



Letter to the Editor

Access to scientific literature: Legitimate channels

Mahesh Gadhvi¹, Shival Srivastav¹, Rajesh Kumar Sharma¹

¹Department of Physiology, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India.

***Corresponding author:**

Dr. Shival Srivastav,
Assistant Professor, Department
of Physiology, All India
Institute of Medical Sciences,
Jodhpur, Rajasthan.

srivastavs@aiimsjodhpur.edu.in

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Quick Response Code:



Sir,

Paywalls imposed by publishing firms limit access to scientific literature. Individual researchers and institutions with limited funding lack access to a major chunk of the scientific literature, which may affect research quality. As per one figure, only 13% of all articles indexed in PubMed are available for free through PubMed Central (PMC).^[1] Two approaches were employed to improve access to literature. One approach was hybrid open access model, wherein authors were provided the option of making papers open access at the time of acceptance of the manuscript. This was subject to payment of article processing charges (APCs). Unfortunately, APCs often run into thousands of dollars and are economically impracticable for most researchers. In some countries, there was an impetus from the government to make every government funded research open access after a certain period. While this was a welcome move, it was restricted to certain countries only. On similar lines, Plan S was launched by cOAlition S, an international consortium of health researchers in September 2018.^[2] Multiple national funding agencies joined hands together with a proposal that any research funded by them should be made open access immediately. However, this proposal is pending implementation.

Despite the above measures, the proportion of scientific literature freely accessible to the general public remained rather small. These lacunae lead to the emergence of Sci-Hub, a popular but illegal source for access to scientific literature. The website was started by Alexandra Elbakyan, a research student based in Kazakhstan.^[3] On the portal, the articles are searchable by title, PubMed ID or digital object identifier (DOI). As per data gathered till March 2017, the website provided access to over 90% of the total articles available in prestigious journals such as Lancet and Nature.^[4] Sci-Hub was sued in courts in the United States of America by Elsevier and American Chemical Society for copyright infringement.^[5,6] The principal domain was taken down immediately, while mirrors of the domain continue to exist.

Despite being extremely popular, the ethical nature of Sci-Hub is dubious. We caution users against using Sci-Hub domains for literature retrieval, as it amounts to infringement of intellectual property and copyright laws. Hence, we explored some legitimate sources that may serve as useful alternatives to Sci-Hub.

UNPAYWALL™

Unpaywall™ was started in April 2017 by Jason Priem and Heather Piwowar. It is available as website and browser extension. Almost half of the papers that are paywalled are available as open access at many sources. The tool used open access DOI (oaDOI) to locate the articles.^[7-9] Unpaywall™ is available at <https://unpaywall.org/>.

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OPEN ACCESS BUTTON (OAB)

OAB, launched by creators Joseph McArthur and David Carroll, is available as a website and browser plug-in. It searches open access aggregators such as CORE, BASE and oaDOI for legitimate copies of papers. Furthermore, it can request the authors for the paper. The source can be accessed at <https://openaccessbutton.org/>.

KOPERNIO™

Kopernio™ is another browser plugin that searches PubMed, Web of Science, Google Scholar, JSTOR and other valid open access sources for copy of the paper. The tool is owned by Clarivate Analytics™ and has deep integration with the Web of Science™ thus expanding its outreach.^[10] The tool can also integrate with institutional login credentials and facilitate easy access to the paper. Kopernio™ can be accessed at <https://kopernio.com/>.

LAZY SCHOLAR™

Lazy scholar, started by Colby Vorland, is a browser extension available at <http://www.lazyscholar.org/>. It uses sources such as Google Scholar™, PubMed, Europe PMC, DOAI.io and Dissem.in for free legitimate copies of the paper.

ACADEMIC SOCIAL NETWORKS

Now, academic social media platforms are available in the form of ResearchGate™ and Academic.edu™, wherein authors from different domains share their work with peers. Here, we can place individual requests to the authors to share article manuscripts. While ResearchGate™ is a free forum, other forums are subscription based.

ResearchGate™ is a very popular social network from academicians and researchers from various domains. The website requires an institutional email address to sign-up. Once sign-in is complete, the users can make their research profile enlisting the various research articles. It is possible to share complete articles, pre-prints and datasets on the website. The complete articles may be shared as publicly available full free texts or as private copies. The private copies are may be accessed after placing a request with the author/s, subject to their approval on the forum.

While the forum facilitates academic exchange of published works, there exists a grey area regarding the legality of article sharing. Most journals impose an embargo period post-publication of the paper, wherein the author/s cannot make available the free full text of the paper publicly available. However, many journals allow the authors to share the copies of their papers on one-to-one basis with fellow researchers, provided that the embargo policy is not violated. In perspective

of this policy, it may be legitimate for the authors to make available copies of their articles on an individual basis.

However, whether embargo policies are followed to the letter remains to be seen. In a random analysis of papers available on ResearchGate™ by Jamali, it was observed that a large chunk of articles uploaded by researchers on the forum were in infringement of the copyright policies of the journals. The probable factor responsible for the same was lack of awareness on part of the authors of the paper.^[11]

Similarly, pre-prints of the articles are widely shared on academic forums. As per Elsevier™, a popular scientific publisher, preprints are described as ‘author’s version of the paper that has not been peer reviewed nor modified by the publisher’ in any way.^[12] Unlike published articles, the policies regarding pre-print sharing and dissemination are quite liberal. This is because they are yet to be peer reviewed and formatted by journal publishers. For the same reason that is, lack of peer review, contents of pre-prints may not be treated as the final published version.

ARXIV™

arXiv™ is a free repository and distribution network of journal articles maintained by Cornell University. The resource is accessible at <https://arxiv.org/>.

Other resources such as OpenDOAR™ (<https://v2.sherpa.ac.uk/pendoar>), CiteSeerX™ (<http://csxstatic.ist.psu.edu/>) and Paperity™ (<https://paperity.org/>) may also provide access to a reasonable number of papers.

Sci-Hub, though immensely popular, is embroiled in litigation for copyright and intellectual property infringement. Therefore, we strongly recommend that researchers access papers through legitimate sources as outlined above. Furthermore, if none of this works, a simple email to the authors directly can help the individual researcher obtain required papers.

Declaration of patient consent

Patient’s consent not required as patients identity is not disclosed or compromised.

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Conflicts of interest

There are no conflicts of interest.

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