Henry J Donahue

List of Publications by Year
in descending order

110 papers	6,765 citations	66234 42 h-index	64668 79 g-index
115 all docs	115 docs citations	115 times ranked	7076 citing authors

#	Article	IF	Citations
1	Inhibition of focal adhesion turnover prevents osteoblastic differentiation through Î²â€catenin mediated transduction of proâ€osteogenic substrate. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, , .	1.6	1
2	The Biological Basis for Surface-dependent Regulation of Osteogenesis and Implant Osseointegration. Journal of the American Academy of Orthopaedic Surgeons, The, 2022, 30, e894-e898.	1.1	5
3	Soluble RANKL exaggerates hindlimb suspensionâ€induced osteopenia but not muscle protein balance. Journal of Orthopaedic Research, 2021, 39, 1860-1869.	1.2	1
4	Effect of carbonated hydroxyapatite submicron particles size on osteoblastic differentiation. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 1369-1379.	1.6	8
5	Fabrication and Characterization of Chitosan Based Injectable Thermosensitive Hydrogels Containing Silica/Calcium Phosphate Nanocomposite Particles. Journal of Biomaterials and Nanobiotechnology, 2021, 12, 34-48.	1.0	3
6	Update on the effects of microgravity on the musculoskeletal system. Npj Microgravity, 2021, 7, 28.	1.9	60
7	Genetic variability affects the skeletal response to immobilization in founder strains of the diversity outbred mouse population. Bone Reports, 2021, 15, 101140.	0.2	5
8	Genetic variability affects the response of skeletal muscle to disuse. Journal of Musculoskeletal Neuronal Interactions, 2021, 21, 387-396.	0.1	0
9	Mechanical loading recovers bone but not muscle lost during unloading. Npj Microgravity, 2020, 6, 36.	1.9	10
10	Protective Effects of Controlled Mechanical Loading of Bone in C57BL6/J Mice Subject to Disuse. JBMR Plus, 2020, 4, e10322.	1.3	13
11	Hydroxyapatite Particle Density Regulates Osteoblastic Differentiation Through Î²-Catenin Translocation. Frontiers in Bioengineering and Biotechnology, 2020, 8, 591084.	2.0	8
12	The Role of Fluid Shear and Metastatic Potential in Breast Cancer Cell Migration. Journal of Biomechanical Engineering, 2020, 142, .	0.6	11
13	Polydopamine Coating on Titanium Affects Osteoblastic Differentiation to a Greater Degree than Does Surface Roughness. Advances in Materials Physics and Chemistry, 2020, 10, 339-349.	0.3	3
14	Bone Loading. , 2020, , 294-310.		0
15	Similarities Between Disuse and Age-Induced Bone Loss. Journal of Bone and Mineral Research, 2020, 37, 1417-1434.	3.1	17
16	LRP receptors in chondrocytes are modulated by simulated microgravity and cyclic hydrostatic pressure. PLoS ONE, 2019, 14, e0223245.	1.1	11
17	Aptamer-Functionalized Fibrin Hydrogel Improves Vascular Endothelial Growth Factor Release Kinetics and Enhances Angiogenesis and Osteogenesis in Critically Sized Cranial Defects. ACS Biomaterials Science and Engineering, 2019, 5, 6152-6160.	2.6	23
18	Single limb immobilization model for bone loss from unloading. Journal of Biomechanics, 2019, 83, 181-189.	0.9	19

