

# Dale R Sumner

## List of Publications by Year in descending order

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117  
papers

4,418  
citations

71102

41  
h-index

118850

62  
g-index

118  
all docs

118  
docs citations

118  
times ranked

4745  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamic knee loads during gait predict proximal tibial bone distribution. <i>Journal of Biomechanics</i> , 1998, 31, 423-430.	2.1	262
2	Normalization of joint moments during gait: a comparison of two techniques. <i>Journal of Biomechanics</i> , 2003, 36, 599-603.	2.1	228
3	Long-term implant fixation and stress-shielding in total hip replacement. <i>Journal of Biomechanics</i> , 2015, 48, 797-800.	2.1	218
4	Relationship between pain and medial knee joint loading in mild radiographic knee osteoarthritis. <i>Arthritis and Rheumatism</i> , 2007, 57, 1254-1260.	6.7	174
5	A quantitative study of bone and soft tissues in cementless porous-coated acetabular components retrieved at autopsy. <i>Journal of Arthroplasty</i> , 1993, 8, 213-225.	3.1	150
6	Alteration of sensory neurons and spinal response to an experimental osteoarthritis pain model. <i>Arthritis and Rheumatism</i> , 2010, 62, 2995-3005.	6.7	149
7	The enhancement of bone regeneration by gene activated matrix encoding for platelet derived growth factor. <i>Biomaterials</i> , 2014, 35, 737-747.	11.4	123
8	Early gene response to low-intensity pulsed ultrasound in rat osteoblastic cells. <i>Ultrasound in Medicine and Biology</i> , 2005, 31, 703-708.	1.5	121
9	The Bone-Implant Interface of Femoral Stems with Non-Circumferential Porous Coating. A Study of Specimens Retrieved at Autopsy*. <i>Journal of Bone and Joint Surgery - Series A</i> , 1996, 78, 1068-81.	3.0	114
10	Sensitivity of periprosthetic stress-shielding to load and the bone densityâ€“modulus relationship in subject-specific finite element models. <i>Journal of Biomechanics</i> , 2000, 33, 809-817.	2.1	109
11	Locally delivered rhBMP-2 enhances bone ingrowth and gap healing in a canine model. <i>Journal of Orthopaedic Research</i> , 2004, 22, 58-65.	2.3	90
12	Bone mineral density in the proximal tibia varies as a function of static alignment and knee adduction angular momentum in individuals with medial knee osteoarthritis. <i>Bone</i> , 2006, 39, 1116-1122.	2.9	87
13	Histology of porous-coated acetabular components: 25 cementless cups retrieved after arthroplasty. <i>Acta Orthopaedica</i> , 1993, 64, 619-626.	1.4	75
14	Coâ€“Crâ€“Mo alloy particles induce tumor necrosis factor alpha production in MLO-Y4 osteocytes: A role for osteocytes in particle-induced inflammation. <i>Bone</i> , 2009, 45, 528-533.	2.9	67
15	Bone ingrowth and wear debris in well-fixed cementless porous-coated tibial components removed from patients. <i>Journal of Arthroplasty</i> , 1995, 10, 157-167.	3.1	63
16	Biomimetic artificial ECMs stimulate bone regeneration. <i>Journal of Biomedical Materials Research - Part A</i> , 2006, 79A, 815-826.	4.0	63
17	Measuring the volume fraction of bone ingrowth: A comparison of three techniques. <i>Journal of Orthopaedic Research</i> , 1990, 8, 448-452.	2.3	62
18	Spontaneous and experimental osteoarthritis in dog: Similarities and differences in proteoglycan levels. <i>Journal of Orthopaedic Research</i> , 2003, 21, 730-737.	2.3	58

