Eric Leclerc

List of Publications by Year
in descending order

79 papers	2,813 citations	186265 28 h-index	189892 50 g-index
79 all docs	79 docs citations	79 times ranked	3110 citing authors

#	Article	IF	Citations
1	Cell Culture in 3-Dimensional Microfluidic Structure of PDMS (polydimethylsiloxane). Biomedical Microdevices, 2003, 5, 109-114.	2.8	285
2	Microfluidic PDMS (Polydimethylsiloxane) Bioreactor for Large-Scale Culture of Hepatocytes. Biotechnology Progress, 2004, 20, 750-755.	2.6	210
3	Study of osteoblastic cells in a microfluidic environment. Biomaterials, 2006, 27, 586-595.	11.4	145
4	Trends in the development of microfluidic cell biochips for in vitro hepatotoxicity. Toxicology in Vitro, 2007, 21, 535-544.	2.4	99
5	Development of a Renal Microchip for In Vitro Distal Tubule Models. Biotechnology Progress, 2007, 23, 0-0.	2.6	96
6	Behavior of HepG2/C3A cell cultures in a microfluidic bioreactor. Biochemical Engineering Journal, 2011, 53, 172-181.	3.6	95
7	Metabolomics-on-a-Chip and Predictive Systems Toxicology in Microfluidic Bioartificial Organs. Analytical Chemistry, 2012, 84, 1840-1848.	6.5	95
8	Improvement of HepG2/C3a cell functions in a microfluidic biochip. Biotechnology and Bioengineering, 2011, 108, 1704-1715.	3.3	90
9	Investigation of ifosfamide nephrotoxicity induced in a liverâ€“kidney coâ€culture biochip. Biotechnology and Bioengineering, 2013, 110, 597-608.	3.3	90
10	Metabolomics-on-a-Chip of Hepatotoxicity Induced by Anticancer Drug Flutamide and Its Active Metabolite Hydroxyflutamide Using HepG2/C3a Microfluidic Biochips. Toxicological Sciences, 2013, 132, 8-20.	3.1	79
11	First pass intestinal and liver metabolism of paracetamol in a microfluidic platform coupled with a mathematical modeling as a means of evaluating ADME processes in humans. Biotechnology and Bioengineering, 2014, 111, 2027-2040.	3.3	74
12	Development of a new microfluidic platform integrating co-cultures of intestinal and liver cell lines. Toxicology in Vitro, 2014, 28, 885-895.	2.4	72
13	Predictive toxicology using systemic biology and liver microfluidic â€œon chipâ€• approaches: Application to acetaminophen injury. Toxicology and Applied Pharmacology, 2012, 259, 270-280.	2.8	59
14	A cocktail of metabolic probes demonstrates the relevance of primary human hepatocyte cultures in a microfluidic biochip for pharmaceutical drug screening. International Journal of Pharmaceutics, 2011, 408, 67-75.	5.2	58
15	Analysis of transcriptomic and proteomic profiles demonstrates improved Madinâ€“Darby canine kidney cell function in a renal microfluidic biochip. Biotechnology Progress, 2012, 28, 474-484.	2.6	54
16	Metabolic Characterization of Primary Rat Hepatocytes Cultivated in Parallel Microfluidic Biochips. Journal of Pharmaceutical Sciences, 2013, 102, 3264-3276.	3.3	49
17	Evaluation of seven drug metabolisms and clearances by cryopreserved human primary hepatocytes cultivated in microfluidic biochips. Xenobiotica, 2013, 43, 140-152.	1.1	42
18	Integrated Proteomic and Transcriptomic Investigation of the Acetaminophen Toxicity in Liver Microfluidic Biochip. PLoS ONE, 2011, 6, e21268.	2.5	41

