Mitchell B Schaffler

List of Publications by Year
in descending order

109 papers	11,761 citations	36691 53 h-index	36203 101 g-index
110 all docs	110 docs citations	110 times ranked	9636 citing authors

#	Article	IF	Citations
1	A Bisphosphonate With a Low Hydroxyapatite Binding Affinity Prevents Bone Loss in Mice After Ovariectomy and Reverses Rapidly With Treatment Cessation. JBMR Plus, 2021, 5, e10476.	1.3	8
2	Skeletal Response to Insulin in the Naturally Occurring Type 1 Diabetes Mellitus Mouse Model. JBMR Plus, 2021, 5, e10483.	1.3	8
3	Reply to: A Bisphosphonate With a Low Hydroxyapatite Binding Affinity Prevents Bone Loss in Mice After Ovariectomy and Reverses Rapidly With Treatment Cessation. JBMR Plus, 2021, 5, e10492.	1.3	0
4	Estrogen depletion on In vivo osteocyte calcium signaling responses to mechanical loading. Bone, 2021, 152, 116072.	1.4	15
5	Induction of somatopause in adult mice compromises bone morphology and exacerbates bone loss during aging. Aging Cell, 2021, 20, e13505.	3.0	6
6	Apoptotic Osteocytes Induce RANKL Production in Bystanders via Purinergic Signaling and Activation of Pannexin Channels. Journal of Bone and Mineral Research, 2020, 35, 966-977.	3.1	30
7	Role of pannexin 1 channels in loadâ€induced skeletal response. Annals of the New York Academy of Sciences, 2019, 1442, 79-90.	1.8	14
8	CITED2 mediates the crossâ€talk between mechanical loading and ILâ€4 to promote chondroprotection. Annals of the New York Academy of Sciences, 2019, 1442, 128-137.	1.8	19
9	Mitochondrial Function Is Compromised in Cortical Bone Osteocytes of Long-Lived Growth Hormone Receptor Null Mice. Journal of Bone and Mineral Research, 2019, 34, 106-122.	3.1	27
10	L-Glutamine Increases IGF-1 Liver Expression to Prevent Bone Loss in Sickle Mice. Blood, 2019, 134, 3561-3561.	0.6	1
11	Potential role for a specialized Î²₃ integrinâ€based structure on osteocyte processes in bone mechanosensation. Journal of Orthopaedic Research, 2018, 36, 642-652.	1.2	53
12	Reduced Serum IGF-1 Associated With Hepatic Osteodystrophy Is a Main Determinant of Low Cortical but Not Trabecular Bone Mass. Journal of Bone and Mineral Research, 2018, 33, 123-136.	3.1	18
13	Ablation of Hepatic Production of the Acid-Labile Subunit in Bovine-GH Transgenic Mice: Effects on Organ and Skeletal Growth. Endocrinology, 2017, 158, 2556-2571.	1.4	10
14	Microdamage induced by in vivo Reference Point Indentation in mice is repaired by osteocyte-apoptosis mediated remodeling. Bone, 2017, 95, 192-198.	1.4	14
15	Osteocyte calcium signals encode strain magnitude and loading frequency in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11775-11780.	3.3	76
16	A multiscale fluidic device for the study of dendrite-mediated cell to cell communication. Biomedical Microdevices, 2017, 19, 71.	1.4	10
17	Lactation-Induced Changes in the Volume of Osteocyte Lacunar-Canalicular Space Alter Mechanical Properties in Cortical Bone Tissue. Journal of Bone and Mineral Research, 2017, 32, 688-697.	3.1	75
18	Regional differences in oxidative metabolism and mitochondrial activity among cortical bone osteocytes. Bone, 2016, 90, 15-22.	1.4	27

