A systematic examination of preprint platforms for use in the medical and biomedical sciences setting

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ABSTRACT

Objectives

The objective of this review is to identify all preprint platforms with biomedical and medical scope and to compare and contrast the key characteristics and policies of these platforms. We also aim to provide a searchable database to enable relevant stakeholders to compare between platforms.

Study Design and Setting

Preprint platforms that were launched up to 25th June 2019 and have a biomedical and medical scope according to MEDLINE’s journal selection criteria were identified using existing lists, web-based searches and the expertise of both academic and non-academic publication scientists. A data extraction form was developed, pilot-tested and used to collect data from each preprint platform’s webpage(s). Data collected were in relation to scope and ownership; content-specific characteristics and information relating to submission, journal transfer options, and external discoverability; screening, moderation, and permanence of content; usage metrics and metadata. Where possible, all online data were verified by the platform owner or representative by correspondence.

Results

A total of 44 preprint platforms were identified as having biomedical and medical scope, 17 (39%) were hosted by the Open Science Framework preprint infrastructure, six (14%) were provided by F1000 Research Ltd (the Open Research Central infrastructure) and 21 (48%) were other independent preprint platforms. Preprint platforms were either owned by non-profit academic groups, scientific societies or funding organisations (n=28; 64%), owned/partly owned by for-profit publishers or companies (n=14; 32%) or owned by individuals/small communities (n=2; 5%). Twenty-four (55%) preprint platforms accepted content from all scientific fields although some of these had restrictions relating to funding source, geographical region or an affiliated journal’s remit. Thirty-three (75%) preprint platforms provided details about article screening (basic checks) and 14 (32%) of these actively involved researchers with context expertise in the screening process. The three most common screening checks related to the scope of the article, plagiarism and legal/ethical/societal issues and compliance. Almost all preprint platforms allow submission to any peer-reviewed journal following publication, have a preservation plan for read-access, and most have a policy regarding reasons for retraction and the sustainability of the service. Forty-one (93%) platforms currently have usage metrics, with the most common metric being the number of downloads presented on the abstract page.

Conclusion

A large number of preprint platforms exist for use in biomedical and medical sciences, all of which offer researchers an opportunity to rapidly disseminate their research findings onto an open-access public server, subject to scope and eligibility. However, the process by which content is screened before online posting and withdrawn or removed after posting varies between platforms, which may be associated with platform operation, ownership, governance and financing.

Keywords: Biomedicine, Medicine, Preprint, Preprint platform, Preprint server, Review, Scholarly Publishing
What is already known on this topic

- In concurrence with an increase in the number of preprint servers and platforms supporting biomedical and medical sciences research since 2013, there has been substantial growth in the number of preprints posted in this research area.

- The significant benefits of accelerated dissemination of research that preprints offer has attracted the support of many major funders.

- The raised profile of preprints has led to their wider acceptance in institutional and individual level assessment.

What this study adds

- This is the first full examination of the characteristics and policies of 44 preprint platforms with biomedical and medical scope. We use a robust methodological approach to extract relevant information from web-based material with input from preprint platform owners.

- Despite concerns regarding the permanence and quality of preprints, most preprint platforms have long-term preservation strategies and many have screening checks (for example, a basic check for the relevance of content) in place. For some platforms, these checks are performed by researchers with content expertise.

- We provide a searchable database as a valuable resource for researchers, funders and policymakers in the biomedical and medical science field to determine which preprint platforms are relevant to their research scope and which have the functionality and policies that they value most.
Introduction

A preprint is an non-peer reviewed scientific manuscript that authors can upload to a public preprint platform and make available almost immediately without formal external peer review. Posting a preprint enables researchers to ‘claim’ priority of discovery of a research finding; this can be particularly useful for early-career researchers in a highly competitive research environment. Some preprint platforms provide digital object identifier (DOIs) for each included manuscript. This information can be included in grant applications. Indeed, progressive granting agencies are recommending applicants include preprints in their applications (e.g., National Institutes of Health (NIH, USA) [1] and in the UK, preprints are becoming recognised as eligible outputs in the Research Excellence Framework (REF) exercise which assesses institutional research performance [2].

Preprints have been widely used in the physical sciences since the early 1990s, and with the creation of the repository of electronic articles, arXiv, over 1.6 million preprints or accepted/published manuscripts have been deposited on this platform alone [3]. Since September 2003, arXiv has supported the sharing of quantitative biology preprints under the q-bio category. The use of preprints in biomedical sciences is increasing, leading to the formation of the scientist-driven initiative ASAPbio (Accelerating Science and Publication in biology) to promote their use [4]. A preprint platform dedicated to life-science-related research (bioRxiv) founded in 2013 has already attracted nearly 80,000 preprints [5]. This platform was set up to capture science manuscripts from all areas of biology, however, medRxiv was launched in June 2019 to provide a dedicated platform and processes for preprints in medicine and health related sciences [6] and it already hosts over 3400 preprints, becoming particularly popular with COVID-19. The Center for Open Science [7] has also developed web infrastructure for these new ‘Rxiv’ (pronounced “archive”) services [8], while F1000 Research Ltd has provided instances of its post-publication peer review and publishing platform for use by several funders (e.g. Wellcome Trust) and research institutions to encourage preprint-first research publishing [9]. Recently, several large publishers (Springer Nature, Wiley, Elsevier) have developed, co-developed or acquired preprint platforms or services, and in April 2020, SciELO launched a preprint platform that works with Open Journal Systems [10]. Many other preprint platforms also support dissemination of biomedical and medical sciences within their broader multi-disciplinary platforms.
Given the increase in the use and profile of preprint platforms, it is increasingly important to identify how many such platforms exist and to understand how they operate in relation to policies and practices important for scientific publishing. With this aim in mind, we conduct a review to identify all preprint platforms that have biomedical and medical science scope and contrast them in terms of their unique characteristics and policies. We also provide a searchable repository of the platforms identified so that researchers, funders and policymakers have access to a structured approach for identifying preprint platforms that are relevant to their research area.

**Terminology**

We define a preprint according to the COPE (Committee of Publication Ethics) definition:

“A preprint is a scholarly manuscript posted by the author(s) in an openly accessible platform, usually before or in parallel with the peer review process.” [11].

Any platform or server that hosts a collection of preprints will be referred to as a **preprint platform**. We use ‘platform’ instead of ‘server’ because, within this definition, we include both servers with no dedicated formal peer-review service and platforms where a manuscript has been submitted for peer review and is openly available to view before the peer review is formally complete.

**Methods**

**Preprint platform identification**

A preliminary list of potentially relevant preprint platforms was identified using Martyn Rittman’s original list [12] and extended using a basic *Google* web-search using the search term ‘preprint’ and the knowledge of the Steering Group (study authors) and Amy Riegelman, University of Minnesota, containing academic experts in publication science and innovators in the promotion of preprints. Additional preprint platforms that were launched up to 25th June 2019 were included if we became aware of them during assessment via our network or contact with platform owners.

**Preprint platform selection**

We included any preprint platform that has biomedical or medical scope according to MEDLINE’s journal selection criteria [13]. Generally this covers: “[manuscripts] predominantly devoted to reporting original investigations in the biomedical and health sciences, including”
research in the basic sciences; clinical trials of therapeutic agents; effectiveness of diagnostic or therapeutic techniques; or studies relating to the behavioural, epidemiological, or educational aspects of medicine.”

