

# Tatsuya Shimizu

## List of Publications by Year in descending order

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Version: 2024-02-01

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	Monolayered mesenchymal stem cells repair scarred myocardium after myocardial infarction. <i>Nature Medicine</i> , 2006, 12, 459-465.	30.7	1,128
2	Fabrication of Pulsatile Cardiac Tissue Grafts Using a Novel 3-Dimensional Cell Sheet Manipulation Technique and Temperature-Responsive Cell Culture Surfaces. <i>Circulation Research</i> , 2002, 90, e40.	4.5	860
3	Cell sheet engineering for myocardial tissue reconstruction. <i>Biomaterials</i> , 2003, 24, 2309-2316.	11.4	638
4	Polysurgery of cell sheet grafts overcomes diffusion limits to produce thick, vascularized myocardial tissues. <i>FASEB Journal</i> , 2006, 20, 708-710.	0.5	457
5	Reconstruction of functional tissues with cell sheet engineering. <i>Biomaterials</i> , 2007, 28, 5033-5043.	11.4	444
6	Feasibility, Safety, and Therapeutic Efficacy of Human Induced Pluripotent Stem Cell-Derived Cardiomyocyte Sheets in a Porcine Ischemic Cardiomyopathy Model. <i>Circulation</i> , 2012, 126, S29-37.	1.6	421
7	In vitro fabrication of functional three-dimensional tissues with perfusable blood vessels. <i>Nature Communications</i> , 2013, 4, 1399.	12.8	387
8	Endothelial Cell Coculture Within Tissue-Engineered Cardiomyocyte Sheets Enhances Neovascularization and Improves Cardiac Function of Ischemic Hearts. <i>Circulation</i> , 2008, 118, S145-52.	1.6	357
9	Fabrication of functional three-dimensional tissues by stacking cell sheets in vitro. <i>Nature Protocols</i> , 2012, 7, 850-858.	12.0	334
10	Repair of impaired myocardium by means of implantation of engineered autologous myoblast sheets. <i>Journal of Thoracic and Cardiovascular Surgery</i> , 2005, 130, 1333-1341.	0.8	317
11	Tissue engineered myoblast sheets improved cardiac function sufficiently to discontinue LVAS in a patient with DCM: report of a case. <i>Surgery Today</i> , 2012, 42, 181-184.	1.5	298
12	Design of prevascularized three-dimensional cell-dense tissues using a cell sheet stacking manipulation technology. <i>Biomaterials</i> , 2010, 31, 1646-1654.	11.4	281
13	In Vitro Engineering of Vascularized Tissue Surrogates. <i>Scientific Reports</i> , 2013, 3, 1316.	3.3	255
14	Human iPS cell-engineered cardiac tissue sheets with cardiomyocytes and vascular cells for cardiac regeneration. <i>Scientific Reports</i> , 2014, 4, 6716.	3.3	235
15	Ultrasoft electronics to monitor dynamically pulsing cardiomyocytes. <i>Nature Nanotechnology</i> , 2019, 14, 156-160.	31.5	195
16	Bioengineered cardiac cell sheet grafts have intrinsic angiogenic potential. <i>Biochemical and Biophysical Research Communications</i> , 2006, 341, 573-582.	2.1	192
17	Enhanced Survival of Transplanted Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes by the Combination of Cell Sheets With the Pedicled Omental Flap Technique in a Porcine Heart. <i>Circulation</i> , 2013, 128, S87-94.	1.6	175
18	Electrical coupling of cardiomyocyte sheets occurs rapidly via functional gap junction formation. <i>Biomaterials</i> , 2006, 27, 4765-4774.	11.4	174

