Chapter 63
Open Access Journal in Bioinformatics: A Study

Rekha Pareek
University of Kota, India

Sudhir Kumar
Vikram University, India

ABSTRACT

Bioinformatics is rapidly growing, interdisciplinary field of science, where methods from information technology, computer science, mathematics, and statistics are used to solve problems of biological science. To access latest scholarly articles in such an important branch one cannot deny the importance of open access journals. In this chapter an attempt has been made to access the current status of open access journals of bioinformatics which are covered by Directory of Open Access Journals (DOAJ) on various parameters like country and language of publication, their currency, impact factor, article processing charges, copyright licensing model they are using, platform for hosting and their coverage in abstracting/indexing databases.

INTRODUCTION

The tremendous growth in internet services and users as well since the 1990s led to universal sharing of knowledge and access to information resources. Similarly, scholarly communication channels also got affected and the internet made them accessible and enhances their readership. Dissemination of scholarly contents through Open access (OA) open new vistas around the globe and these contents are available through the internet in various forms, free of charge and free from copyright and licensing restrictions. Suber (2012) defines OA "*Open Access literature is digital, online, free of charge, and free of most copyright and licensing restrictions*". The OA movement uses the term Gold OA for OA delivered by journals, regardless of the journal's business model, and Green OA for OA delivered by repositories.

DOI: 10.4018/978-1-5225-8903-7.ch063

Self-archiving is the practice of depositing one's own work in an OA repository. All three of these terms were coined by Harnad (2015). Budapest Open Access Initiative in 2002 made revolutionary growth in Open Access contents.

The biggest leap in open access publishing came with the "Budapest Open Access Initiative" (2002), which was aimed to provide free access to refereed articles on the Internet. Budapest Open Access Initiative was launched on 14 February 2002, which is becoming a most popular initiative for scholars and helping them to self-archive their refereed journal articles online. This is further assisting in the establishment of alternative journals that are committed to offering free and unrestricted online access to published articles.

The 2002 Budapest Open Access Initiative's proposed a comprehensive definition of open access as follows:

Free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. (Budapest Open Access Initiative, 2002)

There have been various other initiatives, the other definition came from Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003), ACRL Principles and Strategies for the Reform of Scholarly Communication (2003), UN World Summit on the Information Society Declaration of Principles and Plan of Action (2003), OECD Declaration on Access to Research Data from Public Funding (2004), IFLA Statement on Open Access to Scholarly Literature and Research Documentation (2004), and Wellcome Trust Position Statement on Open Access (2005). The initiatives have demonstrated the open access movement. The momentum has continually gained momentum from library and information point of view, funding agencies scholarly, scholarly societies, and institutions of higher education (Zhang 2007). Because open access primarily focuses on research journals, Lynch (2006, p. 5) concludes that "open access to the research journal literature is inevitable, and that open access has. Similar sentiments and beliefs are reflected in the Bethesda Statement (Patrick et. al. 2003) as well. According to Morrison (2015) the size of contents in The Bielefeld Academic Search Engine is over 71 million documents and in Internet archive it is 7.8 million. The Directory of Open Access (DOAJ) Journals is showing consistent strong growth. Over the past year, the growth in articles that can be retrieved through a DOAJ article-level search grew by over a quarter of a million articles for a total of over 1.8 million articles.

Well established publication houses like Elsevier, Taylor, and Francis, Springer and others also introducing open access journals (Rufai et al, 2011). Many of the existing journals of the repute also adopted the open access policy to reach their readers. At present DOAJ listed 11445 journals of various disciplines and this no. is quite higher than 9919 in 2014 as reported by Pujar (2014). Unlike other academic discipline, bioinformatics is in its infancy and still if you go through the website of DOAJ, it accounts 68 journals, search by keyword of the publisher. Though some of them are not exactly related to bioinformatics, some have been merged with other journals of the publication house and some have been discontinued. Websites of these journals visited thoroughly and 37 continued journals were found, strictly related to bioinformatics. In this article, these 37 journals were considered for the study of their language of publication, a platform for hosting, indexing by abstracting journals, currency etc.