

David C Hay

List of Publications by Year in descending order

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Version: 2024-02-01

101
papers

5,148
citations

109321

35
h-index

88630

70
g-index

126
all docs

126
docs citations

126
times ranked

6440
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly efficient differentiation of hESCs to functional hepatic endoderm requires ActivinA and Wnt3a signaling. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 12301-12306.	7.1	392
2	Generation of functional human hepatic endoderm from human induced pluripotent stem cells. Hepatology, 2010, 51, 329-335.	7.3	389
3	Efficient Differentiation of Hepatocytes from Human Embryonic Stem Cells Exhibiting Markers Recapitulating Liver Development In Vivo. Stem Cells, 2008, 26, 894-902.	3.2	387
4	Hepatic progenitor cells of biliary origin with liver repopulation capacity. Nature Cell Biology, 2015, 17, 971-983.	10.3	374
5	Oct-4 Knockdown Induces Similar Patterns of Endoderm and Trophoblast Differentiation Markers in Human and Mouse Embryonic Stem Cells. Stem Cells, 2004, 22, 225-235.	3.2	340
6	Lineage-specific distribution of high levels of genomic. Cell Research, 2011, 21, 1332-1342.	12.0	174
7	Gene networks and transcription factor motifs defining the differentiation of stem cells into hepatocyte-like cells. Journal of Hepatology, 2015, 63, 934-942.	3.7	165
8	Direct Differentiation of Human Embryonic Stem Cells to Hepatocyte-like Cells Exhibiting Functional Activities. Cloning and Stem Cells, 2007, 9, 51-62.	2.6	149
9	Recombinant Laminins Drive the Differentiation and Self-Organization of hESC-Derived Hepatocytes. Stem Cell Reports, 2015, 5, 1250-1262.	4.8	123
10	Developing High-Fidelity Hepatotoxicity Models From Pluripotent Stem Cells. Stem Cells Translational Medicine, 2013, 2, 505-509.	3.3	122
11	Post-translational modification by SUMO. Toxicology, 2010, 278, 288-293.	4.2	105
12	Liver tissue engineering and cell sources: issues and challenges. Liver International, 2013, 33, 666-676.	3.9	103
13	Concise Review: Workshop Review: Understanding and Assessing the Risks of Stem Cell-Based Therapies. Stem Cells Translational Medicine, 2015, 4, 389-400.	3.3	98
14	Accurate Prediction of Drug-Induced Liver Injury Using Stem Cell-Derived Populations. Stem Cells Translational Medicine, 2014, 3, 141-148.	3.3	96
15	Unbiased screening of polymer libraries to define novel substrates for functional hepatocytes with inducible drug metabolism. Stem Cell Research, 2011, 6, 92-102.	0.7	95
16	Fluid shear stress modulation of hepatocyte-like cell function. Archives of Toxicology, 2016, 90, 1757-1761.	4.2	89
17	3D human liver tissue from pluripotent stem cells displays stable phenotype in vitro and supports compromised liver function in vivo. Archives of Toxicology, 2018, 92, 3117-3129.	4.2	89
18	Progress and future challenges in stem cell-derived liver technologies. American Journal of Physiology - Renal Physiology, 2009, 297, G241-G248.	3.4	76

