

Robert Passier

List of Publications by Citations

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78
papers

10,002
citations

45
h-index

81
g-index

81
ext. papers

11,595
ext. citations

11
avg, IF

5.72
L-index

#	Paper	IF	Citations
78	A promoter-level mammalian expression atlas. <i>Nature</i> , 2014 , 507, 462-70	50.4	1301
77	Differentiation of human embryonic stem cells to cardiomyocytes: role of coculture with visceral endoderm-like cells. <i>Circulation</i> , 2003 , 107, 2733-40	16.7	1012
76	Characterization of human embryonic stem cell lines by the International Stem Cell Initiative. <i>Nature Biotechnology</i> , 2007 , 25, 803-16	44.5	857
75	Stem-cell-based therapy and lessons from the heart. <i>Nature</i> , 2008 , 453, 322-9	50.4	465
74	Transcribed enhancers lead waves of coordinated transcription in transitioning mammalian cells. <i>Science</i> , 2015 , 347, 1010-4	33.3	384
73	CaM kinase signaling induces cardiac hypertrophy and activates the MEF2 transcription factor in vivo. <i>Journal of Clinical Investigation</i> , 2000 , 105, 1395-406	15.9	380
72	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	1.6	338
71	Recombinant vitronectin is a functionally defined substrate that supports human embryonic stem cell self-renewal via alphavbeta5 integrin. <i>Stem Cells</i> , 2008 , 26, 2257-65	5.8	335
70	NKX2-5(eGFP/w) hESCs for isolation of human cardiac progenitors and cardiomyocytes. <i>Nature Methods</i> , 2011 , 8, 1037-40	21.6	321
69	Prediction of drug-induced cardiotoxicity using human embryonic stem cell-derived cardiomyocytes. <i>Stem Cell Research</i> , 2010 , 4, 107-16	1.6	297
68	Increased cardiomyocyte differentiation from human embryonic stem cells in serum-free cultures. <i>Stem Cells</i> , 2005 , 23, 772-80	5.8	291
67	Calmodulin kinase II and arrhythmias in a mouse model of cardiac hypertrophy. <i>Circulation</i> , 2002 , 106, 1288-93	16.7	216
66	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	12	212
65	Human embryonic stem cell-derived cardiomyocytes and cardiac repair in rodents. <i>Circulation Research</i> , 2008 , 102, 1008-10	15.7	204
64	Modulation of cardiac growth and development by HOP, an unusual homeodomain protein. <i>Cell</i> , 2002 , 110, 725-35	56.2	203
63	Genome-wide transcriptional profiling of human embryonic stem cells differentiating to cardiomyocytes. <i>Stem Cells</i> , 2006 , 24, 1956-67	5.8	158
62	Functional maturation of human pluripotent stem cell derived cardiomyocytes in vitro--correlation between contraction force and electrophysiology. <i>Biomaterials</i> , 2015 , 51, 138-150	15.6	144

61	Expansion and patterning of cardiovascular progenitors derived from human pluripotent stem cells. <i>Nature Biotechnology</i> , 2015 , 33, 970-9	44.5	137
60	MUSCLEMOTION: A Versatile Open Software Tool to Quantify Cardiomyocyte and Cardiac Muscle Contraction In Vitro and In Vivo. <i>Circulation Research</i> , 2018 , 122, e5-e16	15.7	125
59	Personalised organs-on-chips: functional testing for precision medicine. <i>Lab on A Chip</i> , 2019 , 19, 198-205	7.2	122
58	Contractile Defect Caused by Mutation in MYBPC3 Revealed under Conditions Optimized for Human PSC-Cardiomyocyte Function. <i>Cell Reports</i> , 2015 , 13, 733-745	10.6	119
57	A quest for human and mouse embryonic stem cell-specific proteins. <i>Molecular and Cellular Proteomics</i> , 2006 , 5, 1261-73	7.6	107
56	Transcriptome of human foetal heart compared with cardiomyocytes from pluripotent stem cells. <i>Development (Cambridge)</i> , 2015 , 142, 3231-8	6.6	102
55	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	7.2	99
54	Complex Tissue and Disease Modeling using hiPSCs. <i>Cell Stem Cell</i> , 2016 , 18, 309-21	18	99
53	Insulin redirects differentiation from cardiogenic mesoderm and endoderm to neuroectoderm in differentiating human embryonic stem cells. <i>Stem Cells</i> , 2008 , 26, 724-33	5.8	94
52	Origin and use of embryonic and adult stem cells in differentiation and tissue repair. <i>Cardiovascular Research</i> , 2003 , 58, 324-35	9.9	91
51	FANTOM5 CAGE profiles of human and mouse samples. <i>Scientific Data</i> , 2017 , 4, 170112	8.2	88
50	Improved genetic manipulation of human embryonic stem cells. <i>Nature Methods</i> , 2008 , 5, 389-92	21.6	87
49	Identification of cell surface proteins for antibody-based selection of human embryonic stem cell-derived cardiomyocytes. <i>Journal of Proteome Research</i> , 2010 , 9, 1610-8	5.6	84
48	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	18.5	79
47	KeyGenes, a Tool to Probe Tissue Differentiation Using a Human Fetal Transcriptional Atlas. <i>Stem Cell Reports</i> , 2015 , 4, 1112-24	8	78
46	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, 2551-67	18.8	69
45	TECRL, a new life-threatening inherited arrhythmia gene associated with overlapping clinical features of both LQTS and CPVT. <i>EMBO Molecular Medicine</i> , 2016 , 8, 1390-1408	12	68
44	Feeder-free culture of human embryonic stem cells in conditioned medium for efficient genetic modification. <i>Nature Protocols</i> , 2008 , 3, 1435-43	18.8	67

