

Claudia Fischbach

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

93
papers

6,018
citations

44
h-index

77
g-index

107
ext. papers

6,815
ext. citations

9.3
avg, IF

5.62
L-index

#	Paper	IF	Citations
93	Breast cancer-secreted factors perturb murine bone growth in regions prone to metastasis. <i>Science Advances</i> , 2021 , 7,	14.3	9
92	Contractility, focal adhesion orientation, and stress fiber orientation drive cancer cell polarity and migration along wavy ECM substrates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	8
91	Fluorescent Silica Nanoparticles to Label Metastatic Tumor Cells in Mineralized Bone Microenvironments. <i>Small</i> , 2021 , 17, e2001432	11	6
90	Engineering Modular Half-Antibody Conjugated Nanoparticles for Targeting CD44v6-Expressing Cancer Cells. <i>Nanomaterials</i> , 2021 , 11,	5.4	5
89	Computational 4D-OCM for label-free imaging of collective cell invasion and force-mediated deformations in collagen. <i>Scientific Reports</i> , 2021 , 11, 2814	4.9	4
88	Tetrathiomolybdate (TM)-associated copper depletion influences collagen remodeling and immune response in the pre-metastatic niche of breast cancer. <i>Npj Breast Cancer</i> , 2021 , 7, 108	7.8	2
87	Engineering strategies to capture the biological and biophysical tumor microenvironment in vitro. <i>Advanced Drug Delivery Reviews</i> , 2021 , 176, 113852	18.5	2
86	Engineered ECM models: Opportunities to advance understanding of tumor heterogeneity. <i>Current Opinion in Cell Biology</i> , 2021 , 72, 1-9	9	1
85	Obesity-associated Adipose Stromal Cells Promote Breast Cancer Invasion Through Direct Cell Contact and ECM Remodeling. <i>Advanced Functional Materials</i> , 2020 , 30, 1910650	15.6	8
84	Collagen microarchitecture mechanically controls myofibroblast differentiation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 11387-11398	11.5	58
83	Supported Membrane Platform to Assess Surface Interactions between Extracellular Vesicles and Stromal Cells. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 3945-3956	5.5	1
82	Direct comparison of optical and electron microscopy methods for structural characterization of extracellular vesicles. <i>Journal of Structural Biology</i> , 2020 , 210, 107474	3.4	31
81	Biomaterials-Based Model Systems to Study Tumor Microenvironment Interactions 2020 , 1217-1236		1
80	Extracellular Matrix Remodelling: Obesity-Associated Adipose Stromal Cells Promote Breast Cancer Invasion through Direct Cell Contact and ECM Remodeling (Adv. Funct. Mater. 48/2020). <i>Advanced Functional Materials</i> , 2020 , 30, 2070320	15.6	
79	Hydroxyapatite mineral enhances malignant potential in a tissue-engineered model of ductal carcinoma in situ (DCIS). <i>Biomaterials</i> , 2019 , 224, 119489	15.6	12
78	Endothelial cells promote 3D invasion of GBM by IL-8-dependent induction of cancer stem cell properties. <i>Scientific Reports</i> , 2019 , 9, 9069	4.9	45
77	The Physics of Cancer. <i>Cancer Research</i> , 2019 , 79, 2107-2110	10.1	13

