Hiroshi Takayanagi

List of Publications by Citations

120 papers	21,151 citations	55 h-index	141 g-index
141 ext. papers	23,989 ext. citations	15.3 avg, IF	7.19 L-index

#	Paper	IF	Citations
120	Induction and activation of the transcription factor NFATc1 (NFAT2) integrate RANKL signaling in terminal differentiation of osteoclasts. *Developmental Cell*, **2002**, 3, 889-901	10.2	1920
119	Osteoimmunology: shared mechanisms and crosstalk between the immune and bone systems. *Nature Reviews Immunology*, **2007**, 7, 292-304	36.5	1399
118	Evidence for osteocyte regulation of bone homeostasis through RANKL expression. *Nature Medicine*, **2011**, 17, 1231-4	50.5	1310
117	Th17 functions as an osteoclastogenic helper T cell subset that links T cell activation and bone destruction. *Journal of Experimental Medicine*, **2006**, 203, 2673-82	16.6	1128
116	T-cell-mediated regulation of osteoclastogenesis by signalling cross-talk between RANKL and IFN-gamma. *Nature*, **2000**, 408, 600-5	50.4	1083
115	The molecular understanding of osteoclast differentiation. *Bone*, **2007**, 40, 251-64	4.7	966
114	Estrogen prevents bone loss via estrogen receptor alpha and induction of Fas ligand in osteoclasts. *Cell*, **2007**, 130, 811-23	56.2	729
113	RANKL maintains bone homeostasis through c-Fos-dependent induction of interferon-beta. *Nature*, **2002**, 416, 744-9	50.4	700
112	Costimulatory signals mediated by the ITAM motif cooperate with RANKL for bone homeostasis. *Nature*, **2004**, 428, 758-63	50.4	691
111	Pathogenic conversion of Foxp3+ T cells into TH17 cells in autoimmune arthritis. *Nature Medicine*, **2014**, 20, 62-8	50.5	679
110	Autoamplification of NFATc1 expression determines its essential role in bone homeostasis. *Journal of Experimental Medicine*, **2005**, 202, 1261-9	16.6	657
109	Involvement of receptor activator of nuclear factor kappaB ligand/osteoclast differentiation factor in osteoclastogenesis from synoviocytes in rheumatoid arthritis. *Arthritis and Rheumatism*, **2000**, 43, 259-69		531
108	Cathepsin K-dependent toll-like receptor 9 signaling revealed in experimental arthritis. *Science*, **2008**, 319, 624-7	33.3	377
107	Osteoprotection by semaphorin 3A. *Nature*, **2012**, 485, 69-74	50.4	376
106	The tumor necrosis factor family receptors RANK and CD40 cooperatively establish the thymic medullary microenvironment and self-tolerance. *Immunity*, **2008**, 29, 423-37	32.3	365
105	Suppression of bone formation by osteoclastic expression of semaphorin 4D. *Nature Medicine*, **2011** , 17, 1473-80	50.5	345
104	Osteoimmunology and the effects of the immune system on bone. *Nature Reviews Rheumatology*, **2009**, 5, 667-76	8.1	336

