Oscar J Abilez

List of Publications by Year
in descending order

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59 papers	4,963 citations	172386 29 h-index	254106 43 g-index
65 all docs	65 docs citations	65 times ranked	6742 citing authors

#	Article	IF	Citations
1	Chemically defined generation of human cardiomyocytes. Nature Methods, 2014, 11, 855-860.	9.0	1,320
2	Patient-Specific Induced Pluripotent Stem Cells as a Model for Familial Dilated Cardiomyopathy. Science Translational Medicine, 2012, 4, 130ra47.	5.8	590
3	Abnormal Calcium Handling Properties Underlie Familial Hypertrophic Cardiomyopathy Pathology in Patient-Specific Induced Pluripotent Stem Cells. Cell Stem Cell, 2013, 12, 101-113.	5.2	584
4	Human Engineered Heart Muscles Engraft and Survive Long Term in a Rodent Myocardial Infarction Model. Circulation Research, 2015, 117, 720-730.	2.0	197
5	A multiscale model for eccentric and concentric cardiac growth through sarcomerogenesis. Journal of Theoretical Biology, 2010, 265, 433-442.	0.8	192
6	Dynamic MicroRNA Expression Programs During Cardiac Differentiation of Human Embryonic Stem Cells. Circulation: Cardiovascular Genetics, 2010, 3, 426-435.	5.1	176
7	iPSC-derived cardiomyocytes reveal abnormal TGF-Î² signalling in left ventricular non-compaction cardiomyopathy. Nature Cell Biology, 2016, 18, 1031-1042.	4.6	148
8	Engineered heart tissues and induced pluripotent stem cells: Macro- and microstructures for disease modeling, drug screening, and translational studies. Advanced Drug Delivery Reviews, 2016, 96, 234-244.	6.6	136
9	A generic approach towards finite growth with examples of athlete's heart, cardiac dilation, and cardiac wall thickening. Journal of the Mechanics and Physics of Solids, 2010, 58, 1661-1680.	2.3	125
10	Effect of Human Donor Cell Source on Differentiation and Function of Cardiac Induced Pluripotent Stem Cells. Journal of the American College of Cardiology, 2014, 64, 436-448.	1.2	119
11	Passive Stretch Induces Structural and Functional Maturation of Engineered Heart Muscle as Predicted by Computational Modeling. Stem Cells, 2018, 36, 265-277.	1.4	111
12	An in Vivo miRNA Delivery System for Restoring Infarcted Myocardium. ACS Nano, 2019, 13, 9880-9894.	7.3	101
13	Stretching Skeletal Muscle: Chronic Muscle Lengthening through Sarcomerogenesis. PLoS ONE, 2012, 7, e45661.	1.1	92
14	Multiscale Computational Models for Optogenetic Control of Cardiac Function. Biophysical Journal, 2011, 101, 1326-1334.	0.2	91
15	Vascular anastomosis using controlled phase transitions in poloxamer gels. Nature Medicine, 2011, 17, 1147-1152.	15.2	84
16	Computational modeling of growth: systemic and pulmonary hypertension in the heart. Biomechanics and Modeling in Mechanobiology, 2011, 10, 799-811.	1.4	84
17	Anisotropic microfibrous scaffolds enhance the organization and function of cardiomyocytes derived from induced pluripotent stem cells. Biomaterials Science, 2017, 5, 1567-1578.	2.6	68
18	Big bottlenecks in cardiovascular tissue engineering. Communications Biology, 2018, 1, 199.	2.0	66