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19	Bone graft harvesting from the distal radius, olecranon, and iliac crest: A quantitative analysis. <i>Journal of Hand Surgery</i> , 2001, 26, 135-141.	1.6	57
20	Incorporation of copper into chitosan scaffolds promotes bone regeneration in rat calvarial defects. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2015, 103, 1044-1049.	3.4	56
21	Accuracy and precision of radiostereometric analysis in the measurement of THR femoral component translations: human and canine in vitro models. <i>Journal of Orthopaedic Research</i> , 2001, 19, 1162-1167.	2.3	55
22	The efficacy of 500 centigray radiation in the prevention of heterotopic ossification after total hip arthroplasty: a prospective, randomized, pilot study. <i>Journal of Arthroplasty</i> , 2003, 18, 677-686.	3.1	55
23	Stem curvature and load angle influence the initial relative bone-implant motion of cementless femoral stems. <i>Journal of Orthopaedic Research</i> , 1993, 11, 758-769.	2.3	53
24	Additive Enhancement of Implant Fixation Following Combined Treatment with rhTGF- $\beta$ 2 and rhBMP-2 in a Canine Model. <i>Journal of Bone and Joint Surgery - Series A</i> , 2006, 88, 806-817.	3.0	53
25	Sclerostin Antibody Increases Bone Volume and Enhances Implant Fixation in a Rat Model. <i>Journal of Bone and Joint Surgery - Series A</i> , 2012, 94, 1670-1680.	3.0	53
26	Sclerostin antibody prevents particle-induced implant loosening by stimulating bone formation and inhibiting bone resorption in a rat model. <i>Arthritis and Rheumatism</i> , 2012, 64, 4012-4020.	6.7	53
27	Apparent age-related bone loss among adult female Gombe chimpanzees. <i>American Journal of Physical Anthropology</i> , 1989, 79, 225-234.	2.1	52
28	Hip motion and moments during gait relate directly to proximal femoral bone mineral density in patients with hip osteoarthritis. <i>Journal of Biomechanics</i> , 1998, 31, 919-925.	2.1	52
29	A low-temperature biomimetic calcium phosphate surface enhances early implant fixation in a rat model. <i>Journal of Biomedical Materials Research Part B</i> , 2004, 70A, 66-73.	3.1	51
30	Local application of rhTGF- $\beta$ 2 enhances peri-implant bone volume and bone-implant contact in a rat model. <i>Bone</i> , 2005, 37, 55-62.	2.9	51
31	Sclerostin Antibody Treatment Improves Implant Fixation in a Model of Severe Osteoporosis. <i>Journal of Bone and Joint Surgery - Series A</i> , 2015, 97, 133-140.	3.0	51
32	PARTICULATE-INDUCED, PROSTAGLANDIN- AND CYTOKINE-MEDIATED BONE RESORPTION IN AN EXPERIMENTAL SYSTEM AND IN FAILED JOINT REPLACEMENTS. <i>American Journal of Therapeutics</i> , 1996, 3, 27-41.	0.9	49
33	Wnt signaling in bone, kidney, intestine, and adipose tissue and interorgan interaction in aging. <i>Annals of the New York Academy of Sciences</i> , 2019, 1442, 48-60.	3.8	49
34	Bone Density, Dynamic Joint Loading and Joint Degeneration. <i>Cells Tissues Organs</i> , 2001, 169, 201-209.	2.3	47
35	Patterns and Localization of Gene Expression During Intramembranous Bone Regeneration in the Rat Femoral Marrow Ablation Model. <i>Calcified Tissue International</i> , 2005, 77, 212-225.	3.1	47
36	Peri-implant bone formation and implant integration strength of peptide-modified p(AAM-co-EG/AAC) interpenetrating polymer network-coated titanium implants. <i>Journal of Biomedical Materials Research - Part A</i> , 2007, 80A, 306-320.	4.0	46

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37	Temporal Gene Expression Profiling during Rat Femoral Marrow Ablation-Induced Intramembranous Bone Regeneration. PLoS ONE, 2010, 5, e12987.	2.5	45
38	Low-intensity pulsed ultrasound (LIPUS) and cell-to-cell communication in bone marrow stromal cells. Ultrasonics, 2011, 51, 639-644.	3.9	43
39	Computed tomography and automated image analysis of prehistoric femora. American Journal of Physical Anthropology, 1985, 68, 225-232.	2.1	42
40	Symmetry of the canine femur: Implications for experimental sample size requirements. Journal of Orthopaedic Research, 1988, 6, 758-765.	2.3	42
41	Use of Bone Morphogenetic Protein 2 on Ectopic Porous Coated Implants in the Rat. Clinical Orthopaedics and Related Research, 1997, 345, 219-228.	1.5	42
42	Bone ingrowth into the tibial component of a canine total condylar knee replacement prosthesis. Journal of Orthopaedic Research, 1989, 7, 893-901.	2.3	38
43	Bone Matrix Quality After Sclerostin Antibody Treatment. Journal of Bone and Mineral Research, 2014, 29, 1597-1607.	2.8	38
44	Cytotoxic effects of cobalt and nickel ions on osteocytes in vitro. Journal of Orthopaedic Surgery and Research, 2014, 9, 91.	2.3	36
45	Impacted particulate allograft for femoral revision total hip arthroplasty. Journal of Arthroplasty, 1996, 11, 500-506.	3.1	33
46	Dynamic loads are determinants of peak bone mass. Journal of Orthopaedic Research, 2004, 22, 339-345.	2.3	30
47	Validation of cortical bone mineral density distribution using micro-computed tomography. Bone, 2017, 99, 53-61.	2.9	30
48	The geometry of the adult canine proximal femur. Journal of Orthopaedic Research, 1990, 8, 671-677.	2.3	28
49	Autologous stem cell regeneration in craniosynostosis. Bone, 2008, 42, 332-340.	2.9	28
50	Overexpression of DMP1 accelerates mineralization and alters cortical bone biomechanical properties in vivo. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 5, 1-8.	3.1	28
51	Patterns of gene expression in rat bone marrow stromal cells cultured on titanium alloy discs of different roughness. Journal of Biomedical Materials Research Part B, 2004, 70A, 391-401.	3.1	27
52	Modulation of bone ingrowth of rabbit femur titanium implants by in vivo axial micromechanical loading. Journal of Applied Physiology, 2005, 98, 1922-1929.	2.5	27
53	How faithfully does intramembranous bone regeneration recapitulate embryonic skeletal development?. Developmental Dynamics, 2021, 250, 377-392.	1.8	27
54	Aging Does Not Lessen the Effectiveness of TGF $\beta$ 2-Enhanced Bone Regeneration. Journal of Bone and Mineral Research, 2003, 18, 730-736.	2.8	26

