

A GUIDE TO THE NATURE INDEX

A description of the terminology and methodology used in this supplement, and a guide to the functionality available free online at natureindex.com

The Nature Index is a database of author affiliations and institutional relationships. The index tracks contributions to research articles published in 82 high-quality natural science journals, chosen by an independent group of researchers.

The Nature Index provides absolute and fractional counts of article publication at the institutional and national level and, as such, is an indicator of global high-quality research output and collaboration. Data in the Nature Index are updated regularly, with the most recent 12 months made available under a Creative Commons licence at natureindex.com. The database is compiled by Nature Research.

NATURE INDEX METRICS

The Nature Index uses article count (AC) and Fractional Count (FC) to track research output. A country/region or an institution is given an AC of 1 for each article that has at least one author from that country/region or institution. This is the case regardless of the number of authors an article has, and it means that the same article can contribute to the AC of multiple countries/regions or institutions.

To glean a country's, a region's or an institution's contribution to an article, and to ensure they are not counted more than once, the Nature Index uses fractional count (FC), which takes into account the share of authorship on each article. The total FC available per article is 1, which is shared among all authors under the assumption that each contributed equally. For instance, an article with 10 authors means that each author receives an FC of 0.1. For authors who are affiliated with more than one institution, the author's FC is then split equally between each institution. The total FC for an institution is calculated by summing the FC for individual affiliated authors. The process is similar for countries/regions, although complicated by the fact that some institutions have overseas labs that will be counted towards host country/region totals.

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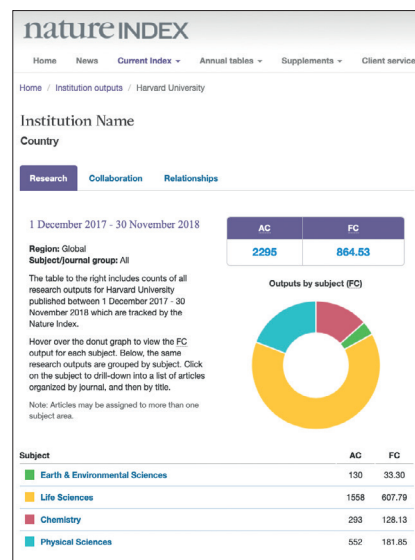
Nature Index 2019 Biomedical Sciences is

NATUREINDEX.COM

A global indicator of high-quality research

natureindex.com users can search for specific institutions or countries and generate their own reports, ordered by article count (AC) or fractional count (FC).

Each query will return a profile page that lists the country or institution's recent outputs, from which it is possible to drill down for more information. Articles can be displayed by journal, and then by article. Research outputs are organized by subject area. The pages list the institution or country's top collaborators, as well as its relationship with other organisations. Registering allows users to track an institution's performance over time, create their own indexes and export table data.



based on the Nature Index database, covering articles published during the period 1 January 2012 to 31 December 2018. The data are drawn from a subset of 55 journals in the Nature Index that excludes journals in areas unrelated to biomedical research. The 55 journals were then searched via the Dimensions from Digital Science database for articles in 29 fields of biomedical research. Articles were identified in the Nature Index for 27 of the 29 fields of research, the top 10 of which appear in the graphic on page S12. The full list of the subset of journals and fields of research is available at natureindex.com.

The tables rank institutions by their FC in the biomedical sciences for articles published between January 2015 and December 2018. Also listed are the institutions' total number of biomedical science articles in the Nature

Index over the period (AC 2015–18) and an estimate of the proportion of each institution's FC in biomedical sciences relative to its total FC from 2015 to 2018 (biomedical sciences %).

We have defined biomedical sciences in the widest possible sense to encompass basic research relevant to the biomedical domain. While every effort has been made to eliminate anomalies, some counts may be slightly high because the fields of research descriptors used to search Dimensions may pick up articles not directly related to biomedical research, for example, related to some aspects of microbiology and cell biology.

The tables specific to health-care institutions also include the percentage of biomedical science papers co-authored with researchers in other countries (international collaborative %). ■