We aimed to be over-inclusive such that preprint platforms that hosted work within the above MEDLINE definition of scope amongst a broader scope (such as “all physical, chemical and life sciences”) were included. Eligibility of preprint platforms was arrived at in discussion with two authors (JJK and NP) and independently approved by the Steering Group. Preprint platforms were excluded for any of the following reasons: they were no longer active (as of June 25, 2019); they were print only or had no web-presence (‘offline’); their primary function was classed as a general purpose repository with no specific preprint functionality.

**Data extraction items**

A data collection form was developed by the Steering Group which aimed to capture both preprint platform characteristics and policies. The form was pilot-tested with bioRxiv and revised accordingly following discussion with the platform owner. The final agreed data collection form is available online in Zenodo repository [14]. In brief, we extracted information on the preprints scope, ownership, governance, indexing and citation identifiers, submission formatting, visibility/versioning, article processing charges, publication timings, editorial board membership and for-profit or not-for-profit status. We also collected data on any checking/screening before preprint posting, open access/copyright and licensing options, sustainability and long-term preservation strategies, usage metrics and the simultaneous deposition policy relating to a manuscript submitted to a journal and the manuscript on the platform, and, if appropriate, policies about the deposition of accepted and published papers onto the platform.

**Data extraction process**

A single researcher (JJK, NP, FM) completed the data extraction for each platform using information found on the platform’s website where content was directly accessible or found on associated webpages provided by the platform (for example, the ‘About’ pages for many OSF platforms linked to external websites provided by the platform operators). Verbatim text from the online search was recorded alongside any relevant web links. The completed data extraction form was then sent to the platform contacts (usually the platform owner), who were asked to check the data for completeness, fill in any missing fields and respond to any queries. On receiving the responses from the platforms, the researcher updated the data form, in some cases
simplifying the text records into categorised information. These data were then returned to the platform to confirm the data were accurate and as complete as possible, and these records were then recorded as ‘verified by the platform representative/owner’.

If no contact with the platform was established, a second researcher (JJK, NP, FM) independently completed the data extraction using information found on the platform’s website and consensus was reached on the final agreed responses following discussion. The completed data form was sent to the platforms informing them that the included information would be presented about their platform as ‘unverified’ data. The deadline for preprint platforms to approve any information and to confirm that all data could be shared publicly was 19th January 2020. Further datasets and records were updated with information provided up to 27th January 2020, and are available on the Zenodo repository [14].

**Reporting of results**

The preprint platform characteristics and policies were summarised descriptively and divided into preprint platforms (i) hosted on the Open Science Framework (OSF) Preprints infrastructure, (ii) provided by the Open Research Central infrastructure, and (iii) all other eligible platforms. Characteristics are presented as: (a) the scope and ownership of each platform; (b) content-specific characteristics and information relating to submission, journal transfer options, and external discoverability; (c) screening, moderation, and permanence of content; (d) usage metrics and other features; and (e) metadata.

**Results**

From all sources, ninety potentially eligible preprint platforms were identified for this review, although 46 were excluded based on scope (n=23), inactivity (n=13), no online presence (n=5) or were general repositories (n=5) (Figure 1). A list of excluded preprint platforms can be found in Supplementary Table 1. Of the 44 included preprint platforms, 17 were hosted by the OSF preprint infrastructure (although MarXiv is no longer part of the OSF family), six were provided by the Open Research Central infrastructure and 21 were other independent preprint platforms (Figure 1). Of the 21 independent preprints platforms, four were First Look platforms (Cell Press Sneak Peek, Preprints with the Lancet, NeuroImage: Clinical, and Surgery Open Science). Whilst meeting the criteria for inclusion in this review, PeerJ Preprints decided to accept no new preprints after 30th September 2019. Thirty-eight (86%) of the 44 preprint platforms verified their own data. We present the data tables in this manuscript, though all tables and raw data are
available in the Zenodo repository [14]. A searchable database of all the preprint platform information is also available (https://asapbio.org/preprint-servers).

**Scope and ownership of preprint platforms (Table 1)**

Twenty-eight platforms (64%) are owned by non-profit academic groups, scientific societies or funding organisations while two platforms are owned by individuals or small communities (Frenxiv and ViXra). Fourteen preprint platforms (32%) are affiliated or partly owned by for-profit publishers or companies; however, the preprint service part of their operation was declared as non-profit for three of these (Preprints.org, ESSOAr and MitoFit Preprint Archives). Of the preprint platforms associated with ‘for-profit’ status, only F1000 Research requires authors to pay an article processing charge.

Twenty-four (55%) preprint platforms accepted articles that covered multidisciplinary scope while 20 (45%) were discipline specific (e.g. PsyArXiv for psychological research). Despite the multidisciplinary scope, there were some further restrictions for some of the platforms, for example, there are five regional platforms (AfricArxiv, Arabixiv, Frenxiv, INA-Rxiv, ChinaXiv) aimed mostly at research being conducted in a specific geographical region. The Open Research Central platforms also only accept articles that are funded by certain funders (e.g. Wellcome Open Research platform only accepts research funded by the Wellcome Trust). Some preprint platforms also only allow articles that fit the remit of their affiliated journals (e.g. Cell Press Sneak Peek). Across all platforms, the median time that they have been active is 32 months (range 10 months, medRxiv to 28 years 8 months, arXiv). In that time, over 2.72 million preprints have been posted and in 2020, two platforms (Research Square and bioRxiv) have averaged more than 2,500 biomedical postings per month.

**Submission, journal transfer options and external discoverability (Table 2)**

Where the information is known, all preprint platforms support the English language, and all accept research articles (with the exception of Thesis Commons which accepts only theses). Some platforms also accept other languages and other article types including research presentation slides and posters. Readers can access the full content of articles from all platforms with the exception of JMIR Preprints and some of the First Look platforms (Cell Press Sneak Peek, Preprints with the Lancet and Surgery Open Science) where reader registration is required. All platforms support PDF as the main viewing option, for some platforms this can be viewed in the browser while for others it requires a download. For all platforms, authors can submit
articles using either a Word doc or as a PDF, with many platforms offering authors a choice of licensing, although where authors do not get a choice, the license required is commonly the CC-BY license.

In general, the Open Science Framework (OSF) and many of the other platforms allow authors to submit their articles to any journal although in some cases there is facilitated submission to certain journals, for example, for bioRxiv there is a host of direct transfer journal options. Authors submitting to F1000 Research, the Open Research platforms and all First Look platforms can only submit articles to journals associated with the platform. Where the information is available, all platforms with the exception of Therapoid and ViXra are externally indexed and most are commonly indexed on Google Scholar.

**Screening, moderation, and permanence of content (Table 3)**

Thirty-three (75%) preprint platforms provided some detail about article screening, while two (FocUS Archive and SocArxiv) do mention checks although the details of such checks are unknown. Therapoid does not perform any screening checks but relies on a moderation process by site users following article posting and ViXra does not perform screening checks but will retract articles in response to issues. Fourteen (32%) preprint platforms that perform screening checks actively involved researchers with content expertise in this process. The three most common screening checks performed related to scope of the article (e.g. scientific content, not spam, relevant material, language), plagiarism and legal/ethical/societal issues and compliance. Only three preprint platforms (Research Square, bioRxiv and medRxiv) check whether the content is dangerous to human health.

