

# Aaron B Baker

## List of Publications by Year in descending order

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Version: 2024-02-01

63  
papers

2,362  
citations

218592

26  
h-index

233338

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. <i>Advanced Drug Delivery Reviews</i> , 2019, 146, 97-125.	6.6	448
2	Biomaterials and Nanotherapeutics for Enhancing Skin Wound Healing. <i>Frontiers in Bioengineering and Biotechnology</i> , 2016, 4, 82.	2.0	216
3	Natural History of Experimental Coronary Atherosclerosis and Vascular Remodeling in Relation to Endothelial Shear Stress. <i>Circulation</i> , 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. <i>Circulation</i> , 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. <i>Current Opinion in Cardiology</i> , 2009, 24, 580-590.	0.8	106
6	Loss of Syndecan-1 Induces a Pro-inflammatory Phenotype in Endothelial Cells with a Dysregulated Response to Atheroprotective Flow. <i>Journal of Biological Chemistry</i> , 2014, 289, 9547-9559.	1.6	106
7	Syndecan-4 proteoliposomes enhance fibroblast growth factor-2 (FGF-2) induced proliferation, migration, and neovascularization of ischemic muscle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 1679-1684.	3.3	89
8	Algal Polysaccharides as Therapeutic Agents for Atherosclerosis. <i>Frontiers in Cardiovascular Medicine</i> , 2018, 5, 153.	1.1	84
9	Endothelial Cells Provide Feedback Control for Vascular Remodeling Through a Mechanosensitive Autocrine TGF- $\beta$ 2 Signaling Pathway. <i>Circulation Research</i> , 2008, 103, 289-297.	2.0	73
10	Heparanase Regulates Thrombosis in Vascular Injury and Stent-Induced Flow Disturbance. <i>Journal of the American College of Cardiology</i> , 2012, 59, 1551-1560.	1.2	58
11	Nanoscale Strategies: Treatment for Peripheral Vascular Disease and Critical Limb Ischemia. <i>ACS Nano</i> , 2015, 9, 3436-3452.	7.3	55
12	Heparanase Alters Arterial Structure, Mechanics, and Repair Following Endovascular Stenting in Mice. <i>Circulation Research</i> , 2009, 104, 380-387.	2.0	54
13	Syndecan-4 enhances PDGF-BB activity in diabetic wound healing. <i>Acta Biomaterialia</i> , 2016, 42, 56-65.	4.1	54
14	Regulation of heparanase expression in coronary artery disease in diabetic, hyperlipidemic swine. <i>Atherosclerosis</i> , 2010, 213, 436-442.	0.4	53
15	Synergistic Effects of Matrix Nanotopography and Stiffness on Vascular Smooth Muscle Cell Function. <i>Tissue Engineering - Part A</i> , 2014, 20, 2115-2126.	1.6	48
16	A multichannel dampened flow system for studies on shear stress-mediated mechanotransduction. <i>Lab on A Chip</i> , 2012, 12, 3322.	3.1	47
17	Glypican-1 nanoliposomes for potentiating growth factor activity in therapeutic angiogenesis. <i>Biomaterials</i> , 2016, 94, 45-56.	5.7	38
18	A tunable delivery platform to provide local chemotherapy for pancreatic ductal adenocarcinoma. <i>Biomaterials</i> , 2016, 93, 71-82.	5.7	35

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19	Syndesome Therapeutics for Enhancing Diabetic Wound Healing. <i>Advanced Healthcare Materials</i> , 2016, 5, 2248-2260.	3.9	35
20	Mechanobiological conditioning of mesenchymal stem cells for enhanced vascular regeneration. <i>Nature Biomedical Engineering</i> , 2021, 5, 89-102.	11.6	35
21	Overcoming disease-induced growth factor resistance in therapeutic angiogenesis using recombinant co-receptors delivered by a liposomal system. <i>Biomaterials</i> , 2014, 35, 196-205.	5.7	34
22	Syndecan-4 Enhances Therapeutic Angiogenesis after Hind Limb Ischemia in Mice with Type 2 Diabetes. <i>Advanced Healthcare Materials</i> , 2016, 5, 1008-1013.	3.9	34
23	Analysis of a high-throughput cone-and-plate apparatus for the application of defined spatiotemporal flow to cultured cells. <i>Biotechnology and Bioengineering</i> , 2013, 110, 1782-1793.	1.7	31
24	Attenuation of inflammation and expansive remodeling by Valsartan alone or in combination with Simvastatin in high-risk coronary atherosclerotic plaques. <i>Atherosclerosis</i> , 2009, 203, 387-394.	0.4	30
25	Biomechanical Regulation of Mesenchymal Stem Cells for Cardiovascular Tissue Engineering. <i>Advanced Healthcare Materials</i> , 2017, 6, 1700556.	3.9	30
26	Recruitment and therapeutic application of macrophages in skeletal muscles after hind limb ischemia. <i>Journal of Vascular Surgery</i> , 2018, 67, 1908-1920.e1.	0.6	30
27	<sup />Glioblastoma Exosomes for Therapeutic Angiogenesis in Peripheral Ischemia. <i>Tissue Engineering - Part A</i> , 2017, 23, 1251-1261.	1.6	29
28	Syndecan-1 Regulates Vascular Smooth Muscle Cell Phenotype. <i>PLoS ONE</i> , 2014, 9, e89824.	1.1	27
29	A novel system for studying mechanical strain waveform-dependent responses in vascular smooth muscle cells. <i>Lab on A Chip</i> , 2013, 13, 4573.	3.1	23
30	A high-throughput mechanofluidic screening platform for investigating tumor cell adhesion during metastasis. <i>Lab on A Chip</i> , 2016, 16, 142-152.	3.1	23
31	High Throughput Label Free Measurement of Cancer Cell Adhesion Kinetics Under Hemodynamic Flow. <i>Scientific Reports</i> , 2016, 6, 19854.	1.6	20
32	Genome wide analysis of gene expression changes in skin from patients with type 2 diabetes. <i>PLoS ONE</i> , 2020, 15, e0225267.	1.1	17
33	Syndecan-1 in mechanosensing of nanotopological cues in engineered materials. <i>Biomaterials</i> , 2018, 155, 13-24.	5.7	16
34	Molecular tension in syndecan-1 is regulated by extracellular mechanical cues and fluidic shear stress. <i>Biomaterials</i> , 2021, 275, 120947.	5.7	12
35	A Novel Small-Specimen Planar Biaxial Testing System With Full In-Plane Deformation Control. <i>Journal of Biomechanical Engineering</i> , 2018, 140, .	0.6	11
36	Biomechanical regulation of breast cancer metastasis and progression. <i>Scientific Reports</i> , 2021, 11, 9838.	1.6	10

