Marco Rasponi

List of Publications by Citations

67 papers	1,913 citations	20 h-index	42 g-index
82 ext. papers	2,343 ext. citations	5.3 avg, IF	4.76 L-index

#	Paper	IF	Citations
67	Bioprinting 3D microfibrous scaffolds for engineering endothelialized myocardium and heart-on-a-chip. *Biomaterials*, **2016**, 110, 45-59	15.6	495
66	Beating heart on a chip: a novel microfluidic platform to generate functional 3D cardiac microtissues. *Lab on A Chip*, **2016**, 16, 599-610	7.2	227
65	Hyperphysiological compression of articular cartilage induces an osteoarthritic phenotype in a cartilage-on-a-chip model. *Nature Biomedical Engineering*, **2019**, 3, 545-557	19	80
64	VA-086 methacrylate gelatine photopolymerizable hydrogels: A parametric study for highly biocompatible 3D cell embedding. *Journal of Biomedical Materials Research - Part A*, **2015**, 103, 2109-17	5.4	76
63	Controlled electromechanical cell stimulation on-a-chip. *Scientific Reports*, **2015**, 5, 11800	4.9	75
62	High-Throughput Microfluidic Platform for 3D Cultures of Mesenchymal Stem Cells, Towards Engineering Developmental Processes. *Scientific Reports*, **2015**, 5, 10288	4.9	64
61	Microfabricated polyester conical microwells for cell culture applications. *Lab on A Chip*, **2011**, 11, 2325-32	7.2	52
60	Fabrication of 3D cell-laden hydrogel microstructures through photo-mold patterning. *Biofabrication*, **2013**, 5, 035002	10.5	49
59	How to embed three-dimensional flexible electrodes in microfluidic devices for cell culture applications. *Lab on A Chip*, **2011**, 11, 1593-5	7.2	43
58	On-chip assessment of human primary cardiac fibroblasts proliferative responses to uniaxial cyclic mechanical strain. *Biotechnology and Bioengineering*, **2016**, 113, 859-69	4.9	38
57	Multi-gradient hydrogels produced layer by layer with capillary flow and crosslinking in open microchannels. *Lab on A Chip*, **2012**, 12, 659-61	7.2	37
56	Developmentally inspired programming of adult human mesenchymal stromal cells toward stable chondrogenesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 4625-4630	11.5	36
55	Anisotropic material synthesis by capillary flow in a fluid stripe. *Biomaterials*, **2011**, 32, 6493-504	15.6	32
54	Human cardiac fibroblasts adaptive responses to controlled combined mechanical strain and oxygen changes in vitro. *ELife*, **2017**, 6,	8.9	32
53	Integrating Biosensors in Organs-on-Chip Devices: A Perspective on Current Strategies to Monitor Microphysiological Systems. *Biosensors*, **2020**, 10,	5.9	32
52	A microfluidic platform for controlled biochemical stimulation of twin neuronal networks. *Biomicrofluidics*, **2012**, 6, 24106-2410610	3.2	31
51	Cardiac Meets Skeletal: What's New in Microfluidic Models for Muscle Tissue Engineering. *Molecules*, **2016**, 21,	4.8	29

