

## RESEARCH OUTPUT ON 'BIOTECHNOLOGY' AS AVAILABLE IN THE 'CORE' OPEN ACCESS AGGREGATOR: A METRIC PERSPECTIVE

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### Abstract

Thanks to the open access movement and the earnest efforts of striving individuals and organizations, the research community is able to enjoy the benefits of accessing a good amount of open access articles in this information proliferated society. The open access aggregators play a major role is taking the OA contents to the world citizens. They harvest data from various data providers and provide full text of research papers. The present study has attempted to find out how CORE – the richest Open Access Resource Aggregator – works, what are the search options available in CORE site, how to restrict our search to specific OA repositories, how to get contents in a chosen language, how to get similar articles and how to get full citation particulars of chosen articles in the discipline 'Biotechnology'. It is suggested that more open access publishers should join and let their metadata and full text articles be harvested by CORE.

### Keywords

CORE, open access repositories, open access aggregators, Bio-technology

### 1. INTRODUCTION

Open access movement is gaining momentum in the present day publication world. A lot of publishers have started publishing their journal articles in open access platforms to get more citations and increase their visibility. When the users felt it difficult to keep a track of the establishment of new open access sites and expressed their difficulty to update them with new additions in those open access platforms, the open access aggregators came handy. These aggregators take the pain of adding the open access articles available in various open access platforms like arXive, DOAJ, DOAR etc and providing them in a single window system with sophisticated search features. These OA aggregators work like a discovery tool and multi-open access platforms cross-checker for the users.

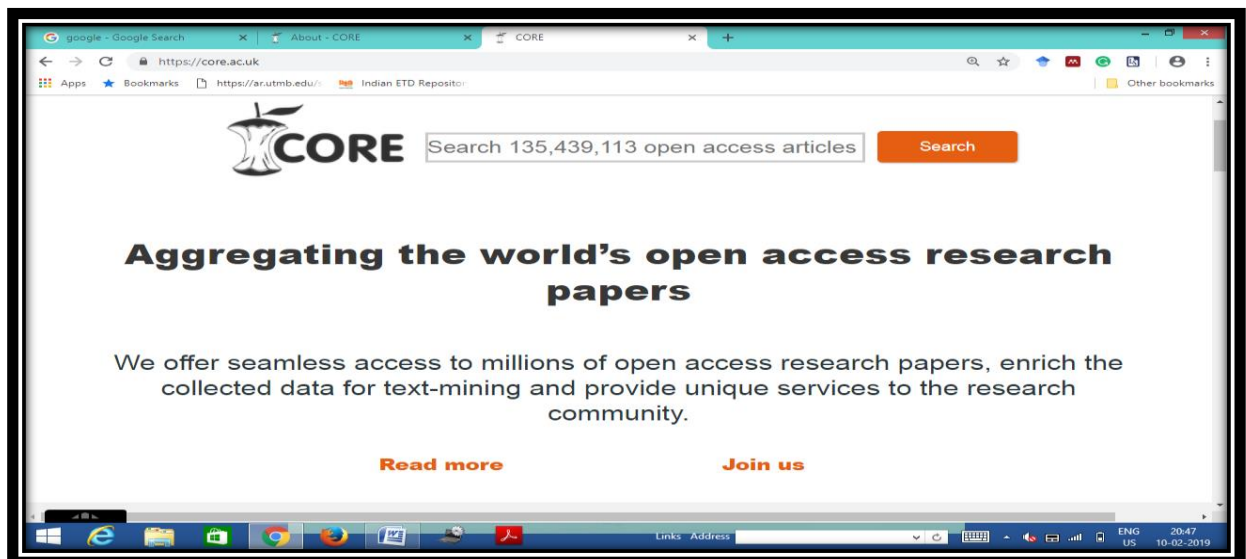
## 2. CORE

CORE is an international service provider in the field of open access movement. Their aim is to aggregate all open access research outputs from repositories and journals worldwide and make them available to the public. It harvests openly accessible content. It harvests all metadata records in a repository, but it is in position to harvest full-text records in PDF only.

### 2.1 Mission of CORE :

- supports the right of citizens and general public to access the results of research towards which they contributed by paying taxes,
- facilitates access to open access content for all by offering services to general public, academic institutions, libraries, software developers, researchers, etc.,
- provides support to both content consumers and content providers by working with digital libraries, institutional and subject repositories and journals,
- enriches the research content using state-of-the-art technology and provides access to it through a set of services including search, API and analytical tools,
- contributes to a cultural change by promoting open access, a fast growing movement.