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55	The use of intra-articular Na-hyaluronate as a potential chondroprotective device in experimentally induced acute articular cartilage injury and repair in rabbits. <i>Journal of Orthopaedic Research</i> , 2003, 21, 305-311.	2.3	26
56	Modulation of Stromal Cell-Derived Factor-1/CXC Chemokine Receptor 4 Axis Enhances rhBMP-2-Induced Ectopic Bone Formation. <i>Tissue Engineering - Part A</i> , 2012, 18, 860-869.	3.1	26
57	Bone turnover markers correlate with implant fixation in a rat model using LPS-doped particles to induced implant loosening. <i>Journal of Biomedical Materials Research - Part A</i> , 2012, 100A, 918-928.	4.0	25
58	Are There Biological Markers for Wear or Corrosion? A Systematic Review. <i>Clinical Orthopaedics and Related Research</i> , 2014, 472, 3728-3739.	1.5	25
59	Porous implants as drug delivery vehicles to augment host tissue integration. <i>FASEB Journal</i> , 2008, 22, 1684-1693.	0.5	23
60	Circulating Dkk1 and TRAIL Are Associated With Cognitive Decline in Community-Dwelling, Older Adults With Cognitive Concerns. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2018, 73, 1688-1694.	3.6	23
61	The effect of enzymatically degradable IPN coatings on peri-implant bone formation and implant fixation. <i>Journal of Biomedical Materials Research - Part A</i> , 2007, 81A, 720-727.	4.0	22
62	Saline irrigation does not affect bone formation or fixation strength of hydroxyapatite/tricalcium phosphate-coated implants in a rat model. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2005, 74B, 712-717.	3.4	21
63	Ultrasound Enhances Recombinant Human BMP-2 Induced Ectopic Bone Formation in a Rat Model. <i>Ultrasound in Medicine and Biology</i> , 2009, 35, 1629-1637.	1.5	20
64	Particle-induced osteolysis is not accompanied by systemic remodeling but is reflected by systemic bone biomarkers. <i>Journal of Orthopaedic Research</i> , 2014, 32, 967-973.	2.3	20
65	Combined Use of Low-Intensity Pulsed Ultrasound and rhBMP-2 to Enhance Bone Formation in a Rat Model of Critical Size Defect. <i>Journal of Orthopaedic Trauma</i> , 2014, 28, 605-611.	1.4	19
66	Pharmacologic Augmentation of Implant Fixation in Osteopenic Bone. <i>Current Osteoporosis Reports</i> , 2014, 12, 55-64.	3.6	18
67	Modulation of VEGF Expression in Rat Bone Marrow Stromal Cells by GDF-5. <i>Connective Tissue Research</i> , 2007, 48, 324-331.	2.3	17
68	Murine articular cartilage morphology and compositional quantification with high resolution cationic contrast-enhanced $\mu$ CT. <i>Journal of Orthopaedic Research</i> , 2017, 35, 2740-2748.	2.3	17
69	Implant placement increases bone remodeling transiently in a rat model. <i>Journal of Orthopaedic Research</i> , 2013, 31, 800-806.	2.3	16
70	Arthrotomy-based preclinical models of particle-induced osteolysis: A systematic review. <i>Journal of Orthopaedic Research</i> , 2017, 35, 2595-2605.	2.3	16
71	Effect of Hip Hemiarthroplasty on Articular Cartilage and Bone in a Canine Model. <i>Clinical Orthopaedics and Related Research</i> , 2005, &NA;, 157-163.	1.5	15
72	Local application of rhTGF- $\beta$ 2 modulates dynamic gene expression in a rat implant model. <i>Bone</i> , 2005, 36, 931-940.	2.9	15

