

International corporation analysis of nanomedicine in the Web of Science database during 2006–2010: A scientometrics study

Abstract

Introduction and aim : scientific growth from different point of views depend on relationship between scientific thoughts. There is close relationship between scientific production and cooperation. One of the most common methods for measuring scientific activities is scientometric. Today scientometric is used for studying scientific activity at production, distribution, publication and closer understanding of scientific researches mechanisms. The aim of this study is studying international cooperation's in nanomedicine field in web of science database during 2006–2010.

Methodology : the present descriptive study is a metrics study which was carried out cross sectional applying scientometric methods and social network analytical techniques. The data source is web of science database. Statistical population is all the articles which are published and indexed in web of science database in the five primary fields of nanomedical (chemical principles, applied physics, material science, nano-science, nano-technology and pharmacy and pharmacology) during 2006–2010. Also, the twenty-five premier institutions of this field are studied. In webometric study, co- word and co-link is measured by cluster categorizing analytic and multidimensional scaling

Finding: USA, China and Germany have the most articles respectively. USA is in the center of communications in five fields. 17 out of 25 studied institutions are from USA. The most active authors are from Germany, USA, South-Korea, Sweden, England and China. 65% of articles are

produced by more than two authors, 22% of articles by two authors, and 13% of articles by one author. Co-link analysis of twenty-five institutions' websites shows that these websites have cooperation with three main clusters in web. Multidimensional scaling map indicates that these websites have cooperation in six categories. Also, cluster categorization of Nano medicine organizations titles includes six clusters which are placed in three categories using multidimensional scale techniques.

Conclusion : Drawing on concurrent study of web and scholars' communications channels, this study indicated that organizations which did not have communication in organizational networks, have wide and extended communication in web and internet. This shows, virtual and internet have provided better space for nano medicine organizations.

Keywords: International cooperation, co-link, co-word, scientometric, webometrics, nanomedicine