All F1000 platforms (inclusive of Open Research ones), MitoFit Preprint Archives, PeerJ Preprints and Preprints.org describe policies online in relation to NIH guidance for reporting preprints [15] with regards to plagiarism, competing interests, misconduct and all other hallmarks of reputable scholarly publishing. Some preprint platforms do have policies but fall short of transparently making these policies visible online while some platforms have no policies. If content is withdrawn, some platforms ensure that the article retains a web presence (e.g. basic information on a tombstone page) although this was not standard across all platforms. Almost all platforms have a preservation plan (or are about to implement) for read access. Most commonly, platforms have set up an archiving agreement with Portico. Others have made their own arrangements: as a notable example, the OSF platforms are associated with a preservation


fund provided by the Center for Open Science (COS) to maintain read access for over 50 years. In addition, most platforms have details on the sustainability of the service, for the OSF platforms this come from an external source (e.g. grants to support the COS framework), while for the Open Research Central infrastructure platforms this comes from article processing charges covered by the respective funding agencies. For some of the other platforms, funding is received from either internal or external sources or from other business model services (e.g. from associated journal publishing).

**Usage metrics and other features (Table 4)**

With the exception of arXiv and MitoFit Preprint Archives (Therapoid metrics arriving soon), all preprint platforms have some form of usage metrics, and apart from JMIR Preprints and ViXra all provide the number of article downloads on the abstract page. The OSF preprints are limited to downloads but the Open Research Central platforms also include the number of views, number of citations and altmetrics, whilst some of the independent platforms also include details of social media interactions direct from the platform (as opposed to the altmetric attention score). Most platforms (n=33; 75%) have some form of commenting and onsite search options (35; 80%), and some (mostly but not exclusively to the independent platforms) have alerts such as RSS feeds or email alerts.

**Metadata (Table 5)**

Forty (91%) of platforms provided information on metadata and all provide the manuscript title, publication date, abstract, and author names in the metadata. Nearly all of these with the exception of SciELO Preprints provide a DOI or other manuscript identifier as well. The majority also offer subject categories (n=34) and license information (n=26) but less than half include author affiliations (n=17) and funder acknowledgements (n=13). Eleven platforms (all six platforms under the Open Research Central infrastructure, Authorea, bioRxiv, ChemRxiv, F1000 Research, Research Square) offer full-text content, but only five include references in the metadata. Half of the platforms (n=22) offer a relational link to the journal publication (if it exists) in the metadata.

**Discussion**

Forty-four preprint platforms were identified that considered biomedical and medical scope. This review characterises each of these preprint platforms such that authors can make a more
informed choice about which ones might be relevant to their research field. Moreover, funders can use the data from this review to compare platforms if they wish to explicitly support and/or encourage their researchers to use certain platforms.

Preprint platforms are fast evolving and despite our cutoff of 25th June 2019, we are aware of new eligible preprint platforms that have been or are about to be launched after this date, for example Open Anthropology Research Repository (OARR) [16] and Cambridge Open Engage [17]. However, the recent advancements in the number of preprint platforms in this field has meant that one platform in this review (PeerJ Preprints) ceased to accept new preprints from the end of September 2019 to focus on their peer-reviewed journal activities [18]. Through our searchable database (https://asapbio.org/preprint-servers), we will endeavour to keep this information up-to-date.

Due to the lack of formal external peer review, preprint platforms that include medical content have been criticised as they may lack quality which can lead to errors in methods, results and interpretation, which subsequently has the potential to harm patients [19, 20]. This review has demonstrated the reality that many preprints do undergo some sensible checks before going online, in contrast to the perception that preprints are not reviewed at all. Research Square, bioRxiv and medRxiv check specifically if there is potential harm to the preprints’ dissemination before peer review. Research Square also offers a transparent checklist to indicate the status of various quality assurance checks (not equivalent to scientific peer review) for each preprint.

Empirical evidence to support the use of editors and peer reviewers as a mechanism to ensure the quality of biomedical research is relatively weak [21, 22] although other studies have rendered peer review as being potentially useful [23, 24]. This review provides some justification that preprint platforms might be a reasonable option for researchers, especially given the time spent and associated cost of peer review [25]. In a recent survey of authors that have published with F1000 Research, 70% of respondents found the speed of publication to be important or very important [26]. In some scenarios, the time to deliver research findings may be as equally as important as research quality, and may be critical to health care provision. A good example of this is the current outbreak of novel coronavirus, where much of the preliminary evidence has been made available through preprints at the time of the World Health Organisation declaring the epidemic a public health emergency [27]. The issue of preprints being available before peer review, and also the level of screening before a preprint is posted, has been particularly pertinent in this case. As an example, bioRxiv has rapidly adapted to ensure users appreciate there has not been any peer review of the COVID-19-related work presented on this platform. In light of
COVID-19, people including the patients and the public might be interested in a quick and easy way to search across platforms. As a start at improving discoverability, Europe PMC aggregates preprints from several repositories and already nearly 3000 preprint articles with ‘COVID-19’ in the title are listed [28].

Strengths and limitations of the study

The strength of this study is that we developed robust methodology for systematically identifying relevant preprint platforms and involved platform owners/representatives wherever possible to verify data that was either unclear or not available on platform websites, and when this was not possible, a second researcher was involved in the data acquisition process. Systematically identifying web-based data that is not indexed in an academic bibliographic database is challenging [29], though the methods employed here are compatible with the principles of a systematic search: the methods are transparent and reproducible. This approach builds on the work by Martyn Rittman to produce an earlier list of preprint servers [12], the process behind which did not use systematic methods or involve platform owners as far as we are aware.

We undertook an internal pilot of developing and testing out the data collection form in collaboration with a preprint platform owner (John Inglis, bioRxiv, medRxiv) and ASAPbio staff and funders (promoters of preprint use) in order to ensure that the list of characteristics collected was both complete and relevant to different stakeholder groups including academics and funders. Many of the general policy information for some platforms was not well-reported or easy to find online and therefore an unexpected but positive by-product of this research is that several of these platforms have updated their webpages to improve the visibility and transparency of their policies in response to this research. Similarly, some platforms became aware of policy attributes that they had not previously considered and are now in the process of considering these for future implementation.

One limitation is that we focussed our attention on the ‘main’ preprint article although in some cases different policies existed for the supplementary material, e.g. acceptable formats and licensing options. This level of detail will be included in our searchable database. Another potential shortcoming was that some preprint platforms had a partner journal and without verification it was sometimes unclear if the policy information related to the journal, preprint platform or both. Finally, we defined preprint platforms as hosting work before peer review is formally complete and we acknowledge that some platforms included here also host content that
Implications for authors of biomedical and medical research

With the increase in the number of preprint platforms available in the biomedical and medical research field, authors have the option to make publicly available and gain some early ownership of their research findings with little or no cost to themselves. Moreover, with many preprints platforms there is little restriction with regards to authors later publishing their preprints in peer-reviewed journals of their choice. While we did not tabulate information on this specifically, it was noted that some platforms (notably OSF platforms) did recommend that authors check the SHERPA/RoMEO service for details of a journal’s sharing policy. There is also some evidence that pre-printing an article first may even boost citation rates [31] due to increased attention from tweets, blogs and news articles than those articles published without a preprint. With many platforms carrying out suitable quality-control checks and having long-term preservation strategies, preprint platforms offer authors direct control of the dissemination of their research in a rapid, free and open environment. As well as primary research, preprints are also vital to users of research (systematic reviewers and decision makers). As an example, a living mapping systematic review of ongoing research into COVID-19 is currently being undertaken, and almost all included studies to date have been identified through preprint platforms [32].