#	Article	IF	Citations
19	Pannexin-1 and P2X7-Receptor Are Required for Apoptotic Osteocytes in Fatigued Bone to Trigger RANKL Production in Neighboring Bystander Osteocytes. Journal of Bone and Mineral Research, 2016, 31, 890-899.	3.1	65
20	Fibrillin-1 Regulates Skeletal Stem Cell Differentiation by Modulating TGFÎ² Activity Within the Marrow Niche. Journal of Bone and Mineral Research, 2016, 31, 86-97.	3.1	33
21	Thermally induced osteocyte damage initiates pro-osteoclastogenic gene expression in vivo. Journal of the Royal Society Interface, 2016, 13, 20160337.	1.5	7
22	Osteocyte Apoptosis Caused by Hindlimb Unloading is Required to Trigger Osteocyte RANKL Production and Subsequent Resorption of Cortical and Trabecular Bone in Mice Femurs. Journal of Bone and Mineral Research, 2016, 31, 1356-1365.	3.1	135
23	DMPâ€1 â€mediated <i>Ghr</i> gene recombination compromises skeletal development and impairs skeletal response to intermittent PTH. FASEB Journal, 2016, 30, 635-652.	0.2	24
24	P2X7R-Panx1 Complex Impairs Bone Mechanosignaling under High Glucose Levels Associated with Type-1 Diabetes. PLoS ONE, 2016, 11, e0155107.	1.1	51
25	Primary Cilia Exist in a Small Fraction of Cells in Trabecular Bone and Marrow. Calcified Tissue International, 2015, 96, 65-72.	1.5	32
26	Bone microdamage, remodeling and bone fragility: how much damage is too much damage?. BoneKEy Reports, 2015, 4, 644.	2.7	89
27	Authors Response to Letter from Plotkin and Bellido. Calcified Tissue International, 2014, 95, 384-384.	1.5	0
28	Skeletal Response of Male Mice to Anabolic Hormone Therapy in the Absence of theIgfalsGene. Endocrinology, 2014, 155, 987-999.	1.4	5
29	Temporal effect of in vivo tendon fatigue loading on the apoptotic response explained in the context of number of fatigue loading cycles and initial damage parameters. Journal of Orthopaedic Research, 2014, 32, 1097-1103.	1.2	27
30	Structural and Mechanical Repair of Diffuse Damage in Cortical Bone In Vivo. Journal of Bone and Mineral Research, 2014, 29, 2537-2544.	3.1	63
31	Osteocyte apoptosis is required for production of osteoclastogenic signals following bone fatigue in vivo. Bone, 2014, 64, 132-137.	1.4	123
32	Osteocytes: Master Orchestrators of Bone. Calcified Tissue International, 2014, 94, 5-24.	1.5	373
33	Reductions in serum <scp>IGF</scp>â€1 during aging impair health span. Aging Cell, 2014, 13, 408-418.	3.0	56
34	Low levels of plasma IGF-1 inhibit intracortical bone remodeling during aging. Age, 2013, 35, 1691-1703.	3.0	22
35	Serum IGF-1 Is Insufficient to Restore Skeletal Size in the Total Absence of the Growth Hormone Receptor. Journal of Bone and Mineral Research, 2013, 28, 1575-1586.	3.1	28
36	Matrix-dependent adhesion mediates network responses to physiological stimulation of the osteocyte cell process. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12096-12101.	3.3	37

#	Article	IF	Citations
37	Mechanosensory responses of osteocytes to physiological forces occur along processes and not cell body and require Î± _V Î² ₃ integrin. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 21012-21017.	3.3	112
38	The Roles of Osteocyte Signaling in Bone. Journal of the American Academy of Orthopaedic Surgeons, The, 2012, 20, 670-671.	1.1	8
39	Activation of resorption in fatigue-loaded bone involves both apoptosis and active pro-osteoclastogenic signaling by distinct osteocyte populations. Bone, 2012, 50, 1115-1122.	1.4	241
40	Osteocyte Signaling in Bone. Current Osteoporosis Reports, 2012, 10, 118-125.	1.5	155
41	The Roles of Osteocyte Signaling in Bone. Journal of the American Academy of Orthopaedic Surgeons, The, 2012, 20, 670-671.	1.1	2
42	Tibial compression is anabolic in the adult mouse skeleton despite reduced responsiveness with aging. Bone, 2011, 49, 439-446.	1.4	108
43	Physiological loading of joints prevents cartilage degradation through CITED2. FASEB Journal, 2011, 25, 182-191.	0.2	74
44	BMP-12 Treatment of Adult Mesenchymal Stem Cells In Vitro Augments Tendon-Like Tissue Formation and Defect Repair In Vivo. PLoS ONE, 2011, 6, e17531.	1.1	154
45	Cancellous bone adaptation to tibial compression is not sex dependent in growing mice. Journal of Applied Physiology, 2010, 109, 685-691.	1.2	89
46	Growth hormone protects against ovariectomy-induced bone loss in states of low circulating insulin-like growth factor (IGF-1). Journal of Bone and Mineral Research, 2010, 25, 235-246.	3.1	26
47	Development and Validation of a Motion and Loading System for a Rat Knee Joint In Vivo. Annals of Biomedical Engineering, 2010, 38, 621-631.	1.3	9
48	Second Harmonic Generation Imaging and Fourier Transform Spectral Analysis Reveal Damage in Fatigue-Loaded Tendons. Annals of Biomedical Engineering, 2010, 38, 1741-1751.	1.3	45
49	Sustained Release of Multiple Growth Factors from Injectable Polymeric System as a Novel Therapeutic Approach Towards Angiogenesis. Pharmaceutical Research, 2010, 27, 264-271.	1.7	111
50	Early response to tendon fatigue damage accumulation in a novel in vivo model. Journal of Biomechanics, 2010, 43, 274-279.	0.9	147
51	Tendonâ€derived stem/progenitor cell aging: defective selfâ€renewal and altered fate. Aging Cell, 2010, 9, 911-915.	3.0	166
52	Serum complexes of insulinâ€like growth factorâ€1 modulate skeletal integrity and carbohydrate metabolism. FASEB Journal, 2009, 23, 709-719.	0.2	90
53	Subrupture tendon fatigue damage. Journal of Orthopaedic Research, 2009, 27, 264-273.	1.2	138
54	Ablation of Cathepsin K Activity in the Young Mouse Causes Hypermineralization of Long Bone and Growth Plates. Calcified Tissue International, 2009, 84, 229-239.	1.5	30

