

# Sci-Hub Project, its Legality, and its Impact on Access to Scientific Journals in Pakistan



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Sci-Hub is a project that uses stolen log-in credentials to access pay-walled scientific articles and journals, and then makes them available for free on its website. It has had a significant impact on medical journals. The HEC Digital Library does not cover all research areas. The Higher Education Commission (HEC) has acknowledged that Sci-Hub could fill a gap in the availability of research materials for Pakistani researchers but cautioned that the use of Sci-Hub is illegal and could have negative consequences for the scientific community. Sci-Hub has faced legal challenges in some countries but has generally been able to operate without interference. The legality of Sci-Hub is complex, with legal challenges varying by country. There are legal ways to access scientific manuscripts. The Sci-Hub project has significantly impacted research in Pakistan, but the HEC does not condone the use of Sci-Hub, and it could have negative consequences for the scientific community.

**KEYWORDS:** Sci-hub; Software Piracy; Legal issues; Higher Education.

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Sci-Hub is a project that provides free access to scientific articles and journals, particularly those published behind paywalls. The project was created in 2011 by Kazakhstani graduate student Alexandra Elbakyan, who was frustrated by the excessive cost of accessing scientific articles. Sci-Hub uses stolen log-in credentials to access pay-walled articles, which it then makes available for free on its website.

The impact of Sci-Hub on medical journals has been significant, as it has provided millions of users with free access to articles that would otherwise be unavailable to them. According to a study published in the *Journal of the American Medical Association*, Sci-Hub had the highest number of downloads for five of the six most accessed journals in the field of medicine, including *The New England Journal of Medicine* and *The Lancet*.<sup>1</sup>

The Higher Education Commission (HEC) of Pakistan is a government agency responsible for promoting research and higher education in Pakistan. One of the ways that the HEC promotes research is by providing access to scientific articles and journals through its online research portal, the HEC Digital Library. The HEC Digital Library provides access to more than 8,000 scientific journals and more than 400,000 articles and is a valuable resource for researchers in Pakistan. However, the HEC Digital Library (<http://www.digitallibrary.edu.pk/>) is not without limitations, as it only provides access to a limited number of journals and does not cover all research areas.

In this context, the Sci-Hub project has emerged as a popular alternative for researchers in Pakistan who are seeking access to scientific articles and journals that are not available through the HEC Digital Library. Sci-Hub is a project that provides free access to scientific articles and journals, particularly those published behind paywalls. It uses stolen log-in credentials to access paywalled articles, which it then makes available for free on its website.

Although the HEC does not condone the use of Sci-Hub, it has acknowledged that the project has the potential to fill a gap in the availability of research materials for Pakistani researchers. In a statement, the HEC stated that it "appreciates the efforts of Sci-Hub to provide free access to scientific research materials" but cautioned that "the use of Sci-Hub is illegal and could have negative consequences for the scientific community" (Higher Education Commission, 2017).

Most universities in Pakistan rely on HEC for access to scientific journals, and only a few subscribe to limited journals. Most medical and dental journals are beyond the budgets of researchers and academicians, making it difficult for them to access them.

Although some argue that Sci-Hub provides a valuable service by making scientific research more accessible, others argue that it undermines the business model of scientific publishing and could harm the financial viability of medical journals. Many journals rely on subscription fees and pay-per-view charges to fund their operations. The widespread use of Sci-Hub could reduce its revenue and impact their ability to publish high-quality research.

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Some medical journals have responded to the threat of Sci-Hub by increasing their efforts to promote open-access publishing, which allows articles to be freely accessed by anyone with an Internet connection. However, this model has challenges, requiring authors to pay publication fees, and may not be sustainable for all journals.

The legality of Sci-Hub, a project that provides free access to scientific articles and journals, has been the subject of much debate and legal action. Sci-Hub uses stolen login credentials to access paywalled articles, which it then makes available for free on its website.<sup>2</sup>

In 2015, the American Chemical Society (ACS) filed a lawsuit against Sci-Hub and its founder, Alexandra Elbakyan, alleging copyright infringement and violation of the Computer Fraud and Abuse Act (CFAA) (American Chemical Society v. Sci-Hub, 2017). The ACS argued that Sci-Hub's actions constituted unauthorized access to its copyrighted material and sought damages of \$4.8 million.<sup>3</sup>

In 2017, a US District Court ruled in favor of ACS and granted an injunction against Sci-Hub, ordering it to stop distributing ACS articles and to give its domain name to the ACS (American Chemical Society v. Sci-Hub, 2017). However, Sci-Hub continues to operate and has remained active, using a series of new domain names and mirror sites to evade legal action.

