

Robert Passier

List of Publications by Year in descending order

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Version: 2024-02-01

81
papers

12,606
citations

44069

48
h-index

60623

81
g-index

81
all docs

81
docs citations

81
times ranked

17503
citing authors

#	ARTICLE	IF	CITATIONS
1	A promoter-level mammalian expression atlas. <i>Nature</i> , 2014, 507, 462-470.	27.8	1,838
2	Differentiation of Human Embryonic Stem Cells to Cardiomyocytes. <i>Circulation</i> , 2003, 107, 2733-2740.	1.6	1,091
3	Characterization of human embryonic stem cell lines by the International Stem Cell Initiative. <i>Nature Biotechnology</i> , 2007, 25, 803-816.	17.5	983
4	Stem-cell-based therapy and lessons from the heart. <i>Nature</i> , 2008, 453, 322-329.	27.8	523
5	Transcribed enhancers lead waves of coordinated transcription in transitioning mammalian cells. <i>Science</i> , 2015, 347, 1010-1014.	12.6	517
6	CaM kinase signaling induces cardiac hypertrophy and activates the MEF2 transcription factor in vivo. <i>Journal of Clinical Investigation</i> , 2000, 105, 1395-1406.	8.2	455
7	Recombinant Vitronectin Is a Functionally Defined Substrate That Supports Human Embryonic Stem Cell Self-Renewal via $\alpha 5 \beta 1$ Integrin. <i>Stem Cells</i> , 2008, 26, 2257-2265.	3.2	389
8	NKX2-5eGFP/w hESCs for isolation of human cardiac progenitors and cardiomyocytes. <i>Nature Methods</i> , 2011, 8, 1037-1040.	19.0	384
9	Human embryonic stem cell-derived cardiomyocytes survive and mature in the mouse heart and transiently improve function after myocardial infarction. <i>Stem Cell Research</i> , 2007, 1, 9-24.	0.7	383
10	Prediction of drug-induced cardiotoxicity using human embryonic stem cell-derived cardiomyocytes. <i>Stem Cell Research</i> , 2010, 4, 107-116.	0.7	340
11	Increased Cardiomyocyte Differentiation from Human Embryonic Stem Cells in Serum-Free Cultures. <i>Stem Cells</i> , 2005, 23, 772-780.	3.2	324
12	Atrial-like cardiomyocytes from human pluripotent stem cells are a robust preclinical model for assessing atrial-selective pharmacology. <i>EMBO Molecular Medicine</i> , 2015, 7, 394-410.	6.9	310
13	Calmodulin Kinase II and Arrhythmias in a Mouse Model of Cardiac Hypertrophy. <i>Circulation</i> , 2002, 106, 1288-1293.	1.6	240
14	MUSCLEMOTION. <i>Circulation Research</i> , 2018, 122, e5-e16.	4.5	235
15	Human Embryonic Stem Cell-Derived Cardiomyocytes and Cardiac Repair in Rodents. <i>Circulation Research</i> , 2008, 102, 1008-1010.	4.5	233
16	Modulation of Cardiac Growth and Development by HOP, an Unusual Homeodomain Protein. <i>Cell</i> , 2002, 110, 725-735.	28.9	219
17	FANTOM5 CAGE profiles of human and mouse samples. <i>Scientific Data</i> , 2017, 4, 170112.	5.3	195
18	Personalised organs-on-chips: functional testing for precision medicine. <i>Lab on A Chip</i> , 2019, 19, 198-205.	6.0	183

