Eric M Darling

List of Publications by Year
in descending order

62 papers	4,415 citations	257357 24 h-index	133188 59 g-index
67 all docs	67 docs citations	67 times ranked	6390 citing authors

#	Article	IF	Citations
1	Nanotopography-induced changes in focal adhesions, cytoskeletal organization, and mechanical properties of human mesenchymal stem cells. Biomaterials, 2010, 31, 1299-1306.	5.7	618
2	Rapid phenotypic changes in passaged articular chondrocyte subpopulations. Journal of Orthopaedic Research, 2005, 23, 425-432.	1.2	545
3	Viscoelastic properties of human mesenchymally-derived stem cells and primary osteoblasts, chondrocytes, and adipocytes. Journal of Biomechanics, 2008, 41, 454-464.	0.9	299
4	Viscoelastic properties of zonal articular chondrocytes measured by atomic force microscopy. Osteoarthritis and Cartilage, 2006, 14, 571-579.	0.6	277
5	A Thin-Layer Model for Viscoelastic, Stress-Relaxation Testing of Cells Using Atomic Force Microscopy: Do Cell Properties Reflect Metastatic Potential?. Biophysical Journal, 2007, 92, 1784-1791.	0.2	277
6	Articular Cartilage Bioreactors and Bioprocesses. Tissue Engineering, 2003, 9, 9-26.	4.9	257
7	Impact of Aging on the Regenerative Properties of Bone Marrow-, Muscle-, and Adipose-Derived Mesenchymal Stem/Stromal Cells. PLoS ONE, 2014, 9, e115963.	1.1	256
8	Cellular mechanical properties reflect the differentiation potential of adipose-derived mesenchymal stem cells. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E1523-9.	3.3	182
9	High-Throughput Assessment of Cellular Mechanical Properties. Annual Review of Biomedical Engineering, 2015, 17, 35-62.	5.7	166
10	Spatial Mapping of the Biomechanical Properties of the Pericellular Matrix of Articular Cartilage Measured In Situ via Atomic Force Microscopy. Biophysical Journal, 2010, 98, 2848-2856.	0.2	130
11	Biomechanical Strategies for Articular Cartilage Regeneration. Annals of Biomedical Engineering, 2003, 31, 1114-1124.	1.3	115
12	Zonal and topographical differences in articular cartilage gene expression. Journal of Orthopaedic Research, 2004, 22, 1182-1187.	1.2	111
13	Three-Dimensional Neural Spheroid Culture: An<i>In Vitro</i>Model for Cortical Studies. Tissue Engineering - Part C: Methods, 2015, 21, 1274-1283.	1.1	111
14	Considerations for high-yield, high-throughput cell enrichment: fluorescence versus magnetic sorting. Scientific Reports, 2019, 9, 227.	1.6	107
15	Growth factor impact on articular cartilage subpopulations. Cell and Tissue Research, 2005, 322, 463-473.	1.5	93
16	Extracellular Matrix Ligand and Stiffness Modulate Immature Nucleus Pulposus Cell-Cell Interactions. PLoS ONE, 2011, 6, e27170.	1.1	91
17	Retaining Zonal Chondrocyte Phenotype by Means of Novel Growth Environments. Tissue Engineering, 2005, 11, 395-403.	4.9	84
18	Isolation, Characterization, and Differentiation of Stem Cells for Cartilage Regeneration. Annals of Biomedical Engineering, 2012, 40, 2079-2097.	1.3	66

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19	In situ friction measurement on murine cartilage by atomic force microscopy. Journal of Biomechanics, 2008, 41, 541-548.	0.9	61
20	Mechanical Properties and Gene Expression of Chondrocytes on Micropatterned Substrates Following Dedifferentiation in Monolayer. Cellular and Molecular Bioengineering, 2009, 2, 395-404.	1.0	47
21	3D Viscoelastic traction force microscopy. Soft Matter, 2014, 10, 8095-8106.	1.2	43
22	Articular Cartilage Tissue Engineering. Synthesis Lectures on Tissue Engineering, 2009, 1, 1-182.	0.3	36
23	Force scanning: a rapid, high-resolution approach for spatial mechanical property mapping. Nanotechnology, 2011, 22, 175707.	1.3	35
24	Live-Cell, Temporal Gene Expression Analysis of Osteogenic Differentiation in Adipose-Derived Stem Cells. Tissue Engineering - Part A, 2013, 19, 40-48.	1.6	26
25	Adipose-derived stem cell fate is predicted by cellular mechanical properties. Adipocyte, 2013, 2, 87-91.	1.3	24
26	Temporal heterogeneity in single-cell gene expression and mechanical properties during adipogenic differentiation. Journal of Biomechanics, 2015, 48, 1058-1066.	0.9	24
27	A Neural Network Model for Cell Classification Based on Single-Cell Biomechanical Properties. Tissue Engineering - Part A, 2008, 14, 1507-1515.	1.6	22
28	Adipose-derived stem cells retain their regenerative potential after methotrexate treatment. Experimental Cell Research, 2014, 327, 222-233.	1.2	22
29	The Emerging Role of Lamin C as an Important LMNA Isoform in Mechanophenotype. Frontiers in Cell and Developmental Biology, 2018, 6, 151.	1.8	21
30	Deficient Mechanical Activation of Anabolic Transcripts and Post-Traumatic Cartilage Degeneration in Matrilin-1 Knockout Mice. PLoS ONE, 2016, 11, e0156676.	1.1	20
31	Live-Cell, Temporal Gene Expression Analysis of Osteogenic Differentiation in Adipose-Derived Stem Cells. Tissue Engineering - Part A, 2014, 20, 899-907.	1.6	19
32	Characterization of Mechanical and Regenerative Properties of Human, Adipose Stromal Cells. Cellular and Molecular Bioengineering, 2014, 7, 585-597.	1.0	18
33	Fabricating polyacrylamide microbeads by inverse emulsification to mimic the size and elasticity of living cells. Biomaterials Science, 2017, 5, 41-45.	2.6	16
34	Concise Review: Fabrication, Customization, and Application of Cell Mimicking Microparticles in Stem Cell Science. Stem Cells Translational Medicine, 2018, 7, 232-240.	1.6	15
35	Cell Mimicking Microparticles Influence the Organization, Growth, and Mechanophenotype of Stem Cell Spheroids. Annals of Biomedical Engineering, 2018, 46, 1146-1159.	1.3	14
36	Regenerative Potential and Inflammation-Induced Secretion Profile of Human Adipose-Derived Stromal Vascular Cells Are Influenced by Donor Variability and Prior Breast Cancer Diagnosis. Stem Cell Reviews and Reports, 2018, 14, 546-557.	5.6	14