#	Article	IF	Citations
19	Liver and kidney cells cultures in a new perfluoropolyether biochip. Sensors and Actuators B: Chemical, 2016, 229, 396-407.	7.8	38
20	Metabolomics-on-a-chip and metabolic flux analysis for label-free modeling of the internal metabolism of HepG2/C3A cells. Molecular BioSystems, 2012, 8, 1908.	2.9	37
21	Development of a pancreas-liver organ-on-chip coculture model for organ-to-organ interaction studies. Biochemical Engineering Journal, 2020, 164, 107783.	3.6	34
22	Liver organ-on-chip models for toxicity studies and risk assessment. Lab on A Chip, 2022, 22, 2423-2450.	6.0	33
23	Guidance of liver and kidney organotypic cultures inside rectangular silicone microchannels. Biomaterials, 2006, 27, 4109-4119.	11.4	31
24	Transcriptomic analysis of the effect of ifosfamide on MDCK cells cultivated in microfluidic biochips. Genomics, 2012, 100, 27-34.	2.9	31
25	Investigation of omeprazole and phenacetin firstâ€pass metabolism in humans using a microscale bioreactor and pharmacokinetic models. Biopharmaceutics and Drug Disposition, 2015, 36, 275-293.	1.9	31
26	Longâ€term human primary hepatocyte cultures in a microfluidic liver biochip show maintenance of mRNA levels and higher drug metabolism compared with Petri cultures. Biopharmaceutics and Drug Disposition, 2016, 37, 264-275.	1.9	31
27	Water-in-oil droplet formation in a flow-focusing microsystem using pressure- and flow rate-driven pumps. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 531, 164-172.	4.7	31
28	Parallelized microfluidic biochips in multi well plate applied to liver tissue engineering. Sensors and Actuators B: Chemical, 2012, 173, 919-926.	7.8	30
29	Evaluation of a Liver Microfluidic Biochip to Predict In Vivo Clearances of Seven Drugs in Rats. Journal of Pharmaceutical Sciences, 2014, 103, 706-718.	3.3	28
30	In situ micropatterning technique by cell crushing for co-cultures inside microfluidic biochips. Biomedical Microdevices, 2008, 10, 169-177.	2.8	27
31	PBPK modeling of the cis- and trans-permethrin isomers and their major urinary metabolites in rats. Toxicology and Applied Pharmacology, 2016, 294, 65-77.	2.8	27
32	Optimized protocol for the hepatic differentiation of induced pluripotent stem cells in a fluidic microenvironment. Biotechnology and Bioengineering, 2019, 116, 1762-1776.	3.3	27
33	Transient flow of microcapsules through convergentâ€"divergent microchannels. Microfluidics and Nanofluidics, 2012, 12, 761-770.	2.2	26
34	Selective control of liver and kidney cells migration during organotypic cocultures inside fibronectin-coated rectangular silicone microchannels. Biomaterials, 2007, 28, 1820-1829.	11.4	25
35	The Current Status of Alternatives to Animal Testing and Predictive Toxicology Methods Using Liver Microfluidic Biochips. Annals of Biomedical Engineering, 2012, 40, 1228-1243.	2.5	25
36	Zonation related function and ubiquitination regulation in human hepatocellular carcinoma cells in dynamic vs. static culture conditions. BMC Genomics, 2012, 13, 54.	2.8	24

