Supplementary

Table S1 Top 20 active countries in nerve–bone interaction publications from 1991 to 2022

Country	Number of publications	Location
USA	1552	North America
China	1237	Asia
Japan	602	Asia
Germany	296	Europe
Italy	268	Europe
UK	206	Europe
France	195	Europe
South Korea	187	Asia
Australia	109	Australia
Canada	99	North America
Iran	93	Asia
Sweden	84	Europe
Netherlands	83	Europe
Spain	70	Europe
Brazil	69	South America
Switzerland	63	Europe
Belgium	60	Europe
Israel	59	Asia
Turkey	57	Europe
Portugal	51	Europe

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Table S2 Top 20 active institutions in nerve–bone interaction publications from 1991 to 2022

Institution	Number of publications	Country
University of Minnesota	92	USA
Air Force Medical University	71	China
Sichuan University	63	China
Johns Hopkins University	54	USA
Baylor College of Medicine	49	USA
Shanghai Jiao Tong University	44	China
Aichi Gakuin University	35	Japan
The Chinese University of Hong Kong	34	China
Columbia University	34	USA
University of Porto	34	Portugal
Osaka University	33	Japan
Tokyo Medical and Dental University	33	Japan
Sun Yat-sen University	31	China
Peking University	28	China
University of California, Los Angeles	28	USA
Vanderbilt University	28	USA
Yale University	28	USA
Harvard University	27	USA
University of Michigan	26	USA
Shandong University	25	China

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Table S3 G index, M index, total citation, and number of publications of the top 20 authors in nerve–bone interaction publications from 1991 to 2022

Authors	G index	M index	Total citation	Number of publications	PY start
Elefteriou F	19	0.667	2242	19	2002
Mantyh PW	14	0.583	2416	14	1999
Wang L	26	0.667	820	26	2002
Togari A	17	0.565	586	17	2000
Karsenty G	11	0.524	2213	11	2002
Clohisy Dr	11	0.417	1562	11	1999
Cao J	9	0.643	169	9	2009
Lei DL	12	0.643	170	12	2009
Li J	12	0.45	186	12	2003
Liu Y	13	0.692	201	13	2010
Wang XY	11	0.643	123	11	2009
Wang Y	14	0.391	268	14	2000
Yoneda Y	10	0.409	305	10	2001
Lamghari M	8	0.571	177	8	2009
Lerner UH	8	0.333	285	8	1999
Saffar JL	8	0.32	309	8	1998
Schwei MJ	8	0.333	1975	8	1999
Wan M	9	2	331	9	2019
Cao X	9	0.875	295	9	2015
Felice P	8	0.5	290	8	2009

G index means that, given a set of articles ranked in decreasing order of the number of citations they received, the G index is the largest number such that the top G articles received at least G^2 citations. The M index was the author's H index divided by the author's academic age (academic age was measured as the number of years since the first published paper in the research area). PY: Year Publication.

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Table S4 Top 20 active authors in author cooperation related to nerve–bone interaction publications from 1991 to 2022

Rank	Freq.	Burst	Degree	Centrality	Sigma	Author	Year
1	14		9	0	1	Lei Wang	2012
2	9		16	0	1	Xu Cao	2019
3	9	4.54	10	0	1	PW Mantyh	2000
4	8	3.56	9	0	1	Pietro Felice	2009
5	8		9	0	1	Delin Lei	2012
6	7		5	0	1	DR Clohisy	2000
7	7		3	0	1	Akifumi Togari	2007
8	6		13	0	1	Gang Li	2020
9	6		2	0	1	Florent Elefteriou	2011
10	6		14	0	1	Mei Wan	2019
11	6		14	0	1	Gehua Zhen	2019
12	5		2	0	1	Ping Gong	2019
13	5		9	0	1	Xiao Wang	2019
14	4		3	0	1	Xudong Wang	2019
15	4		6	0	1	Zhaojie Du	2012
16	4		0	0	1	Hiroki Wakabayashi	2017
17	4		2	0	1	Roberto Pistilli	2012
18	4		2	0	1	A Togari	2000
19	4		5	0	1	Meriem Lamghari	2010
20	4		8	0	1	Yusheng Li	2019

The CiteSpace parameters were as follows: link retaining factor (LRF = 3), look back years (LBY = 8), e for top n (e=2; n=50), timespan (1991 to 2022), and years per slice (1). Burst measures a sudden change of items or citations. Centrality quantifies the importance of the node's position in the network. Sigma is a combination of burst and centrality.

