

Alexander G Robling

List of Publications by Year in descending order

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109
papers

8,889
citations

76326

40
h-index

42399

92
g-index

114
all docs

114
docs citations

114
times ranked

7779
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanical Stimulation of Bone in Vivo Reduces Osteocyte Expression of Sost/Sclerostin. <i>Journal of Biological Chemistry</i> , 2008, 283, 5866-5875.	3.4	1,136
2	BIOMECHANICAL AND MOLECULAR REGULATION OF BONE REMODELING. <i>Annual Review of Biomedical Engineering</i> , 2006, 8, 455-498.	12.3	1,007
3	Improved Bone Structure and Strength After Long-Term Mechanical Loading Is Greatest if Loading Is Separated Into Short Bouts. <i>Journal of Bone and Mineral Research</i> , 2002, 17, 1545-1554.	2.8	445
4	Lrp5 functions in bone to regulate bone mass. <i>Nature Medicine</i> , 2011, 17, 684-691.	30.7	404
5	Sost downregulation and local Wnt signaling are required for the osteogenic response to mechanical loading. <i>Bone</i> , 2012, 50, 209-217.	2.9	396
6	Designing Exercise Regimens to Increase Bone Strength. <i>Exercise and Sport Sciences Reviews</i> , 2003, 31, 45-50.	3.0	375
7	The Wnt Co-receptor LRP5 Is Essential for Skeletal Mechanotransduction but Not for the Anabolic Bone Response to Parathyroid Hormone Treatment. <i>Journal of Biological Chemistry</i> , 2006, 281, 23698-23711.	3.4	364
8	Control of Bone Mass and Remodeling by PTH Receptor Signaling in Osteocytes. <i>PLoS ONE</i> , 2008, 3, e2942.	2.5	331
9	The Osteocyte: New Insights. <i>Annual Review of Physiology</i> , 2020, 82, 485-506.	13.1	286
10	Mechanical Signaling for Bone Modeling and Remodeling. <i>Critical Reviews in Eukaryotic Gene Expression</i> , 2009, 19, 319-338.	0.9	286
11	Recovery periods restore mechanosensitivity to dynamically loaded bone. <i>Journal of Experimental Biology</i> , 2001, 204, 3389-3399.	1.7	277
12	Mechanical Loading of Diaphyseal Bone In Vivo: The Strain Threshold for an Osteogenic Response Varies with Location. <i>Journal of Bone and Mineral Research</i> , 2001, 16, 2291-2297.	2.8	214
13	Partitioning a Daily Mechanical Stimulus into Discrete Loading Bouts Improves the Osteogenic Response to Loading. <i>Journal of Bone and Mineral Research</i> , 2000, 15, 1596-1602.	2.8	188
14	Shorter, more frequent mechanical loading sessions enhance bone mass. <i>Medicine and Science in Sports and Exercise</i> , 2002, 34, 196-202.	0.4	181
15	A comparison of mechanical properties derived from multiple skeletal sites in mice. <i>Journal of Biomechanics</i> , 2005, 38, 467-475.	2.1	153
16	Old age causes de novo intracortical bone remodeling and porosity in mice. <i>JCI Insight</i> , 2017, 2, .	5.0	132
17	Cellular accommodation and the response of bone to mechanical loading. <i>Journal of Biomechanics</i> , 2005, 38, 1838-1845.	2.1	127
18	Skeletal cell YAP and TAZ combinatorially promote bone development. <i>FASEB Journal</i> , 2018, 32, 2706-2721.	0.5	121