## 3. CORE AS A SEARCH ENGINE

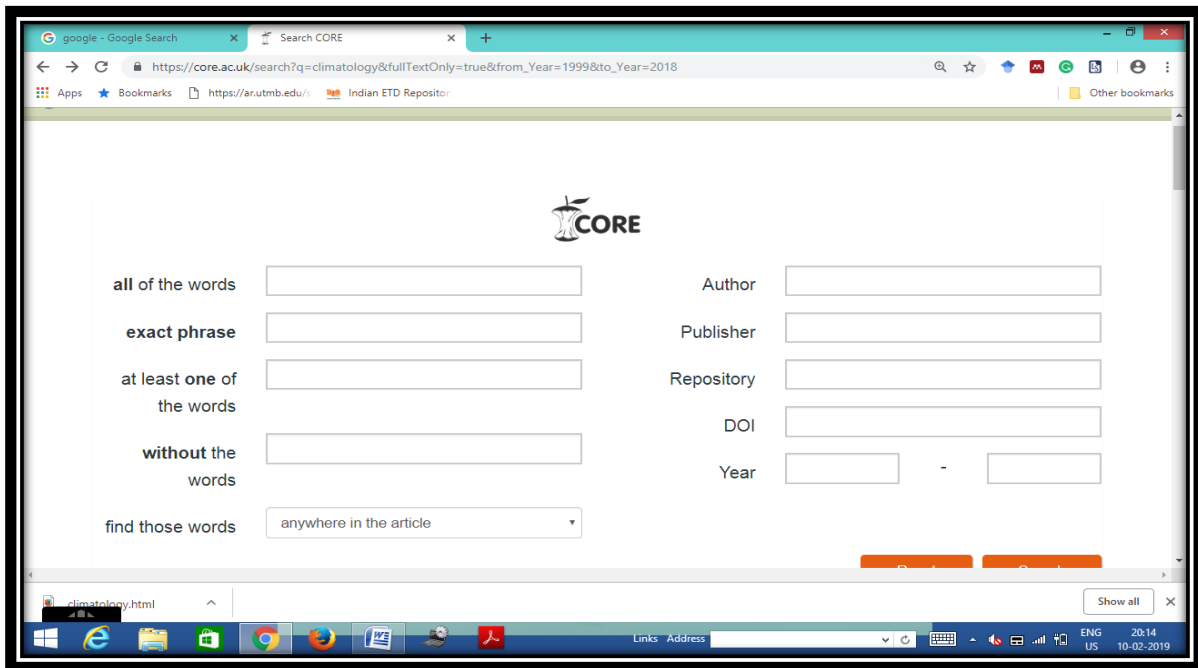


**Figure 1 : Search Engine for Open access articles : CORE**

CORE has harvested 13, 54, 39, 113 open access articles. We can use CORE as a search engine to get access to 10 crore plus open access research papers.

A simple search will bring you the results at once.

An advanced search option will bring the following screen for your perusal.



**Figure 2 : Advance Search options in CORE**

Here we can restrict our search results to all of the words, exact phrase, at least one of the words, without the words, author, publisher, repository, DOI and year. This will enable us get the exact results.

#### **4. DATA PROVIDERS**

CORE aggregates research papers from data providers from all over the world including institutional repositories, subject-repositories and journal publishers. This process, which is called harvesting, allows us to offer search, text-mining and analytical capabilities over not only metadata, but also the full-text of the research papers making CORE a unique service in the research community.

CORE currently contains 135,439,113 open access articles, from over tens of thousands journals, collected from over 3,746 repositories around the world.

#### **5. RESEARCH OUTPUT ON ‘BIOTECHNOLOGY’**

The key word ‘ Biotechnology’ is entered in the search interface as given in Figure 3.