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Table S5 Top 20 cocited authors in nerve–bone interaction publications from 1991 to 2022

Rank	Freq.	Burst	Degree	Centrality	Sigma	Author	Year
1	143	13.15	12	0	1	Bjurholm A	1991
2	132	8.16	13	0	1	Elefteriou F	2006
3	127	15.38	7	0	1	Pittenger MF	2001
4	124	5.99	9	0	1	Takeda S	2003
5	112	12.17	15	0	1	Hill EL	1993
6	112	5.67	7	0	1	Ducy P	2000
7	87	5.19	9	0	1	Hukkanen M	1996
8	80	5.54	12	0	1	Togari A	2000
9	69	11	6	0	1	[anonymous]	2008
10	66	11.22	6	0	1	Gronthos S	2005
11	65	11.45	7	0	1	Wang L	2010
12	64	–	24	0	1	Li Y	1999
13	63	–	13	0	1	Lerner UH	1996
14	62	4.6	17	0	1	Mccarthy JG	1997
15	60	4.89	11	0	1	Mach DB	2003
16	58	10.04	16	0	1	Zaidi M	1993
17	56	12.97	15	0	1	Zuk PA	2003
18	56	5.65	11	0	1	Ilizarov GA	1996
19	56	10.75	8	0	1	Dominici M	2009
20	54	12.3	19	0	1	Hohmann EL	1994

The CiteSpace parameters were as follows: link retaining factor (LRF = 3), look back years (LBY = 8), e for top n (e=2; n=50), timespan (1991 to 2022), and years per slice (1). Burst measures a sudden change of items or citations. Centrality quantifies the importance of the node's position in the network. Sigma is a combination of burst and centrality

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Table S6 Top 20 cocited journals in nerve–bone interaction publications from 1991 to 2022 and impact factor (IF) published in June 2021

Rank	Freq.	Burst	Centrality	Sigma	Journal	IF 2021
1	535		0	1	*P Natl Acad Sci U S A*	11.205
2	492		0	1	*Plos One*	3.24
3	490		0	1	*Nature*	49.962
4	485		0	1	*Bone*	4.398
5	455		0	1	*J Bone Miner Res*	6.741
6	420		0	1	*Cell*	41.582
7	416		0	1	*Science*	47.728
8	403		0	1	*J Biol Chem*	5.157
9	340		0	1	*Biochem Bioph Res Co*	3.575
10	294		0	1	*J Clin Invest*	14.808
11	257		0	1	*J Neurosci*	6.167
12	255		0	1	*Biomaterials*	12.479
13	255		0	1	*Stem Cells*	6.277
14	252		0	1	*J Cell Physiol*	6.384
15	249		0	1	*J Cell Biochem*	4.429
16	242		0	1	*Nat Med*	53.44
17	223		0	1	*Clin Orthop Relat R*	4.176
18	205		0	1	*J Orthop Res*	3.494
19	201	45.1	0	1	*Sci Rep-Uk*	4.379
20	199		0	1	*Neuroscience*	3.359

IF, impact factor. The CiteSpace parameters were as follows: link retaining factor (LRF = 3), look back years (LBY = 8), e for top n (e=2; n=50), timespan (1991 to 2022), and years per slice (1). Burst measures a sudden change of items or citations. Centrality quantifies the importance of the node's position in the network. Sigma is a combination of burst and centrality.

