Valerie marie Weaver

List of Publications by Year in Descending Order

146 papers	30,777 citations	70 h-index	154 g-index
154 ext. papers	36,870 ext. citations	12 avg, IF	7.48 L-index

#	Paper	IF	Citations
146	Immunosuppressive glycoproteins associate with breast tumor fibrosis and aggression.. *Matrix Biology Plus*, **2022**, 14, 100105	5.1	1
145	NCIs publication affiliation conundrum: Reframing innovation to incentivize an equitable path for advocate representation.. *Translational Oncology*, **2021**, 16, 101325	4.9	
144	EPH/EPHRIN regulates cellular organization by actomyosin contractility effects on cell contacts. *Journal of Cell Biology*, **2021**, 220,	7.3	5
143	Matrix compliance permits NF-B activation to drive therapy resistance in breast cancer. *Journal of Experimental Medicine*, **2021**, 218,	16.6	4
142	Single-cell transcriptome analysis defines heterogeneity of the murine pancreatic ductal tree. *ELife*, **2021**, 10,	8.9	7
141	Autophagy in stromal fibroblasts promotes tumor desmoplasia and mammary tumorigenesis. *Genes and Development*, **2021**, 35, 963-975	12.6	6
140	Adhesion-mediated mechanosignaling forces mitohormesis. *Cell Metabolism*, **2021**, 33, 1322-1341.e13	24.6	12
139	Tissue mechanics in stem cell fate, development, and cancer. *Developmental Cell*, **2021**, 56, 1833-1847	10.2	11
138	Membrane Tension Locks In Pluripotency. *Cell Stem Cell*, **2021**, 28, 175-176	18	1
137	Improving DCIS diagnosis and predictive outcome by applying artificial intelligence. *Biochimica Et Biophysica Acta: Reviews on Cancer*, **2021**, 1876, 188555	11.2	
136	Fibrosis and cancer: A strained relationship. *Biochimica Et Biophysica Acta: Reviews on Cancer*, **2020**, 1873, 188356	11.2	105
135	A framework for advancing our understanding of cancer-associated fibroblasts. *Nature Reviews Cancer*, **2020**, 20, 174-186	31.3	790
134	Pancreatic ductal adenocarcinoma progression is restrained by stromal matrix. *Journal of Clinical Investigation*, **2020**, 130, 4704-4709	15.9	44
133	Zena Werb (1945-2020): Mourning the loss of a tissue microenvironment icon. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 27759-27760	11.5	
132	Derivation of a nuclear heterogeneity image index to grade DCIS. *Computational and Structural Biotechnology Journal*, **2020**, 18, 4063-4070	6.8	4
131	Mechanical Tension Promotes Formation of Gastrulation-like Nodes and Patterns Mesoderm Specification in Human Embryonic Stem Cells. *Developmental Cell*, **2020**, 55, 679-694.e11	10.2	28
130	Dons sugarcoat it: How glycocalyx composition influences cancer progression. *Journal of Cell Biology*, **2020**, 219,	7.3	20