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19	Discovery of a Novel Polymer for Human Pluripotent Stem Cell Expansion and Multilineage Differentiation. <i>Advanced Materials</i> , 2015, 27, 4006-4012.	21.0	75
20	Pluripotent stem cell derived hepatocyte like cells and their potential in toxicity screening. <i>Toxicology</i> , 2010, 278, 250-255.	4.2	72
21	Blended electrospinning with human liver extracellular matrix for engineering new hepatic microenvironments. <i>Scientific Reports</i> , 2019, 9, 6293.	3.3	71
22	Liver cell therapy: is this the end of the beginning?. <i>Cellular and Molecular Life Sciences</i> , 2018, 75, 1307-1324.	5.4	56
23	The Hippo Pathway Regulates Caveolae Expression and Mediates Flow Response via Caveolae. <i>Current Biology</i> , 2019, 29, 242-255.e6.	3.9	56
24	Interaction between hnRNPA1 and Irf3 Is Required for Maximal Activation of NF- κ B-Dependent Transcription. <i>Molecular and Cellular Biology</i> , 2001, 21, 3482-3490.	2.3	55
25	Stem cell-derived models to improve mechanistic understanding and prediction of human drug-induced liver injury. <i>Hepatology</i> , 2017, 65, 710-721.	7.3	54
26	Developing defined substrates for stem cell culture and differentiation. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20170230.	4.0	52
27	Deriving Functional Hepatocytes from Pluripotent Stem Cells. <i>Current Protocols in Stem Cell Biology</i> , 2014, 30, 1G.5.1-12.	3.0	51
28	A Drug-Induced Hybrid Electrospun Poly-Capro-Lactone: Cell-Derived Extracellular Matrix Scaffold for Liver Tissue Engineering. <i>Tissue Engineering - Part A</i> , 2017, 23, 650-662.	3.1	49
29	Pluripotent Stem Cell-Derived Hepatocytes: Potential and Challenges in Pharmacology. <i>Annual Review of Pharmacology and Toxicology</i> , 2013, 53, 147-159.	9.4	48
30	Galectin-3 regulates hepatic progenitor cell expansion during liver injury. <i>Gut</i> , 2015, 64, 312-321.	12.1	48
31	Progenitor Cell Characterization and Location in the Developing Human Liver. <i>Stem Cells and Development</i> , 2007, 16, 771-778.	2.1	43
32	SUMOylation of HNF4 α regulates protein stability and hepatocyte function. <i>Journal of Cell Science</i> , 2012, 125, 3630-3635.	2.0	43
33	Modulating Innate Immunity Improves Hepatitis C Virus Infection and Replication in Stem Cell-Derived Hepatocytes. <i>Stem Cell Reports</i> , 2014, 3, 204-214.	4.8	43
34	The Comparison between Conditioned Media and Serum-Free Media in Human Embryonic Stem Cell Culture and Differentiation. <i>Cellular Reprogramming</i> , 2010, 12, 133-140.	0.9	39
35	Persistence of functional hepatocyte-like cells in immune-compromised mice. <i>Liver International</i> , 2011, 31, 254-262.	3.9	37
36	Distinct Gene Expression and Epigenetic Signatures in Hepatocyte-like Cells Produced by Different Strategies from the Same Donor. <i>Stem Cell Reports</i> , 2017, 9, 1813-1824.	4.8	37

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37	Concise Review: Advances in Generating Hepatocytes from Pluripotent Stem Cells for Translational Medicine. <i>Stem Cells</i> , 2016, 34, 1421-1426.	3.2	36
38	Reducing Hepatocyte Injury and Necrosis in Response to Paracetamol Using Noncoding RNAs. <i>Stem Cells Translational Medicine</i> , 2016, 5, 764-772.	3.3	36
39	Defined and Scalable Generation of Hepatocyte-like Cells from Human Pluripotent Stem Cells. <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	35
40	A human iPSC line capable of differentiating into functional macrophages expressing ZsGreen: a tool for the study and <i>in vivo</i> tracking of therapeutic cells. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20170219.	4.0	35
41	Over-the-counter analgesics during pregnancy: a comprehensive review of global prevalence and offspring safety. <i>Human Reproduction Update</i> , 2021, 27, 67-95.	10.8	35
42	Metabolic control of gene transcription in non-alcoholic fatty liver disease: the role of the epigenome. <i>Clinical Epigenetics</i> , 2019, 11, 104.	4.1	34
43	Inflammation-associated suppression of metabolic gene networks in acute and chronic liver disease. <i>Archives of Toxicology</i> , 2020, 94, 205-217.	4.2	32
44	Three-Dimensional Culture of Human Embryonic Stem Cell Derived Hepatic Endoderm and Its Role in Bioartificial Liver Construction. <i>Journal of Biomedicine and Biotechnology</i> , 2010, 2010, 1-12.	3.0	31
45	The Inhibitory Role of Stromal Cell Mesenchyme on Human Embryonic Stem Cell Hepatocyte Differentiation is Overcome by Wnt3a Treatment. <i>Cloning and Stem Cells</i> , 2008, 10, 331-340.	2.6	30
46	Modelling non-alcoholic fatty liver disease in human hepatocyte-like cells. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20170362.	4.0	29
47	From scaffold to structure: the synthetic production of cell derived extracellular matrix for liver tissue engineering. <i>Biomedical Physics and Engineering Express</i> , 2018, 4, 065015.	1.2	28
48	Pluripotent stem cell derived hepatocytes: using materials to define cellular differentiation and tissue engineering. <i>Journal of Materials Chemistry B</i> , 2016, 4, 3433-3442.	5.8	26
49	Development of a cost-effective automated platform to produce human liver spheroids for basic and applied research. <i>Biofabrication</i> , 2021, 13, 015009.	7.1	26
50	Novel Biopolymers to Enhance Endothelialisation of Intra-vascular Devices. <i>Advanced Healthcare Materials</i> , 2012, 1, 646-656.	7.6	25
51	Maternal Smoking Dysregulates Protein Expression in Second Trimester Human Fetal Livers in a Sex-Specific Manner. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2015, 100, E861-E870.	3.6	25
52	Modelling foetal exposure to maternal smoking using hepatoblasts from pluripotent stem cells. <i>Archives of Toxicology</i> , 2017, 91, 3633-3643.	4.2	22
53	The Role of Activin/Nodal and Wnt Signaling in Endoderm Formation. <i>Vitamins and Hormones</i> , 2011, 85, 207-216.	1.7	21
54	Polymer Supported Directed Differentiation Reveals a Unique Gene Signature Predicting Stable Hepatocyte Performance. <i>Advanced Healthcare Materials</i> , 2015, 4, 1820-1825.	7.6	20

