



CAS in Nature Index: A Top Contributor of Quality Science for Four Years

The Chinese Academy of Sciences (CAS) tops the global institution list of the newly released Nature Index 2016, according to the latest ranking released by Nature Publishing Group (NPG) on April 20, 2016, which considered data from January 1, 2015 to December 31, 2015. CAS has maintained the No. 1 institutional contributor of high-level science papers for four years in a row, as revealed by the Nature Index data from 2012 to 2015 released by NPG on the same day.

As showed in the Nature Index 2016 Tables, CAS ranks the No.1 among peer institutions, either ordered by Weighted Fractional Count (WFC) or Article Count (AC), outrunning Harvard University of USA and the French National Centre for Scientific Research (CNRS) of France. When seen in disciplinary areas, or “subject splits”, CAS outstands all peers in chemistry, earth and environment sciences, and physical science, and ranks the ninth in the field of life sciences.

Notably, China has become the second largest contributors of high-quality research papers, only second to the United States. Further more, among the top 10 countries, China has distinguished itself as the only contributor with its output growing at a double-digit rate over the past three years.

First launched in November 2014 and monthly updated by NPG, the Nature Index is a database of author

affiliations and institutional relationships, used to track contributions to articles published in 68 highly-selective science journals. It has since been deemed an indicator of high-level research output and a reference for the overall performance of an institution or a country in science. The journals counted in the very exclusive pool were selected independently by a group of active researchers led by Prof. John Morton from University College London, UK and Dr. Yin-biao Sun from King’s College London, UK.

Three metrics, namely WFC, FC (Fractional Count) and AC, are introduced by NPG to measure the quality scientific research output of an institution, or a country. AC is the original number of papers published in the 68 high-ranking journals by an institution or a country. To better reflect the relative contribution of an institution or a country compared with others, a fraction — the ratio between the number of authors from the institution/country of interest and the total number of authors of a paper — is introduced to multiply the AC and hence produce the FC. The total fractional count of an institution or a country can be interpreted as equivalent to the net number of papers it solely authored. Accordingly, the WFC is a metric further derived from the FC by correcting it with a weight factor to offset the possible bias due to the relatively higher publication frequency in disciplines of astronomy and astrophysics.

2015	Institution	WFC 2014	WFC 2015	AC 2015	Change in WFC 2014-2015
1	Chinese Academy of Sciences (CAS), China	1307.12	1357.82	3449	3.9% ↑
2	Harvard University, United States of America (USA)	858.05	772.33	2622	-10.0% ↓
3	French National Centre for Scientific Research (CNRS), France	753.37	699.45	4937	-7.2% ↓
4	Max Planck Society, Germany	646.59	655.67	3110	1.4% ↑
5	Stanford University, United States of America (USA)	477.13	530.83	1514	11.3% ↑

The top 5 institutions as shown in the Top Institution list of Nature Index 2016 Tables, based on data from 1 Jan 2015 to 31 Dec 2015. (<http://www.natureindex.com/annual-tables/2016/institution/all/all>)