#	Article	IF	Citations
37	Microwell-based pancreas-on-chip model enhances genes expression and functionality of rat islets of Langerhans. Molecular and Cellular Endocrinology, 2020, 514, 110892.	3.2	24
38	Analysis of the mass transfers in an artificial kidney microchip. Journal of Membrane Science, 2010, 352, 116-125.	8.2	23
39	Investigation of expression and activity levels of primary rat hepatocyte detoxication genes under various flow rates and cell densities in microfluidic biochips. Biotechnology Progress, 2014, 30, 401-410.	2.6	23
40	Metabolomicsâ€onâ€aâ€chip approach to study hepatotoxicity of DDT, permethrin and their mixtures. Journal of Applied Toxicology, 2018, 38, 1121-1134.	2.8	21
41	Investigation of acetaminophen toxicity in HepG2/C3a microscale cultures using a system biology model of glutathione depletion. Cell Biology and Toxicology, 2015, 31, 173-185.	5.3	20
42	Transient behavior and relaxation of microcapsules with a cross-linked human serum albumin membrane. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 58, 2-10.	3.1	20
43	Comparison of the transcriptomic profile of hepatic human induced pluripotent stem like cells cultured in plates and in a 3D microscale dynamic environment. Genomics, 2017, 109, 16-26.	2.9	20
44	Analysis of the behavior of 2D monolayers and 3D spheroid human pancreatic beta cells derived from induced pluripotent stem cells in a microfluidic environment. Journal of Biotechnology, 2021, 330, 45-56.	3.8	20
45	Flow of two immiscible liquids with low viscosity in Y shaped microfluidic systems: effect of geometry. Microfluidics and Nanofluidics, 2010, 9, 293-301.	2.2	19
46	Investigation of the hepatotoxicity of flutamide: Pro-survival/apoptotic and necrotic switch in primary rat hepatocytes characterized by metabolic and transcriptomic profiles in microfluidic liver biochips. Toxicology in Vitro, 2014, 28, 1075-1087.	2.4	19
47	Effects of DDT and permethrin on rat hepatocytes cultivated in microfluidic biochips: Metabolomics and gene expression study. Environmental Toxicology and Pharmacology, 2018, 59, 1-12.	4.0	19
48	Investigation into modification of mass transfer kinetics by acrolein in a renal biochip. Toxicology in Vitro, 2011, 25, 1123-1131.	2.4	18
49	Fabrication and in situ characterization of microcapsules in a microfluidic system. Microfluidics and Nanofluidics, 2013, 14, 309-317.	2.2	18
50	Investigation of the hepatic respiration and liver zonation on rat hepatocytes using an integrated oxygen biosensor in a microscale device. Biotechnology Progress, 2019, 35, e2854.	2.6	18
51	Integration of pharmacokinetic and NRF2 system biology models to describe reactive oxygen species production and subsequent glutathione depletion in liver microfluidic biochips after flutamide exposure. Toxicology in Vitro, 2014, 28, 1230-1241.	2.4	17
52	Investigation of ifosfamide and chloroacetaldehyde renal toxicity through integration of <i>in vitro</i> liverâ€“kidney microfluidic data and pharmacokineticâ€system biology models. Journal of Applied Toxicology, 2016, 36, 330-339.	2.8	17
53	Effect on liver cells of stepwise microstructures fabricated in a photosensitive biodegradable polymer by softlithography. Materials Science and Engineering C, 2004, 24, 349-354.	7.3	16
54	Cryogel-Integrated Biochip for Liver Tissue Engineering. ACS Applied Bio Materials, 2021, 4, 5617-5626.	4.6	16

