David A Lee

List of Publications by Year
in descending order

67 papers	4,792 citations	70961 41 h-index	128067 60 g-index
98 all docs	98 docs citations	98 times ranked	5394 citing authors

#	Article	IF	Citations
1	Syndecan-4 tunes cell mechanics by activating the kindlin-integrin-RhoA pathway. Nature Materials, 2020, 19, 669-678.	13.3	66
2	G Protein-Coupled Estrogen Receptor Regulates Actin Cytoskeleton Dynamics to Impair Cell Polarization. Frontiers in Cell and Developmental Biology, 2020, 8, 592628.	1.8	8
3	GPER Activation Inhibits Cancer Cell Mechanotransduction and Basement Membrane Invasion via RhoA. Cancers, 2020, 12, 289.	1.7	16
4	Retinoic Acid Receptorâ€Î² Is Downregulated in Hepatocellular Carcinoma and Cirrhosis and Its Expression Inhibits Myosinâ€Driven Activation and Durotaxis in Hepatic Stellate Cells. Hepatology, 2019, 69, 785-802.	3.6	50
5	Tamoxifen mechanically deactivates hepatic stellate cells via the G protein-coupled estrogen receptor. Oncogene, 2019, 38, 2910-2922.	2.6	43
6	Tamoxifen mechanically reprograms the tumor microenvironment via <scp>HIF</scp> â€1A and reduces cancer cell survival. EMBO Reports, 2019, 20, .	2.0	58
7	GPER is a mechanoregulator of pancreatic stellate cells and the tumor microenvironment. EMBO Reports, 2019, 20, .	2.0	55
8	Dynamic regulation of nuclear architecture and mechanicsâ€"a rheostatic role for the nucleus in tailoring cellular mechanosensitivity. Nucleus, 2017, 8, 287-300.	0.6	42
9	Mechanically Induced Chromatin Condensation Requires Cellular Contractility in Mesenchymal Stem Cells. Biophysical Journal, 2016, 111, 864-874.	0.2	56
10	Type VI Collagen Regulates Dermal Matrix Assembly and Fibroblast Motility. Journal of Investigative Dermatology, 2016, 136, 74-83.	0.3	84
11	Differentiation alters stem cell nuclear architecture, mechanics, and mechano-sensitivity. ELife, 2016, 5, .	2.8	138
12	Biophysical Regulation of Chromatin Architecture Instills a Mechanical Memory in Mesenchymal Stem Cells. Scientific Reports, 2015, 5, 16895.	1.6	148
13	Culture Expansion in Low-Glucose Conditions Preserves Chondrocyte Differentiation and Enhances Their Subsequent Capacity to Form Cartilage Tissue in Three-Dimensional Culture. BioResearch Open Access, 2014, 3, 9-18.	2.6	29
14	Quantification of chromatin condensation level by image processing. Medical Engineering and Physics, 2014, 36, 412-417.	0.8	32
15	Stem cell differentiation increases membrane-actin adhesion regulating cell blebability, migration and mechanics. Scientific Reports, 2014, 4, 7307.	1.6	40
16	Osmotic Challenge Drives Rapid and Reversible Chromatin Condensation in Chondrocytes. Biophysical Journal, 2013, 104, 759-769.	0.2	105
17	Continuous and Uninterrupted Oxygen Tension Influences the Colony Formation and Oxidative Metabolism of Human Mesenchymal Stem Cells. Tissue Engineering - Part C: Methods, 2013, 19, 68-79.	1.1	109
18	Single photon counting fluorescence lifetime detection of pericellular oxygen concentrations. Journal of Biomedical Optics, 2012, 17, 016007.	1.4	35