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19	Cell sheet engineering for regenerative medicine: Current challenges and strategies. <i>Biotechnology Journal</i> , 2014, 9, 904-914.	3.5	156
20	Creation of human cardiac cell sheets using pluripotent stem cells. <i>Biochemical and Biophysical Research Communications</i> , 2012, 425, 321-327.	2.1	144
21	A thermoresponsive, microtextured substrate for cell sheet engineering with defined structural organization. <i>Biomaterials</i> , 2008, 29, 2565-2572.	11.4	127
22	Pulsatile Myocardial Tubes Fabricated With Cell Sheet Engineering. <i>Circulation</i> , 2006, 114, I-87-I-93.	1.6	117
23	Creation of myocardial tubes using cardiomyocyte sheets and an in vitro cell sheet-wrapping device. <i>Biomaterials</i> , 2007, 28, 3508-3516.	11.4	110
24	Creation of mouse embryonic stem cell-derived cardiac cell sheets. <i>Biomaterials</i> , 2011, 32, 7355-7362.	11.4	92
25	Anisotropic cell sheets for constructing three-dimensional tissue with well-organized cell orientation. <i>Biomaterials</i> , 2011, 32, 8830-8838.	11.4	82
26	Contractile force measurement of human induced pluripotent stem cell-derived cardiac cell sheet-tissue. <i>PLoS ONE</i> , 2018, 13, e0198026.	2.5	82
27	Aligned Cell Sheets Grown on Thermo-responsive Substrates with Microcontact Printed Protein Patterns. <i>Advanced Materials</i> , 2009, 21, 2161-2164.	21.0	75
28	Automatic fabrication of 3-dimensional tissues using cell sheet manipulator technique. <i>Biomaterials</i> , 2014, 35, 2428-2435.	11.4	63
29	Three-dimensional functional human myocardial tissues fabricated from induced pluripotent stem cells. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2017, 11, 926-935.	2.7	54
30	Engineered Human Contractile Myofiber Sheets as a Platform for Studies of Skeletal Muscle Physiology. <i>Scientific Reports</i> , 2018, 8, 13932.	3.3	54
31	Simple suspension culture system of human iPS cells maintaining their pluripotency for cardiac cell sheet engineering. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2015, 9, 1363-1375.	2.7	52
32	Tubular Cardiac Tissues Derived from Human Induced Pluripotent Stem Cells Generate Pulse Pressure In Vivo. <i>Scientific Reports</i> , 2017, 7, 45499.	3.3	48
33	Thicker three-dimensional tissue from a "symbiotic recycling system" combining mammalian cells and algae. <i>Scientific Reports</i> , 2017, 7, 41594.	3.3	47
34	Latest status of the clinical and industrial applications of cell sheet engineering and regenerative medicine. <i>Archives of Pharmacal Research</i> , 2014, 37, 96-106.	6.3	44
35	Allogeneic adipose-derived mesenchymal stem cell sheet that produces neurological improvement with angiogenesis and neurogenesis in a rat stroke model. <i>Journal of Neurosurgery</i> , 2020, 132, 442-455.	1.6	44
36	Fundamental Technologies and Recent Advances of Cell-Sheet-Based Tissue Engineering. <i>International Journal of Molecular Sciences</i> , 2021, 22, 425.	4.1	41

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37	A device for the rapid transfer/transplantation of living cell sheets with the absence of cell damage. <i>Biomaterials</i> , 2013, 34, 9018-9025.	11.4	35
38	TRPV-1-mediated elimination of residual iPS cells in bioengineered cardiac cell sheet tissues. <i>Scientific Reports</i> , 2016, 6, 21747.	3.3	35
39	Pulsatile tubular cardiac tissues fabricated by wrapping human iPS cells-derived cardiomyocyte sheets. <i>Regenerative Therapy</i> , 2019, 11, 297-305.	3.0	31
40	Mammalian cell cultivation using nutrients extracted from microalgae. <i>Biotechnology Progress</i> , 2020, 36, e2941.	2.6	31
41	Cell Sheet Technology for Cardiac Tissue Engineering. <i>Methods in Molecular Biology</i> , 2014, 1181, 139-155.	0.9	29
42	Thickness limitation and cell viability of multi-layered cell sheets and overcoming the diffusion limit by a porous-membrane culture insert. <i>Journal of Biochips &amp; Tissue Chips</i> , 2011, 01, .	0.2	26
43	A novel method to align cells in a cardiac tissue-like construct fabricated by cell sheet-based tissue engineering. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2020, 14, 944-954.	2.7	25
44	Electrical interaction between cardiomyocyte sheets separated by non-cardiomyocyte sheets in heterogeneous tissues. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2010, 4, 291-299.	2.7	24
45	Proliferation and differentiation of primary bovine myoblasts using <i>Chlorella vulgaris</i> extract for sustainable production of cultured meat. <i>Biotechnology Progress</i> , 2022, 38, e3239.	2.6	24
46	Time Course of Cell Sheet Adhesion to Porcine Heart Tissue after Transplantation. <i>PLoS ONE</i> , 2015, 10, e0137494.	2.5	22
47	Development of a New Assay System for Evaluating the Permeability of Various Substances Through Three-Dimensional Tissue. <i>Tissue Engineering - Part C: Methods</i> , 2010, 16, 685-692.	2.1	21
48	Aligned human induced pluripotent stem cell-derived cardiac tissue improves contractile properties through promoting unidirectional and synchronous cardiomyocyte contraction. <i>Biomaterials</i> , 2022, 281, 121351.	11.4	20
49	Chondrocyte Differentiation of Human Endometrial Gland-Derived MSCs in Layered Cell Sheets. <i>Scientific World Journal</i> , The, 2013, 2013, 1-7.	2.1	18
50	Rapid fabrication system for three-dimensional tissues using cell sheet engineering and centrifugation. <i>Journal of Biomedical Materials Research - Part A</i> , 2015, 103, 3825-3833.	4.0	16
51	Rapid fabrication of detachable three-dimensional tissues by layering of cell sheets with heating centrifuge. <i>Biotechnology Progress</i> , 2018, 34, 692-701.	2.6	16
52	An organic transistor matrix for multipoint intracellular action potential recording. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	15
53	Harvest of quality-controlled bovine myogenic cells and biomimetic bovine muscle tissue engineering for sustainable meat production. <i>Biomaterials</i> , 2022, 287, 121649.	11.4	14
54	Three-Dimensional Human Cardiac Tissue Engineered by Centrifugation of Stacked Cell Sheets and Cross-Sectional Observation of Its Synchronous Beatings by Optical Coherence Tomography. <i>BioMed Research International</i> , 2017, 2017, 1-8.	1.9	13

