

Research articles published by faculty of School of Life Sciences, University of Hyderabad: A Bibliometric Study

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ABSTRACT

This paper discusses about the research articles published by the faculty from various departments of School of Life Sciences, University of Hyderabad during the study period of five years from 2015-16 to 2019-20. Bibliometric is the method of statistical analysis of written communications such as Books, Journal Article, Thesis and Dissertations etc. to provide a quantitative analysis of academic literature. The data is collected from the Annual Reports of University of Hyderabad pertaining to the study period of five years from 2015-16 to 2019-20. The collected data have been tabulated percentages were calculated and presented for the study. It is found that a total of 752 research articles have been published by the faculty from various departments of School of Life Sciences, University of Hyderabad during the study period from 2015-16 to 2019-20. It is also found that a total of 285(37.80%) research articles have been published by the department of Plant Science and ranked-I, whereas a total of 128(17.02%) research articles have been published by the department of Biochemistry and ranked-IV. It is also noticed that a total of 221(29.38%) research articles have been published during the year 2016-17 and ranked-I, whereas a total of 106(14.09%) research articles have been published by the faculty during the year 2019-20 and ranked-V.

KEYWORDS: Research in Life Sciences- Bibliometric analysis; Animal Biology – Research; Biochemistry - Research; Plant Sciences-Research; Biotechnology-Research

1. INTRODUCTION

Research has become an important component of a university's mission and a key indicator of its performance. Higher education is primarily government funded, so it is essential that university research fulfill the nation's research objectives. Research is an important academic activity and is expected of every faculty member. Research output takes the form of publications that include journal articles, reviews, letters, book and chapter in a book etc. A strong and well designed university research profile contributes the creation of new knowledge, maintains and

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strengthens the quality of a university's programs, increases funding from external sources and enhances the institution's leadership role. Research, as the most important source of knowledge generation, occupies a critical position in promoting a nation's prosperity and its citizens' well-being. Research not only helps solve practical problems but also brings about material improvements. Research is also regarded as an important indicator of a nation's economic competitiveness for the present and the future. Although government and private institutions have set up their own research centers and started their own research in recent years, universities continue to play a prominent role in knowledge production, particularly in the research fields.

Bibliometric analyses result in indicators of research quantity and performance. They can also provide measurement of connections between researchers and research areas through statistical of co-publications and citations. F.W. Lancaster (1991) has defined as "The term '*Bibliometrics*' can be applied to any form of quantitative analysis relating to the production, distribution and use of the published and semi-published literature". Dr. S.R. Ranganathan (1948) coined the term '*Librametry*' and presented his concept at the Aslib Conference held at Lemington Sea.

2. SCHOOL OF LIFE SCIENCES, UNIVERSITY OF HYDERABAD

The University of Hyderabad is regarded as a premier varsity in the country and public research University with high research activity in every department. The university is known for high quality research output from faculty and students in Natural Sciences, Social Sciences and Humanities. It is organized under 12 schools and 42 departments of excellence under the broad categories of subject clusters namely, School of Mathematics and Statistics, School of Physics, School of Chemistry, School of Life Sciences, School of Humanities, School of Social Sciences, School of Arts and Communication, School of Management Studies, School of Medical Sciences, School of Engineering Sciences and Technology, School of Economics and School of Computer & Information Sciences.

School of Life Sciences was founded in 1977 with the vision of promoting inter-disciplinary teaching and research. Over the years, the school of Life Sciences has steadily progressed towards achieving academic excellence. The School consists of five departments i.e. 1. The Department of Animal Biology, 2. Department of Biochemistry, 3. Department of Plant Sciences, 4. Department of Biotechnology and Bioinformatics and 5. the Department of Systems and Computational Biology. The Department of Systems and Computational Biology was established as per the resolution of the Executive Council of the University of Hyderabad on 30th September, 2018.

3. INDIRA GANDHI MEMORIAL LIBRARY, UNIVERSITY OF HYDERABAD

The Indira Gandhi Memorial Library is a central facility to support teaching and research activities of the University. The main objective of the library is to provide the most effective learning resources to the teachers, research scholars and the students of university. The quality research output of any teaching and research institution is from the library resources in different forms and access to library resources. The Indira Gandhi Memorial Library is connected to Campus Network and the library also created electronic learning environment by establishing Online Public Access Catalog (Web OPAC), OPAC Searching Area, Internet browsing area, Laptop Zone with Wi-Fi facility, specialized workstations & software for visually – challenged students and by facilitating electronic resources, search services/tools.

The library serves as resources station and has a print collection around four lakhs that include monographs, text books, back volumes of journals, theses / dissertation, CDs / DVDs. It subscribes around 500 print journals in various disciplines of the university and provides access to more than 25000 e-resources including e-books. It also comprises a reading room which is accessible round – the clock for the benefit of the students.

