Aaron B Baker

List of Publications by Year
in descending order

63 papers	2,362 citations	218677 26 h-index	233421 45 g-index
67 all docs	67 docs citations	67 times ranked	3587 citing authors

#	Article	IF	Citations
1	Therapeutic strategies for enhancing angiogenesis in wound healing. Advanced Drug Delivery Reviews, 2019, 146, 97-125.	13.7	448
2	Biomaterials and Nanotherapeutics for Enhancing Skin Wound Healing. Frontiers in Bioengineering and Biotechnology, 2016, 4, 82.	4.1	216
3	Natural History of Experimental Coronary Atherosclerosis and Vascular Remodeling in Relation to Endothelial Shear Stress. Circulation, 2010, 121, 2092-2101.	1.6	168
4	Augmented Expression and Activity of Extracellular Matrix-Degrading Enzymes in Regions of Low Endothelial Shear Stress Colocalize With Coronary Atheromata With Thin Fibrous Caps in Pigs. Circulation, 2011, 123, 621-630.	1.6	142
5	The role of low endothelial shear stress in the conversion of atherosclerotic lesions from stable to unstable plaque. Current Opinion in Cardiology, 2009, 24, 580-590.	1.8	106
6	Loss of Syndecan-1 Induces a Pro-inflammatory Phenotype in Endothelial Cells with a Dysregulated Response to Atheroprotective Flow. Journal of Biological Chemistry, 2014, 289, 9547-9559.	3.4	106
7	Syndecan-4 proteoliposomes enhance fibroblast growth factor-2 (FGF-2)â€“induced proliferation, migration, and neovascularization of ischemic muscle. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1679-1684.	7.1	89
8	Algal Polysaccharides as Therapeutic Agents for Atherosclerosis. Frontiers in Cardiovascular Medicine, 2018, 5, 153.	2.4	84
9	Endothelial Cells Provide Feedback Control for Vascular Remodeling Through a Mechanosensitive Autocrine TGF-Î² Signaling Pathway. Circulation Research, 2008, 103, 289-297.	4.5	73
10	Heparanase Regulates Thrombosis in Vascular Injury and Stent-Induced Flow Disturbance. Journal of the American College of Cardiology, 2012, 59, 1551-1560.	2.8	58
11	Nanoscale Strategies: Treatment for Peripheral Vascular Disease and Critical Limb Ischemia. ACS Nano, 2015, 9, 3436-3452.	14.6	55
12	Heparanase Alters Arterial Structure, Mechanics, and Repair Following Endovascular Stenting in Mice. Circulation Research, 2009, 104, 380-387.	4.5	54
13	Syndecan-4 enhances PDGF-BB activity in diabetic wound healing. Acta Biomaterialia, 2016, 42, 56-65.	8.3	54
14	Regulation of heparanase expression in coronary artery disease in diabetic, hyperlipidemic swine. Atherosclerosis, 2010, 213, 436-442.	0.8	53
15	Synergistic Effects of Matrix Nanotopography and Stiffness on Vascular Smooth Muscle Cell Function. Tissue Engineering - Part A, 2014, 20, 2115-2126.	3.1	48
16	A multichannel dampened flow system for studies on shear stress-mediated mechanotransduction. Lab on A Chip, 2012, 12, 3322.	6.0	47
17	Glypican-1 nanoliposomes for potentiating growth factor activity in therapeutic angiogenesis. Biomaterials, 2016, 94, 45-56.	11.4	38
18	A tunable delivery platform to provide local chemotherapy for pancreatic ductal adenocarcinoma. Biomaterials, 2016, 93, 71-82.	11.4	35

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19	Syndesome Therapeutics for Enhancing Diabetic Wound Healing. Advanced Healthcare Materials, 2016, 5, 2248-2260.	7.6	35
20	Mechanobiological conditioning of mesenchymal stem cells for enhanced vascular regeneration. Nature Biomedical Engineering, 2021, 5, 89-102.	22.5	35
21	Overcoming disease-induced growth factor resistance in therapeutic angiogenesis using recombinant co-receptors delivered by a liposomal system. Biomaterials, 2014, 35, 196-205.	11.4	34
22	Syndecanâ€4 Enhances Therapeutic Angiogenesis after Hind Limb Ischemia in Mice with Type 2 Diabetes. Advanced Healthcare Materials, 2016, 5, 1008-1013.	7.6	34
23	Analysis of a highâ€throughput coneâ€andâ€plate apparatus for the application of defined spatiotemporal flow to cultured cells. Biotechnology and Bioengineering, 2013, 110, 1782-1793.	3.3	31
24	Attenuation of inflammation and expansive remodeling by Valsartan alone or in combination with Simvastatin in high-risk coronary atherosclerotic plaques. Atherosclerosis, 2009, 203, 387-394.	0.8	30
25	Biomechanical Regulation of Mesenchymal Stem Cells for Cardiovascular Tissue Engineering. Advanced Healthcare Materials, 2017, 6, 1700556.	7.6	30
26	Recruitment and therapeutic application of macrophages in skeletal muscles after hind limb ischemia. Journal of Vascular Surgery, 2018, 67, 1908-1920.e1.	1.1	30
27	<sup />Glioblastoma Exosomes for Therapeutic Angiogenesis in Peripheral Ischemia. Tissue Engineering - Part A, 2017, 23, 1251-1261.	3.1	29
28	Syndecan-1 Regulates Vascular Smooth Muscle Cell Phenotype. PLoS ONE, 2014, 9, e89824.	2.5	27
29	A novel system for studying mechanical strain waveform-dependent responses in vascular smooth muscle cells. Lab on A Chip, 2013, 13, 4573.	6.0	23
30	A high-throughput mechanofluidic screening platform for investigating tumor cell adhesion during metastasis. Lab on A Chip, 2016, 16, 142-152.	6.0	23
31	High Throughput Label Free Measurement of Cancer Cell Adhesion Kinetics Under Hemodynamic Flow. Scientific Reports, 2016, 6, 19854.	3.3	20
32	Genome wide analysis of gene expression changes in skin from patients with type 2 diabetes. PLoS ONE, 2020, 15, e0225267.	2.5	17
33	Syndecan-1 in mechanosensing of nanotopological cues in engineered materials. Biomaterials, 2018, 155, 13-24.	11.4	16
34	Molecular tension in syndecan-1 is regulated by extracellular mechanical cues and fluidic shear stress. Biomaterials, 2021, 275, 120947.	11.4	12
35	A Novel Small-Specimen Planar Biaxial Testing System With Full In-Plane Deformation Control. Journal of Biomechanical Engineering, 2018, 140, .	1.3	11
36	Biomechanical regulation of breast cancer metastasis and progression. Scientific Reports, 2021, 11, 9838.	3.3	10