43	Cardiomyocytes from human pluripotent stem cells in regenerative medicine and drug discovery. <i>Trends in Pharmacological Sciences</i> , 2009 , 30, 536-45	13.2	66
42	Molecular analysis of patterning of conduction tissues in the developing human heart. <i>Circulation: Arrhythmia and Electrophysiology</i> , 2011 , 4, 532-42	6.4	64
41	Improvement of mouse cardiac function by hESC-derived cardiomyocytes correlates with vascularity but not graft size. <i>Stem Cell Research</i> , 2009 , 3, 106-12	1.6	63
40	Oracle, a novel PDZ-LIM domain protein expressed in heart and skeletal muscle. <i>Mechanisms of Development</i> , 2000 , 92, 277-84	1.7	63
39	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	3.7	58
38	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	4.3	58
37	Dual reporter MESP1 mCherry/w-NKX2-5 eGFP/w hESCs enable studying early human cardiac differentiation. <i>Stem Cells</i> , 2015 , 33, 56-67	5.8	53
36	Human embryonic stem cells: genetic manipulation on the way to cardiac cell therapies. <i>Reproductive Toxicology</i> , 2005 , 20, 377-91	3.4	48
35	Cardiomyocyte differentiation from embryonic and adult stem cells. <i>Current Opinion in Biotechnology</i> , 2005 , 16, 498-502	11.4	47
34	NKX2-5 regulates human cardiomyogenesis via a HEY2 dependent transcriptional network. <i>Nature Communications</i> , 2018 , 9, 1373	17.4	45
33	CHAP is a newly identified Z-disc protein essential for heart and skeletal muscle function. <i>Journal of Cell Science</i> , 2010 , 123, 1141-50	5.3	44
32	Cardiac differentiation of pluripotent stem cells and implications for modeling the heart in health and disease. <i>Science Translational Medicine</i> , 2018 , 10,	17.5	43
31	Human Pluripotent Stem Cell Differentiation into Functional Epicardial Progenitor Cells. <i>Stem Cell Reports</i> , 2017 , 9, 1754-1764	8	39
30	Native cardiac environment and its impact on engineering cardiac tissue. <i>Biomaterials Science</i> , 2019 , 7, 3566-3580	7.4	38
29	CHAMP, a novel cardiac-specific helicase regulated by MEF2C. <i>Developmental Biology</i> , 2001 , 234, 497-509.	3.1	37
28	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	4.9	36
27	Funny current channel HCN4 delineates the developing cardiac conduction system in chicken heart. <i>Heart Rhythm</i> , 2011 , 8, 1254-63	6.7	32
26	A COUP-TFII Human Embryonic Stem Cell Reporter Line to Identify and Select Atrial Cardiomyocytes. <i>Stem Cell Reports</i> , 2017 , 9, 1765-1779	8	30

25	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, 52-7	6.5	29
24	Sox2 transduction enhances cardiovascular repair capacity of blood-derived mesoangioblasts. <i>Circulation Research</i> , 2010 , 106, 1290-302	15.7	28
23	Electrical activation of sinus venosus myocardium and expression patterns of RhoA and Isl-1 in the chick embryo. <i>Journal of Cardiovascular Electrophysiology</i> , 2010 , 21, 1284-92	2.7	26
22	Generation and purification of human stem cell-derived cardiomyocytes. <i>Differentiation</i> , 2016 , 91, 126-38.5	38.5	21
21	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	3.4	20
20	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, 357-62	9.4	20
19	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, 476-85	4	17
18	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	5.8	17
17	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	5.8	16
16	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	1.3	14
15	Getting to the heart of the matter: direct reprogramming to cardiomyocytes. <i>Cell Stem Cell</i> , 2010 , 7, 139-41	18	14
14	Human Pluripotent Stem Cell-Derived Cardiomyocytes for Assessment of Anticancer Drug-Induced Cardiotoxicity. <i>Frontiers in Cardiovascular Medicine</i> , 2020 , 7, 50	5.4	13
13	Sarcosin (Krp1) in skeletal muscle differentiation: gene expression profiling and knockdown experiments. <i>International Journal of Developmental Biology</i> , 2012 , 56, 301-9	1.9	11
12	Measuring Both pH and O 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	9.2	10
11	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, 649-55	1.9	7
10	Z-disc protein CHAPb induces cardiomyopathy and contractile dysfunction in the postnatal heart. <i>PLoS ONE</i> , 2017 , 12, e0189139	3.7	7
9	Expandable human cardiovascular progenitors from stem cells for regenerating mouse heart after myocardial infarction. <i>Cardiovascular Research</i> , 2020 , 116, 545-553	9.9	7
8	Microfluidic organ-on-a-chip model of the outer blood-retinal barrier with clinically relevant read-outs for tissue permeability and vascular structure. <i>Lab on A Chip</i> , 2021 , 21, 272-283	7.2	7

7	Collagen I Based Enzymatically Degradable Membranes for Organ-on-a-Chip Barrier Models. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 2998-3005	5.5	6
6	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	6.9	4
5	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 ,	9.9	3
4	Automated image analysis system for studying cardiotoxicity in human pluripotent stem cell-Derived cardiomyocytes. <i>BMC Bioinformatics</i> , 2020 , 21, 187	3.6	2
3	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> ,2101355	6.8	2
2	A New Versatile Platform for Assessment of Improved Cardiac Performance in Human-Engineered Heart Tissues.. <i>Journal of Personalized Medicine</i> , 2022 , 12,	3.6	1
1	Conditional immortalization of human atrial myocytes for the generation of in vitro models of atrial fibrillation.. <i>Nature Biomedical Engineering</i> , 2022 ,	19	1