103	The cytokine RANKL produced by positively selected thymocytes fosters medullary thymic epithelial cells that express autoimmune regulator. *Immunity*, **2008**, 29, 438-50	32.3	331
102	The role of NFAT in osteoclast formation. *Annals of the New York Academy of Sciences*, **2007**, 1116, 227-37	37.5	330
101	Essential role of p38 mitogen-activated protein kinase in cathepsin K gene expression during osteoclastogenesis through association of NFATc1 and PU.1. *Journal of Biological Chemistry*, **2004**, 279, 45969-79	5.4	325
100	IkappaBzeta regulates T(H)17 development by cooperating with ROR nuclear receptors. *Nature*, **2010**, 464, 1381-5	50.4	320
99	Mechanistic insight into osteoclast differentiation in osteoimmunology. *Journal of Molecular Medicine*, **2005**, 83, 170-9	5.5	320
98	Ca2+-NFATc1 signaling is an essential axis of osteoclast differentiation. *Immunological Reviews*, **2009**, 231, 241-56	11.3	295
97	Regulation of osteoclast differentiation and function by the CaMK-CREB pathway. *Nature Medicine*, **2006**, 12, 1410-6	50.5	265
96	Tyrosine kinases Btk and Tec regulate osteoclast differentiation by linking RANK and ITAM signals. *Cell*, **2008**, 132, 794-806	56.2	250
95	New insights into osteoclastogenic signaling mechanisms. *Trends in Endocrinology and Metabolism*, **2012**, 23, 582-90	8.8	230
94	Interferon regulatory factor-8 regulates bone metabolism by suppressing osteoclastogenesis. *Nature Medicine*, **2009**, 15, 1066-71	50.5	219
93	Antiviral response by natural killer cells through TRAIL gene induction by IFN-alpha/beta. *European Journal of Immunology*, **2001**, 31, 3138-46	6.1	213
92	Fezf2 Orchestrates a Thymic Program of Self-Antigen Expression for Immune Tolerance. *Cell*, **2015**, 163, 975-87	56.2	208
91	Osteoimmunology: The Conceptual Framework Unifying the Immune and Skeletal Systems. *Physiological Reviews*, **2017**, 97, 1295-1349	47.9	206
90	Inflammatory bone destruction and osteoimmunology. *Journal of Periodontal Research*, **2005**, 40, 287-93	4.3	197
89	IL-17-producing □T cells enhance bone regeneration. *Nature Communications*, **2016**, 7, 10928	17.4	189
88	Osteoimmunology: evolving concepts in bone-immune interactions in health and disease. *Nature Reviews Immunology*, **2019**, 19, 626-642	36.5	180
87	A new mechanism of bone destruction in rheumatoid arthritis: synovial fibroblasts induce osteoclastogenesis. *Biochemical and Biophysical Research Communications*, **1997**, 240, 279-86	3.4	166
86	New developments in osteoimmunology. *Nature Reviews Rheumatology*, **2012**, 8, 684-9	8.1	158

85	Osteoimmunology: crosstalk between the immune and bone systems. *Journal of Clinical Immunology*, **2009**, 29, 555-67	5.7	156
84	DNA methyltransferase 3a regulates osteoclast differentiation by coupling to an S-adenosylmethionine-producing metabolic pathway. *Nature Medicine*, **2015**, 21, 281-7	50.5	143
83	Interplay between interferon and other cytokine systems in bone metabolism. *Immunological Reviews*, **2005**, 208, 181-93	11.3	139
82	The Mechanisms of T Cell Selection in the Thymus. *Trends in Immunology*, **2017**, 38, 805-816	14.4	125
81	Blimp1-mediated repression of negative regulators is required for osteoclast differentiation. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 3117-22	11.5	124
80	Host defense against oral microbiota by bone-damaging T cells. *Nature Communications*, **2018**, 9, 701	17.4	123
79	Maf promotes osteoblast differentiation in mice by mediating the age-related switch in mesenchymal cell differentiation. *Journal of Clinical Investigation*, **2010**, 120, 3455-65	15.9	120
78	Signaling crosstalk between RANKL and interferons in osteoclast differentiation. *Arthritis Research*, **2002**, 4 Suppl 3, S227-32		119
77	RANKL expressed on synovial fibroblasts is primarily responsible for bone erosions during joint inflammation. *Annals of the Rheumatic Diseases*, **2016**, 75, 1187-95	2.4	116
76	Identification of subepithelial mesenchymal cells that induce IgA and diversify gut microbiota. *Nature Immunology*, **2017**, 18, 675-682	19.1	87
75	Osteoimmunology in Bone Fracture Healing. *Current Osteoporosis Reports*, **2017**, 15, 367-375	5.4	84
74	Immune complexes regulate bone metabolism through FcR signalling. *Nature Communications*, **2015**, 6, 6637	17.4	80
73	Immunology and bone. *Journal of Biochemistry*, **2013**, 154, 29-39	3.1	80
72	Sepsis-Induced Osteoblast Ablation Causes Immunodeficiency. *Immunity*, **2016**, 44, 1434-43	32.3	69
71	Inflammation and bone destruction in arthritis: synergistic activity of immune and mesenchymal cells in joints. *Frontiers in Immunology*, **2012**, 3, 77	8.4	69
70	The immune system, bone and RANKL. *Archives of Biochemistry and Biophysics*, **2014**, 561, 118-23	4.1	67
69	New immune connections in osteoclast formation. *Annals of the New York Academy of Sciences*, **2010**, 1192, 117-23	6.5	65
68	Bone cell communication factors and Semaphorins. *BoneKEy Reports*, **2012**, 1, 183		64