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19	Genome-Wide Transcriptional Profiling of Human Embryonic Stem Cells Differentiating to Cardiomyocytes. <i>Stem Cells</i> , 2006, 24, 1956-1967.	3.2	179
20	Functional maturation of human pluripotent stem cell derived cardiomyocytes in vitro Correlation between contraction force and electrophysiology. <i>Biomaterials</i> , 2015, 51, 138-150.	11.4	176
21	Contractile Defect Caused by Mutation in MYBPC3 Revealed under Conditions Optimized for Human PSC-Cardiomyocyte Function. <i>Cell Reports</i> , 2015, 13, 733-745.	6.4	167
22	Expansion and patterning of cardiovascular progenitors derived from human pluripotent stem cells. <i>Nature Biotechnology</i> , 2015, 33, 970-979.	17.5	165
23	Mimicking arterial thrombosis in a 3D-printed microfluidic in vitro vascular model based on computed tomography angiography data. <i>Lab on A Chip</i> , 2017, 17, 2785-2792.	6.0	143
24	Transcriptome of human foetal heart compared with cardiomyocytes from pluripotent stem cells. <i>Development (Cambridge)</i> , 2015, 142, 3231-8.	2.5	139
25	Origin and use of embryonic and adult stem cells in differentiation and tissue repair. <i>Cardiovascular Research</i> , 2003, 58, 324-335.	3.8	122
26	Complex Tissue and Disease Modeling using hiPSCs. <i>Cell Stem Cell</i> , 2016, 18, 309-321.	11.1	121
27	A Quest for Human and Mouse Embryonic Stem Cell-specific Proteins. <i>Molecular and Cellular Proteomics</i> , 2006, 5, 1261-1273.	3.8	120
28	KeyGenes, a Tool to Probe Tissue Differentiation Using a Human Fetal Transcriptional Atlas. <i>Stem Cell Reports</i> , 2015, 4, 1112-1124.	4.8	118
29	Insulin Redirects Differentiation from Cardiogenic Mesoderm and Endoderm to Neuroectoderm in Differentiating Human Embryonic Stem Cells. <i>Stem Cells</i> , 2008, 26, 724-733.	3.2	113
30	Advanced in vitro models of vascular biology: Human induced pluripotent stem cells and organ-on-chip technology. <i>Advanced Drug Delivery Reviews</i> , 2019, 140, 68-77.	13.7	109
31	Identification of Cell Surface Proteins for Antibody-Based Selection of Human Embryonic Stem Cell-Derived Cardiomyocytes. <i>Journal of Proteome Research</i> , 2010, 9, 1610-1618.	3.7	99
32	<i>TECRL</i> , a new life-threatening inherited arrhythmia gene associated with overlapping clinical features of both <i>LQTS</i> and <i>CPVT</i> . <i>EMBO Molecular Medicine</i> , 2016, 8, 1390-1408.	6.9	98
33	Improved genetic manipulation of human embryonic stem cells. <i>Nature Methods</i> , 2008, 5, 389-392.	19.0	95
34	Advanced Good Cell Culture Practice for human primary, stem cell-derived and organoid models as well as microphysiological systems. <i>ALTEX: Alternatives To Animal Experimentation</i> , 2018, 35, 353-378.	1.5	87
35	Monitoring of cell therapy and assessment of cardiac function using magnetic resonance imaging in a mouse model of myocardial infarction. <i>Nature Protocols</i> , 2007, 2, 2551-2567.	12.0	79
36	Cardiomyocytes from human pluripotent stem cells in regenerative medicine and drug discovery. <i>Trends in Pharmacological Sciences</i> , 2009, 30, 536-545.	8.7	78