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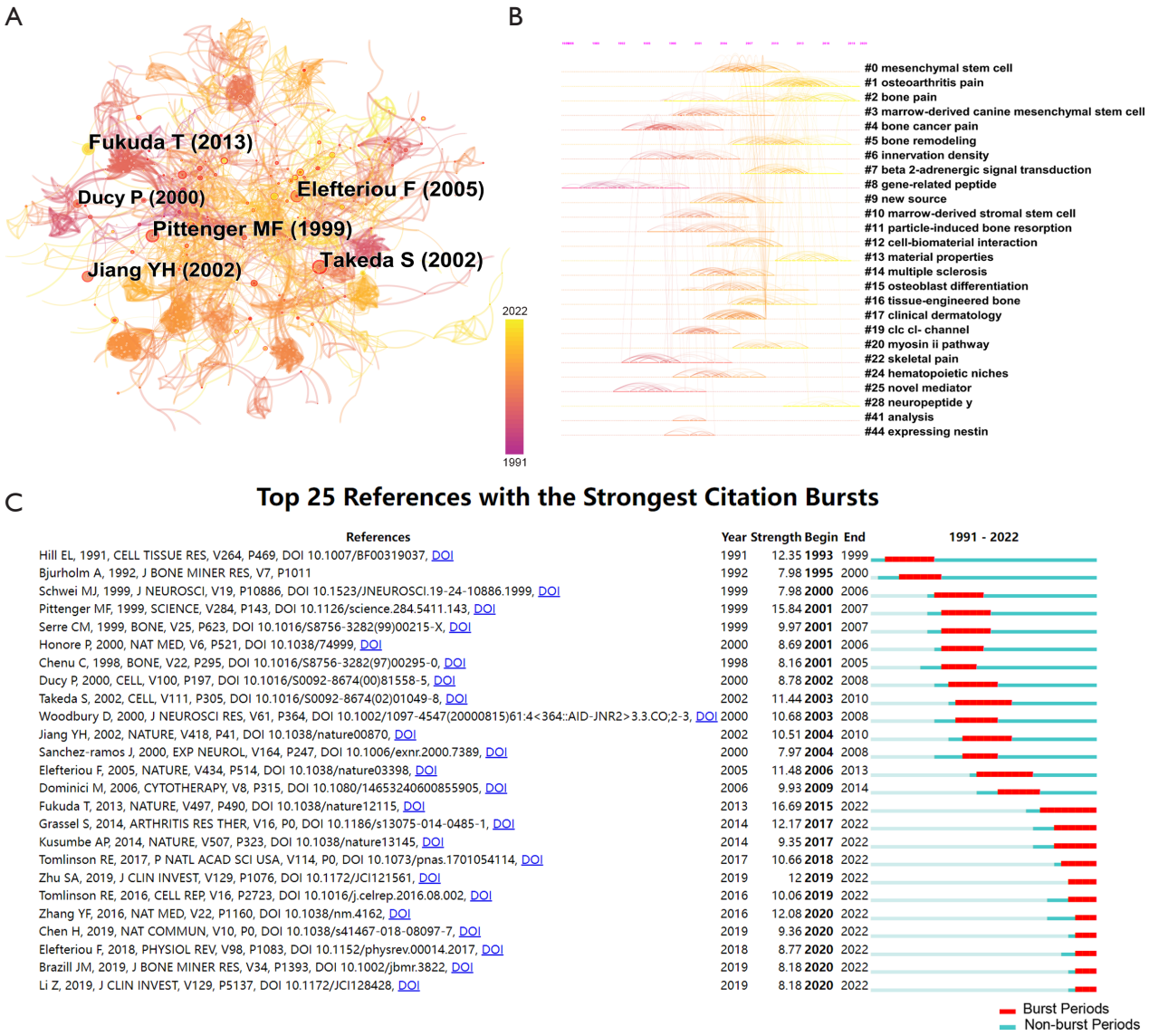

Figure S1 The 30-year reference analysis. (A) The 30-year reference co-citation analysis. Each node represents a reference, and the size of the ring denotes the number of citations of the reference. The color of the connecting line represents the cocitation time, and the shade represents the strength of the association. (B) Time distribution of the literature in different clusters. (C) The top 25 references with the strongest citation bursts. The CiteSpace parameters were as follows: link retaining factor (LRF = 3), look back years (LBY = 8), e for top n (e=2; n=50), timespan (1991–2022), and years per slice (1).