Implications for preprint platforms

There has been a sharp rise in the number of preprints being published each month and it has been estimated (as of June 2019), preprints in biology represents approximately 2.4% of all biomedical publications [33]; and as of April 2020 there are already over 2.72 million preprints in the platforms that we evaluated. This review has summarised the key characteristics and policies of preprint platforms posting both medical and biomedical content although there is a need for some of these platforms to update their policies and to make them more transparent online. As preprints are not formally validated through peer review, it is important to make it clear that their validity is less certain than for peer-reviewed articles (although even the latter may still not be valid). There is perhaps a growing need to standardise the checking process across platforms; such a process should not diminish the speed of publication (what authors value most about a preprint [22]). There is the temptation of making the checking process more rigorous, e.g. by including relevant researchers within the field as gatekeepers. However, this
may slow down the process of making scientific work rapidly available and may promote groupthink, blocking innovative contrarian ideas to be circulated for public open review in the preprint platforms. Based on current checks, our review shows that most preprint platforms manage to post preprints within 48 hours and all within a week on average. Further challenges may arise on resources if the number of preprints continue to rise at a similar rate and the number of new platforms begins to plateau. And now, as several initiatives progress with work to build scientific review directly onto preprints (e.g. Peer Community in [34], Review Commons [35], PREreview [36]), it may become even more important to provide clarity about the level of checks a manuscript has already received and would need to receive to be considered “certified” by the scientific community. If anything, the wide public availability of preprints allows for far more extensive review by many reviewers, as opposed to the typical journal peer-review where only a couple of reviewers are involved. Our review identified 14 platforms linked to for-profit publishers and companies but only F1000 Research currently charges a small article processing charge to authors. With the increase in demand and resources needed to maintain preprint platforms, we should be mindful that article processing charges may change downstream meaning that platforms may have to charge authors; this would be unfortunate in light of the open science movement.

**Conclusion**

One outcome of this review has been to understand the various drivers behind the proliferation of preprint platforms for the life and biomedical sciences. While arXiv, bioRxiv, chemRxiv and medRxiv aim to provide dedicated servers for academics within each field they are dedicated to, several academic groups have offered alternative subject-specific or regional services in line with their own community’s needs, such as sharing work in languages other than English, using the OSF infrastructure. A third provider of preprint platforms is industry stakeholders: as academic publishers providing or acquiring preprint services to support the content they receive as submissions to their journals, and as biotechnology or pharmaceutical companies looking to support the sharing of relevant research content. Whether any platform becomes dominant may be influenced by the communities who adopt them, the influencers who promote them (funders and researchers who influence hiring and promotion decisions) and the financial sustainability underpinning them. We hope that enabling transparency into the processes and policies at each platform empowers the research community (including researchers, funders and others involved in the enterprise) to identify and support the platform(s) that help them to share research results most effectively.
Competing Interests

JP is Executive Director of ASAPbio.

Contributors:

JJK and DM jointly conceived the study and are the guarantors. JJK, DM and NP designed the study methods and developed the data collection form. All authors were involved in identifying eligible platforms. JJK, NP and FM were all involved in data extraction and JJK and NP did the analysis and prepared the data tables. JJK prepared the initial manuscript. All authors were involved in the revision of this manuscript. All authors read and approved the final manuscript and are accountable for all aspects of the work, including the accuracy and integrity.

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[31] Nature Index: Preprints boost article citations and mentions [ONLINE]. Available at: https://www.natureindex.com/news-blog/preprints-boost-article-citations-and-mentions [Accessed 14 April 2020].

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[34] Peer Community in [ONLINE]. Available at: https://peercommunityin.org/ [Accessed 14 April 2020].

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Figure 1: Flow diagram of included preprint platforms covering biomedical and medical scope

- Identified from steering group and existing lists (n=87)
- Newly launched platforms (n=3)
- Potentially eligible platforms (n=90)

Exclusions (n=46)
- Not active: 13
- Not online: 5
- Repository: 5
- Scope: 23 (7 OSF)

Included preprint platforms (n=44)
- OSF communities: 17
- Open research bundles: 6
- Independent platforms: 21

