CHAPTER V

FINDING, CONCLUSION AND SUGGESTIONS

5.1 Findings of the study

This present investigation is entitled “World Literature on Hepatitis C Virus Research: A Scientometric Study”. The study includes Hepatitis C virus research drawn from SCOPUS database, for a period of 15 years spanning between 1999 to 2013. The study fulfilled the identified objectives and tested the set of hypotheses formulated.

Based on the analysis, the following are the findings of this study.

- The volume of literature published on a Hepatitis C virus which is available on Scopus comprises 60434 articles, and Hepatitis C virus research shows upward trend.

- A total number of 60434 articles were published globally in the field of Hepatitis C virus during the period 1999-2013.

- It is observed that the highest quantity of Hepatitis C virus was produced during the block period 2011-2013. During this period that articles and reviews significantly increased.

- An exponential growth in the number of publication on Hepatitis C virus has been observed during the period.
• It is found that 25.63 percent of hepatitis C virus research has been published during 2011-2013, and that the largest number of these articles was published in 2013.

• It is observed that the average relative growth rate for the study period is 4.49 per annum and that the relative growth rate has decreased from 0.41 in 1999 to 0.76 in 2013.

• When the growth of Hepatitis C virus decreases, there takes place a corresponding increase in the study of Hepatitis C virus related subjects.

• Among the countries, the USA with 15837 (26.20%) publications occupies the first place followed by Japan with 5063 (8.37%), Italy with 4853 (8.03%), France with 4489 (7.42%), Germany with 3746 (6.19%). India occupies the 13th position in the world in terms of publication. The USA got the first position in the rank by the highest number of citation, h-index followed by Japan and so on.

• It is observed that the USA invariably stands at the top, followed by Japan in producing Hepatitis C virus research. Other countries which follow them are Canada and Australia in that order.

• Continent-wise distribution of Hepatitis C virus research output shows that the Europe stood in the first place with the highest publication of 23114 (38.24 %). North America occupies the second position with 18081 publications (29.91%). Observed from this analysis, Asia with 22.88 percent (13833) of articles stands in the third position of the research productivity. African countries has 2.92 percent
output during the study period along with 1765 total citation scores. Australia has 2.86 percent with 1730 total citation scores. South America stands in the sixth position with 1531 (2.53 %) among the six continents along with 60434 total citations. Apart from these continent publications, Miscellaneous articles also found a space of 0.62 percent with 380 total citation scores.

- Among the 43 countries in Europe, Italy produced 4853 articles and it occupies the first place. France produced 4489 articles and Germany produced 3746 articles in this field. The UK and Spain contributed more than 3000 articles.

- North American countries contributed 18081 publications in total whereas the USA stands in the highest position among them all, and the reason may be the impact of the advancement of the new and recent technologies applied highly in the USA and followed by Canada, Mexico.

- Out of the 33 Asian countries, the top position is occupied by Japan with 5063 articles on the performance of Hepatitis C virus research output and has proved its strong technological awareness among them all, followed by other countries, in which India stands in the fourth position with 1154 publications.

- All 36 African countries have contributed only 50 articles in the subject of Hepatitis C. Among these 36 countries, Egypt is the leading country followed by South Africa and Nigeria.
• Among the Australian countries, Australia with 1588 contributed more and ranked first and the New Zealand with 136 has picked the second rank of research output in Hepatitis C.

• Out of the 9 South American countries in total, Brazil performed in number one place with 1195, followed by the other countries in the next respective places.

• Activity index indicates the nature of world research efforts. Analysis shows that Italy and the USA are the leaders in this field.

• The largest volume of Hepatitis C virus research was published in Journal of Hepatology.

• The mentioned authors were contributed “Zeuzem” published the highest number of publications (333) with percentage of 0.5.

• The highest number of papers published is in medical sciences (45686) which constitute 75.59 percent of the total output, followed by Immunology and Microbiology (14213) and Biochemistry, Genetics, and Molecular Biology (9788) and followed by other subjects.