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19	Treatment of volumetric muscle loss in mice using nanofibrillar scaffolds enhances vascular organization and integration. Communications Biology, 2019, 2, 170.	2.0	64
20	Iliac fixation inhibits migration of both suprarenal and infrarenal aortic endografts. Journal of Vascular Surgery, 2007, 45, 250-257.	0.6	60
21	Prospective isolation of human embryonic stem cell-derived cardiovascular progenitors that integrate into human fetal heart tissue. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3405-3410.	3.3	57
22	A matrix micropatterning platform for cell localization and stem cell fate determination. Acta Biomaterialia, 2010, 6, 4614-4621.	4.1	49
23	Superficial femoral artery transposition repair for isolated superior mesenteric artery dissection. Journal of Vascular Surgery, 2005, 42, 788-791.	0.6	38
24	Lateral Movement of Endografts Within the Aneurysm Sac Is an Indicator of Stent-Graft Instability. Journal of Endovascular Therapy, 2008, 15, 335-343.	0.8	37
25	Endogenous Retrovirus-Derived lncRNA BANCR Promotes Cardiomyocyte Migration in Humans and Non-human Primates. Developmental Cell, 2020, 54, 694-709.e9.	3.1	37
26	In vivo imaging and evaluation of different biomatrices for improvement of stem cell survival. Journal of Tissue Engineering and Regenerative Medicine, 2007, 1, 465-468.	1.3	35
27	Computational optogenetics: A novel continuum framework for the photoelectrochemistry of living systems. Journal of the Mechanics and Physics of Solids, 2012, 60, 1158-1178.	2.3	33
28	Multi-cellular interactions sustain long-term contractility of human pluripotent stem cell-derived cardiomyocytes. American Journal of Translational Research (discontinued), 2014, 6, 724-35.	0.0	32
29	A Novel Culture System Shows that Stem Cells Can be Grown in 3D and Under Physiologic Pulsatile Conditions for Tissue Engineering of Vascular Grafts. Journal of Surgical Research, 2006, 132, 170-178.	0.8	30
30	CD13 and ROR2 Permit Isolation of Highly Enriched Cardiac Mesoderm from Differentiating Human Embryonic Stem Cells. Stem Cell Reports, 2016, 6, 95-108.	2.3	30
31	Label-free electrophysiological cytometry for stem cell-derived cardiomyocyte clusters. Lab on A Chip, 2013, 13, 220-228.	3.1	29
32	Robust pluripotent stem cell expansion and cardiomyocyte differentiationviageometric patterning. Integrative Biology (United Kingdom), 2013, 5, 1495-1506.	0.6	24
33	Cardiac optogenetics. , 2012, 2012, 1386-9.		19
34	P19 Progenitor Cells Progress to Organized Contracting Myocytes After Chemical and Electrical Stimulation:Implications for Vascular Tissue Engineering. Journal of Endovascular Therapy, 2006, 13, 377-388.	0.8	16
35	Partial Reprogramming of Pluripotent Stem Cell-Derived Cardiomyocytes into Neurons. Scientific Reports, 2017, 7, 44840.	1.6	16
36	Human pluripotent stem cell tools for cardiac optogenetics. , 2014, 2014, 6171-4.		13

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37	IN VITRO/IN SILICO CHARACTERIZATION OF ACTIVE AND PASSIVE STRESSES IN CARDIAC MUSCLE. International Journal for Multiscale Computational Engineering, 2012, 10, 171-188.	0.8	13
38	Transcriptome analysis of non human primate-induced pluripotent stem cell-derived cardiomyocytes in 2D monolayer culture vs. 3D engineered heart tissue. Cardiovascular Research, 2021, 117, 2125-2136.	1.8	12
39	Stretchable microelectrode array using room-temperature liquid alloy interconnects. Journal of Micromechanics and Microengineering, 2011, 21, 054015.	1.5	8
40	Optogenetic LED array for perturbing cardiac electrophysiology. , 2013, 2013, 1619-22.		5
41	A 3D boost. Nature Materials, 2016, 15, 259-261.	13.3	5
42	Stimulation and artifact-free extracellular electrophysiological recording of cells in suspension. , 2011, 2011, 4030-3.		4
43	Power Law as a Method for Ultrasound Detection of Internal Bleeding: In Vivo Rabbit Validation. IEEE Transactions on Biomedical Engineering, 2010, 57, 2870-2875.	2.5	3
44	Optophysiology of cardiomyocytes: characterizing cellular motion with quantitative phase imaging. Biomedical Optics Express, 2017, 8, 4652.	1.5	2
45	Characterizing Cardiomyocytes Motion with Quantitative Phase Imaging. , 2017, , .		2
46	Adaptative Media Remodeling of the Uterine Artery During Pregnancy. Fertility and Sterility, 2005, 84, S399.	0.5	1
47	In vitro and In silico Optogenetic Control of Differentiated Human Pluripotent Stem Cells. Biophysical Journal, 2011, 100, 368a.	0.2	1
48	Localized Control of Exsanguinating Arterial Hemorrhage: An Experimental Model. Polski Przeglad Chirurgiczny, 2011, 83, 1-9.	0.2	1
49	109. Journal of Minimally Invasive Gynecology, 2005, 12, 45-46.	0.3	0
50	A new culture system shows that stem cells can be grown in 3-D and under physiologic pulsatile conditions for tissue engineering of vascular grafts. Journal of Surgical Research, 2006, 130, 265.	0.8	0
51	P134. Journal of Surgical Research, 2007, 137, 289-290.	0.8	0
52	BioMEMS Platform for Electromechanical Stimulation of Cell Culture. , 2007, , .		0
53	In Vitro Assessment of Rat Heart Force Generation: A Quantitative Approach for Predicting Outcomes From Pluripotent Stem Cell-Derived Therapy for Myocardial Infarction. , 2010, , .		0
54	Electrophysiological Modeling of Channelrhodophsin-2 in Cardiac Cells. Biophysical Journal, 2011, 100, 437a.	0.2	0

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55	Computational Modelling of Optogenetics in Cardiac Cells. , 2012, , .		0
56	Differential stickiness. Nature Materials, 2013, 12, 474-476.	13.3	0
57	Human pluripotent stem cells (hPSCs) for heart regeneration. , 2014, , 297-324.		0
58	Pulsatile Pressure System for Cellular Mechanical Stimulation. , 2007, , .		0
59	Abstract 248: Aberrant TGFÎ² Signaling as an Etiology of Left Ventricular Non-compaction Cardiomyopathy. Circulation Research, 2015, 117, .	2.0	0