

Robert Zweigerdt

List of Publications by Year in descending order

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Version: 2024-02-01

72
papers

4,291
citations

168829

31
h-index

129628

63
g-index

78
all docs

78
docs citations

78
times ranked

5452
citing authors

#	ARTICLE	IF	CITATIONS
1	Continuous human iPSC-macrophage mass production by suspension culture in stirred tank bioreactors. <i>Nature Protocols</i> , 2022, 17, 513-539.	5.5	28
2	Chemotherapy-Free Targeted Anti-BCR-ABL+ Acute Lymphoblastic Leukemia Therapy May Benefit the Heart. <i>Cancers</i> , 2022, 14, 983.	1.7	0
3	Targeted biallelic integration of an inducible Caspase 9 suicide gene in iPSCs for safer therapies. <i>Molecular Therapy - Methods and Clinical Development</i> , 2022, 26, 84-94.	1.8	6
4	Dissecting mechanisms of chamber-specific cardiac differentiation and its perturbation following retinoic acid exposure. <i>Development (Cambridge)</i> , 2022, 149, .	1.2	5
5	Human heart-forming organoids recapitulate early heart and foregut development. <i>Nature Biotechnology</i> , 2021, 39, 737-746.	9.4	196
6	High Density Bioprocessing of Human Pluripotent Stem Cells by Metabolic Control and in Silico Modeling. <i>Stem Cells Translational Medicine</i> , 2021, 10, 1063-1080.	1.6	47
7	Telomerase therapy attenuates cardiotoxic effects of doxorubicin. <i>Molecular Therapy</i> , 2021, 29, 1395-1410.	3.7	31
8	Hypoxic Conditions Promote the Angiogenic Potential of Human Induced Pluripotent Stem Cell-Derived Extracellular Vesicles. <i>International Journal of Molecular Sciences</i> , 2021, 22, 3890.	1.8	18
9	Simplified 89Zr-Labeling Protocol of Oxine (8-Hydroxyquinoline) Enabling Prolonged Tracking of Liposome-Based Nanomedicines and Cells. <i>Pharmaceutics</i> , 2021, 13, 1097.	2.0	8
10	Human iPSC-derived macrophages for efficient <i>Staphylococcus aureus</i> clearance in a murine pulmonary infection model. <i>Blood Advances</i> , 2021, 5, 5190-5201.	2.5	8
11	Generation of heart-forming organoids from human pluripotent stem cells. <i>Nature Protocols</i> , 2021, 16, 5652-5672.	5.5	24
12	How Localized Z-Disc Damage Affects Force Generation and Gene Expression in Cardiomyocytes. <i>Bioengineering</i> , 2021, 8, 213.	1.6	2
13	Process control and in silico modeling strategies for enabling high density culture of human pluripotent stem cells in stirred tank bioreactors. <i>STAR Protocols</i> , 2021, 2, 100988.	0.5	6
14	Data-Driven Model Development for Cardiomyocyte Production Experimental Failure Prediction. <i>Computer Aided Chemical Engineering</i> , 2020, , 1639-1644.	0.3	23
15	Advanced Single-Cell Mapping Reveals that in hESC Cardiomyocytes Contraction Kinetics and Action Potential Are Independent of Myosin Isoform. <i>Stem Cell Reports</i> , 2020, 14, 788-802.	2.3	6
16	The Long Non-coding RNA <i>Cyrano</i> Is Dispensable for Pluripotency of Murine and Human Pluripotent Stem Cells. <i>Stem Cell Reports</i> , 2020, 15, 13-21.	2.3	6
17	Prediction of Human Induced Pluripotent Stem Cell Cardiac Differentiation Outcome by Multifactorial Process Modeling. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 851.	2.0	15
18	Myosin-18B Regulates Higher-Order Organization of the Cardiac Sarcomere through Thin Filament Cross-Linking and Thick Filament Dynamics. <i>Cell Reports</i> , 2020, 32, 108090.	2.9	8