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19	Joint diseases: from connexins to gap junctions. Nature Reviews Rheumatology, 2018, 14, 42-51.	3.5	48
20	Functional and structural characterization of osteocytic MLO-Y4 cell proteins encoded by genes differentially expressed in response to mechanical signals in vitro. Scientific Reports, 2018, 8, 6716.	1.6	11
21	Combination of hindlimb suspension and immobilization by casting exaggerates sarcopenia by stimulating autophagy but does not worsen osteopenia. Bone, 2018, 110, 29-37.	1.4	18
22	MDA-MET-conditioned-medium augments the chemoattractant-dependent migration of MDA-MET cells towards hFOB-conditioned medium and increases collagenase activity. BMC Cancer, 2017, 17, 324.	1.1	0
23	Time course of peri-implant bone regeneration around loaded and unloaded implants in a rat model. Journal of Orthopaedic Research, 2017, 35, 997-1006.	1.2	7
24	Simulated space radiation sensitizes bone but not muscle to the catabolic effects of mechanical unloading. PLoS ONE, 2017, 12, e0182403.	1.1	41
25	Biomimetic substrate control of cellular mechanotransduction. Biomaterials Research, 2016, 20, 11.	3.2	38
26	Mechanical Loading Attenuates Radiation-Induced Bone Loss in Bone Marrow Transplanted Mice. PLoS ONE, 2016, 11, e0167673.	1.1	9
27	Mapping the osteocytic cell response to fluid flow using RNA-Seq. Journal of Biomechanics, 2015, 48, 4327-4332.	0.9	25
28	Cx43 and Mechanotransduction in Bone. Current Osteoporosis Reports, 2015, 13, 67-72.	1.5	58
29	3D Printing of Personalized Artificial Bone Scaffolds. 3D Printing and Additive Manufacturing, 2015, 2, 56-64.	1.4	119
30	The Roles of P2Y2 Purinergic Receptors in Osteoblasts and Mechanotransduction. PLoS ONE, 2014, 9, e108417.	1.1	24
31	Shifting Paradigms on the Role of Connexin43 in the Skeletal Response to Mechanical Load. Journal of Bone and Mineral Research, 2014, 29, 275-286.	3.1	44
32	Interdependence of Muscle Atrophy and Bone Loss Induced by Mechanical Unloading. Journal of Bone and Mineral Research, 2014, 29, 1118-1130.	3.1	97
33	Evidence for the role of connexin 43-mediated intercellular communication in the process of intracortical bone resorption via osteocytic osteolysis. BMC Musculoskeletal Disorders, 2014, 15, 122.	0.8	27
34	Integrative transcriptomic and proteomic analysis of osteocytic cells exposed to fluid flow reveals novel mechano-sensitive signaling pathways. Journal of Biomechanics, 2014, 47, 1838-1845.	0.9	29
35	Osteoblast and osteocyteâ€specific loss of Connexin43 results in delayed bone formation and healing during murine fracture healing. Journal of Orthopaedic Research, 2013, 31, 147-154.	1.2	53
36	Connexin 43 deficiency desensitizes bone to the effects of mechanical unloading through modulation of both arms of bone remodeling. Bone, 2013, 57, 76-83.	1.4	78

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37	Specific Biomimetic Hydroxyapatite Nanotopographies Enhance Osteoblastic Differentiation and Bone Graft Osteointegration. Tissue Engineering - Part A, 2013, 19, 1704-1712.	1.6	27
38	BRMS1 Sensitizes Breast Cancer Cells to ATP-Induced Growth Suppression. BioResearch Open Access, 2013, 2, 77-83.	2.6	4
39	Gap junction and hemichannel functions in osteocytes. Bone, 2013, 54, 205-212.	1.4	83
40	Biophysical Regulation of Stem Cell Differentiation. Current Osteoporosis Reports, 2013, 11, 83-91.	1.5	31
41	Genomic approaches in breast cancer research. Briefings in Functional Genomics, 2013, 12, 391-396.	1.3	23
42	Inhibition of GSK-3Î² Rescues the Impairments in Bone Formation and Mechanical Properties Associated with Fracture Healing in Osteoblast Selective Connexin 43 Deficient Mice. PLoS ONE, 2013, 8, e81399.	1.1	41
43	Connexin 43 deficiency attenuates loss of trabecular bone and prevents suppression of cortical bone formation during unloading. Journal of Bone and Mineral Research, 2012, 27, 2359-2372.	3.1	109
44	Nanotopographic Cell Culture Substrate: Polymer-Demixed Nanotextured Films Under Cell Culture Conditions. BioResearch Open Access, 2012, 1, 252-255.	2.6	7
45	Ageâ€related changes in gap junctional intercellular communication in osteoblastic cells. Journal of Orthopaedic Research, 2012, 30, 1979-1984.	1.2	34
46	Purinergic signaling is required for fluid shear stress-induced NF-Î°B translocation in osteoblasts. Experimental Cell Research, 2011, 317, 737-744.	1.2	21
47	Attenuation of arthritis in rodents by a novel orally-available inhibitor of sphingosine kinase. Inflammopharmacology, 2011, 19, 75-87.	1.9	43
48	Publishing the results of multiple experiments using the same methods and outcome measures. Journal of Orthopaedic Research, 2011, 29, 155-156.	1.2	3
49	A New Feature of the Journal of Orthopaedic Research: Research Perspectives. Journal of Orthopaedic Research, 2011, 29, 801-801.	1.2	0
50	Optimizing the osteogenic potential of adult stem cells for skeletal regeneration. Journal of Orthopaedic Research, 2011, 29, 1627-1633.	1.2	38
51	Effects of membrane cholesterol depletion and GPIâ€anchored protein reduction on osteoblastic mechanotransduction. Journal of Cellular Physiology, 2011, 226, 2350-2359.	2.0	20
52	Enhanced Osteoclastic Resorption and Responsiveness to Mechanical Load in Gap Junction Deficient Bone. PLoS ONE, 2011, 6, e23516.	1.1	127
53	Functional Gap Junctions Between Osteocytic and Osteoblastic Cells. Journal of Bone and Mineral Research, 2010, 15, 209-217.	3.1	228
54	Bone Structural and Mechanical Properties Are Affected by Hypotransferrinemia But Not by Iron Deficiency in Mice. Journal of Bone and Mineral Research, 2010, 15, 271-277.	3.1	8