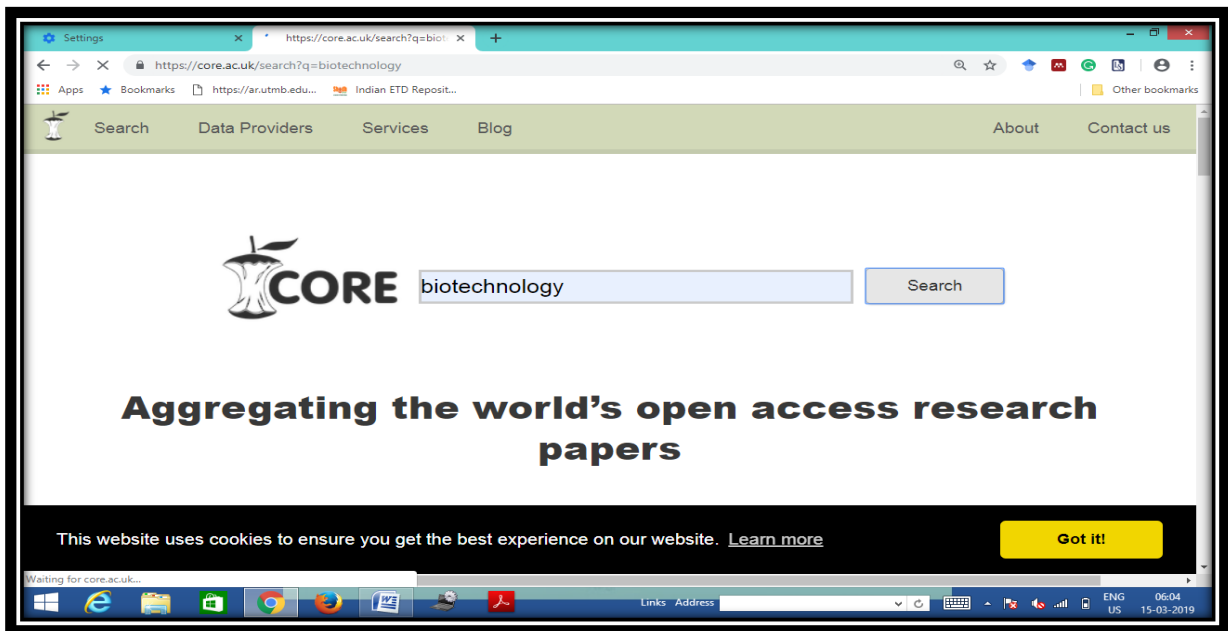


Figure 3 : Search for Open access resources on 'Biotechnology'

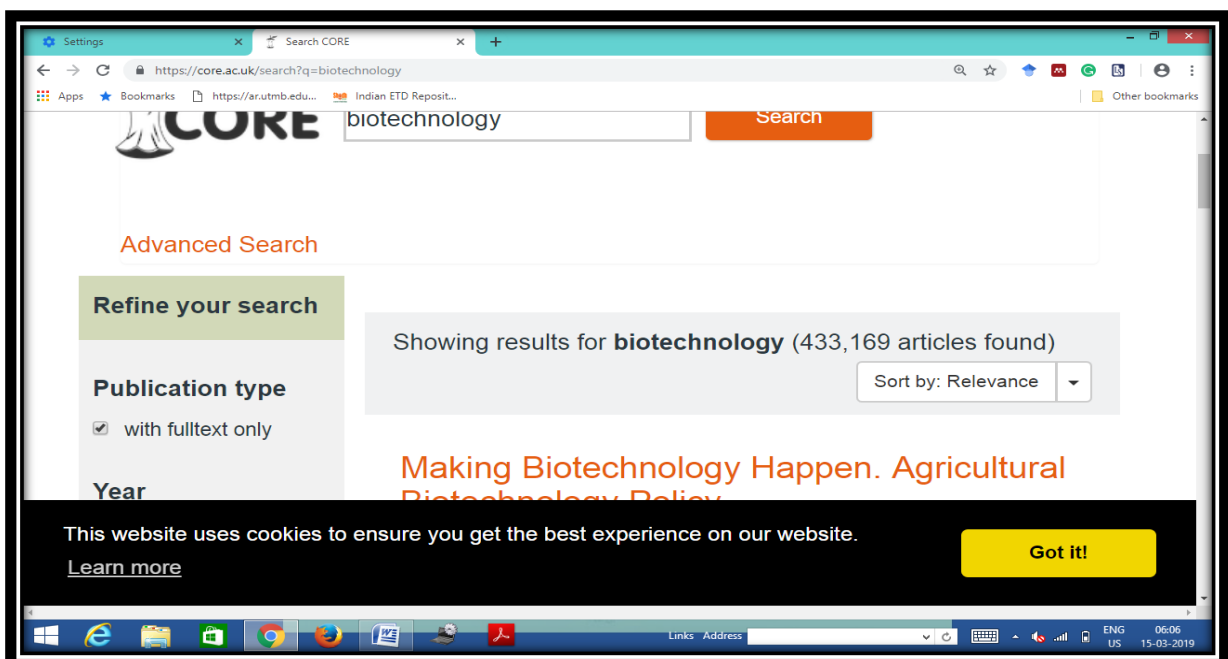


Figure 4 : Search Results for Open access resources on 'Biotechnology'

The figure 4 shows that there are 4,33,169 articles found on the keyword 'Biotechnology'. But using the advanced search option, the period was restricted to 10 year period i.e 2009 to 2018. Now, the result shows that there are 2,70,743 open access articles on biotechnology. This is also clear to note that all these articles are available in full text in open access platforms.