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55	Robust Generation of Hepatocyte-like Cells from Human Embryonic Stem Cell Populations. <i>Journal of Visualized Experiments</i> , 2011, , e2969.	0.3	19
56	A human pluripotent stem cell model for the analysis of metabolic dysfunction in hepatic steatosis. <i>IScience</i> , 2021, 24, 101931.	4.1	19
57	Serum-Free Directed Differentiation of Human Embryonic Stem Cells to Hepatocytes. <i>Methods in Molecular Biology</i> , 2015, 1250, 105-111.	0.9	19
58	Human biliary epithelial cells from discarded donor livers rescue bile duct structure and function in a mouse model of biliary disease. <i>Cell Stem Cell</i> , 2022, 29, 355-371.e10.	11.1	19
59	Stem cell differentiation and human liver disease. <i>World Journal of Gastroenterology</i> , 2012, 18, 2018.	3.3	16
60	Role of stem-cell-derived hepatic endoderm in human drug discovery. <i>Biochemical Society Transactions</i> , 2010, 38, 1033-1036.	3.4	15
61	Pluripotent Stem Cell-Derived Human Tissue: Platforms to Evaluate Drug Metabolism and Safety. <i>AAPS Journal</i> , 2018, 20, 20.	4.4	15
62	Multimiomics Analyses of HNF4 β Protein Domain Function during Human Pluripotent Stem Cell Differentiation. <i>IScience</i> , 2019, 16, 206-217.	4.1	15
63	Maternal over-the-counter analgesics use during pregnancy and adverse perinatal outcomes: cohort study of 151 141 singleton pregnancies. <i>BMJ Open</i> , 2022, 12, e048092.	1.9	13
64	Hepatic Endoderm Differentiation from Human Embryonic Stem Cells. <i>Current Stem Cell Research and Therapy</i> , 2010, 5, 233-244.	1.3	12
65	Science-based assessment of source materials for cell-based medicines: report of a stakeholders workshop. <i>Regenerative Medicine</i> , 2018, 13, 935-944.	1.7	12
66	Serum Free Production of Three-dimensional Human Hepatospheres from Pluripotent Stem Cells. <i>Journal of Visualized Experiments</i> , 2019, , .	0.3	11
67	Stem Cell-Based Toxicity Screening. <i>Pharmaceutical Medicine</i> , 2012, 26, 85-89.	1.9	10
68	Rapid and Scalable Human Stem Cell Differentiation: Now in 3D. <i>Stem Cells and Development</i> , 2013, 22, 2691-2692.	2.1	10
69	Development of an Embryoid Body-Based Screening Strategy for Assessing the Hepatocyte Differentiation Potential of Human Embryonic Stem Cells Following Single-Cell Dissociation. <i>Cellular Reprogramming</i> , 2013, 15, 9-14.	0.9	10
70	Liver biopsy derived induced pluripotent stem cells provide unlimited supply for the generation of hepatocyte-like cells. <i>PLoS ONE</i> , 2019, 14, e0221762.	2.5	10
71	Semi-automated Production of Hepatocyte Like Cells from Pluripotent Stem Cells. <i>Journal of Visualized Experiments</i> , 2018, , .	0.3	9
72	Mathematical modelling of oxygen gradients in stem cell-derived liver tissue. <i>PLoS ONE</i> , 2021, 16, e0244070.	2.5	9

