94.	13.7	108
17	Bioengineering Human Lung Grafts on Porcine Matrix. Annals of Surgery, 2018, 267, 590-598.	4.2	80
18	Applications of Cardiac Extracellular Matrix in Tissue Engineering and Regenerative Medicine. Advances in Experimental Medicine and Biology, 2018, 1098, 59-83.	1.6	10

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19	Electrospun Gelatinâ€"Chondroitin Sulfate Scaffolds Loaded with Platelet Lysate Promote Immature Cardiomyocyte Proliferation. Polymers, 2018, 10, 208.	4.5	24
20	Conditional deletion of RB1 in the Tie2 lineage leads to aortic valve regurgitation. PLoS ONE, 2018, 13, e0190623.	2.5	4
21	Investigation into the effects of varying frequency of mechanical stimulation in a cycle-by-cycle manner on engineered cardiac construct function. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 342-353.	2.7	15
22	Non-destructive two-photon excited fluorescence imaging identifies early nodules in calcific aortic-valve disease. Nature Biomedical Engineering, 2017, 1, 914-924.	22.5	29
23	In vitro and in vivo analysis of visible light crosslinkable gelatin methacryloyl (GelMA) hydrogels. Biomaterials Science, 2017, 5, 2093-2105.	5.4	218
24	Lysyl oxidase expression in cardiac fibroblasts is regulated by Î±2Î²1 integrin interactions with the cellular microenvironment. Biochemical and Biophysical Research Communications, 2016, 475, 70-75.	2.1	22
25	Elastic, silk-cardiac extracellular matrix hydrogels exhibit time-dependent stiffening that modulates cardiac fibroblast response. Journal of Biomedical Materials Research - Part A, 2016, 104, 3058-3072.	4.0	48
26	Optical metrics of the extracellular matrix predict compositional and mechanical changes after myocardial infarction. Scientific Reports, 2016, 6, 35823.	3.3	35
27	Fetal Brain Extracellular Matrix Boosts Neuronal Network Formation in 3D Bioengineered Model of Cortical Brain Tissue. ACS Biomaterials Science and Engineering, 2016, 2, 131-140.	5.2	100
28	Electrical and mechanical stimulation of cardiac cells and tissue constructs. Advanced Drug Delivery Reviews, 2016, 96, 135-155.	13.7	210
29	Partially Digested Adult Cardiac Extracellular Matrix Promotes Cardiomyocyte Proliferation In Vitro. Advanced Healthcare Materials, 2015, 4, 1545-1554.	7.6	35
30	Anisotropic silk biomaterials containing cardiac extracellular matrix for cardiac tissue engineering. Biomedical Materials (Bristol), 2015, 10, 034105.	3.3	81
31	Beta 1 integrin binding plays a role in the constant traction force generation in response to varying stiffness for cells grown on mature cardiac extracellular matrix. Experimental Cell Research, 2015, 330, 311-324.	2.6	31
32	Clinical Applications of Naturally Derived Biopolymer-Based Scaffolds for Regenerative Medicine. Annals of Biomedical Engineering, 2015, 43, 657-680.	2.5	119
33	An in vitro model for the assessment of stem cell fate following implantation within the infarct microenvironment identifies ISL-1 expression as the strongest predictor of c-Kit+ cardiac progenitor cells' therapeutic potential. Journal of Molecular and Cellular Cardiology, 2015, 88, 91-100.	1.9	11
34	Cardiac extracellular matrixâ€"fibrin hybrid scaffolds with tunable properties for cardiovascular tissue engineering. Acta Biomaterialia, 2015, 14, 84-95.	8.3	104
35	The Role of Extracellular Matrix in Cardiac Development. , 2015, , 1-35.		23
36	The Effect of Mechanotransduction and ECM Proteins on the Development of Calcific Nodules: A Model System for CAVD. FASEB Journal, 2015, 29, 890.18.	0.5	0

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37	Evaluation of anisotropic silk sponges containing cardiac ECM for cardiac tissue engineering. , 2014, , .		0
38	It's all in the timing: Modeling isovolumic contraction through development and disease with a dynamic dual electromechanical bioreactor system. Organogenesis, 2014, 10, 317-322.	1.2	13
39	Alterations in membrane potential promote neonatal cardiomyocyte proliferation. , 2014, , .		0
40	Cardiac Fibroblasts Support Endothelial Cell Proliferation and Sprout Formation but not the Development of Multicellular Sprouts in a Fibrin Gel Co-Culture Model. Annals of Biomedical Engineering, 2014, 42, 1074-1084.	2.5	23
41	Development of an Arbitrary Waveform Membrane Stretcher for Dynamic Cell Culture. Annals of Biomedical Engineering, 2014, 42, 1062-1073.	2.5	11
42	Depolarization of Cellular Resting Membrane Potential Promotes Neonatal Cardiomyocyte Proliferation In Vitro. Cellular and Molecular Bioengineering, 2014, 7, 432-445.	2.1	23
43	Influence of collagen fiber architecture on calcific aortic valve disease progression. , 2014, , .		0
44	Creation of a Bioreactor for the Application of Variable Amplitude Mechanical Stimulation of Fibrin Gel-Based Engineered Cardiac Tissue. Methods in Molecular Biology, 2014, 1181, 177-187.	0.9	11
45	Mesenchymal stem cells ability to generate traction stress in response to substrate stiffness is modulated by the changing extracellular matrix composition of the heart during development. Biochemical and Biophysical Research Communications, 2013, 439, 161-166.	2.1	72
46	Strategies for Tissue Engineering Cardiac Constructs to Affect Functional Repair Following Myocardial Infarction. Journal of Cardiovascular Translational Research, 2011, 4, 575-91.	2.4	54
47	Cell-Induced Alignment Augments Twitch Force in Fibrin Gelâ€"Based Engineered Myocardium via Gap Junction Modification. Tissue Engineering - Part A, 2009, 15, 3099-3108.	3.1	145
48	Perfusion-decellularized matrix: using nature's platform to engineer a bioartificial heart. Nature Medicine, 2008, 14, 213-221.	30.7	2,385
49	Mechanical and Failure Properties of Extracellular Matrix Sheets as a Function of Structural Protein Composition. Biophysical Journal, 2008, 94, 1916-1929.	0.5	64
50	Differential effects of static and cyclic stretching during elastase digestion on the mechanical properties of extracellular matrices. Journal of Applied Physiology, 2007, 103, 803-811.	2.5	24
51	Effects of elastase on the mechanical and failure properties of engineered elastin-rich matrices. Journal of Applied Physiology, 2005, 98, 1434-1441.	2.5	33
52	Mechanics, nonlinearity, and failure strength of lung tissue in a mouse model of emphysema: possible role of collagen remodeling. Journal of Applied Physiology, 2005, 98, 503-511.	2.5	122
53	Relating maximum airway dilation and subsequent reconstriction to reactivity in human lungs. Journal of Applied Physiology, 2004, 96, 1808-1814.	2.5	39
54	Effects of posture and bronchoconstriction on low-frequency input and transfer impedances in humans. Journal of Applied Physiology, 2004, 97, 109-118.	2.5	11