Tatsuya Shimizu

List of Publications by Year
in descending order

79 papers	9,145 citations	101543 36 h-index	71685 76 g-index
79 all docs	79 docs citations	79 times ranked	7296 citing authors

#	Article	IF	Citations
1	Aligned human induced pluripotent stem cell-derived cardiac tissue improves contractile properties through promoting unidirectional and synchronous cardiomyocyte contraction. Biomaterials, 2022, 281, 121351.	11.4	20
2	Cell-Based Microfluidic Device Utilizing Cell Sheet Technology. Cyborg and Bionic Systems, 2022, 2022, .	7.9	5
3	Proliferation and differentiation of primary bovine myoblasts using <i>Chlorella vulgaris</i> extract for sustainable production of cultured meat. Biotechnology Progress, 2022, 38, e3239.	2.6	24
4	Perfusable vascular tree like construction in 3D cell-dense tissues using artificial vascular bed. Microvascular Research, 2022, 141, 104321.	2.5	5
5	Functional Evaluation of Human Bioengineered Cardiac Tissue Using iPS Cells Derived from a Patient with Lamin Variant Dilated Cardiomyopathy. International Heart Journal, 2022, 63, 338-346.	1.0	5
6	In vitro ballooned hepatocytes can be produced by primary human hepatocytes and hepatic stellate cell sheets. Scientific Reports, 2022, 12, 5341.	3.3	4
7	Harvest of quality-controlled bovine myogenic cells and biomimetic bovine muscle tissue engineering for sustainable meat production. Biomaterials, 2022, 287, 121649.	11.4	14
8	Functional Analysis of Induced Human Ballooned Hepatocytes in a Cell Sheet-Based Three Dimensional Model. Tissue Engineering and Regenerative Medicine, 2021, 18, 217-224.	3.7	3
9	Measurement of Engineered Derived from Human iPS Cells. Methods in Molecular Biology, 2021, 2320, 161-170.	0.9	2
10	Fundamental Technologies and Recent Advances of Cell-Sheet-Based Tissue Engineering. International Journal of Molecular Sciences, 2021, 22, 425.	4.1	41
11	Development and Future of Cell Sheet-Based Tissue Engineering. Drug Delivery System, 2021, 36, 18-27.	0.0	1
12	Three-dimensional tissue fabrication system by co-culture of microalgae and animal cells for production of thicker and healthy cultured food. Biotechnology Letters, 2021, 43, 1117-1129.	2.2	12
13	Perfusable System Using Porous Collagen Gel Scaffold Actively Provides Fresh Culture Media to a Cultured 3D Tissue. International Journal of Molecular Sciences, 2021, 22, 6780.	4.1	8
14	Microalgal culture in animal cell waste medium for sustainable â€˜cultured foodâ€™ production. Archives of Microbiology, 2021, 203, 5525-5532.	2.2	9
15	Bioengineering of a scaffold-less three-dimensional tissue using net mould. Biofabrication, 2021, 13, 045019.	7.1	7
16	An organic transistor matrix for multipoint intracellular action potential recording. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	15
17	Assessment of human bioengineered cardiac tissue function in hypoxic and re-oxygenized environments to understand functional recovery in heart failure. Regenerative Therapy, 2021, 18, 66-75.	3.0	13
18	Allogeneic adipose-derived mesenchymal stem cell sheet that produces neurological improvement with angiogenesis and neurogenesis in a rat stroke model. Journal of Neurosurgery, 2020, 132, 442-455.	1.6	44