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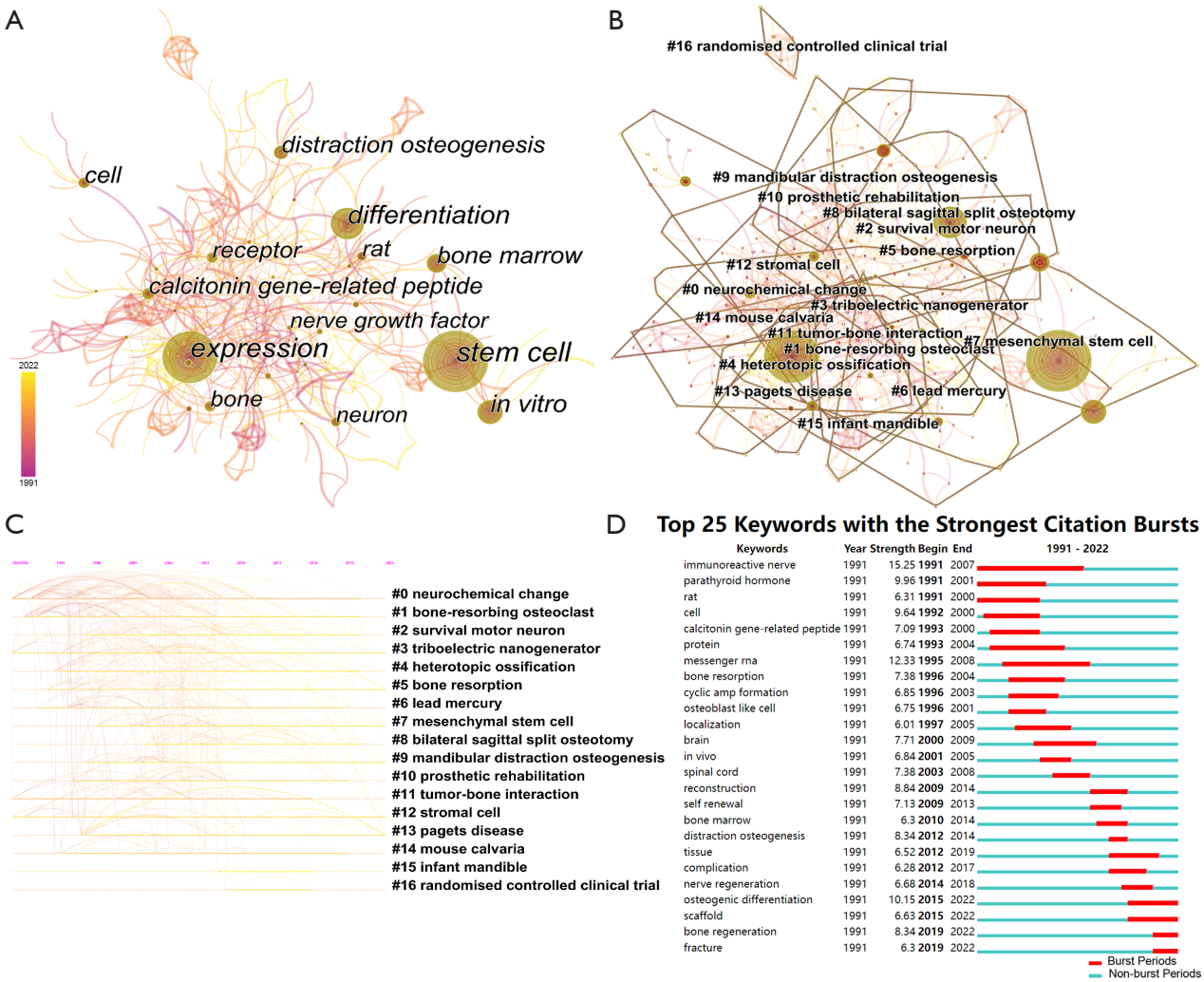

Figure S2 The 30-year keyword analysis. (A) The 30-year keyword co-occurrence analysis. Each node represents a keyword, and the size of the ring denotes the frequency of the keyword. The color of the connecting line represents the co-occurrence time, and the shade represents the strength of the association. (B) Cluster analysis for the 30-year keyword analysis. Different color blocks represent different clusters. The labels are marked to reflect the topic of the respective cluster. (C) Time distribution of keywords in different clusters. (D) The top 25 keywords with the strongest occurrence bursts. The CiteSpace parameters were as follows: link retaining factor (LRF = 3), look back years (LBY = 8), e for top n (e=2; n=50), timespan (1991–2022), and years per slice (1).

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