4. SCOPE AND LIMITATIONS OF THE STUDY

The study has taken in to account the research articles published by the faculty from various departments, they are 1. the department of Animal Biology, 2. department of Biochemistry, 3. department of Plant Sciences and 4. the department of Biotechnology and Bioinformatics of School of Life sciences, University of Hyderabad during the study period of five years from 2015-16 to 2019-20. The research articles published in the journals and the articles presented at conferences have been taken for the study. The Department of Systems and Computational Biology is not taken for the present study, since it was established as per the resolution of the Executive Council of the University of Hyderabad on 30th September, 2018 and not covered by the entire study period. The study is undertaken not with an intention to compare the research articles published by the faculty from various departments in the School of Life Sciences.

5. OBJECTIVES

The following are the objectives of the study:

- ✓ To know the quantity of research articles published by the faculty from various departments of School of Life Sciences, University of Hyderabad during the study period from 2015-16 to 2019-20.
- ✓ To understand the Department-wise publication of research articles published by the faculty from the various departments of School of Life Sciences, University of Hyderabad during the study period of five years.
- ✓ To understand the year-wise publication of research articles published by the faculty from various departments of School of Life Sciences, University of Hyderabad during the period of five years from 2015-16 to 2019-20.

6. METHODOLOGY

The data pertaining to the research articles published by the faculty of various departments of School of Life Sciences, University of Hyderabad have been collected from the Annual Reports of the University of Hyderabad, pertaining to the study period of five years from 2015-16 to 2019-20.

7. DATA ANALYSIS AND PRESENTATION

The collected data is tabulated and is presented in the following tables for analysis and study.

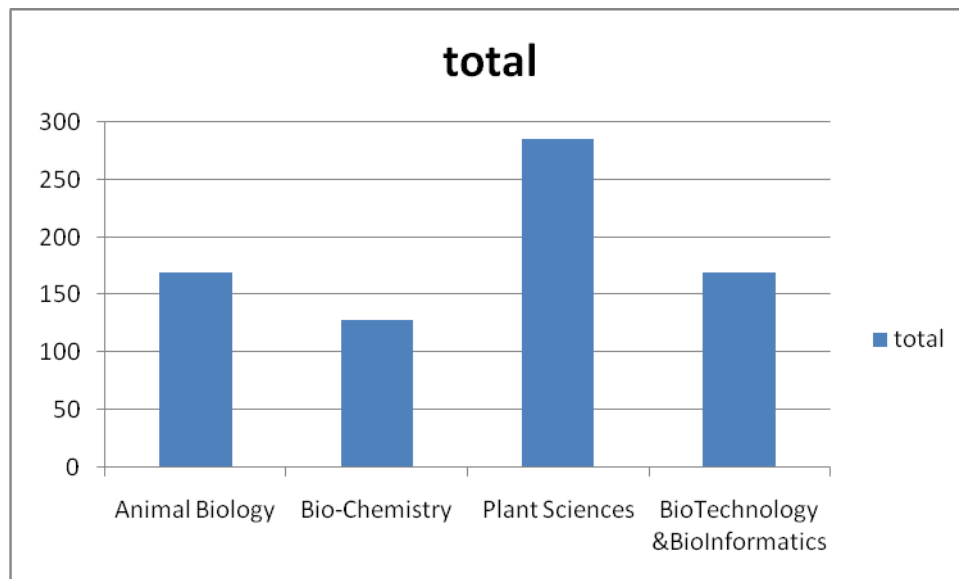
7.1 Department wise research articles published by the faculty of various departments School of Life Sciences, University of Hyderabad is presented in the following table and analyzed and percentages have been calculated and ranked to know the research department wise.

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Table-1 Department wise distribution of research articles published by the faculty of School of Life Sciences, University of Hyderabad during the years 2015-16 to 2019-20.

S.No	Departments	2015-16	2016-17	2017-18	2018-19	2019-20	Total	Cum.Tot	Percent	Cum.%	rank
1	Animal Biology	41	46	39	19	25	170	170	22.60%	22.60%	II
2	Bio-Chemistry	25	31	25	26	21	128	298	17.02%	39.62%	IV
3	Plant Sciences	76	90	34	48	37	285	583	37.80%	77.42%	I
4	BioTechnology & BioInformatics	33	54	36	23	23	169	752	22.47%	99.89%	III
5	Total	175	221	134	116	106	752		99.89%		

Analyzed and it is found from the above table that a total of 752 research articles have been published by the faculty from various departments of the School of Life Sciences, University of Hyderabad during the five year period from 2015-16 to 2019-20. It is also noticed that a total of 285(37.80%) research articles have been published by the faculty of Department of Plant Sciences during five years 2015-16 to 2019-20 and ranked-I, whereas a total of 128(17.02%) research articles have been published by the faculty of department of Bio-Chemistry and ranked-IV. A total of 170(22.60%) research articles have been published by the faculty of Department of Animal Biology, ranked-II and a total of 169(22.47%) research articles have been published by the faculty of department of Bio-Technology and Bio-Informatics, ranked-III.