OSF: Open Science Framework
| Platform Name | Description | Scope | Ownership | Technology | Time to publication | Processing Charges |
|---------------|-------------|-------|-----------|------------|---------------------|-------------------|
| OSF Communities | | | | | | |
| AfriArXiv [1] | "Is a free, open source and community-led digital archive for African research" | All scientific fields | O: Small group of enthusiasts | Open Science Framework (open source) | T: A few days | C: No fee to author |
| AgriXiv [2] | "Preprints for Agriculture and Allied Sciences" | Relating to agriculture and allied sciences, including life sciences, medicine and health sciences, social and behavioural sciences | O: Open Access India and small group of enthusiasts | Open Science Framework (open source) | T: Unknown | C: No fee to author |
| ArabiXiv [3] | "The Arabic Preprint Server" | All scientific fields | O: Small group of enthusiasts | Open Science Framework (open source) | T: Up to 48 hours | C: No fee to author |
| EcoEvolutionXiv [4] | "A free preprint service for ecology, evolution and conservation" | Subject-specific, including ecology, evolution and conservation | O: Transparency in Ecology and Evolution | Open Science Framework (open source) | T: Up to 48 hours | C: No fee to author |
| FocUS Archive [5] | "A free preprint service for the focused ultrasound research community" | Relating to ultrasound, including life sciences, medicine and health sciences | O: Focused Ultrasound Foundation | Open Science Framework (open source) | T: Unknown | C: No fee to author |
| FrenchXiv [6] | "The French server for Preprints in all the scientific fields" | All scientific fields | O: Small group of enthusiasts | Open Science Framework (open source) | T: A few days | C: No fee to author |
| INA-Rxiv [7] | "A preprint server for Indonesian academia to provide an open, free and sustainable scientific repository" | All scientific fields | O: Indonesia open science team | Open Science Framework (open source) | T: Unknown | C: No fee to author |
| MarXiv [8] | "The free research repository for the ocean and marine-climate sciences" | Relating to ocean and marine-climate sciences, including life sciences, social and behavioural sciences | O: Open Communications for the Ocean (OCTO group) | Open Science Framework (open source) | T: Up to 48 hours | C: No fee to author |
| MetaXiv [9] | "An interdisciplinary archive of articles focused on improving research transparency and reproducibility" | Relating to meta-science | O: The Berkeley Initiative for Transparency in the Social Sciences (BITSS), Centre for Effective Global Action, University of California, Berkeley | Open Science Framework (open source) | T: Unknown | C: No fee to author |
| **Service** | **Description** | **Related to** | **Owner** | **Type** | **Funding** | **Verification** |
|-------------|-----------------|----------------|-----------|----------|-------------|-----------------|
| MindRxiv [10] | "Open archive for research on mind and contemplative practices" | Relating to mind and contemplative practices, including medicine and health sciences, neuroscience and neurobiology, psychology, social and behavioral sciences | O: Mind Life Institute | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| NutriXx [11] | "A free preprint service for the nutritional sciences" | Relating to nutritional sciences | O: Small group of enthusiasts | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| OSF Preprints [12] | "OSF Preprints is a preprints discovery site, where you can search not only the preprints in all subjects hosted at OSF Preprints, but also preprints on partner sites such as arXiv, ArXiv, engXiv, PsyArXiv and SocArXiv." | All scientific fields | O: Center for Open Science | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| PaleonXx [13] | "...is a free, open source and community-led digital archive for paleontology research." | Relating to paleontology and paleobiology research | O: Small group of enthusiasts | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| PsyArXiv [14] | "...is designed to facilitate rapid dissemination of psychological research" | Relating to psychology and psychological sciences | O: Society for the Improvement of Psychological Science (SIPS) | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| SocArXiv [15] | "...open archive of the social sciences" | Relating to social sciences including social and behavioral sciences | O: University of Maryland, College Park (UMD) | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| SportRxiv [16] | "...is the first community-led and open access subject repository dedicated to sport, exercise, performance, and health research" | Relating to sports and exercise science, including rehabilitation and therapy, theatre, dance, physiology, physiotherapy, psychology, sociology | O: Society for Transparency, Openness, and Replication in Kinesiology (STORK) | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| Thesis Commons [17] | "An open archive of theses" | All scientific fields | O: Center for Open Science and small group of enthusiasts | T: Open Science Framework (open source) | F: Non-profit or not-for-profit | T: Unknown |
| Open Research Central infrastructure | | | | T: Unknown | C: No fee to author | |
| Date of Publication | Source                                    | Description                                                                 | Funding Organization/Funder | Membership Organization | Publication Type       | Access Fee                  | Access Restrictions          |
|---------------------|-------------------------------------------|------------------------------------------------------------------------------|-----------------------------|-------------------------|-------------------------|-----------------------------|------------------------------|
| 19 February 2019    | [20] Gates Open Research [20]              | "...a platform for rapid author-led publication and open peer review of research funded by the Bill & Melinda Gates Foundation" | O: Bill and Melinda Gates Foundation | T: Custom F1000 software (closed source) | T: Up to 1 week | C: No fee to author [APC] between $150-$1500 paid by the Gates Foundation | C: Author fee applies [min £120; max £800], £20 per poster, slide or document |
| 06 November 2017    | [21] HRB Open Research [21]               | "...a platform for HRB-funded [Health Research Board] researchers to rapidly publish their research outputs in an open and accessible way" | O: Health Research Board Ireland | T: Custom F1000 software (closed source) | T: Up to 1 week | C: No fee to author [APC] between £116-£775 paid by HRB | T: Up to 1 week |
| 15 November 2016    | [22] MNI Open Research [22]               | "...a platform for rapid publication and open peer review of research conducted by MNI [Montreal Neurological Institute] and Hospital researchers" | O: Montreal Neurological Institute and Hospital, McGill University | T: Custom F1000 software (closed source) | T: Up to 1 week | C: No fee to author [APC] between €123-€618 paid by MNI | T: Up to 1 week |
| 15 November 2016    | [23] Welcome Open Research [23]            | "A new way for Wellcome-funded researchers to rapidly publish any results they think are worth sharing" | O: Welcome Trust | T: Custom F1000 software (closed source) | T: Up to 1 week | C: No fee to author [APC] between £116-£775 paid by Welcome | T: Up to 1 week |
| 14 August 1991      | [24] arXiv [24]                           | "Open access to...e-prints..."                                              | O: Cornell University | T: SWORD [open source] | T: A few days | C: No fee to author | T: A few days |
| 06 August 2013      | [25] Authors [25]                         | "...the leading collaborative platform to read, write, and publish research" | O: Atypon [Publisher] | T: SWORD [open source] | T: Same day | C: No fee to author | T: Same day |
| 02 April 2018       | [26] bioRxiv [26]                         | "...a free on line archive and distribution service for unpublished preprints in the life sciences..." | O: Cold Spring Harbor Laboratory (CSHL) | T: Highwire Preprint & BenchPress [proprietary software with some open source components] | T: Up to 48 hours | C: No fee to author | T: Up to 48 hours |
| 02 April 2018       | [27] Cell Press Sneak Peek [27]            | "...an author opt-in preview of the papers under review in [Cell Press] primary research journals" | O: Elsevier | T: Highwire Preprint & BenchPress [proprietary software with some open source components] | T: A few days | C: No fee to author | T: A few days |
| 15 August 2017      | [28] ChemRxiv [28]                        | "...a free submission, distribution and archive service for unpublished preprints in chemistry and related areas..." | O: American Chemical Society, German Chemical Society, and Royal Society of Chemistry | T: Highwire Preprint & BenchPress [proprietary software with some open source components] | T: Up to 48 hours | C: No fee to author | T: Up to 48 hours |

Others

- aXiv, arXiv [24]: "Open access to...e-prints..." Multiple scientific fields, including quantitative biology
- Authors [25]: "...the leading collaborative platform to read, write, and publish research" All scientific fields
- bioRxiv [26]: "...a free on line archive and distribution service for unpublished preprints in the life sciences..." Broad life & biomedical research [from an imal behaviour and cognition to zoology]
- Cell Press Sneak Peek [27]: "...an author opt-in preview of the papers under review in [Cell Press] primary research journals" Subject-specific, including cancer; stem cell; neuroscience; cell development; biology; immunity
- ChemRxiv [28]: "...a free submission, distribution and archive service for unpublished preprints in chemistry and related areas..." Subject-specific, including biological and medicinal chemistry
ChinaXiv [29]  
[25 January 2016; 13,561]  
"... is an open repository of Chinese scientific research papers in the field of natural sciences"  
All scientific fields  
O: Chinese Academy of Sciences  
OT: Academic institution  
P: Non-profit or not-for-profit  
T: Java, SQL server [closed source]  
C: No fee to author  
T: Unknown

Earth and Space Science Open Archive [ESSOA] [30]  
[11 February 2018; 671]  
Verified  
"... is a community server established to accelerate the open discovery and dissemination of Earth and space science"  
Relating to earth, environmental, and space sciences (subject-specific topics include biology, microbiology and public health)  
O: American Geophysical Union [AGU], Wiley  
OT: Scientific society; publishing organization [publisher]  
P: Non-profit or not-for-profit  
T: Abyss/Literatum [closed source]  
C: No fee to author  
T: Unknown

F1000 Research [31]  
[13 July 2012; 3,226]  
Verified  
"... is an Open Research publishing platform for life scientists, offering immediate publication of articles and other research outputs without editorial bias"  
Broad life & biomedical research, including basic scientific, translational and clinical research within the life sciences and medicine  
O: F1000 Research Ltd.  
OT: Publishing organization [publisher]  
P: For-profit  
T: Custom F1000 software [closed source]  
C: Author fee applies [min $150; max $2000 US]

JIR Preprints [32]  
[11 November 2015; Not available]  
"... is a preprint server for pre-publication/pre-review preprints intended for community review as well as a head-of-print accepted manuscripts"  
Broad life & biomedical research  
O: JIR Publications Inc.  
OT: Publishing organization [publisher]  
P: Unknown  
T: Unknown  
C: No fee to author  
T: Unknown

medRxiv [33]  
[25 June 2019; 3,412]  
Verified  
"... is a free online archive and distribution server for complete but unpublished manuscripts [preprints] in the medical, clinical, and related health sciences"  
Broad medical, clinical and related health sciences  
O: Cold Spring Harbor Laboratory (CSHL), Yale University & BNI  
OT: Academic institution  
P: Non-profit or not-for-profit  
T: Highwire Preprint & BenchPress [proprietary software with some open source components]  
C: No fee to author  
T: Unknown

MBoP Preprint Archives [34]  
[12 February 2019; 15]  
"Open Access preprint server for mitochondrial physiology and bioenergetics"  
Subject-specific, including mitochondrial physiology, bioenergetics, ergodynamics  
O: Oroborus Instruments  
OT: Life science tech company  
P: Non-profit or not-for-profit  
T: MediaWiki [open source]  
C: No fee to author  
T: Unknown