50	Reconstitution of the Human Nigro-striatal Pathway on-a-Chip Reveals OPA1-Dependent Mitochondrial Defects and Loss of Dopaminergic Synapses. *Cell Reports*, **2019**, 29, 4646-4656.e4	10.6	23
49	Reliable magnetic reversible assembly of complex microfluidic devices: fabrication, characterization, and biological validation. *Microfluidics and Nanofluidics*, **2011**, 10, 1097-1107	2.8	21
48	Enhancing all-in-one bioreactors by combining interstitial perfusion, electrical stimulation, on-line monitoring and testing within a single chamber for cardiac constructs. *Scientific Reports*, **2018**, 8, 16944	4.9	21
47	Validation of long-term primary neuronal cultures and network activity through the integration of reversibly bonded microbioreactors and MEA substrates. *Biotechnology and Bioengineering*, **2012**, 109, 166-75	4.9	20
46	Microfluidic emulation of mechanical circulatory support device shear-mediated platelet activation. *Biomedical Microdevices*, **2015**, 17, 117	3.7	20
45	Numerical and experimental characterization of a novel modular passive micromixer. *Biomedical Microdevices*, **2012**, 14, 849-62	3.7	20
44	A microscale biomimetic platform for generation and electro-mechanical stimulation of 3D cardiac microtissues. *APL Bioengineering*, **2018**, 2, 046102	6.6	20
43	A three-dimensional in vitro dynamic micro-tissue model of cardiac scar formation. *Integrative Biology (United Kingdom)*, **2018**, 10, 174-183	3.7	19
42	Gelatin hydrogels via thiol-ene chemistry. *Monatshefte F□ Chemie*, **2016**, 147, 587-592	1.4	18
41	Generating Multicompartmental 3D Biological Constructs Interfaced through Sequential Injections in Microfluidic Devices. *Advanced Healthcare Materials*, **2017**, 6, 1601170	10.1	17
40	Microfabricated Physiological Models for In Vitro Drug Screening Applications. *Micromachines*, **2016**, 7,	3.3	16
39	Fabrication of multi-well chips for spheroid cultures and implantable constructs through rapid prototyping techniques. *Biotechnology and Bioengineering*, **2015**, 112, 1457-71	4.9	15
38	Computational and functional evaluation of a microfluidic blood flow device. *ASAIO Journal*, **2007**, 53, 447-55	3.6	15
37	Microfluidic approaches for the assessment of blood cell trauma: a focus on thrombotic risk in mechanical circulatory support devices. *International Journal of Artificial Organs*, **2016**, 39, 184-93	1.9	13
36	Generation of functional cardiac microtissues in a beating heart-on-a-chip. *Methods in Cell Biology*, **2018**, 146, 69-84	1.8	13
35	Frataxin gene editing rescues Friedreich's ataxia pathology in dorsal root ganglia organoid-derived sensory neurons. *Nature Communications*, **2020**, 11, 4178	17.4	13
34	A Simple Vacuum-Based Microfluidic Technique to Establish High-Throughput Organs-On-Chip and 3D Cell Cultures at the Microscale. *Advanced Materials Technologies*, **2019**, 4, 1800319	6.8	12
33	Lymphatic endothelium contributes to colorectal cancer growth via the soluble matrisome component GDF11. *International Journal of Cancer*, **2019**, 145, 1913-1920	7.5	11

32	High-throughput microfluidic platform for adherent single cells non-viral gene delivery. *RSC Advances*, **2015**, 5, 5087-5095	3.7	11
31	Recapitulating monocyte extravasation to the synovium in an organotypic microfluidic model of the articular joint. *Biofabrication*, **2021**, 13,	10.5	11
30	Hyperexcitability in Cultured Cortical Neuron Networks from the G93A-SOD1 Amyotrophic Lateral Sclerosis Model Mouse and its Molecular Correlates. *Neuroscience*, **2019**, 416, 88-99	3.9	10
29	Design and validation of a microfluidic device for blood□brain barrier monitoring and transport studies. *Journal of Micromechanics and Microengineering*, **2018**, 28, 044001	2	9
28	Microfludic platforms for the evaluation of anti-platelet agent efficacy under hyper-shear conditions associated with ventricular assist devices. *Medical Engineering and Physics*, **2017**, 48, 31-38	2.4	9
27	Development of a microfluidic platform for high-throughput screening of non-viral gene delivery vectors. *Biotechnology and Bioengineering*, **2018**, 115, 775-784	4.9	9
26	High-Throughput Microfluidic Platform for 3D Cultures of Mesenchymal Stem Cells. *Methods in Molecular Biology*, **2017**, 1612, 303-323	1.4	8
25	Development of an organotypic microfluidic model to reproduce monocyte extravasation process in the osteoarthritic joint. *Osteoarthritis and Cartilage*, **2018**, 26, S122	6.2	8
24	Stoichiometric control of live cell mixing to enable fluidically-encoded co-culture models in perfused microbioreactor arrays. *Integrative Biology (United Kingdom)*, **2016**, 8, 194-204	3.7	8
23	Micro-electrode channel guide (□ECG) technology: an online method for continuous electrical recording in a human beating heart-on-chip. *Biofabrication*, **2021**,	10.5	8
22	Realization and efficiency evaluation of a micro-photocatalytic cell prototype for real-time blood oxygenation. *Medical Engineering and Physics*, **2011**, 33, 887-92	2.4	7
21	Design of a microfluidic strategy for trapping and screening single cells. *Medical Engineering and Physics*, **2016**, 38, 33-40	2.4	6
20	Liver-Heart on chip models for drug safety. *APL Bioengineering*, **2021**, 5, 031505	6.6	6
19	Lab-on-Chip for testing myelotoxic effect of drugs and chemicals. *Microfluidics and Nanofluidics*, **2015**, 19, 935-940	2.8	5
18	Assessing the influence of perfusion on cardiac microtissue maturation: A heart-on-chip platform embedding peristaltic pump capabilities. *Biotechnology and Bioengineering*, **2021**, 118, 3128-3137	4.9	5
17	Microfluidic flow-based platforms for induction and analysis of dynamic shear-mediated platelet activation-Initial validation versus the standardized hemodynamic shearing device. *Biomicrofluidics*, **2018**, 12, 042208	3.2	5
16	A dynamic microscale mid-throughput fibrosis model to investigate the effects of different ratios of cardiomyocytes and fibroblasts. *Lab on A Chip*, **2021**, 21, 4177-4195	7.2	5
15	Physiologic flow-conditioning limits vascular dysfunction in engineered human capillaries. *Biomaterials*, **2021**, 280, 121248	15.6	4