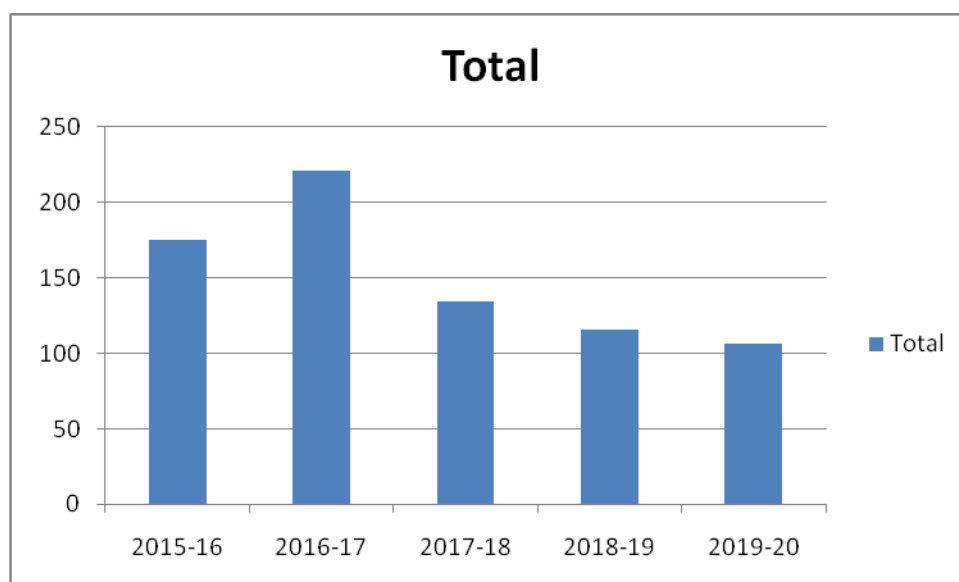
Graphical presentation of department-wise research articles published by the faculty of School of life sciences, University of Hyderabad during the study period 2015-16 to 2019-20

7.2 Year-wise research articles published by the faculty of School of Life Sciences, University of Hyderabad is presented in the following table and analyzed and percentages have been calculated and ranked to know the research year wise.

Table -2 Year-wise distribution of research articles published by the faculty of School of Life Sciences, University of Hyderabad during the years 2015-16 to 2019-20.

S.No	Years	Animal Biology	Bio-Chem.	Plant Sc.	Biotech& Bio Info	Total	Cum.tot	Percen	Cum.%	Rank
1	2015-16	41	25	76	33	175	175	23.27%	23.27%	II
2	2016-17	46	31	90	54	221	396	29.38%	52.65%	I
3	2017-18	39	25	34	36	134	530	17.81%	70.46%	III
4	2018-19	19	26	48	23	116	646	15.42%	85.88%	IV
5	2019-20	25	21	37	23	106	752	14.09%	99.97%	V
6	Total	170	128	285	169	752		99.97%		

Analyzed and found from the above table that a total of 752 research articles have been published by the faculty from various departments of the School of Life sciences, University of Hyderabad during the five year period from 2015-16 to 2019-20. It is noticed that a total of 221(29.38%) research articles have been published by the faculty of School of Life Sciences, University of Hyderabad during the year 2016-17 and ranked-I, whereas a total of 106(14.09%) research articles have been published by the faculty during the year 2019-20 and ranked-V. And also noticed that a total of 175(23.27%) research articles have been published by the faculty during the year 2015-16 and ranked-II, a total of 134(17.81%) research articles have been published by the faculty during the year 2017-18 and ranked-III and also noticed that a total of 116(15.42%) research articles have been published by the faculty during the year 2018-19 and ranked-IV.



Graphical presentation of research articles published by the faculty of School of Life Sciences, University of Hyderabad during the study period 2015-16 to 2019-20.

FINDINGS

- It is found that a total of 752 research articles have been published by the faculty from various departments of School of Life Sciences, University of Hyderabad during the five year period from 2015-16 to 2019-20

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- It is also noticed that more number of articles 285(37.80%) have been published by the faculty of department of Plant Sciences during five years 2015-16 to 2019-20 and ranked-I, whereas a total number of 128(17.02%) research articles have been published by the faculty of department of Bio-Chemistry and ranked-IV.
- It is noticed that a total of 221(29.38%) research articles have been published by the faculty from various departments of School of Life Sciences, University of Hyderabad during the year 2016-17 and ranked-I, whereas a total of 106(14.09%) research articles have been published by the faculty during the year 2019-20 and ranked-V.

CONCLUSION

A strong and well designed university research profile contributes to the creation of new knowledge, maintains and strengthens the quality of a university's programs. Research provides insights and new ideas that enrich human understanding of various social, economic and cultural phenomena.

The University of Hyderabad is regarded as a premier varsity in the country and public research University with high research activity in every department. The research work in the School of Life Sciences, University of Hyderabad has extended the frontiers of knowledge in the concerned subjects. It is noticed that more number of research articles i.e. 285(37.80%) have been published by the faculty of Department of Plant Sciences during the study period of 2015-16 to 2019-20 and also noticed that more number of research articles i.e. 221(29.38%) have been published by the faculty of School of Life Sciences, University of Hyderabad during the year 2016-17.

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