NeuroImage: Clinical - First Look [35]  
[01 August 2018; 15]  
Verified  
"... is an author opt-in preview of the papers currently under consideration in [NeuroImage: Clinical]"  
Subject-specific, including diseases, disorders and syndromes involving the nervous system, neuroimaging  
O: Elsevier  
OT: Publishing organization [publisher]  
P: For-profit  
T: Unknown  
C: No fee to author  
T: Unknown

PeerJ Preprints [36]  
[04 April 2013; 5,068; note: no new preprints accepted after 30 September 2019]  
Verified  
"... is the 'pre-print' area of PeerJ"  
Biological, medical and environmental sciences, matching scope to PeerJ journal (excludes Clinical Trials, diagnostic, therapeutic or health implications)  
O: PeerJ  
OT: Publishing organization [publisher]  
P: For-profit  
T: Custom PeerJ Preprints software [closed source]  
C: No fee to author  
T: Up to 24 hours

Preprints with The Lancet [37]  
[30 June 2018; 5,073]  
Verified  
"... a place where journals and other research experts identify content of interest prior to publication... Authors have either opted in at submission to The Lancet family of journals to post their preprints on Preprints with The Lancet, or submitted directly via SSRN"  
Medical sciences  
O: Elsevier  
OT: Publishing organization [publisher]  
P: For-profit  
T: Unknown  
C: No fee to author  
T: Up to 2 weeks

PreprintServer [38]  
[02 July 2016; 14,837]  
Verified  
"... is a multidisciplinary preprint platform that makes scientific manuscripts from all fields of research immediately available"  
All scientific fields  
O: Multidisciplinary Digital Publishing Institute (MDPI)  
OT: Publishing organization [publisher]  
P: Non-profit or not-for-profit  
T: Up to 24 hours  
C: No fee to author  
T: Unknown
| Service Provider | Ownership Model | Description | Suggested Wait Time | Fee for Authors |
|------------------|----------------|-------------|---------------------|----------------|
| Research Square  | Custom software (closed source) | All scientific fields | A few days | No fee to author |
| SciELO Preprints  | Custom software (closed source) | Multiple scientific fields including biological, health, human, applied social sciences | A few days | No fee to author |
| SSRN             | Custom software (open source) | Multiple scientific fields including applied sciences, health sciences, life sciences, social sciences | Up to 48 hours | No fee to author |
| Surgery Open Science - First Look | Custom software (open source) | Relating to surgery, matching scope to Surgery journal | A few days | No fee to author |
| Therapod         | Custom software (proprietary software with some open source components) | Relating to pharmaceutical, medical device, and medical/health diagnostic technologies | Same day | No fee to author |
| VIrca            | Custom software (open source) | Multiple scientific fields, including biology | Up to 48 hours | No fee to author |