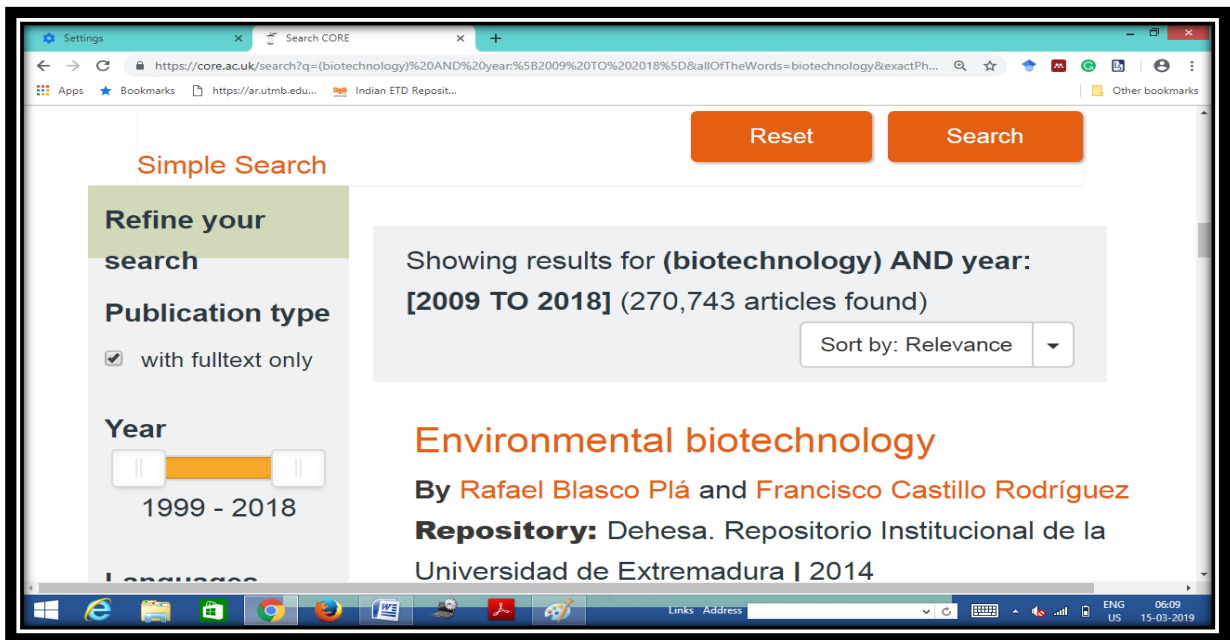


Figure 5 : Search Results for Open access resources on ‘Biotechnology’