129	Zena Werb 1945-2020.. *Nature Cancer*, **2020**, 1, 753-754	15.4	1
128	Targeting acid ceramidase inhibits YAP/TAZ signaling to reduce fibrosis in mice. *Science Translational Medicine*, **2020**, 12,	17.5	25
127	Proteoglycans as Mediators of Cancer Tissue Mechanics. *Frontiers in Cell and Developmental Biology* , **2020**, 8, 569377	5.7	8
126	Wnt4 from the Niche Controls the Mechano-Properties and Quiescent State of Muscle Stem Cells. *Cell Stem Cell*, **2019**, 25, 654-665.e4	18	54
125	Controlled modelling of human epiblast and amnion development using stem cells. *Nature*, **2019**, 573, 421-425	50.4	169
124	The Extracellular Matrix Modulates the Metastatic Journey. *Developmental Cell*, **2019**, 49, 332-346	10.2	153
123	Tissue mechanics, an important regulator of development and disease. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2019**, 374, 20180215	5.8	29
122	Patterning the Geometry of Human Embryonic Stem Cell Colonies on Compliant Substrates to Control Tissue-Level Mechanics. *Journal of Visualized Experiments*, **2019**,	1.6	2
121	Discoidin domain receptor 1 (DDR1) ablation promotes tissue fibrosis and hypoxia to induce aggressive basal-like breast cancers. *Genes and Development*, **2018**, 32, 244-257	12.6	27
120	Antisecretory Factor-Mediated Inhibition of Cell Volume Dynamics Produces Antitumor Activity in Glioblastoma. *Molecular Cancer Research*, **2018**, 16, 777-790	6.6	10
119	New Horizons in Advocacy Engaged Physical Sciences and Oncology Research. *Trends in Cancer*, **2018**, 4, 260-264	12.5	5
118	Modeling Tissue Polarity in Context. *Journal of Molecular Biology*, **2018**, 430, 3613-3628	6.5	10
117	Fibronectin rescues estrogen receptor from lysosomal degradation in breast cancer cells. *Journal of Cell Biology*, **2018**, 217, 2777-2798	7.3	22
116	Feeling Stress: The Mechanics of Cancer Progression and Aggression. *Frontiers in Cell and Developmental Biology*, **2018**, 6, 17	5.7	164
115	The Physical and Biochemical Properties of the Extracellular Matrix Regulate Cell Fate. *Current Topics in Developmental Biology*, **2018**, 130, 1-37	5.3	113
114	Spatiotemporal mosaic self-patterning of pluripotent stem cells using CRISPR interference. *ELife*, **2018**, 7,	8.9	19
113	Excess area dependent scaling behavior of nano-sized membrane tethers. *Physical Biology*, **2018**, 15, 026002	3	8
112	TMIC-43. A TENSION-MEDIATED GLYCOCALYX FEEDBACK LOOP PROMOTES A MESENCHYMAL, STEM-LIKE PHENOTYPE IN GLIOBLASTOMA. *Neuro-Oncology*, **2018**, 20, vi265-vi266	1	78

111	A tension-mediated glycocalyx-integrin feedback loop promotes mesenchymal-like glioblastoma. *Nature Cell Biology*, **2018**, 20, 1203-1214	23.4	60
110	Compartment resolved proteomics reveals a dynamic matrisome in a biomechanically driven model of pancreatic ductal adenocarcinoma. *Journal of Immunology and Regenerative Medicine*, **2018**, 1, 67-75	2.8	8
109	Visualizing dynamic microvillar search and stabilization during ligand detection by T cells. *Science*, **2017**, 356,	33.3	133
108	Integrin-mediated traction force enhances paxillin molecular associations and adhesion dynamics that increase the invasiveness of tumor cells into a three-dimensional extracellular matrix. *Molecular Biology of the Cell*, **2017**, 28, 1467-1488	3.5	84
107	Force-dependent breaching of the basement membrane. *Matrix Biology*, **2017**, 57-58, 178-189	11.4	49
106	Tissue mechanics regulate brain development, homeostasis and disease. *Journal of Cell Science*, **2017**, 130, 71-82	5.3	160
105	Extracellular Matrix Remodeling and Stiffening Modulate Tumor Phenotype and Treatment Response. *Annual Review of Cancer Biology*, **2017**, 1, 313-334	13.3	59
104	Tissue Force Programs Cell Fate and Tumor Aggression. *Cancer Discovery*, **2017**, 7, 1224-1237	24.4	125
103	Lysyl Oxidase-like Protein LOXL2 Promotes Lung Metastasis of Breast Cancer. *Cancer Research*, **2017**, 77, 5846-5859	10.1	84
102	Development of Aggressive Pancreatic Ductal Adenocarcinomas Depends on Granulocyte Colony Stimulating Factor Secretion in Carcinoma Cells. *Cancer Immunology Research*, **2017**, 5, 718-729	12.5	30
101	Cellular adaptation to biomechanical stress across length scales in tissue homeostasis and disease. *Seminars in Cell and Developmental Biology*, **2017**, 67, 141-152	7.5	35
100	EXTH-23. ANTISECRETORY FACTOR-MEDIATED LOWERING OF INTERSTITIAL FLUID PRESSURE PRODUCES ANTI-TUMOR ACTIVITY IN GLIOBLASTOMA. *Neuro-Oncology*, **2017**, 19, vi77-vi77	1	78
99	A bulky glycocalyx fosters metastasis formation by promoting G1 cell cycle progression. *ELife*, **2017** , 6,	8.9	43
98	Comprehensive characterization of DNA methylation changes in Fuchs endothelial corneal dystrophy. *PLoS ONE*, **2017**, 12, e0175112	3.7	16
97	Metronomic chemotherapy prevents therapy-induced stromal activation and induction of tumor-initiating cells. *Journal of Experimental Medicine*, **2016**, 213, 2967-2988	16.6	106
96	Tissue Mechanics Orchestrate Wnt-Dependent Human Embryonic Stem Cell Differentiation. *Cell Stem Cell*, **2016**, 19, 462-475	18	100
95	Tissue mechanics promote IDH1-dependent HIF1α-tenascin C feedback to regulate glioblastoma aggression. *Nature Cell Biology*, **2016**, 18, 1336-1345	23.4	157
94	Mechanical Control of Epithelial-to-Mesenchymal Transitions in Development and Cancer. *Annual Review of Cell and Developmental Biology*, **2016**, 32, 527-554	12.6	85