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37	Molecular Analysis of Patterning of Conduction Tissues in the Developing Human Heart. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2011, 4, 532-542.	4.8	78
38	NKX2-5 regulates human cardiomyogenesis via a HEY2 dependent transcriptional network. <i>Nature Communications</i> , 2018, 9, 1373.	12.8	77
39	Feeder-free culture of human embryonic stem cells in conditioned medium for efficient genetic modification. <i>Nature Protocols</i> , 2008, 3, 1435-1443.	12.0	73
40	Improvement of mouse cardiac function by hESC-derived cardiomyocytes correlates with vascularity but not graft size. <i>Stem Cell Research</i> , 2009, 3, 106-112.	0.7	71
41	Oracle, a novel PDZ-LIM domain protein expressed in heart and skeletal muscle. <i>Mechanisms of Development</i> , 2000, 92, 277-284.	1.7	67
42	Dual Reporter <i><i>MESP1mCherry/w-NKX2-5eGFP/w</i></i> hESCs Enable Studying Early Human Cardiac Differentiation. <i>Stem Cells</i> , 2015, 33, 56-67.	3.2	65
43	Human Embryonic and Fetal Mesenchymal Stem Cells Differentiate toward Three Different Cardiac Lineages in Contrast to Their Adult Counterparts. <i>PLoS ONE</i> , 2011, 6, e24164.	2.5	64
44	Human embryonic stem cells: Genetic manipulation on the way to cardiac cell therapies. <i>Reproductive Toxicology</i> , 2005, 20, 377-391.	2.9	55
45	Human Pluripotent Stem Cell Differentiation into Functional Epicardial Progenitor Cells. <i>Stem Cell Reports</i> , 2017, 9, 1754-1764.	4.8	55
46	Cardiomyocyte differentiation from embryonic and adult stem cells. <i>Current Opinion in Biotechnology</i> , 2005, 16, 498-502.	6.6	53
47	CHAP is a newly identified Z-disc protein essential for heart and skeletal muscle function. <i>Journal of Cell Science</i> , 2010, 123, 1141-1150.	2.0	53
48	A comprehensive gene expression analysis at sequential stages of in vitro cardiac differentiation from isolated MESP1-expressing-mesoderm progenitors. <i>Scientific Reports</i> , 2016, 6, 19386.	3.3	53
49	Cardiac differentiation of pluripotent stem cells and implications for modeling the heart in health and disease. <i>Science Translational Medicine</i> , 2018, 10, .	12.4	53
50	Native cardiac environment and its impact on engineering cardiac tissue. <i>Biomaterials Science</i> , 2019, 7, 3566-3580.	5.4	51
51	A COUP-TFII Human Embryonic Stem Cell Reporter Line to Identify and Select Atrial Cardiomyocytes. <i>Stem Cell Reports</i> , 2017, 9, 1765-1779.	4.8	44
52	A cardiomyocyte show of force: A fluorescent alpha-actinin reporter line sheds light on human cardiomyocyte contractility versus substrate stiffness. <i>Journal of Molecular and Cellular Cardiology</i> , 2020, 141, 54-64.	1.9	42
53	Microfluidic organ-on-a-chip model of the outer bloodâ€“retinal barrier with clinically relevant read-outs for tissue permeability and vascular structure. <i>Lab on A Chip</i> , 2021, 21, 272-283.	6.0	40
54	CHAMP, A Novel Cardiac-Specific Helicase Regulated by MEF2C. <i>Developmental Biology</i> , 2001, 234, 497-509.	2.0	39