## 6. ARRANGEMENT OF RESULTS

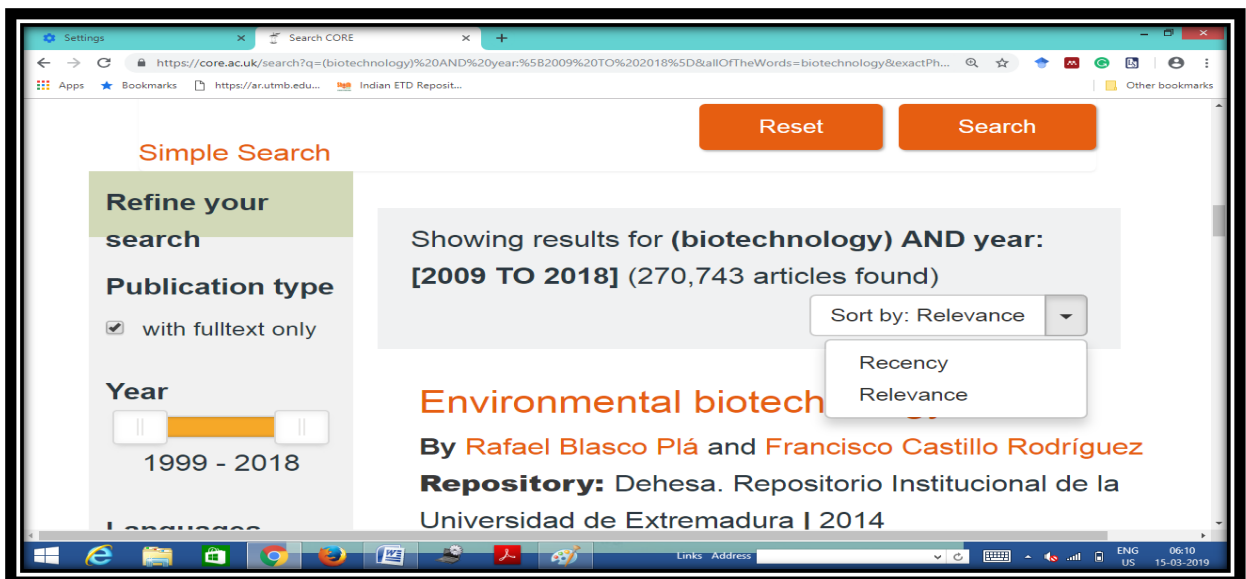


Figure 6 : Sorting the results by Recency or Relevance

The availed results may be arranged either according to ‘Recency’ or according to ‘Relevance’. Choosing recency will list the resources from the latest years to the oldest years.

## 7. LANGUAGE-WISE DISTRIBUTION OF OPEN ACCESS ARTICLES ON ‘BIOTECHNOLOGY’ (200+)

S.No	Language	No. of Articles
1	English	13756
2	Portuguese	1242
3	Czech	588
4	German	471
5	Spanish	403
6	French	259
7	Italian	249

As it is the case found in most of the literature outputs, the highest amount articles were written in English. The contribution on ‘Biotechnology’ is the minimum and the least in many other languages. There are 13756 articles in English followed by 1242 articles in Portuguese, 588 articles in Czech and 403 articles in Spanish. The contributions on Biotechnology are just 259 and 249 from French and Italian languages.

## 8. REPOSITORY-WISE DISTRIBUTION OF OPEN ACCESS ARTICLES ON ‘BIOTECHNOLOGY’ (> 1500)

S.No	Name of the Repository	No. of Records
1	Springer Publisher connector	35345
2	Elsevier publisher connector	25321
3	Frontiers Publisher connector	6953
4	Universidade do Monho : RepositoryUM	3127
5	Online research database in technology	2397
6	NELITI	2229
7	Directory of open access journals	2224
8	Ghent university academic bibliography	2161
9	Helsingin yliopiston digitaalinen arkisto	2055
10	arXiv.org e-print archive	1815
11	White rose research online	1787
	NORA – Norwegian open research archives	1785
12	Harvard University DASH	1775

13	Spiral – Imperial college digital repository	1753
14	Dpace @ MIT	1722
15	OpenGrey repository	1633
16	Wageningen yield	1592
17	Digitale Hochschulschriften der LMU	1568
18	EconStor	1541

It is clear from the above table that Springer Publisher connector has made available 35345 OA articles on Biotechnology in CORE project followed by Elsevier publisher connector with 25321 records and Frontiers Publisher connector with 6953 records. Universidade do Monho : RepositoryUM has contributed 3127 articles on biotechnology in Core repository. There are 10 other repositories with more than 1500 but less than 2000 records and there are five other open access repositories with more than 200 but less than 3000 records.

## 9. RESTRICTING RESULTS TO SELECTED REPOSITORIES

If one or two repositories are selected, only those open access articles available in the selected repositories will be displayed. For example, selecting ‘ Springer’ repository will bring forth the following 35345 records.