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19	Is Bone's Response to Mechanical Signals Dominated by Muscle Forces?. <i>Medicine and Science in Sports and Exercise</i> , 2009, 41, 2044-2049.	0.4	114
20	Bone and skeletal muscle: Key players in mechanotransduction and potential overlapping mechanisms. <i>Bone</i> , 2015, 80, 24-36.	2.9	114
21	Mechanisms by which exercise improves bone strength. <i>Journal of Bone and Mineral Metabolism</i> , 2005, 23, 16-22.	2.7	99
22	Absence of Cx43 selectively from osteocytes enhances responsiveness to mechanical force in mice. <i>Journal of Orthopaedic Research</i> , 2013, 31, 1075-1081.	2.3	97
23	Control of Bone Anabolism in Response to Mechanical Loading and PTH by Distinct Mechanisms Downstream of the PTH Receptor. <i>Journal of Bone and Mineral Research</i> , 2017, 32, 522-535.	2.8	89
24	Loss of HIF-1 α in the Notochord Results in Cell Death and Complete Disappearance of the Nucleus Pulposus. <i>PLoS ONE</i> , 2014, 9, e110768.	2.5	83
25	An osteocalcin-deficient mouse strain without endocrine abnormalities. <i>PLoS Genetics</i> , 2020, 16, e1008361.	3.5	81
26	Sclerostin Inhibition Reverses Skeletal Fragility in an Lrp5-Deficient Mouse Model of OPPG Syndrome. <i>Science Translational Medicine</i> , 2013, 5, 211ra158.	12.4	76
27	An RNA-seq protocol to identify mRNA expression changes in mouse diaphyseal bone: Applications in mice with bone property altering <i>Lrp5</i> mutations. <i>Journal of Bone and Mineral Research</i> , 2013, 28, 2081-2093.	2.8	76
28	Targeting the LRP5 Pathway Improves Bone Properties in a Mouse Model of Osteogenesis Imperfecta. <i>Journal of Bone and Mineral Research</i> , 2014, 29, 2297-2306.	2.8	72
29	Anabolic and Catabolic Regimens of Human Parathyroid Hormone 1-34 Elicit Bone- and Envelope-Specific Attenuation of Skeletal Effects in Sost-Deficient Mice. <i>Endocrinology</i> , 2011, 152, 2963-2975.	2.8	63
30	Sclerostin neutralization unleashes the osteoanabolic effects of Dkk1 inhibition. <i>JCI Insight</i> , 2018, 3, .	5.0	63
31	High-bone-mass-producing mutations in the Wnt signaling pathway result in distinct skeletal phenotypes. <i>Bone</i> , 2011, 49, 1010-1019.	2.9	62
32	Inactivation of Lrp5 in osteocytes reduces Young's modulus and responsiveness to the mechanical loading. <i>Bone</i> , 2013, 54, 35-43.	2.9	56
33	Evidence for a skeletal mechanosensitivity gene on mouse chromosome 4. <i>FASEB Journal</i> , 2003, 17, 324-326.	0.5	54
34	YAP and TAZ Mediate Osteocyte Perilacunar/Canalicular Remodeling. <i>Journal of Bone and Mineral Research</i> , 2020, 35, 196-210.	2.8	53
35	Mechanotransduction in bone tissue: The A214V and G171V mutations in Lrp5 enhance load-induced osteogenesis in a surface-selective manner. <i>Bone</i> , 2012, 51, 459-465.	2.9	51
36	Genetic Effects on Bone Mechanotransduction in Congenic Mice Harboring Bone Size and Strength Quantitative Trait Loci. <i>Journal of Bone and Mineral Research</i> , 2007, 22, 984-991.	2.8	45