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19	In Vitro Production of Human Ballooned Hepatocytes in a Cell Sheet-based Three-dimensional Model. Tissue Engineering - Part A, 2020, 26, 93-101.	3.1	13
20	Mammalian cell cultivation using nutrients extracted from microalgae. Biotechnology Progress, 2020, 36, e2941.	2.6	31
21	Measuring the Contractile Force of Multilayered Human Cardiac Cell Sheets. Tissue Engineering - Part C: Methods, 2020, 26, 485-492.	2.1	6
22	A novel method to align cells in a cardiac tissueâ€like construct fabricated by cell sheetâ€based tissue engineering. Journal of Tissue Engineering and Regenerative Medicine, 2020, 14, 944-954.	2.7	25
23	Adequate taylor couette flow-mediated shear stress is useful for dissociating human iPS cell-derived cell aggregates. Regenerative Therapy, 2019, 12, 6-13.	3.0	5
24	Pulsatile tubular cardiac tissues fabricated by wrapping human iPS cells-derived cardiomyocyte sheets. Regenerative Therapy, 2019, 11, 297-305.	3.0	31
25	Recent progress in induced pluripotent stem cell-derived cardiac cell sheets for tissue engineering. BioScience Trends, 2019, 13, 292-298.	3.4	10
26	Analysis of force vector field during centrifugation for optimizing cell sheet adhesion. Biotechnology Progress, 2019, 35, e2857.	2.6	2
27	Ultrasoft electronics to monitor dynamically pulsing cardiomyocytes. Nature Nanotechnology, 2019, 14, 156-160.	31.5	195
28	Rapid fabrication of detachable threeâ€dimensional tissues by layering of cell sheets with heating centrifuge. Biotechnology Progress, 2018, 34, 692-701.	2.6	16
29	Induced Pluripotent Stem Cell Elimination in a Cell Sheet by Methionine-Free and 42Â°C Condition for Tumor Prevention. Tissue Engineering - Part C: Methods, 2018, 24, 605-615.	2.1	13
30	Engineered Human Contractile Myofiber Sheets as a Platform for Studies of Skeletal Muscle Physiology. Scientific Reports, 2018, 8, 13932.	3.3	54
31	Rapid creation system of morphologically and functionally communicative threeâ€dimensional cellâ€dense tissue by centrifugation. Biotechnology Progress, 2018, 34, 1447-1453.	2.6	5
32	Contractile force measurement of human induced pluripotent stem cell-derived cardiac cell sheet-tissue. PLoS ONE, 2018, 13, e0198026.	2.5	82
33	Three-dimensional functional human myocardial tissues fabricated from induced pluripotent stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 926-935.	2.7	54
34	Optical coherence microscopy of living cells and bioengineered tissue dynamics in high-resolution cross-section. , 2017, 105, 481-488.		2
35	Realâ€time quantitation of internal metabolic activity of threeâ€dimensional engineered tissues using an oxygen microelectrode and optical coherence tomography. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 855-864.	3.4	3
36	Thicker three-dimensional tissue from a â€œsymbiotic recycling systemâ€•combining mammalian cells and algae. Scientific Reports, 2017, 7, 41594.	3.3	47

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37	Tubular Cardiac Tissues Derived from Human Induced Pluripotent Stem Cells Generate Pulse Pressure In Vivo. Scientific Reports, 2017, 7, 45499.	3.3	48
38	Fabrication of micro-alginate gel tubes utilizing micro-gelatin fibers. Japanese Journal of Applied Physics, 2017, 56, 05EB06.	1.5	1
39	Three-Dimensional Human Cardiac Tissue Engineered by Centrifugation of Stacked Cell Sheets and Cross-Sectional Observation of Its Synchronous Beatings by Optical Coherence Tomography. BioMed Research International, 2017, 2017, 1-8.	1.9	13
40	TRPV-1-mediated elimination of residual iPS cells in bioengineered cardiac cell sheet tissues. Scientific Reports, 2016, 6, 21747.	3.3	35
41	Noninvasive cross-sectional observation of three-dimensional cell sheet-tissue-fabrication by optical coherence tomography. Biochemistry and Biophysics Reports, 2015, 2, 57-62.	1.3	7
42	Realâ€time, noninvasive optical coherence tomography of crossâ€sectional living cellâ€sheets <i>in vitro</i> and <i>in vivo</i>. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2015, 103, 1267-1273.	3.4	7
43	Time Course of Cell Sheet Adhesion to Porcine Heart Tissue after Transplantation. PLoS ONE, 2015, 10, e0137494.	2.5	22
44	Rapid fabrication system for threeâ€dimensional tissues using cell sheet engineering and centrifugation. Journal of Biomedical Materials Research - Part A, 2015, 103, 3825-3833.	4.0	16
45	Simple suspension culture system of human iPS cells maintaining their pluripotency for cardiac cell sheet engineering. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 1363-1375.	2.7	52
46	Cell sheet engineering for regenerative medicine: Current challenges and strategies. Biotechnology Journal, 2014, 9, 904-914.	3.5	156
47	Latest status of the clinical and industrial applications of cell sheet engineering and regenerative medicine. Archives of Pharmacal Research, 2014, 37, 96-106.	6.3	44
48	Automatic fabrication of 3-dimensional tissues using cell sheet manipulator technique. Biomaterials, 2014, 35, 2428-2435.	11.4	63
49	Human iPS cell-engineered cardiac tissue sheets with cardiomyocytes and vascular cells for cardiac regeneration. Scientific Reports, 2014, 4, 6716.	3.3	235
50	Cell Sheet Technology for Cardiac Tissue Engineering. Methods in Molecular Biology, 2014, 1181, 139-155.	0.9	29
51	In Vitro Engineering of Vascularized Tissue Surrogates. Scientific Reports, 2013, 3, 1316.	3.3	255
52	In vitro fabrication of functional three-dimensional tissues with perfusable blood vessels. Nature Communications, 2013, 4, 1399.	12.8	387
53	A device for the rapid transfer/transplantation of living cell sheets with the absence of cell damage. Biomaterials, 2013, 34, 9018-9025.	11.4	35
54	Enhanced Survival of Transplanted Human Induced Pluripotent Stem Cellâ€"Derived Cardiomyocytes by the Combination of Cell Sheets With the Pedicled Omental Flap Technique in a Porcine Heart. Circulation, 2013, 128, S87-94.	1.6	175