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73	Effects of <i>TCF-<math>\beta</math>1</i> and <i>VEGF-A</i> transgenes on the osteogenic potential of bone marrow stromal cells in vitro and in vivo. <i>Journal of Tissue Engineering</i> , 2012, 3, 204173141245974.	5.5	15
74	Implant Design Affects Markers of Bone Resorption and Formation in Total Hip Replacement. <i>Journal of Bone and Mineral Research</i> , 2002, 17, 800-807.	2.8	14
75	Adult Stem Cell Mobilization Enhances Intramembranous Bone Regeneration: A Pilot Study. <i>Clinical Orthopaedics and Related Research</i> , 2012, 470, 2503-2512.	1.5	14
76	Dopamine Receptors and the Persistent Neurovascular Dysregulation Induced by Methamphetamine Self-Administration in Rats. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2014, 351, 432-439.	2.5	14
77	Bone Matrix Maturation in a Rat Model of Intra-Cortical Bone Remodeling. <i>Calcified Tissue International</i> , 2017, 101, 193-203.	3.1	13
78	Discovery of biomarkers to identify peri-implant osteolysis before radiographic diagnosis. <i>Journal of Orthopaedic Research</i> , 2018, 36, 2754-2761.	2.3	13
79	Effects of fixation technique on displacement incompatibilities at the bone-implant interface in cementless total knee replacement in a canine model. <i>Journal of Applied Biomaterials: an Official Journal of the Society for Biomaterials</i> , 1994, 5, 349-352.	1.2	12
80	Dimensional characteristics of uncomplicated autopsy-retrieved acetabular polyethylene liners by ultrasound. <i>Journal of Biomedical Materials Research Part B</i> , 1998, 39, 120-129.	3.1	12
81	Microstructural and Strength Evaluation of Regenerate Tissue during the Consolidation Period after Vertical Mandibular Ramus Distraction. <i>Journal of Craniofacial Surgery</i> , 2005, 16, 805-811.	0.7	12
82	Refraction Effects of Diffraction-Enhanced Radiographic Imaging. <i>Journal of the American Podiatric Medical Association</i> , 2004, 94, 453-455.	0.3	11
83	Assessment of glenoid chondral healing: comparison of microfracture to autologous matrix-induced chondrogenesis in a novel rabbit shoulder model. <i>Journal of Shoulder and Elbow Surgery</i> , 2015, 24, 1789-1800.	2.6	11
84	Optimizing a micro-computed tomography-based surrogate measurement of bone-implant contact. <i>Journal of Orthopaedic Research</i> , 2018, 36, 979-986.	2.3	11
85	Biomechanics of Implant Fixation in Osteoporotic Bone. <i>Current Osteoporosis Reports</i> , 2020, 18, 577-586.	3.6	11
86	Effect of recombinant human transforming growth factor- $\beta$ 2 dose on bone formation in rat femur titanium implant model. <i>Journal of Biomedical Materials Research - Part A</i> , 2010, 92A, 1210-1217.	4.0	10
87	Postembryonic dimensional allometry of the human femur. <i>American Journal of Physical Anthropology</i> , 1984, 64, 69-74.	2.1	9
88	Intramembranous bone regeneration differs among common inbred mouse strains following marrow ablation. <i>Journal of Orthopaedic Research</i> , 2015, 33, 1374-1381.	2.3	9
89	Subchondral Thickness Does Not Vary with Cartilage Degeneration on the Metatarsal. <i>Journal of the American Podiatric Medical Association</i> , 2003, 93, 104-110.	0.3	8
90	Micro-Computed Tomography Evaluation of the Glenoid Fossa and Mandibular Condyle Bone After Bilateral Vertical Ramus Mandibular Distraction in a Canine Model. <i>Journal of Craniofacial Surgery</i> , 2006, 17, 611-619.	0.7	8