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37	Mechanosignaling in Bone Health, Trauma and Inflammation. Antioxidants and Redox Signaling, 2014, 20, 970-985.	5.4	45
38	New Insights into Wnt/PCP/Lrp5/6/PCP-Catenin Signaling in Mechanotransduction. Frontiers in Endocrinology, 2014, 5, 246.	3.5	44
39	Differential Bone Loss in Mouse Models of Colon Cancer Cachexia. Frontiers in Physiology, 2016, 7, 679.	2.8	44
40	Osteoblast-Specific Overexpression of Human WNT16 Increases Both Cortical and Trabecular Bone Mass and Structure in Mice. Endocrinology, 2016, 157, 722-736.	2.8	43
41	Skeletal loading regulates breast cancer-associated osteolysis in a loading intensity-dependent fashion. Bone Research, 2020, 8, 9.	11.4	40
42	Conditional Deletion of <i>Sost</i> in MSC-Derived Lineages Identifies Specific Cell-Type Contributions to Bone Mass and B-Cell Development. Journal of Bone and Mineral Research, 2018, 33, 1748-1759.	2.8	39
43	Reduced gravitational loading does not account for the skeletal effect of botulinum toxin-induced muscle inhibition suggesting a direct effect of muscle on bone. Bone, 2013, 54, 98-105.	2.9	34
44	The Wnt pathway: An important control mechanism in bone's response to mechanical loading. Bone, 2021, 153, 116087.	2.9	34
45	Histomorphometry of Human Cortical Bone: Applications to Age Estimation. , 0, , 149-182.		33
46	Sostdc1 deficiency accelerates fracture healing by promoting the expansion of periosteal mesenchymal stem cells. Bone, 2016, 88, 20-30.	2.9	32
47	Vhl deficiency in osteocytes produces high bone mass and hematopoietic defects. Bone, 2018, 116, 307-314.	2.9	32
48	Inhibition of CaMKK2 Enhances Fracture Healing by Stimulating Indian Hedgehog Signaling and Accelerating Endochondral Ossification. Journal of Bone and Mineral Research, 2018, 33, 930-944.	2.8	29
49	The Interaction of Biological Factors with Mechanical Signals in Bone Adaptation: Recent Developments. Current Osteoporosis Reports, 2012, 10, 126-131.	3.6	28
50	Reply to Lrp5 regulation of bone mass and gut serotonin synthesis. Nature Medicine, 2014, 20, 1229-1230.	30.7	26
51	Quick and inexpensive paraffin-embedding method for dynamic bone formation analyses. Scientific Reports, 2017, 7, 42505.	3.3	25
52	Overexpression of Lrp5 enhanced the anti-breast cancer effects of osteocytes in bone. Bone Research, 2021, 9, 32.	11.4	25
53	Nmp4/CIZ contributes to fluid shear stress induced MMP-13 gene induction in osteoblasts. Journal of Cellular Biochemistry, 2007, 102, 1202-1213.	2.6	24
54	Postnatal β -catenin deletion from Dmp1-expressing osteocytes/osteoblasts reduces structural adaptation to loading, but not periosteal load-induced bone formation. Bone, 2016, 88, 138-145.	2.9	24

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55	Adult-Onset Deletion of β -Catenin in 10kbDmp1-Expressing Cells Prevents Intermittent PTH-Induced Bone Gain. <i>Endocrinology</i> , 2016, 157, 3047-3057.	2.8	21
56	Osteocytes and mechanical loading: The Wnt connection. <i>Orthodontics and Craniofacial Research</i> , 2019, 22, 175-179.	2.8	21
57	Missense Mutations in LRP5 Associated with High Bone Mass Protect the Mouse Skeleton from Disuse- and Ovariectomy-Induced Osteopenia. <i>PLoS ONE</i> , 2015, 10, e0140775.	2.5	21
58	High Bone Massâ€‘Causing Mutant LRP5 Receptors Are Resistant to Endogenous Inhibitors <i>in Vivo</i> . <i>Journal of Bone and Mineral Research</i> , 2015, 30, 1822-1830.	2.8	20
59	Lrp4 Mediates Bone Homeostasis and Mechanotransduction through Interaction with Sclerostin <i>In Vivo</i> . <i>IScience</i> , 2019, 20, 205-215.	4.1	20
60	Charles Hall Turner 1961â€‘2010. <i>Journal of Bone and Mineral Research</i> , 2011, 26, 1-2.	2.8	18
61	Enhanced Wnt signaling improves bone mass and strength, but not brittleness, in the <i>Col1a1 +/mov13</i> mouse model of type I Osteogenesis Imperfecta. <i>Bone</i> , 2016, 90, 127-132.	2.9	18
62	<i>Sost</i> , independent of the non-coding enhancer ECR5, is required for bone mechanoadaptation. <i>Bone</i> , 2016, 92, 180-188.	2.9	18
63	Bone Mass and Strength are Significantly Improved in Mice Overexpressing Human WNT16 in Osteocytes. <i>Calcified Tissue International</i> , 2017, 100, 361-373.	3.1	16
64	The expanding role of Wnt signaling in bone metabolism. <i>Bone</i> , 2013, 55, 256-257.	2.9	14
65	Genome-Wide Mapping and Interrogation of the <i>Nmp4</i> Antianabolic Bone Axis. <i>Molecular Endocrinology</i> , 2015, 29, 1269-1285.	3.7	12
66	The skeletal phenotype of Achondrogenesis type 1A is caused exclusively by cartilage defects. <i>Development (Cambridge)</i> , 2018, 145, .	2.5	12
67	Loss of <i>Nmp4</i> optimizes osteogenic metabolism and secretion to enhance bone quality. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2019, 316, E749-E772.	3.5	12
68	Induction of Lrp5 HBM-causing mutations in Cathepsin-K expressing cells alters bone metabolism. <i>Bone</i> , 2019, 120, 166-175.	2.9	12
69	Loss of mechanosensitive sclerostin may accelerate cranial bone growth and regeneration. <i>Journal of Neurosurgery</i> , 2018, 129, 1085-1091.	1.6	11
70	Co-deletion of Lrp5 and Lrp6 in the skeleton severely diminishes bone gain from sclerostin antibody administration. <i>Bone</i> , 2021, 143, 115708.	2.9	11
71	Mechanical Stimulation and Intermittent Parathyroid Hormone Treatment Induce Disproportional Osteogenic, Geometric, and Biomechanical Effects in Growing Mouse Bone. <i>Calcified Tissue International</i> , 2010, 86, 389-396.	3.1	10
72	Expression of a Degradation-Resistant β -Catenin Mutant in Osteocytes Protects the Skeleton From Mechanodeprivation-Induced Bone Wasting. <i>Journal of Bone and Mineral Research</i> , 2019, 34, 1964-1975.	2.8	10