List of Publications

14	Experimental liver models: From cell culture techniques to microfluidic organs-on-chip. *Liver International*, **2021**, 41, 1744-1761	7.9	4
13	Young at Heart: Pioneering Approaches to Model Nonischaemic Cardiomyopathy with Induced Pluripotent Stem Cells. *Stem Cells International*, **2016**, 2016, 4287158	5	4
12	Current strategies of mechanical stimulation for maturation of cardiac microtissues. *Biophysical Reviews*, **2021**, 13, 717-727	3.7	4
11	The MICELI (MICrofluidic, ELectrical, Impedance): Prototyping a Point-of-Care Impedance Platelet Aggregometer. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	3
10	Photo and Soft Lithography for Organ-on-Chip Applications. *Methods in Molecular Biology*, **2022**, 2373, 1-19	1.4	3
9	Modeling In Vitro Osteoarthritis Phenotypes in a Vascularized Bone Model Based on a Bone-Marrow Derived Mesenchymal Cell Line and Endothelial Cells. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
8	Microfluidic Biofabrication of 3D Multicellular Spheroids by Modulation of Non-geometrical Parameters. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 366	5.8	1
7	Short-term effects of microstructured surfaces: role in cell differentiation toward a contractile phenotype. *Journal of Applied Biomaterials and Functional Materials*, **2015**, 13, e92-9	1.8	1
6	Study of Cellular Adhesion by Means of Micropillar Surface Topologies. *Advanced Materials Research*, **2011**, 409, 105-110	0.5	1
5	A RELIABLE METHOD FOR PROTOTYPING FLEXIBLE PHYSIOLOGIC-LIKE BEHAVING LEFT VENTRICLES FOR STUDYING MITRAL VALVE SURGICAL CORRECTIONS. *Journal of Mechanics in Medicine and Biology*, **2006**, 06, 101-107	0.7	1
4	Organ-on-Chips for Studying Tissue Barriers: Standard Techniques and a Novel Method for Including Porous Membranes Within Microfluidic Devices. *Methods in Molecular Biology*, **2022**, 2373, 21-38	1.4	1
3	Electromechanical Stimulation of 3D Cardiac Microtissues in a Heart-on-Chip Model. *Methods in Molecular Biology*, **2022**, 2373, 133-157	1.4	1
2	Selective Biochemical Manipulation of Twin Neuronal Networks on Microelectrode Arrays. *Neuromethods*, **2015**, 217-230	0.4	
1	Mechanical Induction of Osteoarthritis Traits in a Cartilage-on-a-Chip Model. *Methods in Molecular Biology*, **2022**, 2373, 231-251	1.4	