93	Loss of miR-203 regulates cell shape and matrix adhesion through ROBO1/Rac/FAK in response to stiffness. *Journal of Cell Biology*, **2016**, 212, 707-19	7.3	30
92	Targeting the cancer-associated fibroblasts as a treatment in triple-negative breast cancer. *Oncotarget*, **2016**, 7, 82889-82901	3.3	108
91	Physiological ranges of matrix rigidity modulate primary mouse hepatocyte function in part through hepatocyte nuclear factor 4 alpha. *Hepatology*, **2016**, 64, 261-75	11.2	86
90	Physical and Chemical Gradients in the Tumor Microenvironment Regulate Tumor Cell Invasion, Migration, and Metastasis. *Cold Spring Harbor Symposia on Quantitative Biology*, **2016**, 81, 189-205	3.9	93
89	From transformation to metastasis: deconstructing the extracellular matrix in breast cancer. *Cancer and Metastasis Reviews*, **2016**, 35, 655-667	9.6	83
88	Site-Specific Modulation of Charge Controls the Structure and Stimulus Responsiveness of Intrinsically Disordered Peptide Brushes. *Langmuir*, **2016**, 32, 5990-6	4	8
87	Force Matters: Biomechanical Regulation of Cell Invasion and Migration in Disease. *Trends in Cell Biology*, **2016**, 26, 486-497	18.3	150
86	Genotype tunes pancreatic ductal adenocarcinoma tissue tension to induce matricellular fibrosis and tumor progression. *Nature Medicine*, **2016**, 22, 497-505	50.5	338
85	Visualizing mechanical modulation of nanoscale organization of cell-matrix adhesions. *Integrative Biology (United Kingdom)*, **2016**, 8, 795-804	3.7	4
84	Fighting the force: Potential of homeobox genes for tumor microenvironment regulation. *Biochimica Et Biophysica Acta: Reviews on Cancer*, **2015**, 1855, 248-53	11.2	7
83	STAT3 Blockade Inhibits Radiation-Induced Malignant Progression in Glioma. *Cancer Research*, **2015**, 75, 4302-11	10.1	58
82	Microenvironment rigidity modulates responses to the HER2 receptor tyrosine kinase inhibitor lapatinib via YAP and TAZ transcription factors. *Molecular Biology of the Cell*, **2015**, 26, 3946-53	3.5	89
81	A 3D tension bioreactor platform to study the interplay between ECM stiffness and tumor phenotype. *Journal of Biotechnology*, **2015**, 193, 66-9	3.7	67
80	Tumor-induced solid stress activates Ecatenin signaling to drive malignant behavior in normal, tumor-adjacent cells. *BioEssays*, **2015**, 37, 1293-7	4.1	8
79	ATPS-63OSMOTIC SWELLING REGULATES TUMOR GROWTH AND DRUG UPTAKE IN HUMAN GLIOBLASTOMA. *Neuro-Oncology*, **2015**, 17, v32.1-v32	1	78
78	Tumor mechanics and metabolic dysfunction. *Free Radical Biology and Medicine*, **2015**, 79, 269-80	7.8	79
77	Understanding tissue context influences on intratumour heterogeneity. *Nature Cell Biology*, **2014**, 16, 301-2	23.4	20
76	The extracellular matrix modulates the hallmarks of cancer. *EMBO Reports*, **2014**, 15, 1243-53	6.5	957