67	Autoimmune arthritis: the interface between the immune system and joints. *Advances in Immunology*, **2012**, 115, 45-71	5.6	63
66	Autoregulation of Osteocyte Sema3A Orchestrates Estrogen Action and Counteracts Bone Aging. *Cell Metabolism*, **2019**, 29, 627-637.e5	24.6	60
65	The orally available Btk inhibitor ibrutinib (PCI-32765) protects against osteoclast-mediated bone loss. *Bone*, **2014**, 60, 8-15	4.7	45
64	Inhibition of the TNF Family Cytokine RANKL Prevents Autoimmune Inflammation in the Central Nervous System. *Immunity*, **2015**, 43, 1174-85	32.3	44
63	Modulation of osteoclast function by adenovirus vector-induced epidermal growth factor receptor. *Journal of Bone and Mineral Research*, **1998**, 13, 1714-20	6.3	44
62	Efficacy of an orally active small-molecule inhibitor of RANKL in bone metastasis. *Bone Research*, **2019**, 7, 1	13.3	44
61	Stage-specific functions of leukemia/lymphoma-related factor (LRF) in the transcriptional control of osteoclast development. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 2561-6	11.5	42
60	Glucocorticoid impairs cell-cell communication by autophagy-mediated degradation of connexin 43 in osteocytes. *Oncotarget*, **2016**, 7, 26966-78	3.3	41
59	Osteocyte regulation of orthodontic force-mediated tooth movement via RANKL expression. *Scientific Reports*, **2017**, 7, 8753	4.9	40
58	Osteoimmunology in 2014: Two-faced immunology-from osteogenesis to bone resorption. *Nature Reviews Rheumatology*, **2015**, 11, 74-6	8.1	39
57	Overview of Osteoimmunology. *Calcified Tissue International*, **2018**, 102, 503-511	3.9	36
56	The thymic cortical epithelium determines the TCR repertoire of IL-17-producing cells. *EMBO Reports*, **2015**, 16, 638-53	6.5	36
55	Arginine methylation controls the strength of -family cytokine signaling in T cell maintenance. *Nature Immunology*, **2018**, 19, 1265-1276	19.1	36
54	LOX Fails to Substitute for RANKL in Osteoclastogenesis. *Journal of Bone and Mineral Research*, **2017**, 32, 434-439	6.3	34
53	In vitro and in vivo suppression of osteoclast function by adenovirus vector-induced csk gene. *Journal of Bone and Mineral Research*, **2000**, 15, 41-51	6.3	34
52	Soluble RANKL is physiologically dispensable but accelerates tumour metastasis to bone. *Nature Metabolism*, **2019**, 1, 868-875	14.6	33
51	Osteoimmunology. *Cold Spring Harbor Perspectives in Medicine*, **2019**, 9,	5.4	33
50	Stat1-mediated cytoplasmic attenuation in osteoimmunology. *Journal of Cellular Biochemistry*, **2005**, 94, 232-40	4.7	32