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37	Transmembrane stem cell factor protein therapeutics enhance revascularization in ischemia without mast cell activation. Nature Communications, 2022, 13, 2497.	12.8	8
38	Computational Analysis of Fluid Flow Within a Device for Applying Biaxial Strain to Cultured Cells. Journal of Biomechanical Engineering, 2015, 137, 051006.	1.3	7
39	Preclinical Model of Hind Limb Ischemia in Diabetic Rabbits. Journal of Visualized Experiments, 2019, , .	0.3	6
40	A high throughput screening system for studying the effects of applied mechanical forces on reprogramming factor expression. Scientific Reports, 2020, 10, 15469.	3.3	5
41	Murine Model of Femoral Artery Wire Injury with Implantation of a Perivascular Drug Delivery Patch. Journal of Visualized Experiments, 2015, , e52403.	0.3	3
42	Effects of Mechanical Forces on Cells and Tissues. , 2020, , 717-733.		3
43	A rapid, nondestructive method for vascular network visualization. BioTechniques, 2020, 69, 443-449.	1.8	2
44	Optimized design of a hyperflexible sieve electrode to enhance neurovascular regeneration for a peripheral neural interface. Biomaterials, 2021, 275, 120924.	11.4	1
45	Stent Today, Gone Tomorrow. Science Translational Medicine, 2012, 4, .	12.4	1
46	Emulating Biomechanical Environments in Microengineered Systems. , 2020, , 3-36.		1
47	The Role of Syndecanâ€1 in Arterial Mechanotransduction. FASEB Journal, 2010, 24, 480.1.	0.5	1
48	Bridging the Gap for Small-Diameter Vascular Grafts. Science Translational Medicine, 2012, 4, .	12.4	1
49	T Cells Gone Bad in Heart Disease. Science Translational Medicine, 2012, 4, .	12.4	0
50	To Serve and Neuro-Protect. Science Translational Medicine, 2012, 4, .	12.4	0
51	Calming RAGE in Alzheimerâ€™s Disease. Science Translational Medicine, 2012, 4, .	12.4	0
52	A New Trick of the Light: Saving the Heart from Ischemia. Science Translational Medicine, 2012, 4, .	12.4	0
53	Cutting the Supply Lines in Cancer and Retinal Disease. Science Translational Medicine, 2012, 4, .	12.4	0
54	Restoring Rhythm in the Broken Heart. Science Translational Medicine, 2012, 4, .	12.4	0

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55	Come Together: Antibody Linkers to Combat Hemophilia. Science Translational Medicine, 2012, 4, .	12.4	0
56	Calling All Satellite Cells!. Science Translational Medicine, 2012, 4, .	12.4	0
57	Warranted Wiretapping: Listening in on Cancerâ€™s Conversations. Science Translational Medicine, 2012, 4, .	12.4	0
58	Remaking the Brain with Stem Cells. Science Translational Medicine, 2013, 5, .	12.4	0
59	TRIPpinâ€™ on a Fat Cell. Science Translational Medicine, 2013, 5, .	12.4	0
60	Abstract 54: Syndesome-Based Dressings for Enhanced Wound Healing in Diabetic Ulcers. Arteriosclerosis, Thrombosis, and Vascular Biology, 2015, 35, .	2.4	0
61	Abstract 347: Early Drug-Induced Inhibition of Proatherogenic Genes in Coronary Regions of Low Endothelial Shear Stress in Diabetic Hyperlipidemic Juvenile Swine. Arteriosclerosis, Thrombosis, and Vascular Biology, 2012, 32, .	2.4	0
62	Abstract 176: The Edge Effect: How Syndecan-1 Can Increase the Therapeutic Efficacy of Vasoregulatory Drugs and Growth Factors. Arteriosclerosis, Thrombosis, and Vascular Biology, 2013, 33, .	2.4	0
63	Abstract 493: Syndesomes: An Syndecan-4 Based Therapeutic for Effective Revascularization in Peripheral Ischemia in Diabetes. Arteriosclerosis, Thrombosis, and Vascular Biology, 2015, 35, .	2.4	0