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37	Transmembrane stem cell factor protein therapeutics enhance revascularization in ischemia without mast cell activation. <i>Nature Communications</i> , 2022, 13, 2497.	5.8	8
38	Computational Analysis of Fluid Flow Within a Device for Applying Biaxial Strain to Cultured Cells. <i>Journal of Biomechanical Engineering</i> , 2015, 137, 051006.	0.6	7
39	Preclinical Model of Hind Limb Ischemia in Diabetic Rabbits. <i>Journal of Visualized Experiments</i> , 2019, , .	0.2	6
40	A high throughput screening system for studying the effects of applied mechanical forces on reprogramming factor expression. <i>Scientific Reports</i> , 2020, 10, 15469.	1.6	5
41	Murine Model of Femoral Artery Wire Injury with Implantation of a Perivascular Drug Delivery Patch. <i>Journal of Visualized Experiments</i> , 2015, , e52403.	0.2	3
42	Effects of Mechanical Forces on Cells and Tissues. , 2020, , 717-733.		3
43	A rapid, nondestructive method for vascular network visualization. <i>BioTechniques</i> , 2020, 69, 443-449.	0.8	2
44	Optimized design of a hyperflexible sieve electrode to enhance neurovascular regeneration for a peripheral neural interface. <i>Biomaterials</i> , 2021, 275, 120924.	5.7	1
45	Stent Today, Gone Tomorrow. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	1
46	Emulating Biomechanical Environments in Microengineered Systems. , 2020, , 3-36.		1
47	The Role of Syndecanâ€1 in Arterial Mechanotransduction. <i>FASEB Journal</i> , 2010, 24, 480.1.	0.2	1
48	Bridging the Gap for Small-Diameter Vascular Grafts. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	1
49	T Cells Gone Bad in Heart Disease. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
50	To Serve and Neuro-Protect. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
51	Calming RAGE in Alzheimerâ€™s Disease. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
52	A New Trick of the Light: Saving the Heart from Ischemia. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
53	Cutting the Supply Lines in Cancer and Retinal Disease. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
54	Restoring Rhythm in the Broken Heart. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0

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55	Come Together: Antibody Linkers to Combat Hemophilia. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
56	Calling All Satellite Cells!. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
57	Warranted Wiretapping: Listening in on Cancer's Conversations. <i>Science Translational Medicine</i> , 2012, 4, .	5.8	0
58	Remaking the Brain with Stem Cells. <i>Science Translational Medicine</i> , 2013, 5, .	5.8	0
59	TRIPin™ on a Fat Cell. <i>Science Translational Medicine</i> , 2013, 5, .	5.8	0
60	Abstract 54: Syndesome-Based Dressings for Enhanced Wound Healing in Diabetic Ulcers. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2015, 35, .	1.1	0
61	Abstract 347: Early Drug-Induced Inhibition of Proatherogenic Genes in Coronary Regions of Low Endothelial Shear Stress in Diabetic Hyperlipidemic Juvenile Swine. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2012, 32, .	1.1	0
62	Abstract 176: The Edge Effect: How Syndecan-1 Can Increase the Therapeutic Efficacy of Vasoregulatory Drugs and Growth Factors. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2013, 33, .	1.1	0
63	Abstract 493: Syndesomes: An Syndecan-4 Based Therapeutic for Effective Revascularization in Peripheral Ischemia in Diabetes. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2015, 35, .	1.1	0