75	Extracellular matrix assembly: a multiscale deconstruction. *Nature Reviews Molecular Cell Biology*, **2014**, 15, 771-85	48.7	756
74	The cancer glycocalyx mechanically primes integrin-mediated growth and survival. *Nature*, **2014**, 511, 319-25	50.4	425
73	Depletion of carcinoma-associated fibroblasts and fibrosis induces immunosuppression and accelerates pancreas cancer with reduced survival. *Cancer Cell*, **2014**, 25, 719-34	24.3	1332
72	Deconstructing signaling in three dimensions. *Biochemistry*, **2014**, 53, 2078-90	3.2	43
71	Force engages vinculin and promotes tumor progression by enhancing PI3K activation of phosphatidylinositol (3,4,5)-triphosphate. *Cancer Research*, **2014**, 74, 4597-611	10.1	128
70	Rapid disorganization of mechanically interacting systems of mammary acini. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 658-63	11.5	98
69	The microenvironment matters. *Molecular Biology of the Cell*, **2014**, 25, 3254-8	3.5	5
68	Tissue mechanics modulate microRNA-dependent PTEN expression to regulate malignant progression. *Nature Medicine*, **2014**, 20, 360-7	50.5	291
67	Multicellular architecture of malignant breast epithelia influences mechanics. *PLoS ONE*, **2014**, 9, e101955	3.7	14
66	Molecular profiling of prostatic acinar morphogenesis identifies PDCD4 and KLF6 as tissue architecture-specific prognostic markers in prostate cancer. *American Journal of Pathology*, **2013**, 182, 363-74	5.8	9
65	Collagen architecture in pregnancy-induced protection from breast cancer. *Journal of Cell Science*, **2013**, 126, 4108-10	5.3	72
64	MT1-MMP-dependent control of skeletal stem cell commitment via a β1-integrin/YAP/TAZ signaling axis. *Developmental Cell*, **2013**, 25, 402-16	10.2	185
63	Stromally derived lysyl oxidase promotes metastasis of transforming growth factor-β-deficient mouse mammary carcinomas. *Cancer Research*, **2013**, 73, 5336-46	10.1	125
62	Cell biology. Strength under tension. *Science*, **2013**, 341, 965-6	33.3	15
61	A physical sciences network characterization of non-tumorigenic and metastatic cells. *Scientific Reports*, **2013**, 3, 1449	4.9	113
60	Scanning angle interference microscopy reveals cell dynamics at the nanoscale. *Nature Methods*, **2012**, 9, 825-7	21.6	78
59	The extracellular matrix: a dynamic niche in cancer progression. *Journal of Cell Biology*, **2012**, 196, 395-406	7.3	1999
58	Exploring the link between human embryonic stem cell organization and fate using tension-calibrated extracellular matrix functionalized polyacrylamide gels. *Methods in Molecular Biology*, **2012**, 916, 317-50	1.4	35