APC: Article Processing Charge

1 As of 21st April 2020 (accept for SSRN, last verified 11th September 2019); 2 OSF communities are still working out the balance of ownership between service leaders and the Centre for Open Science; 3 Disciplinary scope of server is broader – we list only those relevant to biomedical and health sciences; 4 Based on article length, surcharges may apply for articles with unusually large word counts; 5 MN will pay for one publication per lab only.
| Preprint Server | Major content accepted (level of research, where known) | Content language(s) | Permitted submission formats | Viewing options | Unique identifier (if DOI, prefix in brackets) | Versioning policy / version identifiers | Licensing options | Reader registration required to view or download full text | Journal submission options | Preprint displays link to journal publication | External content indexing (EI) | Metadata availability (MA) | Machine-readable full-text content (MR) |
|-----------------|-------------------------------------------------|---------------------|-----------------------------|-----------------|----------------------------------|--------------------------------------|-----------------|-----------------------------------------------|----------------------------------------|-------------------------------|---------------------------------|------------------------------|-----------------------------|
| **OSF Communities** | | | | | | | | | | | | | |
| Afrixiv [1] – Verified | Any scholarly content | Afrikaans, Akan, English, French, Igbo, Swahili, Zulu, other unspecified native African languages – summary must be provided in English and French; non-English languages held in moderation queue awaiting verification | S: PDF, Word doc, other text formats | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI (10.31730/osf.io) | VP: Accepts any new versions / single DOI retained for all versions | L: Authors are provided with a choice of licenses GNU Lesser General Public License (LGPL) 3.0, BSD 3-Clause "New"/"Revised" License, BSD 2-Clause "Simplified" License, GNU Lesser General Public License (LGPL) 2.1, CC-By Attribution 4.0 International, Artistic License 2.0, CCO 1.0 Universal, Apache License 2.0, Mozilla Public License 2.0, Academic Free License (AFFL), 3.0, Eclipse Public License 1.0, MIT License, GNU General Public License (GPL) 3.0, GNU General Public License (GPL) 2.0 | R: No reader registration required | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None | Facilitated submission to other journals: None | PL: Can be added by author | EI: Google Scholar, SHARE, Microsoft Academic, Unpaywall | MA: Openly available via API | MR: No (planned in development roadmap) |
| Agrixiv [2] – Verified | Research manuscripts only | Cyrillic, English, Indonesian, unknown if others | S: Any format supported by OSF platform | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI (10.31220/osf.io) | VP: Accepts any new versions / single DOI retained for all versions | L: Authors are provided with a choice of licenses CCO 1.0 Universal, CC-By Attribution 4.0 International | R: No reader registration required | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None | Facilitated submission to other journals: None | PL: Can be added by author | EI: Google Scholar, SHARE, Microsoft Academic, Unpaywall | MA: Openly available via API | MR: No (planned in development roadmap) |
| Arabixiv [3] – Verified | Any scholarly content | Arabic, English | S: PDF | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI (10.31221/osf.io) | VP: Accepts any new versions / single DOI retained for all versions | L: Authors are provided with a choice of licenses No license, GNU Lesser General Public License (LGPL) 3.0, BSD 3-Clause "New"/"Revised" License, BSD 2-Clause "Simplified" License, GNU Lesser General Public License (LGPL) 2.1, CC-By Attribution 4.0 International | R: No reader registration required | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None | Facilitated submission to other journals: None | PL: Can be added by author | EI: Google Scholar, SHARE, Microsoft Academic, Unpaywall | MA: Openly available via API | MR: No (planned in development roadmap) |
| Journal Name                  | License Details                                                                 | Submission Options                    |
|------------------------------|---------------------------------------------------------------------------------|----------------------------------------|
| EcotevRx [4] – Verified       | Public License [GPL] 2.1, CC-By-Attribution 4.0 International, Artistic License 2.0, CCO 1.0 Universal, Apache License 2.0, Mozilla Public License 2.0, Academic Free License [AFL] 3.0, Eclipse Public License 1.0, MIT License, GNU General Public License [GPL] 3.0, GNU General Public License [GPL] 2.0 | Journal submission: Unrestricted - manuscript can be published in any destination. Journals directly associated with platform: None. Facilitated submission to other journals: None. PI: Can be added by author. |
| Focus Archive [5] – Verified  | Unknown                                                                         | Journal submission: Unrestricted - manuscript can be published in any destination. Journals directly associated with platform: None. Facilitated submission to other journals: None. PI: Can be added by author. |
| Frenxiv [6] – Verified         | All article types, datasets, posters [primary and secondary research]            | Journal submission: Unrestricted - manuscript can be published in any destination. Journals directly associated with platform: None. Facilitated submission to other journals: None. PI: Can be added by author. |
| Platform        | Conditions                                                                 | Journal Submission | Notes                                                                 |
|-----------------|------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------|
| INArxiv [7]     | Multiple types including research manuscripts, essays, datasets, multimedia files; types not accepted are: thesis, report, draft book | Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None. Facilitated submission to other journals: None. PL: Can be added by author. |
| MarXiv [8]      | Any scholarly content                                                        | Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None. Facilitated submission to other journals: None. PL: Can be added by author. |
| MetaArXiv [8]   | Multiple types including manuscripts, theses, conference proceedings, tutorials | Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None. Facilitated submission to other journals: None. PL: Can be added by author. |
| MindRxiv [10]   | Research manuscripts only                                                    | Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None. Facilitated submission to other journals: None. PL: Can be added by author. |
| Platform | Availability | Journal Submission | Facilitated Submission to Other Journals | DOI | License | Other Notes |
|----------|--------------|---------------------|-----------------------------------------|-----|---------|-------------|
| NutriXiv [11] – Verified | Unknown | Unkown | S: Any format supported by OSF platform | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI | MA: Openly available via API | M R: No available via API |
| OSF Preprints [12] – Verified | Multiple types | Any language | S: PDF, Word doc | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI | MA: Openly available via API | M R: No available via API |
| PaleoXiv [13] – Verified | Multiple article types | Any language – non-English languages held in moderation queue awaiting verification | S: PDF, LaTeX, txt | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI | MA: Openly available via API | M R: No available via API |
| PsyArXiv [14] – Verified | Any scholarly content | Unknown | S: PDF, Word doc | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI | MA: Openly available via API | M R: No available via API |
| SocArXiv [15] – Verified | Research manuscripts only | Unknown | S: Any format supported by OSF platform | V: By download in file format submitted by author(s), PDF viewable in browser without download | I: DOI | MA: Openly available via API | M R: No available via API |
| Journal | Article Type | Language | Submission Details | Access | Notes |
|---------|--------------|----------|--------------------|-------|-------|
| SportRxiv [16] – Verified | All article types (including research papers, manuscripts, commentaries, review articles, current opinions, case studies, technical reports, short communications) | Any language — non-English languages held in moderation queue awaiting verification | Journal submission: Unrestricted — manuscript can be published in any destination | Paywall | MA: Openly available via API |
| Thesis Commons [17] – Verified | Theses only | Any language | Journal submission: Unrestricted — manuscript can be published in any destination | Paywall | MA: Openly available via API |
| Open Research Central Infrastructure | All article types (primary and secondary research) | English | Journal submission: Restricted — manuscript can only be published in journal linked to server | Paywall | MA: Available for free upon request |
| AAS Open Research [18] – Verified | All article types | English | Journal submission: Restricted — manuscript can only be published in journal linked to server | Paywall | MA: Available for free upon request |
| AMRC Open Research [19] – Verified | All article types | English | Journal submission: Restricted — manuscript can only be published in journal linked to server | Paywall | MA: Available for free upon request |
| Gates Open Research [20] – Verified | All article types | English | Journal submission: Restricted — manuscript can only be published in journal linked to server | Paywall | MA: Available for free upon request |
| HRB Open Research [21] – Verified | All article types | English | Journal submission: Restricted — manuscript can only be published in journal linked to server | Paywall | MA: Available for free upon request |
| MNI Open Research [22] – Verified | All article types | English | Journal submission: Restricted — manuscript can only be published in journal linked to server | Paywall | MA: Available for free upon request |
| Wellcome Open Research [23] – Verified | All article types | English | Journal submission: Restricted — manuscript can only be published in journal linked to server | Paywall | MA: Available for free upon request |
| Others                        | Research manuscripts only | Any language – abstract must be in English | Journal submission: Unrestricted – manuscript can be published in any destination | Journal submission: Manuscripts must be | Journal submission: Manuscripts must be | Journal submission: Manuscripts must be |
|------------------------------|----------------------------|------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| [24] [Verified]              | [24] [Verified]             | S: PDF, LaTeX, HTML                      | Journals directly associated with platform: None                                | Journals directly associated with platform: None    | Journals directly associated with platform: None    | Journals directly associated with platform: None    |
|                             |                            | V: PDF [and other format(s) as supplied by author] viewable in browser without download | Facilitated submission to other journals: Not available                        | Facilitated submission to other journals: Not available | Facilitated submission to other journals: Not available | Facilitated submission to other journals: Not available |
|                             |                            | I: Platform-specific ID [arXiv ID]       | Pl: Yes, added by platform after one month from publication                  | Pl: Yes, added by platform after one month from publication | Pl: Yes, added by platform after one month from publication | Pl: Yes, added by platform after one month from publication |
|                             |                            | L: Accepts any new versions / each version receives its own non-DOI-Identifiable Identifier |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            | R: No reader registration required      |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
| [25] [Verified]              | [25] [Verified]             | Any language                             |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            | S: PDF, Word doc, LaTeX                  |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            | V: Full-text viewable in browser without PDF (e.g. as HTML) by LaTeX download |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            | I: DOI [10.22541]                       |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            | L: Accepts any new versions / each version receives its own DOI |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            | R: No reader registration required      |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
| [26] [Verified]              | [26] [Verified]             | English – non-English language translations can be included as supplementary files |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             | [primary research only]    | S: PDF, Word doc, WordPerfect            |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             | [primary research only]    | V: By PDF download, PDF viewable in browser without download, full-text viewable in browser without PDF (e.g. as HTML) |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             | [primary research only]    | I: DOI [10.1101]                        |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             | [primary research only]    | L: Accepts new versions until acceptance at journal/ single DOI retained but new versions have distinct URLs |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             | [primary research only]    | R: Authors are provided with a choice of licenses CC0, CC-BY, CC-BY-NC, CC-BY-ND, CC-BY-NC-ND, or no reuse; with no preference for which license chosen |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             | [primary research only]    |                                                                     |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            | R: No reader registration required      |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
| [Content criteria as]        | Content criteria as        | S: PDF                                  |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
|                             |                            |                                                                                  |                                                                                  |                                                                                  |                                                                                  |                                                                                  |
| Platform | Access Type | License | Facilitated Submission to Other Journals | Journal Submission | Metadata Access | Versioning | Platform Licensing | Journal Publishing | Reader Registration | Reader Certification | Archiving | Peer Review |
|----------|-------------|---------|------------------------------------------|--------------------|------------------|-------------|-------------------|-------------------|-------------------|---------------------|-----------|-------------|
| [27] – Verified | directed by associated journals | Cell Press portfolio | Unrestricted - manuscript can be published in any destination | Journal submission: Unrestricted - manuscript can be published in any destination | MA: Unknown | MR: No | No | MA: Openly available via API | MR: If provided by author in machine-readable format | No | Not yet on roadmap |
| ChemRxiv [28] | Research manuscripts only | English | Journal submission: Unrestricted - manuscript can be published in any destination | Journal submission: Unrestricted - manuscript can be published in any destination | MA: Openly available via API | MA: OPEN | V: By PDF download, PDF viewable in browser without download | I: DOI | MR: Yes | No | Not yet on roadmap |
| ChinaXiv [29] | Research manuscripts only | Standard Chinese, English, unknown if other | Journal submission: Unrestricted - manuscript can be published in any destination | Journal submission: Unrestricted - manuscript can be published in any destination | MA: Openly available via API | MA: Openly available via API | V: By PDF download | I: DOI | MR: No | No | Not yet on roadmap |
| EOSOA [30] – Verified | Scholarly research content including manuscripts and posters | English | Journal submission: Unrestricted - manuscript can be published in any destination | Journal submission: Unrestricted - manuscript can be published in any destination | MA: Openly available via CrossRef | MA: Openly available via CrossRef | V: By PDF download | I: DOI | MR: Yes | No | Not yet on roadmap |
| F1000 Research [31] – Verified | Any scholarly content including articles, posters | English | Journal submission: Restricted - manuscript can only be published in journal linked to server | Journal submission: Restricted - manuscript can only be published in journal linked to server | MA: Google Scholar, Europe PMC, SHARE, SciUR, PrePubMed | MA: Google Scholar, Europe PMC, SHARE, SciUR, PrePubMed | V: By PDF download, full-text viewable in browser without PDF, by XML download | I: DOI | MR: Yes | No | Not yet on roadmap |
| Journal | Submission Policy | Access | License | Registration Required | DOI Access | Preprints Policy | Journal Directly Associated With Platform | Favored Content Types | Citations Available | License Options |
|---------|------------------|--------|---------|-----------------------|------------|-----------------|----------------------------------------|----------------------|------------------|------------------|
| JMIR Preprints[32] | Research manuscripts, blog posts, "grey" online reports | Unknown | Yes (XML and HTML) | No reader registration required | DOI (10.2196/preprints.) | Accepted new versions / each version receives its own DOI | JMIR Publications journals | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: JMIR Preprints | Unknown | Yes (XML and HTML) |
| J Neuroimaging: Clinical [35] | Content criteria as directed by associated journal [Neuroimage: Clinical] | Unknown | Yes (XML and HTML) | No reader registration required | DOI (10.1101) | Accepted new versions until acceptance at journal / single DOI retained for all versions | Unknown | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: JMIR Preprints | Unknown | Yes (XML and HTML) |
| medRxiv [33] – Verified | Multiple article types including research articles, systematic reviews and meta-analysis, clinical research design protocols, data articles; types not accepted are: theses, opinion pieces, editorials, narrative reviews, datasets | English | Yes (XML and HTML) | No reader registration required | DOI (10.12688/f1000research) | Accepted any new versions / each version receives its own DOI and own non-DOI citable identifier | Google Scholar, Microsoft Academic Search, Crossref | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None | Unknown | Yes (XML and HTML) |
| MRRPreprint Archives[34] | Any scholarly content (primary and secondary research) | English | Yes (XML and HTML) | No reader registration required | DOI (10.1016/j.preinf.2019.05.028) | Accepted new versions until acceptance at journal / single DOI retained for all versions | Google Scholar | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: None | Unknown | Yes (XML and HTML) |
| Neuroimage: Clinical - First Look [35] | Content criteria as directed by associated journal [Neuroimage: Clinical] | Unknown | Yes (XML and HTML) | No reader registration required | DOI (10.1101) | Accepted any new versions / each version receives its own DOI and own non-DOI citable identifier | Google Scholar | Journal submission: Unrestricted - manuscript can be published in any destination | Journals directly associated with platform: JMIR Preprints | Unknown | Yes (XML and HTML) |
| Preprint | Content Criteria | Submission Details | Available Formats | Licensing | Reader Registration Required | Journal Submission Details | Enhanced Availability Details | Journal Submission Platform | Editorial Availability Details | Facilitated Submission Details | Other Journal Availability Details |
|----------|-----------------|-------------------|-------------------|-----------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|
| Preprints[36] – Verified | Any scholarly content (primary and secondary research) | English | S: PDF V: By PDF download, PDF viewable in browser without download, by XML download I: DOI [10.7287] VP: Accepts any new versions until publication in a journal / each version receives its own non-DOI citable identifier L: Authors are provided with a choice of licenses CC0, CC-BY; with CC-BY preferred R: No reader registration required | Journal submission: Unrestricted – manuscript can be published in any destination Journals directly associated with platform: PeerJ, Facilitated submission to other journals: Unknown PI: Can be added by author or journal | EI: Google Scholar, Europe PMC MA: Openly available via CrossRef MR: No |
| Preprints with The Lancet[37] – Verified | Content criteria as directed by associated journals | Unknown | S: Unknown V: By PDF download, PDF viewable in browser without download I: URL only VP: Accepts first submission only / not applicable L: Unknown R: Reader can view basic content (title, abstract) without account but must register to view and download full content | Journal submission: Manuscripts must be submitted to the Lancet family of journals (including EBioMedicine and Clinical Medicine) first, authors are then provided with the option of displaying their manuscript while under review using SSRN’s ‘First Look’ PI: Can be added by author or journal | EI: Unknown MA: Unknown MR: No |
| Preprints.org[38] | Multiple article types (including research manuscripts, comprehensive reviews, data articles, case reports; types not accepted are: editorials, discussion papers, commentaries, coursework) | English | S: Word doc, LaTeX V: By PDF download I: DOI [10.20944] VP: Accepts any new versions / each version receives its own DOI and own non-DOI citable identifier L: Authors must use CC-BY license R: No reader registration required | Journal submission: Unrestricted – manuscript can be published in any destination Journals directly associated with platform: None PI: Unknown | EI: Google Scholar, PrePubMed, Europe PMC, SHARE, Scilit MA: Openly available via CrossRef MR: No |
| Research Square [39] – Verified | Multiple article types (including research articles, systematic reviews, method articles, data articles; types not accepted are: literature reviews, hypotheses, opinions, theories or commentaries) | English | S: Word doc, LaTeX V: By PDF download, full-text viewable in browser without PDF [e.g. as HTML] I: DOI [10.21203] VP: Accepts any new versions / each version receives its own DOI L: Authors must use CC-BY license R: No reader registration required | Journal submission: Unrestricted – manuscript can be published in any destination Journals directly associated with platform: Submit directly or submit from BMC journals and more from Springer Nature portfolio listed at https://www.researchsquare.com Journals directly associated with platform: None PI: Unknown | EI: Google Scholar, Researcher-app MA: Openly available via CrossRef MR: Yes (HTML) |