#	Article	IF	Citations
55	Osteocyte Apoptosis Controls Activation of Intracortical Resorption in Response to Bone Fatigue. Journal of Bone and Mineral Research, 2009, 24, 597-605.	3.1	286
56	Type 2 diabetic mice demonstrate slender long bones with increased fragility secondary to increased osteoclastogenesis. Bone, 2009, 44, 648-655.	1.4	72
57	The dependency of solute diffusion on molecular weight and shape in intact bone. Bone, 2009, 45, 1017-1023.	1.4	40
58	Coordinate Regulation of IL-1Î² and MMP-13 in Rat Tendons Following Subrupture Fatigue Damage. Clinical Orthopaedics and Related Research, 2008, 466, 1555-1561.	0.7	99
59	Targeting of androgen receptor in bone reveals a lack of androgen anabolic action and inhibition of osteogenesis. Bone, 2008, 43, 440-451.	1.4	61
60	Selective estrogen receptor modulation influences atherosclerotic plaque composition in a rabbit menopause model. Atherosclerosis, 2008, 201, 76-84.	0.4	20
61	Loss of MMP-2 disrupts skeletal and craniofacial development and results in decreased bone mineralization, joint erosion and defects in osteoblast and osteoclast growth. Human Molecular Genetics, 2007, 16, 1113-1123.	1.4	202
62	A model for the role of integrins in flow induced mechanotransduction in osteocytes. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 15941-15946.	3.3	224
63	The effect of a short-term delay of puberty on trabecular bone mass and structure in female rats: A texture-based and histomorphometric analysis. Bone, 2007, 40, 419-424.	1.4	11
64	Comparative assessment of bone mass and structure using texture-based and histomorphometric analyses. Bone, 2007, 40, 544-552.	1.4	16
65	Novel procedure for high-fidelity tendon histology. Journal of Orthopaedic Research, 2007, 25, 390-395.	1.2	37
66	FSH Directly Regulates Bone Mass. Cell, 2006, 125, 247-260.	13.5	612
67	Mice Lacking Cathepsin K Maintain Bone Remodeling but Develop Bone Fragility Despite High Bone Mass. Journal of Bone and Mineral Research, 2006, 21, 865-875.	3.1	113
68	Examination of the Anatomy of Lower Limb Length Discrepancy (LLLD) between Inuit and Urban Populations: Orthopaedic Considerations. FASEB Journal, 2006, 20, A23.	0.2	0
69	In situ measurement of solute transport in the bone lacunarâ€canalicular system. FASEB Journal, 2006, 20, A418.	0.2	0
70	Long-Term Disuse Osteoporosis Seems Less Sensitive to Bisphosphonate Treatment Than Other Osteoporosis. Journal of Bone and Mineral Research, 2005, 20, 117-124.	3.1	78
71	Relationship Between Bone Morphology and Bone Quality in Male Tibias: Implications for Stress Fracture Risk. Journal of Bone and Mineral Research, 2005, 20, 1372-1380.	3.1	128
72	Genetic Background Influences Cortical Bone Response to Ovariectomy. Journal of Bone and Mineral Research, 2005, 20, 2150-2158.	3.1	85