49	Scientific basis for the efficacy of combined use of antirheumatic drugs against bone destruction in rheumatoid arthritis. *Modern Rheumatology*, **2007**, 17, 17-23	3.3	30
48	Class IA phosphatidylinositol 3-kinase regulates osteoclastic bone resorption through protein kinase B-mediated vesicle transport. *Journal of Bone and Mineral Research*, **2012**, 27, 2464-75	6.3	28
47	T cell receptor signaling for γδ T cell development. *Inflammation and Regeneration*, **2019**, 39, 6	10.9	26
46	The unexpected link between osteoclasts and the immune system. *Advances in Experimental Medicine and Biology*, **2010**, 658, 61-8	3.6	26
45	Fibroblasts as a source of self-antigens for central immune tolerance. *Nature Immunology*, **2020**, 21, 1172-1180	19.1	25
44	OPG Production Matters Where It Happened. *Cell Reports*, **2020**, 32, 108124	10.6	23
43	Intravital imaging of Ca(2+) signals in lymphocytes of Ca(2+) biosensor transgenic mice: indication of autoimmune diseases before the pathological onset. *Scientific Reports*, **2016**, 6, 18738	4.9	23
42	γδTCR recruits the Syk/PI3K axis to drive proinflammatory differentiation program. *Journal of Clinical Investigation*, **2018**, 128, 415-426	15.9	22
41	Arthritogenic T cells in autoimmune arthritis. *International Journal of Biochemistry and Cell Biology*, **2015**, 58, 92-6	5.6	21
40	Chd4 choreographs self-antigen expression for central immune tolerance. *Nature Immunology*, **2020**, 21, 892-901	19.1	21
39	Ly49Q, an ITIM-bearing NK receptor, positively regulates osteoclast differentiation. *Biochemical and Biophysical Research Communications*, **2010**, 393, 432-8	3.4	21
38	Endoplasmic reticulum mediates mitochondrial transfer within the osteocyte dendritic network. *Science Advances*, **2019**, 5, eaaw7215	14.3	21
37	SnapShot: Osteoimmunology. *Cell Metabolism*, **2015**, 21, 502.e1	24.6	20
36	RANK rewires energy homeostasis in lung cancer cells and drives primary lung cancer. *Genes and Development*, **2017**, 31, 2099-2112	12.6	19
35	Regulatory T cells in Arthritis. *Progress in Molecular Biology and Translational Science*, **2015**, 136, 207-15	4	19
34	Rheumatoid arthritis associated with osteopetrosis. *Modern Rheumatology*, **2009**, 19, 687-690	3.3	15
33	Butyrophilin-like proteins display combinatorial diversity in selecting and maintaining signature intraepithelial γδT cell compartments. *Nature Communications*, **2020**, 11, 3769	17.4	15
32	Human thymoproteasome variations influence CD8 T cell selection. *Science Immunology*, **2017**, 2,	28	14

