

APPENDIX B: Rankings for Nature and CWTS Leiden

These two bibliometric rankings use the size-dependent metric, the number of publications, for inclusion in their datasets, and for the default rankings. Two tables are included. One lists the top twenty Nature universities in 2022 and 2023. The second table compares Nature and CWTS Leiden rankings. Both rankings include Hong Kong and Macau under China. This does not change the top rankings

PART 1 : Nature Index

In creating this table, I wanted to see if there was a noticeable difference in the top universities with the addition of Health Sciences as a subject accompanied by additional journals.

TABLE 56-2.5: Top 20 academic institutions in Nature Index 2023 and 2022

		2023	2022
Harvard University	US	1	1
U of Chinese Academy of Sciences (UCAS)	CN	2	4
Stanford University	US	3	2
U of Science and Technology of China (USTC)	CN	4	5
Nanjing University (NJU)	CN	5	8
Peking University (PKU)	CN	6	6
Tsinghua University	CN	7	7
Zhejiang University (ZJU)	CN	8	11
Massachusetts Institute of Technology (MIT)	US	9	3
Shanghai Jiao Tong University (SJTU)	CN	10	17
Sun Yat-sen	CN	11	18
University of Cambridge	UK	12	12
Fudan	CN	13	15
University of Oxford	UK	14	9
University of Tokyo	JP	15	10
Yale University	US	16	21
University of Pennsylvania	US	17	22
University of Michigan	US	18	19
University of Toronto	CA	19	26
ETH Zurich	CH	20	13
UC Berkeley	US	22	14
UCLA	US	24	20
UC San Diego	US	25	16

In both years, Asia and the West had ten universities in the top 20. Even though the United States universities had more shares in Health Sciences than the nine other top countries combined, the addition did nothing to stem the Asian tide at the top of the world. In 2022, five of the top ten were Chinese, three from the US, one from the UK and one from Japan.

In 2023, seven of the top ten are Chinese with three from the US. Three US universities dropped out of the top twenty to be replaced by two from the US and one from Canada. The Asian universities are the same and the ranks for nine of the ten went up in 2023. Cambridge improved its rank.

Only three Asian universities are in the top 20 in Health Sciences, Shanghai Jiao Tung at 10 and Fudan, Sun-Yat Sen. Seven of the top 10 are from the US and 13 of the top 20 with two from the UK and one from Canada and Sweden.

PART 2 NATURE and CWTS LEIDEN

Both rankings measure scholarly research using scholarly output, Nature from its own package of journals from the previous year. CWTS uses data extracted from Web of Science with the most recent citation data, in this year's ranking, from 2018-2021.

Nature has a limited basket of publications but includes any institution that has one author whose name has been on a paper. A casual user, interested in India, can do a default search on the top 500 overall and retrieve 11 Indian institutions. A serious scholar can search for Indian universities in physical science and retrieve a list of 100 Indian universities.

CWTS Leiden includes 72 countries and one list of 1411 universities in its most recent rankings. It covers many more publications than Nature. The same dataset is used for the four CWTS indicators and five fields, including Social sciences and humanities.

Table 56.-2.6: Quantity vs. Quality for Overall rankings and Health

		NATURE		CWTS LEIDEN		Citation Impact ¹	
		All	Health Sciences	All	Health & Biomed	Top All	10% Health
Harvard University	US	1	1	1	1	6	13
Univ of Chinese Ac of Science	CN	2	31	16	152	173	189
Stanford University	US	3	13	21	14	5	14
U Science & Tech China	CN	4	>100	35	324	16	18
Nanjing University	CN	5	>100	41	137	251	539
Zhejiang University (ZJU)	CN	8	24	2	6	239	426
Shanghai Jiao Tong University (CN	10	10	3	3	331	504
Fudan	CN	13	18	13	5	407	508
University of Michigan	US	18	5	15	10	81	85
University of Toronto	CA	19	2	5	2	114	101
Johns Hopkins	US	21	3	20	4	64	49
Sichuan	CN	26	71	4	8	660	624
UC San Francisco	US	32	4	78	18	16	18

1 – Proportion of citations in the top 10% of their field

The table highlights NATURE's top five global academic institutions in the world and in Health Sciences and CWTS Leiden's global top five in Scientific Impact and in Biomedical and Health output. CWTS also provides a size-independent ranking based on articles with citations in the top ten percent of their field.

Harvard is number one in both types of rankings from both providers. No university is in the top ten in all the categories. An example of the difference in using total documents with documents based on citations is Zhejiang, the top ten in the world on overall rankings and over 200 when it comes to impact.

Both rankings provide the option to download the data. CWTS makes the complete dataset available including metrics not shown online.

Nature Index 2023 Tables. <https://www.nature.com/nature-index/annual-tables/2023>

CWTS Leiden. <https://www.leidenranking.com/ranking/2023/list>

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