57	Balancing forces: architectural control of mechanotransduction. *Nature Reviews Molecular Cell Biology*, **2011**, 12, 308-19	48.7	698
56	Forcing form and function: biomechanical regulation of tumor evolution. *Trends in Cell Biology*, **2011**, 21, 47-56	18.3	226
55	Actomyosin-mediated cellular tension drives increased tissue stiffness and β-catenin activation to induce epidermal hyperplasia and tumor growth. *Cancer Cell*, **2011**, 19, 776-91	24.3	391
54	Tumor microenvironment and progression. *Journal of Surgical Oncology*, **2011**, 103, 468-74	2.8	120
53	In situ force mapping of mammary gland transformation. *Integrative Biology (United Kingdom)*, **2011**, 3, 910-21	3.7	207
52	Extracellular matrix degradation and remodeling in development and disease. *Cold Spring Harbor Perspectives in Biology*, **2011**, 3,	10.2	1165
51	Biophysics. Enforcing order on signaling. *Science*, **2010**, 327, 1335-6	33.3	8
50	The extracellular matrix at a glance. *Journal of Cell Science*, **2010**, 123, 4195-200	5.3	2175
49	Dynamic interplay between the collagen scaffold and tumor evolution. *Current Opinion in Cell Biology*, **2010**, 22, 697-706	9	585
48	SWI/SNF chromatin remodeling enzyme ATPases promote cell proliferation in normal mammary epithelial cells. *Journal of Cellular Physiology*, **2010**, 223, 667-78	7	27
47	Effect of substrate stiffness and PDGF on the behavior of vascular smooth muscle cells: implications for atherosclerosis. *Journal of Cellular Physiology*, **2010**, 225, 115-22	7	69
46	HOXA9 regulates BRCA1 expression to modulate human breast tumor phenotype. *Journal of Clinical Investigation*, **2010**, 120, 1535-50	15.9	81
45	The tissue diagnostic instrument. *Review of Scientific Instruments*, **2009**, 80, 054303	1.7	57
44	CpG island tumor suppressor promoter methylation in non-BRCA-associated early mammary carcinogenesis. *Cancer Epidemiology Biomarkers and Prevention*, **2009**, 18, 901-14	4	44
43	Integrin clustering is driven by mechanical resistance from the glycocalyx and the substrate. *PLoS Computational Biology*, **2009**, 5, e1000604	5	176
42	Filamin A-beta1 integrin complex tunes epithelial cell response to matrix tension. *Molecular Biology of the Cell*, **2009**, 20, 3224-38	3.5	97
41	Mechanics, malignancy, and metastasis: the force journey of a tumor cell. *Cancer and Metastasis Reviews*, **2009**, 28, 113-27	9.6	674
40	Three-dimensional context regulation of metastasis. *Clinical and Experimental Metastasis*, **2009**, 26, 35-49	4.7	245

39	A tense situation: forcing tumour progression. *Nature Reviews Cancer*, **2009**, 9, 108-22	31.3	1315
38	Matrix crosslinking forces tumor progression by enhancing integrin signaling. *Cell*, **2009**, 139, 891-906	56.2	2673
37	Multiscale modeling of form and function. *Science*, **2009**, 324, 208-12	33.3	149
36	Modeling morphogenesis and oncogenesis in three-dimensional breast epithelial cultures. *Annual Review of Pathology: Mechanisms of Disease*, **2008**, 3, 313-39	34	106
35	A human breast cell model of preinvasive to invasive transition. *Cancer Research*, **2008**, 68, 1378-87	10.1	130
34	Rac-dependent cyclin D1 gene expression regulated by cadherin- and integrin-mediated adhesion. *Journal of Cell Science*, **2008**, 121, 226-33	5.3	47
33	Demystifying the effects of a three-dimensional microenvironment in tissue morphogenesis. *Methods in Cell Biology*, **2007**, 83, 547-83	1.8	62
32	alpha6beta4 integrin activates Rac-dependent p21-activated kinase 1 to drive NF-kappaB-dependent resistance to apoptosis in 3D mammary acini. *Journal of Cell Science*, **2007**, 120, 3700-12	5.3	65
31	GSabSing the microenvironment for invasion. *Developmental Cell*, **2007**, 13, 462-3	10.2	3
30	Mammary epithelial cell: influence of extracellular matrix composition and organization during development and tumorigenesis. *International Journal of Biochemistry and Cell Biology*, **2007**, 39, 1987-94	5.6	225
29	The ultrastructure of MCF-10A acini. *Journal of Cellular Physiology*, **2006**, 208, 141-8	7	56
28	Forcing the third dimension. *Cell*, **2006**, 125, 429-31	56.2	13
27	Tensional homeostasis and the malignant phenotype. *Cancer Cell*, **2005**, 8, 241-54	24.3	2866
26	Analysis of protein expression during oxidative stress in breast epithelial cells using a stable isotope labeled proteome internal standard. *Journal of Proteome Research*, **2005**, 4, 2007-14	5.6	43
25	Effects of substrate stiffness on cell morphology, cytoskeletal structure, and adhesion. *Cytoskeleton*, **2005**, 60, 24-34		1699
24	Hypoxia-inducible factor regulates alphavbeta3 integrin cell surface expression. *Molecular Biology of the Cell*, **2005**, 16, 1901-12	3.5	111
23	Rac-GAP-dependent inhibition of breast cancer cell proliferation by {beta}2-chimerin. *Journal of Biological Chemistry*, **2005**, 280, 24363-70	5.4	66
22	Watch thy neighbor: cancer is a communal affair. *Journal of Cell Science*, **2004**, 117, 1287-90	5.3	62