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73	The mTORC2 Component Rictor Is Required for Load-Induced Bone Formation in Late-Stage Skeletal Cells. <i>JBMR Plus</i> , 2020, 4, e10366.	2.7	10
74	Sensitive detection of Cre-mediated recombination using droplet digital PCR reveals Tg(BGLAP-Cre) and Tg(DMP1-Cre) are active in multiple non-skeletal tissues. <i>Bone</i> , 2021, 142, 115674.	2.9	10
75	The role of Meteorin-like in skeletal development and bone fracture healing. <i>Journal of Orthopaedic Research</i> , 2022, 40, 2510-2521.	2.3	10
76	Improving Combination Osteoporosis Therapy in a Preclinical Model of Heightened Osteoanabolism. <i>Endocrinology</i> , 2017, 158, 2722-2740.	2.8	9
77	Mechanical stimulations can inhibit local and remote tumor progression by downregulating WISP1. <i>FASEB Journal</i> , 2020, 34, 12847-12859.	0.5	9
78	Skeletal Functions of Voltage Sensitive Calcium Channels. <i>Current Osteoporosis Reports</i> , 2021, 19, 206-221.	3.6	9
79	Bone Matrix Composition Following PTH Treatment is Not Dependent on Sclerostin Status. <i>Calcified Tissue International</i> , 2016, 98, 149-157.	3.1	8
80	Mechanical Loading-Driven Tumor Suppression Is Mediated by Lrp5-Dependent and Independent Mechanisms. <i>Cancers</i> , 2021, 13, 267.	3.7	8
81	A high-fat diet catalyzes progression to hyperglycemia in mice with selective impairment of insulin action in Glut4-expressing tissues. <i>Journal of Biological Chemistry</i> , 2022, 298, 101431.	3.4	8
82	Muscle loss and bone loss: Master and slave?. <i>Bone</i> , 2010, 46, 272-273.	2.9	7
83	WNT-mediated Modulation of Bone Metabolism: Implications for WNT Targeting to Treat Extraskeletal Disorders. <i>Toxicologic Pathology</i> , 2017, 45, 864-868.	1.8	7
84	Twist1 Inactivation in Dmp1-Expressing Cells Increases Bone Mass but Does Not Affect the Anabolic Response to Sclerostin Neutralization. <i>International Journal of Molecular Sciences</i> , 2019, 20, 4427.	4.1	7
85	Improving Bone Health by Optimizing the Anabolic Action of Wnt Inhibitor Multitargeting. <i>JBMR Plus</i> , 2021, 5, e10462.	2.7	7
86	Combination therapy in the Col1a2G610C mouse model of Osteogenesis Imperfecta reveals an additive effect of enhancing LRP5 signaling and inhibiting TGF β 2 signaling on trabecular bone but not on cortical bone. <i>Bone</i> , 2020, 131, 115084.	2.9	6
87	Notum Deletion From Late-Stage Skeletal Cells Increases Cortical Bone Formation and Potentiates Skeletal Effects of Sclerostin Inhibition. <i>Journal of Bone and Mineral Research</i> , 2020, 36, 2413-2425.	2.8	5
88	Sclerostin Depletion Induces Inflammation in the Bone Marrow of Mice. <i>International Journal of Molecular Sciences</i> , 2021, 22, 9111.	4.1	5
89	Suppression of Sost/Sclerostin and Dickkopf-1 Augment Intervertebral Disc Structure in Mice. <i>Journal of Bone and Mineral Research</i> , 2020, 37, 1156-1169.	2.8	5
90	Sclerostin: From bedside to bench, and back to bedside. <i>Bone</i> , 2017, 96, 1-2.	2.9	4