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19	Heart Muscle Tissue Engineering. Learning Materials in Biosciences, 2020, , 99-121.	0.2	1
20	Comparing human iPSC-cardiomyocytes versus HEK293T cells unveils disease-causing effects of Brugada mutation A735V of NaV1.5 sodium channels. Scientific Reports, 2019, 9, 11173.	1.6	33
21	Continuous WNT Control Enables Advanced hPSC Cardiac Processing and Prognostic Surface Marker Identification in Chemically Defined Suspension Culture. Stem Cell Reports, 2019, 13, 366-379.	2.3	61
22	Modeling methodology for defining a priori the hydrodynamics of a dynamic suspension bioreactor. Application to human induced pluripotent stem cell culture. Journal of Biomechanics, 2019, 94, 99-106.	0.9	4
23	Evaluating the Effect of Drug Compounds on Cardiac Spheroids Using the Cardiac Cell Outgrowth Assay. Methods in Molecular Biology, 2019, 1994, 185-193.	0.4	3
24	Production of Cardiomyocytes from Human Pluripotent Stem Cells by Bioreactor Technologies. Methods in Molecular Biology, 2019, 1994, 55-70.	0.4	8
25	Human Pluripotent Stem Cell Expansion in Stirred Tank Bioreactors. Methods in Molecular Biology, 2019, 1994, 79-91.	0.4	8
26	Femtosecond laser-based nanosurgery reveals the endogenous regeneration of single Z-discs including physiological consequences for cardiomyocytes. Scientific Reports, 2019, 9, 3625.	1.6	10
27	Chemically-Defined, Xeno-Free, Scalable Production of hPSC-Derived Definitive Endoderm Aggregates with Multi-Lineage Differentiation Potential. Cells, 2019, 8, 1571.	1.8	19
28	Expansion of functional personalized cells with specific transgene combinations. Nature Communications, 2018, 9, 994.	5.8	35
29	Differentiation of Human Pluripotent Stem Cells into Functional Endothelial Cells in Scalable Suspension Culture. Stem Cell Reports, 2018, 10, 1657-1672.	2.3	75
30	Solubilization and renaturation of biologically active human bone morphogenetic protein-4 from inclusion bodies. Biotechnology Reports (Amsterdam, Netherlands), 2018, 18, e00249.	2.1	3
31	Laser bioprinting of human induced pluripotent stem cells – the effect of printing and biomaterials on cell survival, pluripotency, and differentiation. Biofabrication, 2018, 10, 035005.	3.7	93
32	Differential Expression of Cholinergic System Components in Human Induced Pluripotent Stem Cells, Bone Marrow-Derived Multipotent Stromal Cells, and Induced Pluripotent Stem Cell-Derived Multipotent Stromal Cells. Stem Cells and Development, 2018, 27, 166-183.	1.1	3
33	Bioreactor-based mass production of human iPSC-derived macrophages enables immunotherapies against bacterial airway infections. Nature Communications, 2018, 9, 5088.	5.8	105
34	A Cardiac Cell Outgrowth Assay for Evaluating Drug Compounds Using a Cardiac Spheroid-on-a-Chip Device. Bioengineering, 2018, 5, 36.	1.6	33
35	Large-scale production of megakaryocytes in microcarrier-supported stirred suspension bioreactors. Scientific Reports, 2018, 8, 10146.	1.6	29
36	Anti-androgenic therapy with finasteride improves cardiac function, attenuates remodeling and reverts pathologic gene-expression after myocardial infarction in mice. Journal of Molecular and Cellular Cardiology, 2018, 122, 114-124.	0.9	14

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37	Paracrine mechanisms in early differentiation of human pluripotent stem cells: Insights from a mathematical model. <i>Stem Cell Research</i> , 2018, 32, 1-7.	0.3	16
38	Quantitative Secretomics Reveals Extrinsic Signals Involved in Human Pluripotent Stem Cell Cardiomyogenesis. <i>Proteomics</i> , 2018, 18, e1800102.	1.3	23
39	Multimodal Imaging for In Vivo Evaluation of Induced Pluripotent Stem Cells in a Murine Model of Heart Failure. <i>Artificial Organs</i> , 2017, 41, 192-199.	1.0	9
40	Proteomic Analysis of Human Pluripotent Stem Cell Cardiomyogenesis Revealed Altered Expression of Metabolic Enzymes and PDLIM5 Isoforms. <i>Journal of Proteome Research</i> , 2017, 16, 1133-1149.	1.8	32
41	EBIO Does Not Induce Cardiomyogenesis in Human Pluripotent Stem Cells but Modulates Cardiac Subtype Enrichment by Lineage-Selective Survival. <i>Stem Cell Reports</i> , 2017, 8, 305-317.	2.3	15
42	Scalable Cardiac Differentiation of Pluripotent Stem Cells Using Specific Growth Factors and Small Molecules. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2017, 163, 39-69.	0.6	20
43	A Scalable Approach for the Generation of Human Pluripotent Stem Cell-Derived Hepatic Organoids with Sensitive Hepatotoxicity Features. <i>Stem Cells and Development</i> , 2017, 26, 1490-1504.	1.1	40
44	Sensitivity of human pluripotent stem cells to insulin precipitation induced by peristaltic pump-based medium circulation: considerations on process development. <i>Scientific Reports</i> , 2017, 7, 3950.	1.6	9
45	Progress and challenges in large-scale expansion of human pluripotent stem cells. <i>Process Biochemistry</i> , 2017, 59, 244-254.	1.8	131
46	Modulation of cardiomyocyte activity using pulsed laser irradiated gold nanoparticles. <i>Biomedical Optics Express</i> , 2017, 8, 177.	1.5	35
47	Transplantation of purified iPSC-derived cardiomyocytes in myocardial infarction. <i>PLoS ONE</i> , 2017, 12, e0173222.	1.1	53
48	Differences in Contractile Function of Myofibrils within Human Embryonic Stem Cell-Derived Cardiomyocytes vs. Adult Ventricular Myofibrils Are Related to Distinct Sarcomeric Protein Isoforms. <i>Frontiers in Physiology</i> , 2017, 8, 1111.	1.3	36
49	Bulk cell density and Wnt/TGFbeta signalling regulate mesendodermal patterning of human pluripotent stem cells. <i>Nature Communications</i> , 2016, 7, 13602.	5.8	105
50	A Microfluidic Bioreactor for Toxicity Testing of Stem Cell Derived 3D Cardiac Bodies. <i>Methods in Molecular Biology</i> , 2016, 1502, 159-168.	0.4	12
51	Impact of Feeding Strategies on the Scalable Expansion of Human Pluripotent Stem Cells in Single-Use Stirred Tank Bioreactors. <i>Stem Cells Translational Medicine</i> , 2016, 5, 1289-1301.	1.6	110
52	Stiff matrix induces switch to pure β^2 -cardiac myosin heavy chain expression in human ESC-derived cardiomyocytes. <i>Basic Research in Cardiology</i> , 2016, 111, 68.	2.5	59
53	Large-scale production of human pluripotent stem cell derived cardiomyocytes. <i>Advanced Drug Delivery Reviews</i> , 2016, 96, 18-30.	6.6	101
54	Long noncoding RNA <i>Chast</i> promotes cardiac remodeling. <i>Science Translational Medicine</i> , 2016, 8, 326ra22.	5.8	321

