

Visualizing Distinguished Stem Cell Researches on a Visual Landscape during Past Five Years

Mahdi Lotfipanah

Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran

Abstract

Nowadays the evaluation, assessment, and analysis of scientific outputs of universities, scientific centers, and scientific publications are considered necessary through bibliometrics and scientometrics. In this regards the evaluation of scientific documents in the field of stem cells in national and international journals indexed in the web of science (ISI) database is no exception. Therefore, publishing articles in high-quality journals with more collaboration with the other scientists in all around the world are highly recommended to authors due to more turnover and maximizing the effectiveness of scientific production. This paper studied journal of "Cell" outputs as a sample of high-quality and efficiency scientific journal in the field of stem cells during 2013 till the end of 2017 to show the trends of stem cell researches, to investigate some network and links of "academic communications". This study is expected to give insights of how distinguished researchers in the field of stem cells thought during past five years and may unearth some absorbing features and landscape by constructing and displaying large bibliometric maps and graphical representation.

Keywords : Cell, Science Mapping , Co- Citation, Trend

Methods:

In this research, data and outputs of the journal of Cell were collected from WoS database using the scientometric methods. Data visualization was done by using VOSviewer software which is a computer program for creating maps based directly on the network, bibliographic data and data text which can be visualizing and exploring these maps. The present evaluation method is called scientometrics which is used by researchers in the field of future studies or information sciences. A total of 3102 documents was extracted from the web of science database and analyzed. Original articles, review papers and editorial materials were considered for analyzing. This publication was identified with the keywords: "Cell" in publication name item and we chose 2013 till 2017 for analyzing.

Results:

"Cell" journal had 3102 scientific documents in total. The main research topics of this journal constituted to cell biology, chemistry, and molecular biology. The most records published in this journal belongs to the United States with 2254 papers (72.663%) and The most scientific collaboration and co-authorship of re-

searchers in this specific journal was respectively with United States, Germany, England, and China. Co-occurrences of author's keywords were respectively gene expression, in-vivo, protein, mice, cells, *saccharomyces-cerevisiae*, cancer, differentiation. The greatest concentration and most used keywords in this reputed journal were as follow: mouse, complex, structure, neuron, cancer, binding, genome and transcription. The most "co-citation by cited authors" were Zhang Y, Li H, Emsley P, Langmead B and Scheres SHW. Bibliographic coupling of some authors such as Zhang Y, Zhang F, Young RA and Landers ES is strong.

Conclusion:

Cell journal is considered by stem cell researchers as a pioneer scientific journal all around the world. In vivo cancer studies are considered by researchers as the most important issue in stem cell researches. The researchers of two continent (Europe and United States) are trying to have more collaboration and are reaching with a great deal of interest and are enthusiastic to work multi-center multidisciplinary studies with international collaboration.