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55	Chondrocyte Differentiation of Human Endometrial Gland-Derived MSCs in Layered Cell Sheets. Scientific World Journal, The, 2013, 2013, 1-7.	2.1	18
56	Feasibility, Safety, and Therapeutic Efficacy of Human Induced Pluripotent Stem Cell-Derived Cardiomyocyte Sheets in a Porcine Ischemic Cardiomyopathy Model. Circulation, 2012, 126, S29-37.	1.6	421
57	Creation of human cardiac cell sheets using pluripotent stem cells. Biochemical and Biophysical Research Communications, 2012, 425, 321-327.	2.1	144
58	Fabrication of functional three-dimensional tissues by stacking cell sheets in vitro. Nature Protocols, 2012, 7, 850-858.	12.0	334
59	Tissue engineered myoblast sheets improved cardiac function sufficiently to discontinue LVAS in a patient with DCM: report of a case. Surgery Today, 2012, 42, 181-184.	1.5	298
60	Creation of mouse embryonic stem cell-derived cardiac cell sheets. Biomaterials, 2011, 32, 7355-7362.	11.4	92
61	Anisotropic cell sheets for constructing three-dimensional tissue with well-organized cell orientation. Biomaterials, 2011, 32, 8830-8838.	11.4	82
62	Thickness limitation and cell viability of multi-layered cell sheets and overcoming the diffusion limit by a porous-membrane culture insert. Journal of Biochips & Tissue Chips, 2011, 01, .	0.2	26
63	Electrical interaction between cardiomyocyte sheets separated by non-cardiomyocyte sheets in heterogeneous tissues. Journal of Tissue Engineering and Regenerative Medicine, 2010, 4, 291-299.	2.7	24
64	Design of prevascularized three-dimensional cell-dense tissues using a cell sheet stacking manipulation technology. Biomaterials, 2010, 31, 1646-1654.	11.4	281
65	Development of a New Assay System for Evaluating the Permeability of Various Substances Through Three-Dimensional Tissue. Tissue Engineering - Part C: Methods, 2010, 16, 685-692.	2.1	21
66	Aligned Cell Sheets Grown on Thermoâ€Responsive Substrates with Microcontact Printed Protein Patterns. Advanced Materials, 2009, 21, 2161-2164.	21.0	75
67	A thermoresponsive, microtextured substrate for cell sheet engineering with defined structural organization. Biomaterials, 2008, 29, 2565-2572.	11.4	127
68	Endothelial Cell Coculture Within Tissue-Engineered Cardiomyocyte Sheets Enhances Neovascularization and Improves Cardiac Function of Ischemic Hearts. Circulation, 2008, 118, S145-52.	1.6	357
69	Reconstruction of functional tissues with cell sheet engineering. Biomaterials, 2007, 28, 5033-5043.	11.4	444
70	Creation of myocardial tubes using cardiomyocyte sheets and an in vitro cell sheet-wrapping device. Biomaterials, 2007, 28, 3508-3516.	11.4	110
71	Bioengineered cardiac cell sheet grafts have intrinsic angiogenic potential. Biochemical and Biophysical Research Communications, 2006, 341, 573-582.	2.1	192
72	Monolayered mesenchymal stem cells repair scarred myocardium after myocardial infarction. Nature Medicine, 2006, 12, 459-465.	30.7	1,128

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73	Electrical coupling of cardiomyocyte sheets occurs rapidly via functional gap junction formation. Biomaterials, 2006, 27, 4765-4774.	11.4	174
74	Pulsatile Myocardial Tubes Fabricated With Cell Sheet Engineering. Circulation, 2006, 114, I-87-I-93.	1.6	117
75	Polysurgery of cell sheet grafts overcomes diffusion limits to produce thick, vascularized myocardial tissues. FASEB Journal, 2006, 20, 708-710.	0.5	457
76	Repair of impaired myocardium by means of implantation of engineered autologous myoblast sheets. Journal of Thoracic and Cardiovascular Surgery, 2005, 130, 1333-1341.	0.8	317
77	Cell sheet engineering for myocardial tissue reconstruction. Biomaterials, 2003, 24, 2309-2316.	11.4	638
78	Fabrication of Pulsatile Cardiac Tissue Grafts Using a Novel 3-Dimensional Cell Sheet Manipulation Technique and Temperature-Responsive Cell Culture Surfaces. Circulation Research, 2002, 90, e40.	4.5	860
79	In vitro circulation model driven by tissue-engineered dome-shaped cardiac tissue. Biofabrication, 0, , .	7.1	2