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55	Gap Junctions and Biophysical Regulation of Bone Cells. Clinical Reviews in Bone and Mineral Metabolism, 2010, 8, 189-200.	1.3	9
56	Increased mechanosensitivity of cells cultured on nanotopographies. Journal of Biomechanics, 2010, 43, 3058-3062.	0.9	31
57	Estrogen Receptor Expression in Posterior Tibial Tendon Dysfunction: A Pilot Study. Foot and Ankle International, 2010, 31, 1081-1084.	1.1	36
58	From streamingâ€potentials to shear stress: 25 years of bone cell mechanotransduction. Journal of Orthopaedic Research, 2009, 27, 143-149.	1.2	121
59	The role of gap junctions in megakaryocyte-mediated osteoblast proliferation and differentiation. Bone, 2009, 44, 80-86.	1.4	67
60	Surface energy effects on osteoblast spatial growth and mineralization. Biomaterials, 2008, 29, 1776-1784.	5.7	189
61	Alterations in Cx43 and OB-cadherin affect breast cancer cell metastatic potential. Clinical and Experimental Metastasis, 2008, 25, 265-272.	1.7	41
62	Expressing connexin 43 in breast cancer cells reduces their metastasis to lungs. Clinical and Experimental Metastasis, 2008, 25, 893-901.	1.7	54
63	Chemotransport contributes to the effect of oscillatory fluid flow on human bone marrow stromal cell proliferation. Journal of Orthopaedic Research, 2008, 26, 918-924.	1.2	25
64	Osteoprotegrin and the bone homing and colonization potential of breast cancer cells. Journal of Cellular Biochemistry, 2008, 103, 30-41.	1.2	30
65	Towards a micromachined system for mechanical characterization of osteoblasts. , 2008, , .		0
66	Porous Thermoresponsive-co-Biodegradable Hydrogels as Tissue-Engineering Scaffolds for 3-Dimensional In Vitro Culture of Chondrocytes. Tissue Engineering, 2007, 13, 2645-2652.	4.9	38
67	Cell Sensing and Response to Micro- and Nanostructured Surfaces Produced by Chemical and Topographic Patterning. Tissue Engineering, 2007, 13, 1879-1891.	4.9	495
68	Oscillating fluid flow activation of gap junction hemichannels induces atp release from MLO-Y4 osteocytes. Journal of Cellular Physiology, 2007, 212, 207-214.	2.0	273
69	The regulation of integrin-mediated osteoblast focal adhesion and focal adhesion kinase expression by nanoscale topography. Biomaterials, 2007, 28, 1787-1797.	5.7	225
70	Influence of substratum surface chemistry/energy and topography on the human fetal osteoblastic cell line hFOB 1.19: Phenotypic and genotypic responses observed in vitroâ˜†. Biomaterials, 2007, 28, 4535-4550.	5.7	292
71	Effect of surface nanoscale topography on elastic modulus of individual osteoblastic cells as determined by atomic force microscopy. Journal of Biomechanics, 2007, 40, 2865-2871.	0.9	73
72	ATP Release Mediates Fluid Flow-Induced Proliferation of Human Bone Marrow Stromal Cells. Journal of Bone and Mineral Research, 2007, 22, 589-600.	3.1	74