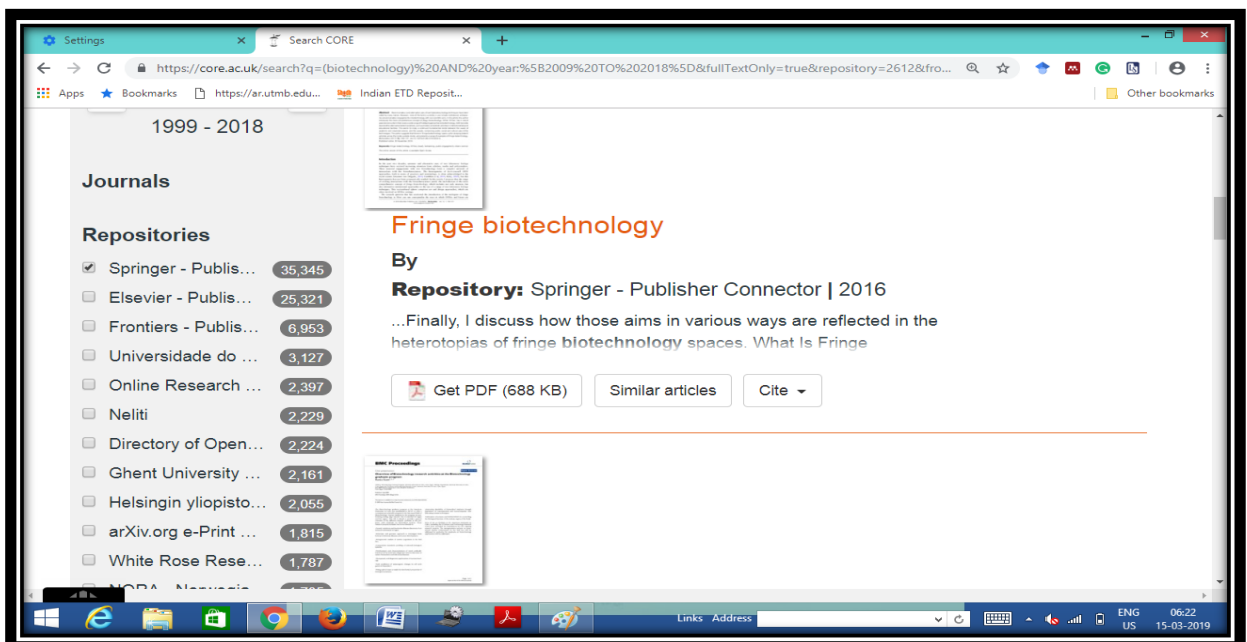


Figure 7 : Records of Springer

## 10. SIMILAR ARTICLES

Clicking on the ‘Similar Articles’ button will display the articles which are similar to the selected article and available in CORE.

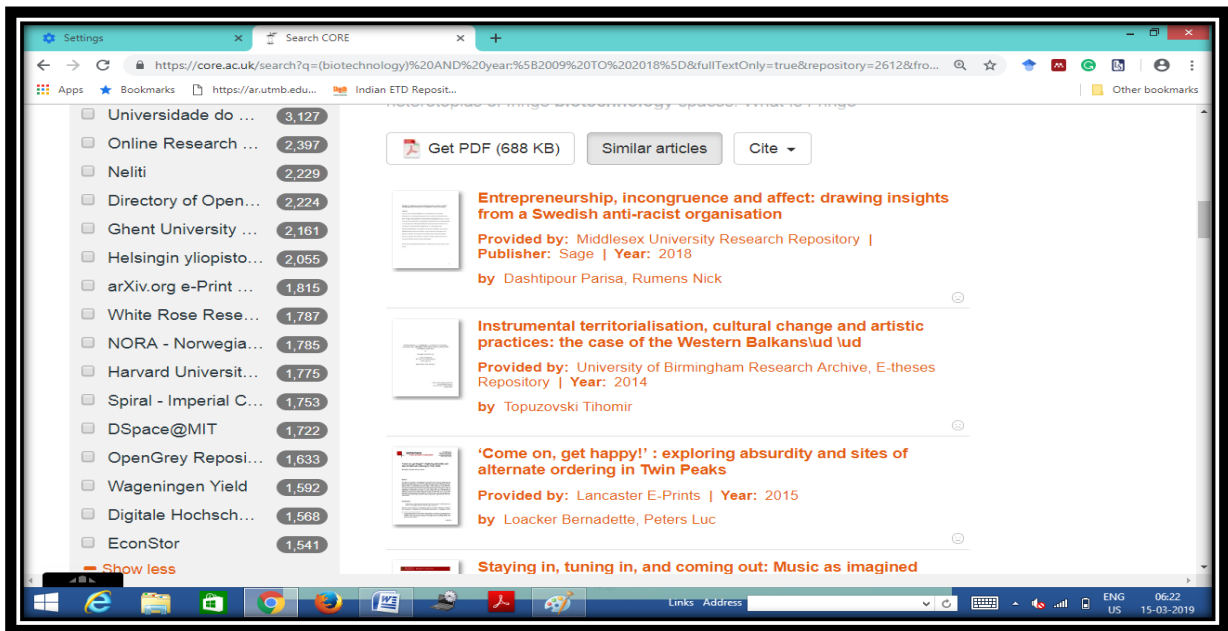


Figure 8 : Results for ‘ Similar Articles’

## 11. CITE OPTION

The ‘cite’ button will help the researcher to get bibliographical particulars of the chosen article. There are two options available in ‘ Cite’ button viz., BibTex and Full citation.