31	Runx2-I isoform contributes to fetal bone formation even in the absence of specific N-terminal amino acids. *PLoS ONE*, **2014**, 9, e108294	3.7	14
30	Global epigenomic analysis indicates protocadherin-7 activates osteoclastogenesis by promoting cell-cell fusion. *Biochemical and Biophysical Research Communications*, **2014**, 455, 305-11	3.4	12
29	Osteoimmunological insight into bone damage in rheumatoid arthritis. *Modern Rheumatology*, **2005** , 15, 225-231	3.3	12
28	RANKL as the master regulator of osteoclast differentiation. *Journal of Bone and Mineral Metabolism*, **2021**, 39, 13-18	2.9	11
27	Roles of Enhancer RNAs in RANKL-induced Osteoclast Differentiation Identified by Genome-wide Cap-analysis of Gene Expression using CRISPR/Cas9. *Scientific Reports*, **2018**, 8, 7504	4.9	11
26	Stepwise cell fate decision pathways during osteoclastogenesis at single-cell resolution. *Nature Metabolism*, **2020**, 2, 1382-1390	14.6	10
25	The role of the BH3-only protein Noxa in bone homeostasis. *Biochemical and Biophysical Research Communications*, **2011**, 410, 620-5	3.4	10
24	Interaction between the immune system and bone metabolism: an emerging field of osteoimmunology. *Proceedings of the Japan Academy Series B: Physical and Biological Sciences*, **2007** , 83, 136-43	4	10
23	Phosphoproteomic analysis of kinase-deficient mice reveals multiple TAK1 targets in osteoclast differentiation. *Biochemical and Biophysical Research Communications*, **2015**, 463, 1284-90	3.4	9
22	Targeted deletion of RANKL in M cell inducer cells by the Col6a1-Cre driver. *Biochemical and Biophysical Research Communications*, **2017**, 493, 437-443	3.4	9
21	Inhibitory effect of chloroquine on bone resorption reveals the key role of lysosomes in osteoclast differentiation and function. *Inflammation and Regeneration*, **2012**, 32, 222-231	10.9	9
20	The role of bone cells in immune regulation during the course of infection. *Seminars in Immunopathology*, **2019**, 41, 619-626	12	7
19	Mice lacking all of the Skint family genes. *International Immunology*, **2018**, 30, 301-309	4.9	7
18	Osteoimmunological insight into bone damage in rheumatoid arthritis. *Modern Rheumatology*, **2005** , 15, 225-31	3.3	7
17	Non-Epithelial Thymic Stromal Cells: Unsung Heroes in Thymus Organogenesis and T Cell Development. *Frontiers in Immunology*, **2020**, 11, 620894	8.4	7
16	Plasma cells promote osteoclastogenesis and periarticular bone loss in autoimmune arthritis. *Journal of Clinical Investigation*, **2021**, 131,	15.9	6
15	Mechanisms of joint destruction in rheumatoid arthritis □immune cell□fibroblast□bone interactions. *Nature Reviews Rheumatology*,	8.1	6
14	Osteoimmunology - Bidirectional dialogue and inevitable union of the fields of bone and immunity. *Proceedings of the Japan Academy Series B: Physical and Biological Sciences*, **2020**, 96, 159-169	4	5

13	Novel signaling pathways and therapeutic targets in osteoclasts. *Advances in Experimental Medicine and Biology*, **2007**, 602, 93-6	3.6	5
12	Stromal Interaction Molecule Deficiency in T Cells Promotes Spontaneous Follicular Helper T Cell Development and Causes Type 2 Immune Disorders. *Journal of Immunology*, **2019**, 202, 2616-2627	5.3	3
11	Identification of a p53 target, CD137L, that mediates growth suppression and immune response of osteosarcoma cells. *Scientific Reports*, **2017**, 7, 10739	4.9	3
10	Suppression of hematopoietic cell kinase ameliorates the bone destruction associated with inflammation. *Modern Rheumatology*, **2020**, 30, 85-92	3.3	3
9	The fibroblast: An emerging key player in thymic T cell selection. *Immunological Reviews*, **2021**, 302, 68-85	11.3	2
8	Osteoclast Biology and Bone Resorption **2018**, 46-53		1
7	Osteoimmunology **2018**, 261-282		1
6	Osteoimmunology as an intrinsic part of immunology. *International Immunology*, **2021**, 33, 673-678	4.9	1
5	Retroviral Gene Transduction into T Cell Progenitors for Analysis of T Cell Development in the Thymus. *Methods in Molecular Biology*, **2020**, 2111, 193-203	1.4	0
4	Cytokine profile in patients with chronic non-bacterial osteomyelitis, juvenile idiopathic arthritis, and insulin-dependent diabetes mellitus. *Cytokine*, **2021**, 143, 155521	4	0
3	RANKL inhibition -Bone and beyond-. *Proceedings for Annual Meeting of the Japanese Pharmacological Society*, **2018**, WCP2018, SY42-1	0	
2	T Cells in The Regulation of Bone Metabolism **2020**, 12-19		
1	Potential molecular targets for suppressing Th17 development. *Inflammation and Regeneration*, **2011**, 31, 354-360	10.9	