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73	Mechanically induced intracellular calcium waves in osteoblasts demonstrate calcium fingerprints in bone cell mechanotransduction. Biomechanics and Modeling in Mechanobiology, 2007, 6, 391-398.	1.4	36
74	Fluid Shear-Induced ATP Secretion Mediates Prostaglandin Release in MC3T3-E1 Osteoblasts. Journal of Bone and Mineral Research, 2005, 20, 41-49.	3.1	236
75	Intercellular communication and mechanotransduction in bone. Current Opinion in Orthopaedics, 2005, 16, 311-315.	0.3	1
76	Thermoresponsive Terpolymeric Films Applicable for Osteoblastic Cell Growth and Noninvasive Cell Sheet Harvesting. Tissue Engineering, 2005, 11, 30-40.	4.9	42
77	Osteoblast Adhesion on Poly(l-lactic Acid)/Polystyrene Demixed Thin Film Blends:Â Effect of Nanotopography, Surface Chemistry, and Wettability. Biomacromolecules, 2005, 6, 3319-3327.	2.6	131
78	Integrin Expression and Osteopontin Regulation in Human Fetal Osteoblastic Cells Mediated by Substratum Surface Characteristics. Tissue Engineering, 2005, 11, 19-29.	4.9	68
79	Human foetal osteoblastic cell response to polymer-demixed nanotopographic interfaces. Journal of the Royal Society Interface, 2005, 2, 97-108.	1.5	162
80	Fluid Shear-Induced ATP Secretion Mediates Prostaglandin Release in MC3T3-E1 Osteoblasts. Journal of Bone and Mineral Research, 2005, 20, 41-49.	3.1	24
81	Fabrication of Ordered Sub-Micron Topographies on Large-Area Poly(Urethane Urea) by Two-Stage Replication Molding. Materials Research Society Symposia Proceedings, 2004, 820, 288.	0.1	2
82	A small molecule antagonist of the Î±vÎ²3integrin suppresses MDA-MB-435 skeletal metastasis. Clinical and Experimental Metastasis, 2004, 21, 119-128.	1.7	105
83	Breast cancer metastatic potential: Correlation with increased heterotypic gap junctional intercellular communication between breast cancer cells and osteoblastic cells. International Journal of Cancer, 2004, 111, 693-697.	2.3	66
84	Breast cancer cells induce osteoblast apoptosis: A possible contributor to bone degradation. Journal of Cellular Biochemistry, 2004, 91, 265-276.	1.2	74
85	Cycle number and waveform of fluid flow affect bovine articular chondrocytes. Biorheology, 2004, 41, 315-22.	1.2	10
86	Strain Rate, Temperature, and Microstructure-Dependent Yield Stress of Poly(ethylene terephthalate). Macromolecular Chemistry and Physics, 2003, 204, 653-660.	1.1	14
87	Osteoblastic cells have refractory periods for fluid-flow-induced intracellular calcium oscillations for short bouts of flow and display multiple low-magnitude oscillations during long-term flow. Journal of Biomechanics, 2003, 36, 35-43.	0.9	88
88	Bone formation is not impaired by hibernation (disuse) in black bears Ursus americanus. Journal of Experimental Biology, 2003, 206, 4233-4239.	0.8	34
89	Fluid flow induced PGE2 release by bone cells is reduced by glycocalyx degradation whereas calcium signals are not. Biorheology, 2003, 40, 591-603.	1.2	84
90	P2Y Purinoceptors Are Responsible for Oscillatory Fluid Flow-induced Intracellular Calcium Mobilization in Osteoblastic Cells. Journal of Biological Chemistry, 2002, 277, 48724-48729.	1.6	81