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55	Cardiac differentiation of human pluripotent stem cells in scalable suspension culture. <i>Nature Protocols</i> , 2015, 10, 1345-1361.	5.5	125
56	Macroscopic Fluorescence Imaging: A Novel Technique to Monitor Retention and Distribution of Injected Microspheres in an Experimental Model of Ischemic Heart Failure. <i>PLoS ONE</i> , 2014, 9, e101775.	1.1	8
57	Controlling Expansion and Cardiomyogenic Differentiation of Human Pluripotent Stem Cells in Scalable Suspension Culture. <i>Stem Cell Reports</i> , 2014, 3, 1132-1146.	2.3	189
58	Cleavage of E-Cadherin and β -Catenin by Calpain Affects Wnt Signaling and Spheroid Formation in Suspension Cultures of Human Pluripotent Stem Cells. <i>Molecular and Cellular Proteomics</i> , 2014, 13, 990-1007.	2.5	52
59	Your Heart on a Chip: iPSC-Based Modeling of Barth-Syndrome-Associated Cardiomyopathy. <i>Cell Stem Cell</i> , 2014, 15, 9-11.	5.2	15
60	Promoter and lineage independent anti-silencing activity of the A2 ubiquitous chromatin opening element for optimized human pluripotent stem cell-based gene therapy. <i>Biomaterials</i> , 2014, 35, 1531-1542.	5.7	42
61	Directing Cardiomyogenic Differentiation of Human Pluripotent Stem Cells by Plasmid-Based Transient Overexpression of Cardiac Transcription Factors. <i>Stem Cells and Development</i> , 2013, 22, 1112-1125.	1.1	34
62	Murine and human pluripotent stem cell-derived cardiac bodies form contractile myocardial tissue in vitro. <i>European Heart Journal</i> , 2013, 34, 1134-1146.	1.0	180
63	Suspension Culture of Human Pluripotent Stem Cells in Controlled, Stirred Bioreactors. <i>Tissue Engineering - Part C: Methods</i> , 2012, 18, 772-784.	1.1	172
64	Cytokine production using membrane adsorbers: Human basic fibroblast growth factor produced by <i>Escherichia coli</i> . <i>Engineering in Life Sciences</i> , 2012, 12, 29-38.	2.0	25
65	A practical synthesis of Rho-Kinase inhibitor Y-27632 and fluoro derivatives and their evaluation in human pluripotent stem cells. <i>Organic and Biomolecular Chemistry</i> , 2011, 9, 5503.	1.5	20
66	Scalable expansion of human pluripotent stem cells in suspension culture. <i>Nature Protocols</i> , 2011, 6, 689-700.	5.5	240
67	Up-scaling single cell-inoculated suspension culture of human embryonic stem cells. <i>Stem Cell Research</i> , 2010, 4, 165-179.	0.3	150
68	Global Expression Profile of Highly Enriched Cardiomyocytes Derived from Human Embryonic Stem Cells. <i>Stem Cells</i> , 2009, 27, 2163-2174.	1.4	162
69	Generation of Induced Pluripotent Stem Cells from Human Cord Blood. <i>Cell Stem Cell</i> , 2009, 5, 434-441.	5.2	450
70	Large Scale Production of Stem Cells and Their Derivatives. , 2009, 114, 201-235.		51
71	Cardiomyocyte Production in Mass Suspension Culture: Embryonic Stem Cells as a Source for Great Amounts of Functional Cardiomyocytes. <i>Tissue Engineering - Part A</i> , 2008, 14, 1591-1601.	1.6	72
72	Differentiation and lineage selection of mouse embryonic stem cells in a stirred bench scale bioreactor with automated process control. <i>Biotechnology and Bioengineering</i> , 2005, 92, 920-933.	1.7	166