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55	Induced Pluripotent Stem Cell Elimination in a Cell Sheet by Methionine-Free and 42°C Condition for Tumor Prevention. <i>Tissue Engineering - Part C: Methods</i> , 2018, 24, 605-615.	2.1	13
56	In Vitro Production of Human Ballooned Hepatocytes in a Cell Sheet-based Three-dimensional Model. <i>Tissue Engineering - Part A</i> , 2020, 26, 93-101.	3.1	13
57	Assessment of human bioengineered cardiac tissue function in hypoxic and re-oxygenized environments to understand functional recovery in heart failure. <i>Regenerative Therapy</i> , 2021, 18, 66-75.	3.0	13
58	Three-dimensional tissue fabrication system by co-culture of microalgae and animal cells for production of thicker and healthy cultured food. <i>Biotechnology Letters</i> , 2021, 43, 1117-1129.	2.2	12
59	Recent progress in induced pluripotent stem cell-derived cardiac cell sheets for tissue engineering. <i>BioScience Trends</i> , 2019, 13, 292-298.	3.4	10
60	Microalgal culture in animal cell waste medium for sustainable "cultured food"™ production. <i>Archives of Microbiology</i> , 2021, 203, 5525-5532.	2.2	9
61	Perfusable System Using Porous Collagen Gel Scaffold Actively Provides Fresh Culture Media to a Cultured 3D Tissue. <i>International Journal of Molecular Sciences</i> , 2021, 22, 6780.	4.1	8
62	Noninvasive cross-sectional observation of three-dimensional cell sheet-tissue-fabrication by optical coherence tomography. <i>Biochemistry and Biophysics Reports</i> , 2015, 2, 57-62.	1.3	7
63	Real-time, noninvasive optical coherence tomography of cross-sectional living cell sheets <i>in vitro</i> and <i>in vivo</i> . <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2015, 103, 1267-1273.	3.4	7
64	Bioengineering of a scaffold-less three-dimensional tissue using net mould. <i>Biofabrication</i> , 2021, 13, 045019.	7.1	7
65	Measuring the Contractile Force of Multilayered Human Cardiac Cell Sheets. <i>Tissue Engineering - Part C: Methods</i> , 2020, 26, 485-492.	2.1	6
66	Rapid creation system of morphologically and functionally communicative three-dimensional cell-dense tissue by centrifugation. <i>Biotechnology Progress</i> , 2018, 34, 1447-1453.	2.6	5
67	Adequate taylor couette flow-mediated shear stress is useful for dissociating human iPS cell-derived cell aggregates. <i>Regenerative Therapy</i> , 2019, 12, 6-13.	3.0	5
68	Cell-Based Microfluidic Device Utilizing Cell Sheet Technology. <i>Cyborg and Bionic Systems</i> , 2022, 2022, .	7.9	5
69	Perfusable vascular tree like construction in 3D cell-dense tissues using artificial vascular bed. <i>Microvascular Research</i> , 2022, 141, 104321.	2.5	5
70	Functional Evaluation of Human Bioengineered Cardiac Tissue Using iPS Cells Derived from a Patient with Lamin Variant Dilated Cardiomyopathy. <i>International Heart Journal</i> , 2022, 63, 338-346.	1.0	5
71	In vitro ballooned hepatocytes can be produced by primary human hepatocytes and hepatic stellate cell sheets. <i>Scientific Reports</i> , 2022, 12, 5341.	3.3	4
72	Real-time quantitation of internal metabolic activity of three-dimensional engineered tissues using an oxygen microelectrode and optical coherence tomography. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2017, 105, 855-864.	3.4	3

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73	Functional Analysis of Induced Human Ballooned Hepatocytes in a Cell Sheet-Based Three Dimensional Model. <i>Tissue Engineering and Regenerative Medicine</i> , 2021, 18, 217-224.	3.7	3
74	Optical coherence microscopy of living cells and bioengineered tissue dynamics in high-resolution cross-section. , 2017, 105, 481-488.		2
75	Analysis of force vector field during centrifugation for optimizing cell sheet adhesion. <i>Biotechnology Progress</i> , 2019, 35, e2857.	2.6	2
76	Measurement of Engineered Derived from Human iPS Cells. <i>Methods in Molecular Biology</i> , 2021, 2320, 161-170.	0.9	2
77	In vitro circulation model driven by tissue-engineered dome-shaped cardiac tissue. <i>Biofabrication</i> , 0, , .	7.1	2
78	Fabrication of micro-alginate gel tubes utilizing micro-gelatin fibers. <i>Japanese Journal of Applied Physics</i> , 2017, 56, 05EB06.	1.5	1
79	Development and Future of Cell Sheet-Based Tissue Engineering. <i>Drug Delivery System</i> , 2021, 36, 18-27.	0.0	1