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91	Bone Matrix Composition Following PTH Treatment is Not Dependent on Sclerostin Status. <i>Calcified Tissue International</i> , 2016, 98, 149-157.	3.1	8
92	Racism, structural racism, and the American Association for Anatomy: Initial report from a task force. <i>Anatomical Record</i> , 2022, 305, 772-787.	1.4	8
93	Micro-Computed Tomography Evaluation of the Glenoid Fossa and Mandibular Condyle Bone After Bilateral Vertical Ramus Mandibular Distraction in a Canine Model. <i>Journal of Craniofacial Surgery</i> , 2006, 17, 111-119.	0.7	7
94	Calcineurin/nuclear factor of activated T cells (NFAT) signaling in cobalt-chromium-molybdenum (CoCrMo) particles induced tumor necrosis factor- $\alpha$ (TNF $\alpha$ ) secretion in MLO-4 osteocytes. <i>Journal of Orthopaedic Research</i> , 2011, 29, 1867-1873.	2.3	7
95	The risk of revision following total hip arthroplasty in patients with inflammatory bowel disease, a registry based study. <i>PLoS ONE</i> , 2021, 16, e0257310.	2.5	7
96	Implant Pushout and Pullout Tests. , 1999, , 463-476.		6
97	CHIP regulates skeletal development and postnatal bone growth. <i>Journal of Cellular Physiology</i> , 2020, 235, 5378-5385.	4.1	6
98	The gut microbiota may be a novel pathogenic mechanism in loosening of orthopedic implants in rats. <i>FASEB Journal</i> , 2020, 34, 14302-14317.	0.5	6
99	Unilateral hip replacement causes bilateral changes in tibial bone mineral content in a canine model. <i>Journal of Bone and Mineral Research</i> , 1996, 11, 693-696.	2.8	5
100	HBM Mice Have Altered Bone Matrix Composition and Improved Material Toughness. <i>Calcified Tissue International</i> , 2016, 99, 384-395.	3.1	5
101	Calcium restriction during lactation has minimal effects on post-weaning mineral metabolism and bone recovery. <i>Journal of Bone and Mineral Metabolism</i> , 2019, 37, 648-657.	2.7	5
102	Relationship between articular cartilage damage and bone density in the first metatarsal. <i>Journal of Foot and Ankle Surgery</i> , 1998, 37, 401-409.	1.0	4
103	Implant surface alters compartmental-specific contributions to fixation strength in rats. <i>Journal of Orthopaedic Research</i> , 2020, 38, 1208-1215.	2.3	4
104	Osteoporosis Treatments Affect Bone Matrix Maturation in a Rat Model of Induced Cortical Remodeling. <i>JBMR Plus</i> , 2020, 4, e10344.	2.7	3
105	In-vitro trabecular bone damage following mono- and bicortical mini implants anchorage in mini-implant assisted rapid palatal expansion (MARPE). <i>International Orthodontics</i> , 2021, 19, 243-251.	1.9	3
106	MRI heterogeneity of articular cartilage in strong magnetic fields: Dependence on proteoglycan content. <i>Concepts in Magnetic Resonance</i> , 2004, 23B, 33-43.	1.3	2
107	Early changes in serum osteocalcin and body weight are predictive of implant fixation in a rat model of implant loosening. <i>Journal of Orthopaedic Research</i> , 2020, 38, 1216-1227.	2.3	2
108	The relative contribution of bone microarchitecture and matrix composition to implant fixation strength in rats. <i>Journal of Orthopaedic Research</i> , 2022, 40, 862-870.	2.3	2

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109	Letter to the Editor Regarding "Bone mineral density of the proximal femur is not related to dynamic joint loading during locomotion in young women." by Bareither et al.. Bone, 2006, 38, 954-955.	2.9	1
110	Bone Biology of Implant Failure. , 2020, , 136-145.		1
111	Activation of canonical Wnt signaling accelerates intramembranous bone regeneration in male mice. Journal of Orthopaedic Research, 2021, , .	2.3	1
112	Contrast-enhanced micro-computed tomography of compartment and time-dependent changes in femoral cartilage and subchondral plate in a murine model of osteoarthritis. Anatomical Record, 0, , .	1.4	1
113	Biological control of peri-implant bone remodeling and implant loosening (Sun Valley 2012). IBMS BoneKey, 2013, 10, .	0.0	0
114	Comparison of Bone Turnover Biomarkers in Serum and Urine Measured on an Automated Analytical Platform. journal of applied laboratory medicine, The, 2021, 6, 750-755.	1.3	0
115	Effects of Age on the Development of Arthropathy in Mice with Hemophilia.. Blood, 2008, 112, 3393-3393.	1.4	0
116	A Novel Model to Assess the Effects of Osteoporosis Medications on Bone Quality. FASEB Journal, 2018, 32, 365.1.	0.5	0
117	Alcohol and Circadian Disruption Minimally Impact Bone Properties in Two Cohorts of Male Mice While Between-Cohort Differences Predominate: Association With Season of Birth?. JBMR Plus, 2022, 6, e10591.	2.7	0