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55	Sox2 Transduction Enhances Cardiovascular Repair Capacity of Blood-Derived Mesoangioblasts. <i>Circulation Research</i> , 2010, 106, 1290-1302.	4.5	37
56	Funny current channel HCN4 delineates the developing cardiac conduction system in chicken heart. <i>Heart Rhythm</i> , 2011, 8, 1254-1263.	0.7	37
57	Human Pluripotent Stem Cell-Derived Cardiomyocytes for Assessment of Anticancer Drug-Induced Cardiotoxicity. <i>Frontiers in Cardiovascular Medicine</i> , 2020, 7, 50.	2.4	36
58	Inhibition of ROCK improves survival of human embryonic stem cell-derived cardiomyocytes after dissociation. <i>Annals of the New York Academy of Sciences</i> , 2010, 1188, 52-57.	3.8	30
59	Animal models and animal-free innovations for cardiovascular research: current status and routes to be explored. Consensus document of the ESC Working Group on Myocardial Function and the ESC Working Group on Cellular Biology of the Heart. <i>Cardiovascular Research</i> , 2022, 118, 3016-3051.	3.8	30
60	Electrical Activation of Sinus Venosus Myocardium and Expression Patterns of RhoA and Isl1 in the Chick Embryo. <i>Journal of Cardiovascular Electrophysiology</i> , 2010, 21, 1284-1292.	1.7	28
61	Altered calcium handling and increased contraction force in human embryonic stem cell derived cardiomyocytes following short term dexamethasone exposure. <i>Biochemical and Biophysical Research Communications</i> , 2015, 467, 998-1005.	2.1	28
62	Measuring Both pH and O ₂ with a Single On-Chip Sensor in Cultures of Human Pluripotent Stem Cell-Derived Cardiomyocytes to Track Induced Changes in Cellular Metabolism. <i>ACS Sensors</i> , 2021, 6, 267-274.	7.8	26
63	Generation and purification of human stem cell-derived cardiomyocytes. <i>Differentiation</i> , 2016, 91, 126-138.	1.9	24
64	Z-disc protein CHAPb induces cardiomyopathy and contractile dysfunction in the postnatal heart. <i>PLoS ONE</i> , 2017, 12, e0189139.	2.5	22
65	Adenoviral Transfer of Endothelial Nitric Oxide Synthase Attenuates Lesion Formation in a Novel Murine Model of Postangioplasty Restenosis. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2004, 24, 357-362.	2.4	21
66	Concise Review: Fluorescent Reporters in Human Pluripotent Stem Cells: Contributions to Cardiac Differentiation and Their Applications in Cardiac Disease and Toxicity. <i>Stem Cells</i> , 2016, 34, 13-26.	3.2	21
67	Collagen I Based Enzymatically Degradable Membranes for Organ-on-a-Chip Barrier Models. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 2998-3005.	5.2	21
68	Human embryonic stem cells: towards therapies for cardiac disease. Derivation of a Dutch human embryonic stem cell line. <i>Reproductive BioMedicine Online</i> , 2005, 11, 476-485.	2.4	20
69	Fluidic circuit board with modular sensor and valves enables stand-alone, tubeless microfluidic flow control in organs-on-chips. <i>Lab on A Chip</i> , 2022, 22, 1231-1243.	6.0	17
70	Organs-on-Chips in Drug Development: The Importance of Involving Stakeholders in Early Health Technology Assessment. <i>Applied in Vitro Toxicology</i> , 2016, 2, 74-81.	1.1	16
71	Conditional immortalization of human atrial myocytes for the generation of in vitro models of atrial fibrillation. <i>Nature Biomedical Engineering</i> , 2022, 6, 389-402.	22.5	16
72	Getting to the Heart of the Matter: Direct Reprogramming to Cardiomyocytes. <i>Cell Stem Cell</i> , 2010, 7, 139-141.	11.1	14

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73	Metabolic environment in vivo as a blueprint for differentiation and maturation of human stem cell-derived cardiomyocytes. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2020, 1866, 165881.	3.8	14
74	Sarcosin (Krp1) in skeletal muscle differentiation: gene expression profiling and knockdown experiments. <i>International Journal of Developmental Biology</i> , 2012, 56, 301-309.	0.6	12
75	Generation and Culture of Cardiac Microtissues in a Microfluidic Chip with a Reversible Open Top Enables Electrical Pacing, Dynamic Drug Dosing and Endothelial Cell Co-culture. <i>Advanced Materials Technologies</i> , 2022, 7, .	5.8	11
76	Expandable human cardiovascular progenitors from stem cells for regenerating mouse heart after myocardial infarction. <i>Cardiovascular Research</i> , 2020, 116, 545-553.	3.8	10
77	Cytoskeletal heart-enriched actin-associated protein (CHAP) is expressed in striated and smooth muscle cells in chick and mouse during embryonic and adult stages. <i>International Journal of Developmental Biology</i> , 2011, 55, 649-655.	0.6	8
78	A New Versatile Platform for Assessment of Improved Cardiac Performance in Human-Engineered Heart Tissues. <i>Journal of Personalized Medicine</i> , 2022, 12, 214.	2.5	8
79	Cardiovascular Tissue Engineering and Regeneration: A Plea for Further Knowledge Convergence. <i>Tissue Engineering - Part A</i> , 2022, 28, 525-541.	3.1	6
80	Automated image analysis system for studying cardiotoxicity in human pluripotent stem cell-Derived cardiomyocytes. <i>BMC Bioinformatics</i> , 2020, 21, 187.	2.6	5
81	Improved Atrial Differentiation of Human Pluripotent Stem Cells by Activation of Retinoic Acid Receptor Alpha (RAR α). <i>Journal of Personalized Medicine</i> , 2022, 12, 628.	2.5	5