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91	PARALLEL CHANGES IN EXTRACELLULAR MATRIX PROTEIN GENE EXPRESSION, BONE FORMATION AND BIOMECHANICAL PROPERTIES IN AGING RAT BONE. Journal of Musculoskeletal Research, 2002, 06, 157-169.	0.1	3
92	Suppression of Human Melanoma Metastasis by the Metastasis Suppressor Gene, BRMS1. Experimental Cell Research, 2002, 273, 229-239.	1.2	134
93	Effects of cell swelling on intracellular calcium and membrane currents in bovine articular chondrocytes. Journal of Cellular Biochemistry, 2002, 86, 290-301.	1.2	68
94	Intracellular Calcium Changes in Rat Aortic Smooth Muscle Cells in Response to Fluid Flow. Annals of Biomedical Engineering, 2002, 30, 371-378.	1.3	28
95	Aged bone displays an increased responsiveness to low-intensity resistance exercise. Journal of Applied Physiology, 2001, 90, 1359-1364.	1.2	46
96	Oscillating fluid flow regulates cytosolic calcium concentration in bovine articular chondrocytes. Journal of Biomechanics, 2001, 34, 59-65.	0.9	49
97	Osteopontin Gene Regulation by Oscillatory Fluid Flow via Intracellular Calcium Mobilization and Activation of Mitogen-activated Protein Kinase in MC3T3â€"E1 Osteoblasts. Journal of Biological Chemistry, 2001, 276, 13365-13371.	1.6	342
98	Oscillating Fluid Flow Inhibits TNF-Î±-induced NF-ÎºB Activation via an IÎºB Kinase Pathway in Osteoblast-like UMR106 Cells. Journal of Biological Chemistry, 2001, 276, 13499-13504.	1.6	34
99	Differentiation of human fetal osteoblastic cells and gap junctional intercellular communication. American Journal of Physiology - Cell Physiology, 2000, 278, C315-C322.	2.1	109
100	Analysis of Time-Varying Biological Data Using Rainflow Cycle Counting. Computer Methods in Biomechanics and Biomedical Engineering, 2000, 3, 31-40.	0.9	10
101	Mechanically induced calcium waves in articular chondrocytes are inhibited by gadolinium and amiloride. Journal of Orthopaedic Research, 1999, 17, 421-429.	1.2	139
102	Mechanisms contributing to fluid-flow-induced Ca2+ mobilization in articular chondrocytes. , 1999, 180, 402-408.		85
103	Gap Junctional Intercellular Communication Contributes to Hormonal Responsiveness in Osteoblastic Networks. Journal of Biological Chemistry, 1996, 271, 12165-12171.	1.6	107
104	Electromagnetic fields in bone repair and adaptation. Radio Science, 1995, 30, 233-244.	0.8	19
105	Cell-to-cell communication in osteoblastic networks: Cell lineâ€"dependent hormonal regulation of gap junction function. Journal of Bone and Mineral Research, 1995, 10, 881-889.	3.1	159
106	Chondrocytes isolated from mature articular cartilage retain the capacity to form functional gap junctions. Journal of Bone and Mineral Research, 1995, 10, 1359-1364.	3.1	66
107	Electric fields modulate bone cell function in a density-dependent manner. Journal of Bone and Mineral Research, 1993, 8, 977-984.	3.1	75
108	Regulation of cytokine expression in osteoblasts by parathyroid hormone: Rapid stimulation of interleukin-6 and leukemia inhibitory factor mRNA. Journal of Bone and Mineral Research, 1993, 8, 1163-1171.	3.1	121

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109	Regulation of cytoplasmic calcium concentration in tetracycline-treated osteoclasts. Journal of Bone and Mineral Research, 1992, 7, 1313-1318.	3.1	27
110	Kinetics of Erythrocyte Plasma Membrane (Ca²⁺,Mg²⁺)ATPase in Familial Benign Hypercalcemia*. Journal of Clinical Endocrinology and Metabolism, 1989, 68, 893-898.	1.8	8