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91	Independent validation of experimental results requires timely and unrestricted access to animal models and reagents. <i>PLoS Genetics</i> , 2020, 16, e1008940.	3.5	3
92	<i>Nmp4</i> , a Regulator of Induced Osteoanabolism, Also Influences Insulin Secretion and Sensitivity. <i>Calcified Tissue International</i> , 2022, 110, 244-259.	3.1	3
93	Generation and Characterization of Mouse Models for Skeletal Disease. <i>Methods in Molecular Biology</i> , 2021, 2221, 165-191.	0.9	3
94	Mechanical Adaptation. , 2019, , 203-233.		2
95	The Effect of Overexpression of <i>Lrp5</i> on the Temporomandibular Joint. <i>Cartilage</i> , 2021, 13, 419S-426S.	2.7	2
96	The effect of overexpression of <i>Lrp5</i> on orthodontic tooth movement. <i>Orthodontics and Craniofacial Research</i> , 2021, 24, 430-437.	2.8	2
97	Differential changes in bone strength of two inbred mouse strains following administration of a sclerostin-neutralizing antibody during growth. <i>PLoS ONE</i> , 2019, 14, e0214520.	2.5	1
98	SAT-337 Disruption Of The Circadian Melatonin Signal By Dim Light At Night Promotes Bone-lytic Breast Cancer Metastases. <i>Journal of the Endocrine Society</i> , 2019, 3, .	0.2	1
99	Finite Element Analysis of the Mouse Distal Femur with Tumor Burden in Response to Knee Loading. <i>International Journal of Orthopaedics (Hong Kong)</i> , 2018, 5, 863-871.	0.1	1
100	Finite-element analysis of the mouse proximal ulna in response to elbow loading. <i>Journal of Bone and Mineral Metabolism</i> , 2019, 37, 419-429.	2.7	0
101	<i>Pten</i> deletion in <i>Dmp1</i> -expressing cells does not rescue the osteopenic effects of <i>Wnt1</i> - <i>catenin</i> suppression. <i>Journal of Cellular Physiology</i> , 2020, 235, 9785-9794.	4.1	0
102	Regulation of bone cell sensitivity to mechanical stimulation. <i>FASEB Journal</i> , 2006, 20, A417.	0.5	0
103	Hyperactivation of <i>p21ras</i> and <i>PI3-K</i> Cooperate To Alter Murine and Human <i>NF1</i> Haploinsufficient Osteoclast Functions.. <i>Blood</i> , 2006, 108, 675-675.	1.4	0
104	Genetically engineered missense mutations in <i>Propeller 1</i> of the low-density lipoprotein receptor-related protein 5 (<i>LRP5</i>) induce high bone mass and strength. <i>FASEB Journal</i> , 2009, 23, LB16.	0.5	0
105	Transiently increased serotonin has modest or no effects on bone mass accrual in growing female <i>C57BL6/J</i> or growing male and female <i>Lrp5A214V</i> mice. <i>Bone</i> , 2022, 158, 116307.	2.9	0
106	An osteocalcin-deficient mouse strain without endocrine abnormalities. , 2020, 16, e1008361.		0
107	An osteocalcin-deficient mouse strain without endocrine abnormalities. , 2020, 16, e1008361.		0
108	An osteocalcin-deficient mouse strain without endocrine abnormalities. , 2020, 16, e1008361.		0

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109	An osteocalcin-deficient mouse strain without endocrine abnormalities. , 2020, 16, e1008361.		0