76	Mapping and Profiling Lipid Distribution in a 3D Model of Breast Cancer Progression. <i>ACS Central Science</i> , 2019 , 5, 768-780	16.8	19
75	Loss of Sirtuin 1 Alters the Secretome of Breast Cancer Cells by Impairing Lysosomal Integrity. <i>Developmental Cell</i> , 2019 , 49, 393-408.e7	10.2	66
74	Intrafibrillar, bone-mimetic collagen mineralization regulates breast cancer cell adhesion and migration. <i>Biomaterials</i> , 2019 , 198, 95-106	15.6	36
73	Obesity-Associated Extracellular Matrix Remodeling Promotes a Macrophage Phenotype Similar to Tumor-Associated Macrophages. <i>American Journal of Pathology</i> , 2019 , 189, 2019-2035	5.8	38
72	Physical confinement induces malignant transformation in mammary epithelial cells. <i>Biomaterials</i> , 2019 , 217, 119307	15.6	8
71	CD44v6 increases gastric cancer malignant phenotype by modulating adipose stromal cell-mediated ECM remodeling. <i>Integrative Biology (United Kingdom)</i> , 2018 , 10, 145-158	3.7	13
70	Biophysical Properties of Extracellular Matrix: Linking Obesity and Cancer. <i>Trends in Cancer</i> , 2018 , 4, 271-273	12.3	20
69	Tissue-Engineered Models for Studies of Bone Metastasis. <i>Cancer Drug Discovery and Development</i> , 2018 , 95-116	0.3	
68	Studying biomineralization pathways in a 3D culture model of breast cancer microcalcifications. <i>Biomaterials</i> , 2018 , 179, 71-82	15.6	19
67	Revealing Mechanisms of Microvesicle Biogenesis in Breast Cancer Cells via in situ Microscopy. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1256-1257	0.5	1
66	Obesity-associated extracellular matrix remodeling promotes a tumor-associated macrophage phenotype in tumor-free breast adipose tissue. <i>FASEB Journal</i> , 2018 , 32, 280.5	0.9	
65	Correlative imaging reveals physiochemical heterogeneity of microcalcifications in human breast carcinomas. <i>Journal of Structural Biology</i> , 2018 , 202, 25-34	3.4	23
64	Cancer metabolism gets physical. <i>Science Translational Medicine</i> , 2018 , 10,	17.5	29
63	Collagen Fiber Orientation Regulates 3D Vascular Network Formation and Alignment. <i>ACS Biomaterials Science and Engineering</i> , 2018 , 4, 2967-2976	5.5	26
62	Protein-crystal interface mediates cell adhesion and proangiogenic secretion. <i>Biomaterials</i> , 2017 , 116, 174-185	15.6	10
61	Breast cancer-derived extracellular vesicles stimulate myofibroblast differentiation and pro-angiogenic behavior of adipose stem cells. <i>Matrix Biology</i> , 2017 , 60-61, 190-205	11.4	38
60	Multiscale characterization of the mineral phase at skeletal sites of breast cancer metastasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 10542-10547	11.5	41
59	Influencing the Tumor Microenvironment: A Phase II Study of Copper Depletion Using Tetrathiomolybdate in Patients with Breast Cancer at High Risk for Recurrence and in Preclinical Models of Lung Metastases. <i>Clinical Cancer Research</i> , 2017 , 23, 666-676	12.9	92