21	The tension mounts: mechanics meets morphogenesis and malignancy. *Journal of Mammary Gland Biology and Neoplasia*, **2004**, 9, 325-42	2.4	369
20	Death in the third dimension: apoptosis regulation and tissue architecture. *Current Opinion in Genetics and Development*, **2004**, 14, 71-80	4.9	129
19	Autocrine laminin-5 ligates alpha6beta4 integrin and activates RAC and NFkappaB to mediate anchorage-independent survival of mammary tumors. *Journal of Cell Biology*, **2003**, 163, 1397-407	7.3	158
18	Alpha 6 beta 4 integrin regulates keratinocyte chemotaxis through differential GTPase activation and antagonism of alpha 3 beta 1 integrin. *Journal of Cell Science*, **2003**, 116, 3543-56	5.3	117
17	beta4 integrin-dependent formation of polarized three-dimensional architecture confers resistance to apoptosis in normal and malignant mammary epithelium. *Cancer Cell*, **2002**, 2, 205-16	24.3	803
16	The organizing principle: microenvironmental influences in the normal and malignant breast. *Differentiation*, **2002**, 70, 537-46	3.5	473
15	Membrane-associated MMP regulators: novel cell adhesion tumor suppressor proteins?. *Developmental Cell*, **2002**, 2, 6-7	10.2	13
14	Tumour-stromal interactions. Integrins and cell adhesions as modulators of mammary cell survival and transformation. *Breast Cancer Research*, **2001**, 3, 224-9	8.3	43
13	Structural cues from the tissue microenvironment are essential determinants of the human mammary epithelial cell phenotype. *Journal of Mammary Gland Biology and Neoplasia*, **1998**, 3, 201-13	2.4	70
12	Extracellular Matrix and Nuclear Matrix Interactions May Regulate Apoptosis and Tissue-Specific Gene Expression: A Concept Whose Time has Come. *Advances in Molecular and Cell Biology*, **1997**, 24, 1-55		1
11	Extracellular matrix: the central regulator of cell and tissue homeostasis. *Trends in Cell Biology*, **1997**, 7, 40-2	18.3	23
10	Protein synthesis, DNA degradation, and morphological changes during programmed cell death in labial glands of Manduca sexta. *Genesis*, **1997**, 21, 249-57		27
9	The development of a functionally relevant cell culture model of progressive human breast cancer. *Seminars in Cancer Biology*, **1995**, 6, 175-84	12.7	107
8	Endonuclease activities associated with high molecular weight and internucleosomal DNA fragmentation in apoptosis. *Experimental Cell Research*, **1994**, 213, 100-6	4.2	152
7	1,25-dihydroxycholecalciferol supplementation prevents hypocalcemia in magnesium-deficient chicks. *Journal of Nutrition*, **1993**, 123, 764-71	4.1	7
6	Activation of protein kinase C modulates dihydroxycholecalciferol synthesis in rat renal tubules. *Cellular Signalling*, **1992**, 4, 293-301	4.9	7
5	Regulation of renal 25(OH)D3 1 alpha-hydroxylase: signal transduction pathways. *Biochemistry and Cell Biology*, **1991**, 69, 768-70	3.6	12
4	Vitamin D receptors and compensatory tissue growth in spontaneously diabetic BB rats. *Annals of Nutrition and Metabolism*, **1991**, 35, 196-202	4.5	5

3	Vitamin D metabolism in magnesium deficient chicks. *Nutrition Research*, **1989**, 9, 1363-1369	4	4
2	Adaptation to low dietary calcium in magnesium-deficient rats. *Journal of Nutrition*, **1988**, 118, 729-34	4.1	14
1	Mechanics regulate human embryonic stem cell self-organization to specify mesoderm		1