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19	Mechanical Regulation of Nuclear Structure and Function. Annual Review of Biomedical Engineering, 2012, 14, 431-455.	5.7	136
20	Gap junction permeability between tenocytes within tendon fascicles is suppressed by tensile loading. Biomechanics and Modeling in Mechanobiology, 2012, 11, 439-447.	1.4	39
21	Quantification of mRNA Using Real-Time PCR and Western Blot Analysis of MAPK Events in Chondrocyte/Agarose Constructs. Methods in Molecular Biology, 2011, 695, 77-97.	0.4	11
22	The metabolism of human mesenchymal stem cells during proliferation and differentiation. Journal of Cellular Physiology, 2011, 226, 2562-2570.	2.0	255
23	Stem cell mechanobiology. Journal of Cellular Biochemistry, 2011, 112, 1-9.	1.2	103
24	Extracellular oxygen concentration mapping with a confocal multiphoton laser scanning microscope and TCSPC card. Proceedings of SPIE, 2010, , .	0.8	2
25	1P338 1J1450 Mechano-regulation of gap junction communications between tenocytes within isolated fascicles(Bioengineering,Oral Presentations,The 48th Annual Meeting of the Biophysical Society of) Tj ETQq1 1 0.784314 rgBT /Overlo	0.0	0
26	Low oxygen reduces the modulation to an oxidative phenotype in monolayerâ€expanded chondrocytes. Journal of Cellular Physiology, 2010, 222, 248-253.	2.0	30
27	Both superficial and deep zone articular chondrocyte subpopulations exhibit the crabtree effect but have different basal oxygen consumption rates. Journal of Cellular Physiology, 2010, 223, 630-639.	2.0	48
28	Functional analysis of tenocytes gene expression in tendon fascicles subjected to cyclic tensile strain. Connective Tissue Research, 2010, 51, 434-444.	1.1	27
29	A compartment model to evaluate the permeability of gap junctions between tenocytes in tendon fascicles. FASEB Journal, 2010, 24, 975.9.	0.2	0
30	Differential regulation of gene expression in isolated tendon fascicles exposed to cyclic tensile strain in vitro. Journal of Applied Physiology, 2009, 106, 506-512.	1.2	60
31	Cell-generated forces influence the viability, metabolism and mechanical properties of fibroblast-seeded collagen gel constructs. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 43-53.	1.3	17
32	Effect of Intermittent Cyclic Tensile Strain on Collagen Synthesis by Tenocytes in Isolated Fascicles. Journal of Biomechanical Science and Engineering, 2009, 4, 510-517.	0.1	0
33	The development of a bioreactor to perfuse radially-confined hydrogel constructs: Design and characterization of mass transport properties. Biorheology, 2009, 46, 417-437.	1.2	8
34	Dynamic compression counteracts IL-1beta induced iNOS and COX-2 expression in chondrocyte / agarose constructs. Arthritis Research and Therapy, 2008, 10, R35.	1.6	51
35	Time dependence of cyclic tensile strain on collagen production in tendon fascicles. Biochemical and Biophysical Research Communications, 2007, 362, 399-404.	1.0	34
36	The influence of swelling and matrix degradation on the microstructural integrity of tendon. Acta Biomaterialia, 2006, 2, 505-513.	4.1	79