• The number of articles written in English far exceeds those written in all other languages,

• University of California, San Francisco (United States) published the highest number of papers 663.

• Among the research institute categories Inserm, French Institute of Health and Medical Research, France published 923 papers.
• The Hospital of VA Medical Centre, America published 854 publications.

• Among the other institutions, Medizinische Hochschule Hannover MHH, Germany published 382 papers.

• The number of papers published by researchers in all of science as seen from Scopus in each one of the years 1999–2013 in the field of Hepatitis C virus has increased. The researcher has also shown the number of papers from all over the world that have been cited at least 70 times (Top 10 highly cited papers). Moreover it shows Local Citations Scores, Number of authors, Cited reference and so on.

• The majority of the articles are contributed by multiple authors. Especially double authors’ contribution is the highest among the other collaborative productivity. It indicates that the single authored work is less than that of the multiple authored contributions. The researcher has identified the factor; three or two authored team has been leading their research work to a winning triumph in every year output in Hepatitis C virus research. The degree of collaboration is found as 0.80 to 4.53.

• Lotka’s law has been applied to count the productivity of authors with a value n=2 indicating that there are a few highly productive authors whereas a great majority among them contribute only occasionally to Hepatitis C virus research.
After applying Bradford’s law of scattering the 2109 journal obtained were distributed into three zones. The core zone contains 45 most productivity journals publishing 20163 articles on the subjects.


5.2 Suggestions

The study upholds the following impact measure to improve the Hepatitis C virus research based on the findings.

Hepatitis C scientists should focus on the new areas to carry out more research activities in the sub fields in Hepatitis C virus research.

From the analysis of the present study the productivity of the autor could be recognized. Therefore the individual scientist may be inspired to distribute more number of contributions.

Among the continents, North America, Europe, Asia and Australia dominate the research field in Hepatitis C virus. Other continents particularly South America and Africa must be encouraged to work vigorously in this field.
There is need to motivate and encourage research, and scientists in the field for Hepatitis C research to identify the impact of research output.

It is required to initiate specific institutes to support research in the area of Hepatitis C virus.

New implements, equipments and state of art infrastructure must be made available more in Hepatitis C Medical universities and Medical Research institutes. That would save much time which is spent on arranging preliminaries.

The Scopus database should include Indian languages, and also cover Indian journals.

5.3 Recommendation for Future Research

This study explored and described emerging pattern of scholarly activity and intellectual structure among researchers in the Hepatitis C virus publications from 1999 to 2013. Based on this study, the following directions are recommended for the future of scientometric research in the Hepatitis C virus.

Attempts must be made for further scientometric analyses of the research literature from other subfields in Hepatitis C virus to provide a baseline for describing and interpreting citation data in the field of Hepatitis C virus and across subfields.
Investigations as to the context and content of citation could be undertaken to see how Hepatitis C virus scholars perceive themselves as building, extending or challenging the prior work of other Hepatitis C virus scientists they are citing. This study is based on Scopus database. Further research using other database like Web of Science, Chemical abstract, Derwent Biotechnology Abstracts, BIOSIS, Pub med could be attempted.

5.4 Conclusion

There has been proflic increase in Hepatitis C virus research particularly since 2001 onwards when green revolution took its roots. A number of serials in specialized disciplines of science and technology were added to the ones already exiting in these areas. This increase in research is being undertaken by a host of national and internatinal institutes. The application of scientometric study on Hepatitis C virus and characteristics is found to be very useful in understanding the communication and information science use pattern in the field of this study.

Evaluation of Hepatitis C virus research with the help of some indications has given some observation on the implications of which would be very useful to Hepatitis C Medical Science, Chemical Science, Biological science faculties, reserachers, scientists who use the information and library information science professionals who organise exponential knowledge.
The scientometric studies are of much significance for the work, like designing and developing of catalogue code, Metadata, Institutional Repositories and compilation of bibliographies for the organizing of scientific information. It is also useful for the organization of research and development works. The scientists of the Health discipline can carry out qualitative work in their respective field and publish their work in international and standard journals.