#	Article	IF	Citations
55	Investigation of steatosis profiles induced by pesticides using liver organ-on-chip model and omics analysis. Food and Chemical Toxicology, 2021, 152, 112155.	3.6	15
56	Hepatocytes cocultured with Sertoli cells in bioreactor favors Sertoli barrier tightness in rat. Journal of Applied Toxicology, 2017, 37, 287-295.	2.8	13
57	Characterization of liver zonationâ€like transcriptomic patterns in <scp>HLCs</scp> derived from <scp>hiPSCs</scp> in a microfluidic biochip environment. Biotechnology Progress, 2020, 36, e3013.	2.6	13
58	Behaviors of liver and kidney explants from chicken embryos inside plasma treated PDMS microchannels. Materials Science and Engineering C, 2009, 29, 861-868.	7.3	12
59	Multiparametric temporal analysis of the Caco-2/TC7 demonstrated functional and differentiated monolayers as early as 14 days of culture. European Journal of Pharmaceutical Sciences, 2015, 72, 1-11.	4.0	12
60	Analysis of the biocompatibility of perfluoropolyether dimethacrylate network using an organotypic method. Materials Science and Engineering C, 2016, 65, 295-302.	7.3	12
61	Online monitoring of hepatic rat metabolism by coupling a liver biochip and a mass spectrometer. Analyst, The, 2017, 142, 3747-3757.	3.5	12
62	Integration of an oxygen sensor into a polydymethylsiloxane hepatic culture device for two-dimensional gradient characterization. Sensors and Actuators B: Chemical, 2018, 273, 1062-1069.	7.8	12
63	Analysis of the transcription factors and their regulatory roles during a step-by-step differentiation of induced pluripotent stem cells into hepatocyte-like cells. Molecular Omics, 2019, 15, 383-398.	2.8	11
64	Analysis of hiPSCs differentiation toward hepatocyte-like cells upon extended exposition to oncostatin. Differentiation, 2020, 114, 36-48.	1.9	11
65	Transcriptome profiling of hiPSC-derived LSECs with nanoCAGE. Molecular Omics, 2020, 16, 138-146.	2.8	11
66	Metabolomic profiling during the differentiation of human induced pluripotent stem cells into hepatocyte-like cells. Differentiation, 2020, 112, 17-26.	1.9	10
67	Profiling of derived-hepatocyte progenitors from induced pluripotent stem cells using nanoCAGE promoter analysis. Biochemical Engineering Journal, 2019, 142, 7-17.	3.6	9
68	Investigation of the hepatic development in the coculture of hiPSCs-derived LSECs and HLCs in a fluidic microenvironment. APL Bioengineering, 2021, 5, 026104.	6.2	8
69	Multiâ€omics analysis of hiPSCsâ€derived HLCs matured onâ€chip revealed patterns typical of liver regeneration. Biotechnology and Bioengineering, 2021, 118, 3716-3732.	3.3	7
70	Differential scanning calorimetry analysis of W/O emulsions prepared by miniature scale magnetic agitation and microfluidics. Canadian Journal of Chemical Engineering, 2014, 92, 337-343.	1.7	6
71	Integration of metabolomic and transcriptomic profiles of hiPSCs-derived hepatocytes in a microfluidic environment. Biochemical Engineering Journal, 2020, 155, 107490.	3.6	5
72	In vitro cyto-biocompatibility study of thin-film transistors substrates using an organotypic culture method. Journal of Materials Science: Materials in Medicine, 2017, 28, 4.	3.6	4

#	Article	IF	Citations
73	Migration of liver and kidney explants inside trapezoidal PDMS microchannels. Materials Science and Engineering C, 2010, 30, 1190-1196.	7.3	3
74	Evaluation of the mass transfers of caffeine and vitamin B12 in chloroacetaldehyde treated renal barrier model using a microfluidic biochip. Sensors and Actuators B: Chemical, 2012, 174, 465-472.	7.8	3
75	Cellular Responses of Hepatocytes Induced by Hypothermia: Modulation of Cytokinesis and Drug Metabolism-Related Functions. Therapeutic Hypothermia and Temperature Management, 2014, 4, 32-42.	0.9	3
76	Integration of metabolomic and transcriptomic profiling to compare two protocols of differentiation of human induced pluripotent stem cells into hepatocytes. Process Biochemistry, 2020, 88, 138-147.	3.7	2
77	Characterisation of early HepG2/3a cell response to a microfluidic culture in liver biochips using multi-parametric real time image processing. Sensors and Actuators B: Chemical, 2014, 199, 433-445.	7.8	1
78	Characterization of the proteome and metabolome of human liver sinusoidal endothelial-like cells derived from induced pluripotent stem cells. Differentiation, 2021, 120, 28-35.	1.9	1
79	Graph_sampler: a simple tool for fully Bayesian analyses of DAG-models. Computational Statistics, 2017, 32, 691-716.	1.5	0