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37	Rate of oxygen consumption by isolated articular chondrocytes is sensitive to medium glucose concentration. Journal of Cellular Physiology, 2006, 206, 402-410.	2.0	68
38	Glucose Concentration and Medium Volume Influence Cell Viability and Glycosaminoglycan Synthesis in Chondrocyte-Seeded Alginate Constructs. Tissue Engineering, 2006, 12, 3487-3496.	4.9	49
39	Chondrocyte Deformation and Mechanotransduction in Cartilage Model Systems(International) Tj ETQq1 1 0.784314 rgBT /Overlock 10 2005.18, 2-3.	0.0	0
40	Glucose Concentration and Medium Volume Influences Cell Viability and Glycosaminoglycan Synthesis in Chondrocyte-Seeded Alginate Constructs. Tissue Engineering, 2006, .	4.9	0
41	Dynamic compression counteracts IL-1beta induced iNOS and COX-2 activity by human chondrocytes cultured in agarose constructs. Biorheology, 2006, 43, 413-29.	1.2	27
42	Dynamic compressive strain influences chondrogenic gene expression in human mesenchymal stem cells. Biorheology, 2006, 43, 455-70.	1.2	97
43	The Influence of Noncollagenous Matrix Components on the Micromechanical Environment of Tendon Fascicles. Annals of Biomedical Engineering, 2005, 33, 1090-1099.	1.3	105
44	Nutrient Utilization by Bovine Articular Chondrocytes: A Combined Experimental and Theoretical Approach. Journal of Biomechanical Engineering, 2005, 127, 758-766.	0.6	55
45	Cyclic tensile strain upregulates collagen synthesis in isolated tendon fascicles. Biochemical and Biophysical Research Communications, 2005, 336, 424-429.	1.0	98
46	Bioreactor Culture Techniques for Cartilage-Tissue Engineering. , 2004, 238, 159-170.		8
47	Crosslinking Density Influences Chondrocyte Metabolism in Dynamically Loaded Photocrosslinked Poly(ethylene glycol) Hydrogels. Annals of Biomedical Engineering, 2004, 32, 407-417.	1.3	212
48	Crosslinking density influences the morphology of chondrocytes photoencapsulated in PEG hydrogels during the application of compressive strain. Journal of Orthopaedic Research, 2004, 22, 1143-1149.	1.2	169
49	Mechanical Loading of Chondrocytes Embedded in 3D Constructs: In Vitro Methods for Assessment of Morphological and Metabolic Response to Compressive Strain. , 2004, 100, 307-324.		30
50	Cellular Utilization Determines Viability and Matrix Distribution Profiles in Chondrocyte-Seeded Alginate Constructs. Tissue Engineering, 2004, 10, 1467-1479.	4.9	74
51	Temporal regulation of chondrocyte metabolism in agarose constructs subjected to dynamic compression. Archives of Biochemistry and Biophysics, 2003, 417, 105-111.	1.4	108
52	Mechanical Conditioning Influences the Metabolic Response of Cell-Seeded Constructs. Cells Tissues Organs, 2003, 175, 140-150.	1.3	52
53	Live cell imaging using confocal microscopy induces intracellular calcium transients and cell death. American Journal of Physiology - Cell Physiology, 2003, 284, C1083-C1089.	2.1	102
54	Influence of External Uniaxial Cyclic Strain on Oriented Fibroblast-Seeded Collagen Gels. Tissue Engineering, 2003, 9, 613-624.	4.9	66

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55	Expansion of chondrocytes for tissue engineering in alginate beads enhances chondrocytic phenotype compared to conventional monolayer techniques. Acta Orthopaedica, 2003, 74, 6-15.	1.4	99
56	Dynamic Compression Inhibits the Synthesis of Nitric Oxide and PGE2 by IL-1Î²-Stimulated Chondrocytes Cultured in Agarose Constructs. Biochemical and Biophysical Research Communications, 2001, 285, 1168-1174.	1.0	88
57	Mechanical compression influences intracellular Ca²⁺signaling in chondrocytes seeded in agarose constructs. Journal of Applied Physiology, 2001, 90, 1385-1391.	1.2	114
58	Compressive Deformation and Damage of Muscle Cell Subpopulations in a Model System. Annals of Biomedical Engineering, 2001, 29, 153-163.	1.3	92
59	Chondrocyte deformation within compressed agarose constructs at the cellular and sub-cellular levels. Journal of Biomechanics, 2000, 33, 81-95.	0.9	118
60	Confocal analysis of cytoskeletal organisation within isolated chondrocyte sub-populations cultured in agarose. The Histochemical Journal, 2000, 32, 165-174.	0.6	70
61	Structure â€“ Properties of Soft Tissues Articular Cartilage. Pergamon Materials Series, 2000, , 75-103.	0.2	6
62	Response of chondrocyte subpopulations cultured within unloaded and loaded agarose. Journal of Orthopaedic Research, 1998, 16, 726-733.	1.2	105
63	Dynamic Mechanical Compression Influences Nitric Oxide Production by Articular Chondrocytes Seeded in Agarose. Biochemical and Biophysical Research Communications, 1998, 251, 580-585.	1.0	88
64	Compressive strains at physiological frequencies influence the metabolism of chondrocytes seeded in agarose. Journal of Orthopaedic Research, 1997, 15, 181-188.	1.2	323
65	Quantification of Sulfated Glycosaminoglycans in Chondrocyte/Alginate Cultures, by Use of 1,9-Dimethylmethylene Blue. Analytical Biochemistry, 1996, 243, 189-191.	1.1	276
66	The development and characterization of anin vitro system to study strain-induced cell deformation in isolated chondrocytes. In Vitro Cellular and Developmental Biology - Animal, 1995, 31, 828-835.	0.7	71
67	Effects of ascorbate on myogenesis in micromass culture. In Vitro Cellular & Developmental Biology, 1990, 26, 259-264.	1.0	7