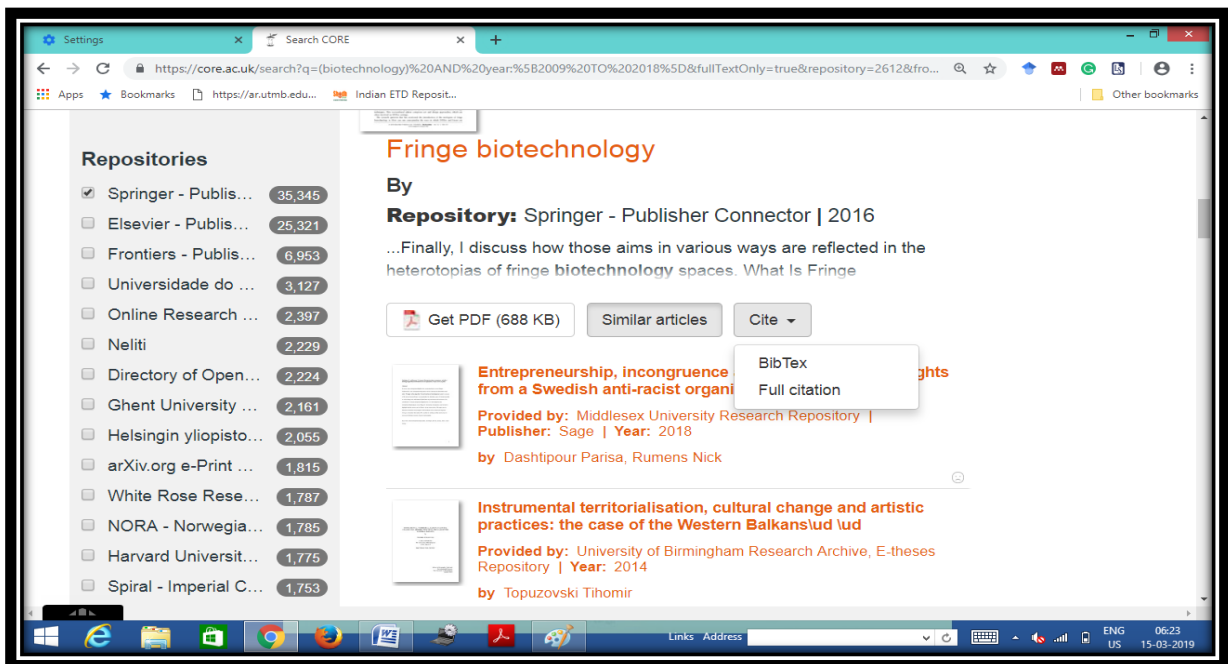


Figure 9 : Two options for ‘Cite’ Provision



If full citation option is selected, the reference will appear in the screen. The contents may be copied and pasted in a typical word format.

If BibTex option is selected, the bibliographical elements of the chosen article will be displayed as in the following figure. The citation particulars may be copied and pasted in the required word file.

