Kartik Balachandran

List of Publications by Year
in descending order

35 papers	1,287 citations	471061 17 h-index	395343 33 g-index
36 all docs	36 docs citations	36 times ranked	1498 citing authors

#	Article	IF	Citations
1	Effect of Cyclic Uniaxial Mechanical Strain on Endothelial Progenitor Cell Differentiation. Cardiovascular Engineering and Technology, 2022, 13, 872-885.	0.7	4
2	Functional Analysis of the Cortical Transcriptome and Proteome Reveal Neurogenesis, Inflammation, and Cell Death after Repeated Traumatic Brain Injury <i>In vivo</i>. Neurotrauma Reports, 2022, 3, 224-239.	0.5	1
3	Anisotropic Fiber-Reinforced Glycosaminoglycan Hydrogels for Heart Valve Tissue Engineering. Tissue Engineering - Part A, 2021, 27, 513-525.	1.6	21
4	Label-Free Multiphoton Microscopy for the Detection and Monitoring of Calcific Aortic Valve Disease. Frontiers in Cardiovascular Medicine, 2021, 8, 688513.	1.1	3
5	Bloodâ€œBrain Barrier Breakdown and Astrocyte Reactivity Evident in the Absence of Behavioral Changes after Repeated Traumatic Brain Injury. Neurotrauma Reports, 2021, 2, 399-410.	0.5	9
6	Local Renin-Angiotensin System Signaling Mediates Cellular Function of Aortic Valves. Annals of Biomedical Engineering, 2021, 49, 3550.	1.3	1
7	Aortic valve cell microenvironment: Considerations for developing a valve-on-chip. Biophysics Reviews, 2021, 2, 041303.	1.0	1
8	Valve leafletâ€inspired elastomeric scaffolds with tunable and anisotropic mechanical properties. Polymers for Advanced Technologies, 2020, 31, 94-106.	1.6	19
9	Label-free optical biomarkers detect early calcific aortic valve disease in a wild-type mouse model. BMC Cardiovascular Disorders, 2020, 20, 521.	0.7	3
10	Label-free metabolic biomarkers for assessing valve interstitial cell calcific progression. Scientific Reports, 2020, 10, 10317.	1.6	7
11	Cues from the Nanoenvironment: The Role of Nanomaterials in Stem Cell Differentiation and Stem Cell Tissue Engineering. , 2020, , 361-400.		1
12	Repeated In Vitro Impact Conditioning of Astrocytes Decreases the Expression and Accumulation of Extracellular Matrix. Annals of Biomedical Engineering, 2019, 47, 967-979.	1.3	5
13	The role of fibroblast growth factor 1 and 2 on the pathological behavior of valve interstitial cells in a three-dimensional mechanically-conditioned model. Journal of Biological Engineering, 2019, 13, 45.	2.0	14
14	Using Dimensionless Numbers to Predict Centrifugal Jet-Spun Nanofiber Morphology. Journal of Nanomaterials, 2019, 2019, 1-14.	1.5	14
15	Characterization of uniaxial high-speed stretch as an in vitro model of mild traumatic brain injury on the blood-brain barrier. Neuroscience Letters, 2018, 672, 123-129.	1.0	12
16	Elevated Serotonin Interacts with Angiotensin-II to Result in Altered Valve Interstitial Cell Contractility and Remodeling. Cardiovascular Engineering and Technology, 2018, 9, 168-180.	0.7	8
17	Characterization of Biaxial Stretch as an In Vitro Model of Traumatic Brain Injury to the Blood-Brain Barrier. Molecular Neurobiology, 2018, 55, 258-266.	1.9	16
18	Mechanical Mediation of Signaling Pathways in Heart Valve Development and Disease. , 2018, , 241-262.		1

#	Article	IF	Citations
19	Fabrication of a matrigelâ€“collagen semi-interpenetrating scaffold for use in dynamic valve interstitial cell culture. Biomedical Materials (Bristol), 2017, 12, 045013.	1.7	22
20	Isolation of Endothelial Progenitor Cells from Human Umbilical Cord Blood. Journal of Visualized Experiments, 2017, , .	0.2	5
21	Engineering anisotropic biphasic Janusâ€type polymer nanofiber scaffold networks via centrifugal jet spinning. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 2455-2464.	1.6	29
22	Valve interstitial cell shape modulates cell contractility independent of cell phenotype. Journal of Biomechanics, 2016, 49, 3289-3297.	0.9	20
23	Valve interstitial cell contractile strength and metabolic state are dependent on its shape. Integrative Biology (United Kingdom), 2016, 8, 1079-1089.	0.6	32
24	Acetazolamide Mitigates Astrocyte Cellular Edema Following Mild Traumatic Brain Injury. Scientific Reports, 2016, 6, 33330.	1.6	42
25	The Mechanobiology of Drug-Induced Cardiac Valve Disease. Journal of Long-Term Effects of Medical Implants, 2015, 25, 27-40.	0.2	6
26	Characterization of thin poly(dimethylsiloxane)-based tissue-simulating phantoms with tunable reduced scattering and absorption coefficients at visible and near-infrared wavelengths. Journal of Biomedical Optics, 2014, 19, 115002.	1.4	40
27	Engineering hybrid polymer-protein super-aligned nanofibers via rotary jet spinning. Biomaterials, 2014, 35, 3188-3197.	5.7	134
28	Elevated cyclic stretch and serotonin result in altered aortic valve remodeling via a mechanosensitive 5-HT2A receptor-dependent pathway. Cardiovascular Pathology, 2012, 21, 206-213.	0.7	26
29	Cyclic strain induces dual-mode endothelial-mesenchymal transformation of the cardiac valve. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19943-19948.	3.3	145
30	Hemodynamics and Mechanobiology of Aortic Valve Inflammation and Calcification. International Journal of Inflammation, 2011, 2011, 1-15.	0.9	133
31	Aortic Valve Cyclic Stretch Causes Increased Remodeling Activity and Enhanced Serotonin Receptor Responsiveness. Annals of Thoracic Surgery, 2011, 92, 147-153.	0.7	43
32	The Effects of Combined Cyclic Stretch and Pressure on the Aortic Valve Interstitial Cell Phenotype. Annals of Biomedical Engineering, 2011, 39, 1654-1667.	1.3	49
33	Elevated Cyclic Stretch Induces Aortic Valve Calcification in a Bone Morphogenic Protein-Dependent Manner. American Journal of Pathology, 2010, 177, 49-57.	1.9	138
34	Elevated cyclic stretch alters matrix remodeling in aortic valve cusps: implications for degenerative aortic valve disease. American Journal of Physiology - Heart and Circulatory Physiology, 2009, 296, H756-H764.	1.5	172
35	An Ex Vivo Study of the Biological Properties of Porcine Aortic Valves in Response to Circumferential Cyclic Stretch. Annals of Biomedical Engineering, 2006, 34, 1655-1665.	1.3	110