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73	Dimethyl fumarate reduces hepatocyte senescence following paracetamol exposure. <i>IScience</i> , 2021, 24, 102552.	4.1	9
74	Cadaveric Hepatocytes Repopulate Diseased Livers: Life After Death. <i>Gastroenterology</i> , 2010, 139, 729-731.	1.3	8
75	Maintaining Hepatic Stem Cell Gene Expression on Biological and Synthetic Substrata. <i>BioResearch Open Access</i> , 2012, 1, 50-53.	2.6	7
76	Human PSC-Derived Hepatocytes Express Low Levels of Viral Pathogen Recognition Receptors, but Are Capable of Mounting an Effective Innate Immune Response. <i>International Journal of Molecular Sciences</i> , 2020, 21, 3831.	4.1	7
77	Modeling Human Liver Biology Using Stem Cell-Derived Hepatocytes. <i>International Journal of Molecular Sciences</i> , 2013, 14, 22011-22021.	4.1	6
78	Quantification of ethyl glucuronide, ethyl sulfate, nicotine, and its metabolites in human fetal liver and placenta. <i>Forensic Toxicology</i> , 2018, 36, 102-112.	2.4	6
79	Combining stem cell-derived hepatocytes with impedance sensing to better predict human drug toxicity. <i>Expert Opinion on Drug Metabolism and Toxicology</i> , 2019, 15, 77-83.	3.3	6
80	Protocol for automated production of human stem cell derived liver spheres. <i>STAR Protocols</i> , 2021, 2, 100502.	1.2	6
81	Pluripotent Stem Cell-Derived Hepatocytes Inhibit T Cell Proliferation In Vitro through Tryptophan Starvation. <i>Cells</i> , 2022, 11, 24.	4.1	6
82	Identification and Application of Polymers as Biomaterials for Tissue Engineering and Regenerative Medicine. , 2012, , 1-30.		3
83	SUMOylation of HNF4 α regulates protein stability and hepatocyte function. <i>Journal of Cell Science</i> , 2012, 125, 4686-4686.	2.0	2
84	Stabilizing Hepatocellular Phenotype Using Optimized Synthetic Surfaces. <i>Journal of Visualized Experiments</i> , 2014, , 51723.	0.3	2
85	Low-Density Lipoprotein Uptake Demonstrates a Hepatocyte Phenotype in the Dog, but Is Nonspecific. <i>Stem Cells and Development</i> , 2016, 25, 90-100.	2.1	2
86	Innate immunity in stem cell-derived hepatocytes. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20170220.	4.0	2
87	Modeling human hepatic steatosis in pluripotent stem cell-derived hepatocytes. <i>STAR Protocols</i> , 2021, 2, 100493.	1.2	2
88	HIV-1 lentivirus tethering to the genome is associated with transcription factor binding sites found in genes that favour virus survival. <i>Gene Therapy</i> , 2022, 29, 720-729.	4.5	2
89	Polyurethane: Stable Cell Phenotype Requires Plasticity: Polymer Supported Directed Differentiation Reveals a Unique Gene Signature Predicting Stable Hepatocyte Performance (<i>Adv. Healthcare Mater.</i>) Tj ETQq1 1 0784314 rgBT /Ovedlo		
90	Mass production of stem cell derived human hepatocytes for experimental medicine. <i>Expert Review of Gastroenterology and Hepatology</i> , 2016, 10, 769-771.	3.0	1

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91	Liver stem cells. , 2020, , 723-736.		1
92	Hepatic Progenitor Specification from Pluripotent Stem Cells using a Defined Differentiation System. Journal of Visualized Experiments, 2020, , .	0.3	1
93	Modelling Hepatic Endoderm Development: Highly Efficient Differentiation of Human Embryonic Stem Cells to Functional Hepatic Endoderm Requires ActivinA and Wnt3a Signalling.. Nature Precedings, 2008, , .	0.1	0
94	The effect of SUMO modification on hepatic differentiation from hESCs. Toxicology, 2010, 278, 352.	4.2	0
95	The Complexities of Engineering Human Stem Cell-Derived Therapeutics. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-2.	3.0	0
96	Real-time monitoring of hepatocyte differentiation and impedimetric activity using impedance sensing. , 2017, , .		0
97	Designer human tissue: coming to a lab near you. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170212.	4.0	0
98	Deriving Metabolically Active Hepatic Endoderm from Pluripotent Stem Cells. Springer Protocols, 2011, , 369-386.	0.3	0
99	Introducing Point Mutations into Human Pluripotent Stem Cells using Seamless Genome Editing. Journal of Visualized Experiments, 2020, , .	0.3	0
100	Serum-Free Production of Three-Dimensional Hepatospheres from Pluripotent Stem Cells. Methods in Molecular Biology, 2021, , 1.	0.9	0
101	Nuclear factor programming improves stem-cell-derived hepatocyte phenotype. Cell Stem Cell, 2022, 29, 657-658.	11.1	0