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37	Singleâ€Cell Microgels for Diagnostics and Therapeutics. Advanced Functional Materials, 2021, 31, 2009946.	7.8	14
38	Nuclear Lamin Protein C Is Linked to Lineage-Specific, Whole-Cell Mechanical Properties. Cellular and Molecular Bioengineering, 2018, 11, 131-142.	1.0	13
39	Gene expression-based enrichment of live cells from adipose tissue produces subpopulations with improved osteogenic potential. Stem Cell Research and Therapy, 2014, 5, 145.	2.4	12
40	Protein characterization of intracellular target-sorted, formalin-fixed cell subpopulations. Scientific Reports, 2016, 6, 33999.	1.6	11
41	A biomimetic synthetic feeder layer supports the proliferation and self-renewal of mouse embryonic stem cells. Acta Biomaterialia, 2016, 39, 55-64.	4.1	10
42	Functional properties of chondrocytes and articular cartilage using optical imaging to scanning probe microscopy. Journal of Orthopaedic Research, 2018, 36, 620-631.	1.2	10
43	Influence of Inherent Mechanophenotype on Competitive Cellular Adherence. Annals of Biomedical Engineering, 2017, 45, 2036-2047.	1.3	9
44	Synthesis and Characterization of a Magnetically Active ¹⁹F Molecular Beacon. Bioconjugate Chemistry, 2018, 29, 335-342.	1.8	9
45	Disparate Response to Methotrexate in Stem Versus Non-Stem Cells. Stem Cell Reviews and Reports, 2016, 12, 340-351.	5.6	8
46	Lead removal at trace concentrations from water by inactive yeast cells. Communications Earth & Environment, 2022, 3, .	2.6	8
47	Single Step Double-walled Nanoencapsulation (SSDN). Journal of Controlled Release, 2018, 280, 11-19.	4.8	7
48	Shapeâ€Preserved Transformation of Biological Cells into Synthetic Hydrogel Microparticles. Advanced Biology, 2019, 3, e1800285.	3.0	7
49	Effect of elastic modulus on inertial displacement of cell-like particles in microchannels. Biomicrofluidics, 2020, 14, 044110.	1.2	7
50	Force sensors for measuring microenvironmental forces during mesenchymal condensation. Biomaterials, 2021, 270, 120684.	5.7	7
51	Integration of hyper-compliant microparticles into a 3D melanoma tumor model. Journal of Biomechanics, 2019, 82, 46-53.	0.9	5
52	Processing fixed and stored adipose-derived stem cells for quantitative protein array assays. BioTechniques, 2017, 63, 275-280.	0.8	3
53	Discovery of surface biomarkers for cell mechanophenotype via an intracellular protein-based enrichment strategy. Cellular and Molecular Life Sciences, 2022, 79, .	2.4	3
54	<scp>Massâ€Added</scp> Density Modulation for Sorting Cells Based on Differential Surface Protein Levels. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2021, 99, 488-495.	1.1	2

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55	Quantification of Antibody Persistence for Cell Surface Protein Labeling. Cellular and Molecular Bioengineering, 2021, 14, 267-277.	1.0	2
56	Articular Cartilage Bioreactors and Bioprocesses. Tissue Engineering, 2003, 9, 565-565.	4.9	1
57	Generating Cell Type-Specific Protein Signatures from Non-symptomatic and Diseased Tissues. Annals of Biomedical Engineering, 2020, 48, 2218-2232.	1.3	1
58	Temporal responsiveness of adipose-derived stem/stromal cell immune plasticity. Experimental Cell Research, 2021, 406, 112738.	1.2	1
59	The Inhomogeneous Mechanical Properties of the Pericellular Matrix of Articular Cartilage Measured In Situ by Atomic Force Microscopy. , 2009, , .		1
60	Comparison of four stainless steel heat exchangers for neonatal ECMO applications. Journal of Extra-Corporeal Technology, 1994, 26, 68-73.	0.2	1
61	Discovering the Keys: Transformative and Translational Mechanobiology. Cellular and Molecular Bioengineering, 2017, 10, 273-274.	1.0	0
62	Translating Mechanobiology to the Clinic: A Panel Discussion from the 2018 CMBE Conference. Cellular and Molecular Bioengineering, 2018, 11, 531-535.	1.0	0