The legality of Sci-Hub has also been the subject of debate in other countries. In Russia, where Sci-Hub was founded, the project has faced legal challenges, but has generally been able to operate without interference. In other countries, such as the United Kingdom and Germany, courts have issued injunctions against Sci-Hub and ordered Internet Service Providers (ISPs) to block access to the site. In March 2021, a warning was issued by the City of London Police's Intellectual Property Crime Unit (PIPCU) to students and universities cautioning them not to use Sci-Hub as it hosts stolen intellectual property. PIPCU warns users of "malicious methods" of obtaining papers, including phishing emails that trick users into providing their university login details. In this way, Sci-Hub is alleged to have hacked 42 universities. PIPCU has not mentioned the names of these 42 universities, and none of the universities in the UK have ever reported any hacking by Sci-Hub.

The authorities of most countries warn users to stay away from Sci-Hub to protect both their cybersecurity and their institution's cybersecurity. They also remind users that accessing the site is illegal as the content is stolen intellectual property. Some claim that by downloading articles from Sci-Hub, malicious software and malware will automatically be downloaded, although most antivirus and antimalware software deem these sites safe for browsing. Some authorities warn that the manuscripts downloaded from Sci-Hub could

be truncated and incomplete.

Sci-Hub was first sued in 2015 by Elsevier in one of the most important copyright cases of the century. Sci-Hub was found to have infringed Elsevier's copyright in that case and was fined \$15 million. The Sci-Hub domains were blocked by ISPs in Sweden, the United Kingdom, Russia, Belgium, and France following lawsuits in Europe. Libgen and Sci-Hub are also on the European Commission's piracy watch list. Sci-Hub and Libgen constantly change their URLs to avoid ISP blocking challenges by utilizing ever-shifting domains and untraceable VPN servers. Furthermore, academicians from developed countries constantly assist Sci-Hub by uploading the latest research publications to strengthen their databases. Libgen and Sci-Hub have now become the Robinhood of Science, stealing manuscripts from wealthy journals, and storing them on public servers for the needy and poor.

Overall, the legality of Sci-Hub is a complex and ongoing issue, with legal challenges and decisions varying by country. While some argue that Sci-Hub provides a valuable service by making scientific research more accessible, others argue that it violates copyright laws and threatens the financial viability of scientific publishers.

There are legal ways to access scientific manuscripts, such as using free browser extensions such as CORE discovery, Unpaywall, and Open Access button. The Facebook group "Paper Request" is run by academicians to help researchers gain access to scientific manuscripts. Google Scholar has started compiling all free versions available to any manuscript available to readers through the "All versions" option. Furthermore, there are research platforms like ResearchGate where articles can be downloaded or requested directly from the author. Though they might not be as fast as a Sci-Hub search, these solutions are legal. Researchers are debating whether they should only be able to access scientific information for a fee or whether they should be able to access it free to citizens who pay for it through their taxes.

Publicly funded research is often published in journals that cost thousands of dollars a year to read. This barrier to access excludes poorer institutions, independent researchers, and the general public from the scientific insights "protected" by this very profitable system. Sci-Hub and Libgen provide readers with free access to these resources without commercial interest. Some authors claim that journals charge exorbitantly, although the researcher generates the knowledge, and the reviewers are not paid for the peer-review process. So, it is a case of academic exploitation and restricting research in paywall servers for only the wealthy. The publish-or-perish model of academia sustains large publishing monopolies and their "authority of knowledge."

The pay-for-knowledge model has fueled inequalities in science and technology. The government needs to address this by negotiating with these academic journals to establish affordable subscriptions throughout the country. Meanwhile, Sci-Hub seems to be the only solution for needy researchers and Libgen for those students who cannot afford books. In general, the Sci-Hub project has significantly impacted research in Pakistan, as it has provided researchers with access to articles and journals that are not available through the HEC Digital Library. While the HEC does not condone the use of Sci-Hub, it has recognized the project's role in promoting research in the country. Although it can potentially increase the accessibility of scientific research, it also threatens the financial viability of medical journals and could have negative consequences for the scientific community.

## CONFLICT OF INTEREST

None declared

## REFERENCES

1. Bohannon J. Who's downloading pirated papers? Everyone. American Association for the Advancement of Science; 2016. <https://doi.org/10.1126/science.352.6285.508>
2. Nazarovets S. Black open access in Ukraine: analysis of downloading sci-hub publications by Ukrainian internet users. arXiv preprint arXiv:180408479. 2018. <https://doi.org/10.15407/scine14.02.019>
3. American Chemical Society wins preliminary finding against Sci-Hub [press release]. <https://cen.acs.org/web/2017/10/American-Chemical-Society-wins-preliminary.html>