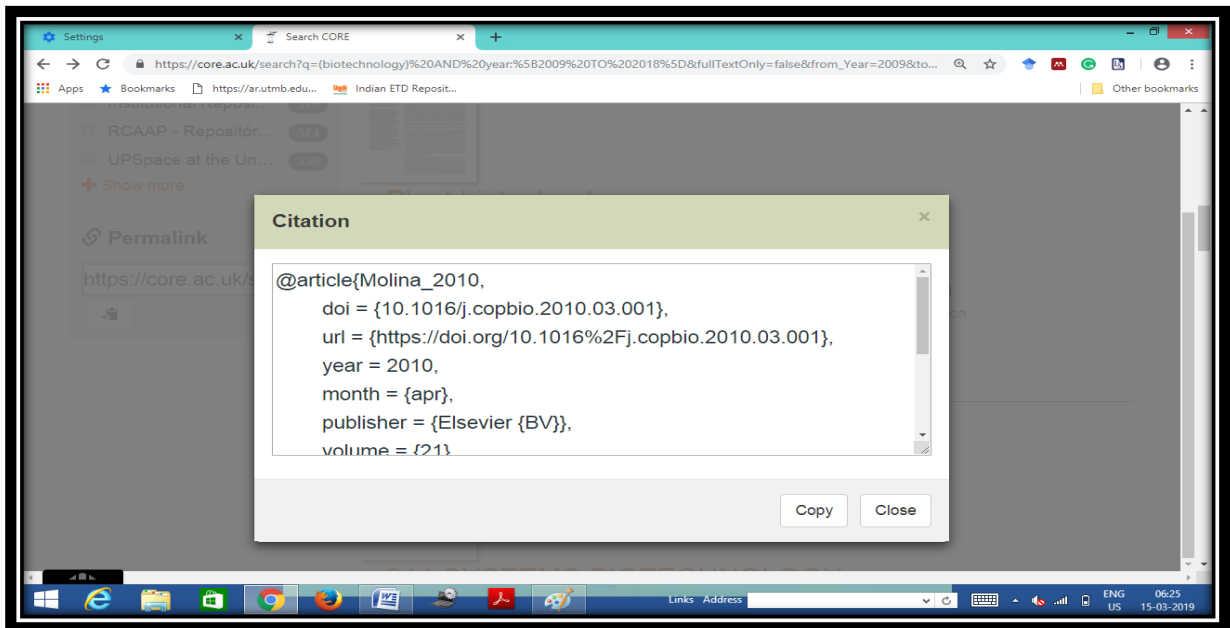


Figure 10 : The Results of ‘ BibTex’ option

## 12 GET PDF OPTION

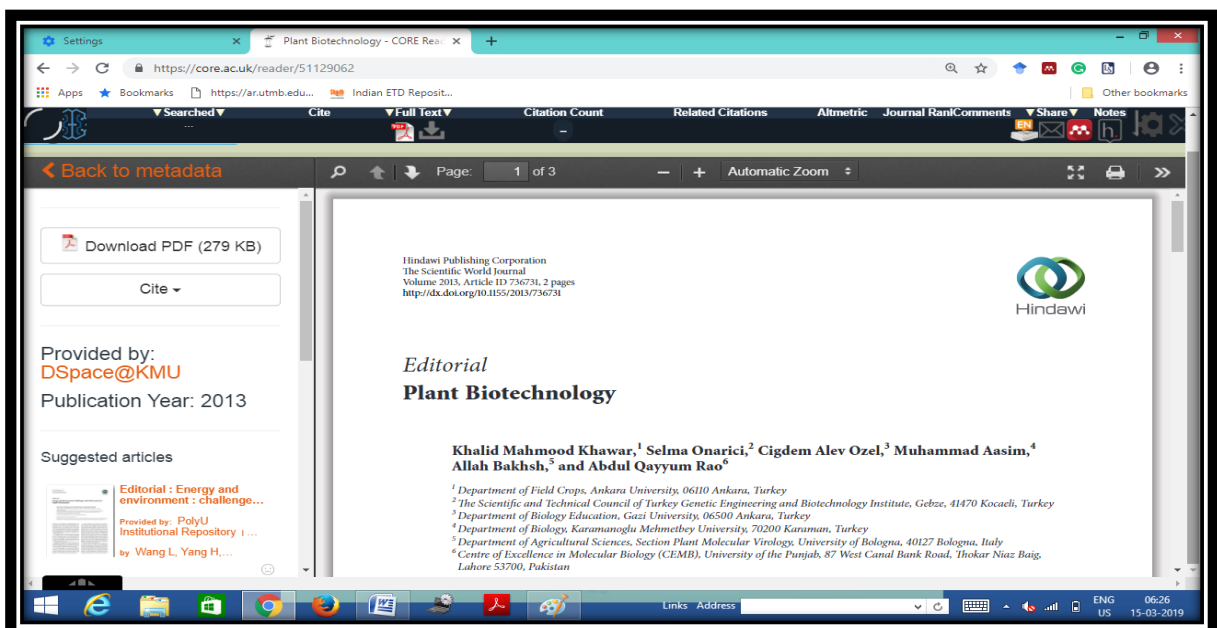


Figure 11 : Full text of the article

If you click the ‘Get PDF’ option available in the leftmost side, then the above screen will appear with the full text pdf version of the file along with such particulars as name of the repository, year of publication, options to cite and suggested articles.

### 13. CONCLUSION

The open access aggregators like CORE make the life of researcher simpler and effective. The institutions which cannot afford to costly paid databases and journals will derive the best output from aggregators. The CORE programme may be strengthened further by adding more open access journals and open access publishers. Citation related particulars may be made available in the CORE site. More data providers may be encouraged to contribute their data to CORE. At present only PDF files (full text) are available. Efforts may be taken to include other file formats in CORE. This will ensure good quality research among the young researchers with freely available scholarly communications.

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<https://core.ac.uk/search?q=biotechnology>.