58	Breast cancer cells alter the dynamics of stromal fibronectin-collagen interactions. <i>Matrix Biology</i> , 2017 , 60-61, 86-95	11.4	56
57	Contextual Control of Adipose-Derived Stem Cell Function: Implications for Engineered Tumor Models. <i>ACS Biomaterials Science and Engineering</i> , 2017 , 3, 1483-1493	5.5	6
56	Fibronectin Mechanobiology Regulates Tumorigenesis. <i>Cellular and Molecular Bioengineering</i> , 2016 , 9, 1-11	3.9	50
55	Collagen I hydrogel microstructure and composition conjointly regulate vascular network formation. <i>Acta Biomaterialia</i> , 2016 , 44, 200-8	10.8	35
54	Adipose-derived stem cells increase angiogenesis through matrix metalloproteinase-dependent collagen remodeling. <i>Integrative Biology (United Kingdom)</i> , 2016 , 8, 205-15	3.7	41
53	Engineered tumours: Roll-on scaffolds. <i>Nature Materials</i> , 2016 , 15, 138-9	27	
52	Biomaterials approaches to modeling macrophage-extracellular matrix interactions in the tumor microenvironment. <i>Current Opinion in Biotechnology</i> , 2016 , 40, 16-23	11.4	21
51	Three-Dimensional Mechanical Loading Modulates the Osteogenic Response of Mesenchymal Stem Cells to Tumor-Derived Soluble Signals. <i>Tissue Engineering - Part A</i> , 2016 , 22, 1006-15	3.9	27
50	Chemical and physical properties of carbonated hydroxyapatite affect breast cancer cell behavior. <i>Acta Biomaterialia</i> , 2015 , 24, 333-42	10.8	40
49	Stiffening and unfolding of early deposited-fibronectin increase proangiogenic factor secretion by breast cancer-associated stromal cells. <i>Biomaterials</i> , 2015 , 54, 63-71	15.6	56
48	Effect of the Materials Properties of Hydroxyapatite Nanoparticles on Fibronectin Deposition and Conformation. <i>Crystal Growth and Design</i> , 2015 , 15, 2452-2460	3.5	28
47	3D culture broadly regulates tumor cell hypoxia response and angiogenesis via pro-inflammatory pathways. <i>Biomaterials</i> , 2015 , 55, 110-8	15.6	90
46	3D Conducting Polymer Platforms for Electrical Control of Protein Conformation and Cellular Functions. <i>Journal of Materials Chemistry B</i> , 2015 , 3, 5040-5048	7.3	96
45	Obesity-dependent changes in interstitial ECM mechanics promote breast tumorigenesis. <i>Science Translational Medicine</i> , 2015 , 7, 301ra130	17.5	175
44	Lung inflammation promotes metastasis through neutrophil protease-mediated degradation of Tsp-1. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 16000-5	11.5	118
43	In vitro models of tumor vessels and matrix: engineering approaches to investigate transport limitations and drug delivery in cancer. <i>Advanced Drug Delivery Reviews</i> , 2014 , 69-70, 205-216	18.5	55
42	Biomechanical forces in the skeleton and their relevance to bone metastasis: biology and engineering considerations. <i>Advanced Drug Delivery Reviews</i> , 2014 , 79-80, 119-34	18.5	26
41	Abstract 153: A Novel 3D Platform to Investigate Neoangiogenesis, Transendothelial Migration and Metastasis of Breast Cancer Cells. <i>Plastic and Reconstructive Surgery</i> , 2014 , 133, 169	2.7	3

40	Engineered culture models for studies of tumor-microenvironment interactions. <i>Annual Review of Biomedical Engineering</i> , 2013 , 15, 29-53	12	112
39	Microengineered tumor models: insights & opportunities from a physical sciences-oncology perspective. <i>Biomedical Microdevices</i> , 2013 , 15, 583-593	3.7	33
38	Formation of microvascular networks in vitro. <i>Nature Protocols</i> , 2013 , 8, 1820-36	18.8	149
37	Fibronectin conformation regulates the proangiogenic capability of tumor-associated adipogenic stromal cells. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2013 , 1830, 4314-20	4	32
36	Glioblastoma stem cells are regulated by interleukin-8 signaling in a tumoral perivascular niche. <i>Cancer Research</i> , 2013 , 73, 7079-89	10.1	136
35	In vivo tibial compression decreases osteolysis and tumor formation in a human metastatic breast cancer model. <i>Journal of Bone and Mineral Research</i> , 2013 , 28, 2357-67	6.3	64
34	A physical sciences network characterization of non-tumorigenic and metastatic cells. <i>Scientific Reports</i> , 2013 , 3, 1449	4.9	113
33	Physicochemical regulation of endothelial sprouting in a 3D microfluidic angiogenesis model. <i>Journal of Biomedical Materials Research - Part A</i> , 2013 , 101, 2948-56	5.4	59
32	Phosphorescent nanoparticles for quantitative measurements of oxygen profiles in vitro and in vivo. <i>Biomaterials</i> , 2012 , 33, 2710-22	15.6	48
31	In vitro microvessels for the study of angiogenesis and thrombosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 9342-7	11.5	657
30	Multiscale models of breast cancer progression. <i>Annals of Biomedical Engineering</i> , 2012 , 40, 2488-500	4.7	38
29	Electrical control of protein conformation. <i>Advanced Materials</i> , 2012 , 24, 2501-5	24	62
28	Implanted adipose progenitor cells as physicochemical regulators of breast cancer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 9786-91	11.5	116
27	Hydroxyapatite nanoparticle-containing scaffolds for the study of breast cancer bone metastasis. <i>Biomaterials</i> , 2011 , 32, 5112-22	15.6	113
26	Stiffness of photocrosslinked RGD-alginate gels regulates adipose progenitor cell behavior. <i>Biotechnology and Bioengineering</i> , 2011 , 108, 1683-92	4.9	83
25	Adipose progenitor cells increase fibronectin matrix strain and unfolding in breast tumors. <i>Physical Biology</i> , 2011 , 8, 015008	3	56
24	Microenvironmental Regulation of Tumor Angiogenesis: Biological and Engineering Considerations 2011 , 167-202		1
23	A novel 3-D mineralized tumor model to study breast cancer bone metastasis. <i>PLoS ONE</i> , 2010 , 5, e8849	3.7	81