#	Article	IF	Citations
73	In situ measurement of solute transport in the bone lacunar-canalicular system. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11911-11916.	3.3	182
74	High-dose risedronate treatment partially preserves cancellous bone mass and microarchitecture during long-term disuse. Bone, 2005, 37, 287-295.	1.4	52
75	Long-Term Disuse Osteoporosis Seems Less Sensitive to Bisphosphonate Treatment Than Other Osteoporosis. Journal of Bone and Mineral Research, 2005, 20, 117-124.	3.1	7
76	Osteocyte lacuna size and shape in women with and without osteoporotic fracture. Journal of Biomechanics, 2004, 37, 563-572.	0.9	124
77	Ultrastructure of the osteocyte process and its pericellular matrix. The Anatomical Record, 2004, 278A, 505-513.	2.3	290
78	Age-related changes in physicochemical properties of mineral crystals are related to impaired mechanical function of cortical bone. Bone, 2004, 34, 443-453.	1.4	383
79	Mechanotransduction and strain amplification in osteocyte cell processes. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 16689-16694.	3.3	413
80	Aging of Microstructural Compartments in Human Compact Bone. Journal of Bone and Mineral Research, 2003, 18, 1012-1019.	3.1	231
81	Role of bone turnover in microdamage. Osteoporosis International, 2003, 14, 73-80.	1.3	71
82	Increased Collagen Mineralization Affects the Yield Stress But Not the Yield Strain in Cortical Bone of Rats: Implications for Age-Related Tissue Embrittlement. , 2002, , 307.		0
83	Prestress Due to Dimensional Changes Caused by Demineralization: A Potential Mechanism for Microcracking in Bone. Annals of Biomedical Engineering, 2002, 30, 217-225.	1.3	18
84	Spatial Distribution of Bax and Bcl-2 in Osteocytes After Bone Fatigue: Complementary Roles in Bone Remodeling Regulation?. Journal of Bone and Mineral Research, 2002, 17, 907-914.	3.1	161
85	Strain and Fracture Induced Changes in Bone Mineral Crystals. , 2002, , .		0
86	A model for strain amplification in the actin cytoskeleton of osteocytes due to fluid drag on pericellular matrix. Journal of Biomechanics, 2001, 34, 1375-1386.	0.9	368
87	Fatigue and repair in bone. International Journal of Fatigue, 2000, 22, 839-846.	2.8	38
88	Loss of Osteocyte Integrity in Association with Microdamage and Bone Remodeling After Fatigue In Vivo. Journal of Bone and Mineral Research, 2000, 15, 60-67.	3.1	636
89	Temporal and Spatial Characterization of Regenerate Bone in the Lengthened Rabbit Tibia. Journal of Bone and Mineral Research, 1999, 14, 1978-1986.	3.1	33
90	Damage type and strain mode associations in human compact bone bending fatigue. Journal of Orthopaedic Research, 1998, 16, 322-329.	1.2	230

#	Article	IF	Citations
91	The interosseous membrane affects load distribution in the forearm. Journal of Hand Surgery, 1997, 22, 975-980.	0.7	124
92	Bone Microdamage and Skeletal Fragility in Osteoporotic and Stress Fractures. Journal of Bone and Mineral Research, 1997, 12, 6-15.	3.1	593
93	The involvement of subchondral mineralized tissues in osteoarthrosis: Quantitative microscopic evidence. , 1997, 37, 343-357.		195
94	Type I collagen mutation alters the strength and fatigue behavior of Mov13 cortical tissue. Journal of Biomechanics, 1997, 30, 1141-1147.	0.9	115
95	Type-I collagen mutation compromises the post-yield behavior of Mov13 long bone. Journal of Orthopaedic Research, 1996, 14, 493-499.	1.2	93
96	Chondrocyte apoptosis in endochondral ossification of chick sterna. Developmental Dynamics, 1995, 203, 468-476.	0.8	128
97	Endochondral resorption of chick sterna in culture. Journal of Orthopaedic Research, 1995, 13, 542-552.	1.2	8
98	Fatigue and bone fragility. Calcified Tissue International, 1993, 53, S67-S67.	1.5	0
99	Conclusion: Research prospects and initiatives. Calcified Tissue International, 1993, 53, S176-S180.	1.5	0
100	Adaptation of diaphyseal structure with aging and increased mechanical usage in the adult rat: A histomorphometrical and biomechanical study. The Anatomical Record, 1991, 230, 332-338.	2.3	91
101	Composition of the cement line and its possible mechanical role as a local interface in human compact bone. Journal of Biomechanics, 1988, 21, 939-945.	0.9	253
102	Stiffness of compact bone: Effects of porosity and density. Journal of Biomechanics, 1988, 21, 13-16.	0.9	564
103	Comparison of joint degeneration models: Surgical instability and repetitive impulsive loading. Acta Orthopaedica, 1986, 57, 349-353.	1.4	23
104	Structural and Mechanical Indicators of Limb Specialization in Primates. Folia Primatologica, 1985, 45, 61-75.	0.3	113
105	Bone remodeling in response to in vivo fatigue microdamage. Journal of Biomechanics, 1985, 18, 189-200.	0.9	674
106	Bone microstructure: A study in comparative locomotion. Journal of Biomechanics, 1985, 18, 239.	0.9	2
107	Primate cortical bone microstructure: Relationship to locomotion. American Journal of Physical Anthropology, 1984, 65, 191-197.	2.1	67
108	Osteoarthrosis: Sex-specific relationship to osteoporosis. American Journal of Physical Anthropology, 1983, 61, 299-303.	2.1	22

#	Article	IF	Citations
109	Development and Eruption of the Mandibular Cheek Teeth in <i>Cebus albifron</i><i>s</i>. Folia Primatologica, 1982, 38, 158-169.	0.3	33