22	Oxygen-controlled three-dimensional cultures to analyze tumor angiogenesis. <i>Tissue Engineering - Part A</i> , 2010 , 16, 2133-41	3.9	84
21	Tissue-engineered three-dimensional tumor models to study tumor angiogenesis. <i>Tissue Engineering - Part A</i> , 2010 , 16, 2147-52	3.9	41
20	Microfluidic culture models of tumor angiogenesis. <i>Tissue Engineering - Part A</i> , 2010 , 16, 2143-6	3.9	70
19	Dense type I collagen matrices that support cellular remodeling and microfabrication for studies of tumor angiogenesis and vasculogenesis in vitro. <i>Biomaterials</i> , 2010 , 31, 8596-607	15.6	243
18	Cancer cell angiogenic capability is regulated by 3D culture and integrin engagement. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 399-404	11.5	253
17	Parylene peel-off arrays to probe the role of cell-cell interactions in tumour angiogenesis. <i>Integrative Biology (United Kingdom)</i> , 2009 , 1, 587-94	3.7	48
16	Electrical control of cell density gradients on a conducting polymer surface. <i>Chemical Communications</i> , 2009 , 5278-80	5.8	54
15	Integrin-adhesion ligand bond formation of preosteoblasts and stem cells in three-dimensional RGD presenting matrices. <i>Biomacromolecules</i> , 2008 , 9, 1843-51	6.9	57
14	In vivo development and long-term survival of engineered adipose tissue depend on in vitro precultivation strategy. <i>Tissue Engineering - Part A</i> , 2008 , 14, 275-84	3.9	37
13	Polymers for pro- and anti-angiogenic therapy. <i>Biomaterials</i> , 2007 , 28, 2069-76	15.6	78
12	Engineering tumors with 3D scaffolds. <i>Nature Methods</i> , 2007 , 4, 855-60	21.6	681
11	Modifying the proliferative state of target cells to control DNA expression and identifying cell types transfected in vivo. <i>Molecular Therapy</i> , 2007 , 15, 361-8	11.7	17
10	Mechanical strain regulates endothelial cell patterning in vitro. <i>Tissue Engineering</i> , 2007 , 13, 207-17		94
9	Integrated approach to designing growth factor delivery systems. <i>FASEB Journal</i> , 2007 , 21, 3896-903	0.9	111
8	Adipose tissue engineering based on mesenchymal stem cells and basic fibroblast growth factor in vitro. <i>Tissue Engineering</i> , 2005 , 11, 1840-51		107
7	Combination treatment significantly enhances the efficacy of antitumor therapy by preferentially targeting angiogenesis. <i>Laboratory Investigation</i> , 2005 , 85, 756-67	5.9	50
6	Basic fibroblast growth factor enhances PPARgamma ligand-induced adipogenesis of mesenchymal stem cells. <i>FEBS Letters</i> , 2004 , 577, 277-83	3.8	86
5	Three-dimensional in vitro model of adipogenesis: comparison of culture conditions. <i>Tissue Engineering</i> , 2004 , 10, 215-29		63

4	Generation of mature fat pads in vitro and in vivo utilizing 3-D long-term culture of 3T3-L1 preadipocytes. <i>Experimental Cell Research</i> , 2004 , 300, 54-64	4.2	100
3	Poly(D,L-lactic acid)-poly(ethylene glycol)-monomethyl ether diblock copolymers control adhesion and osteoblastic differentiation of marrow stromal cells. <i>Tissue Engineering</i> , 2003 , 9, 71-84		74
2	Does UV irradiation affect polymer properties relevant to tissue engineering?. <i>Surface Science</i> , 2001 , 491, 333-345	1.8	76
1	Polymeric Systems for Bioinspired Delivery of Angiogenic Molecules191-221		20