This table provides information on various preprint platforms, their content criteria, submission details, available formats, licensing requirements, reader registration, and journal submission details. Each platform has unique features and requirements, such as editorial availability, facilitation of submission to other journals, and licensing agreements.
| Platform                        | Submission Type          | Acceptance | Content Criteria | Journal Submission | Facilitated Submission | Publishing | Registration | Notes |
|--------------------------------|--------------------------|------------|------------------|--------------------|------------------------|-------------|--------------|-------|
| SciELO Preprints [40] –        | Research manuscripts only| Yes, added by platform within one month of publication | Yes, added by platform within one month of publication | Journal submission: Unrestricted – manuscript can be published in any destination | Journals directly associated with platform: None | Yes, added by platform within one month of publication | No reader registration required | Pl: Y, V: PDF or any PDF-convertible format, I: URL only, VP: Accepts any new versions until acceptance at journal/single DOI retained for all versions, L: Authors must use CC-BY license |
| SSRN [41] – Verified           | Multiple types (including research manuscripts, abstracts, editorials, opinion papers) | Unknown  | Unknown           | Journal submission: Unrestricted – manuscript can be published in any destination | Journals directly associated with platform: None | Unknown      | No reader registration required | Pl: Can be added by author or journal |
| Surgery Open Science –        | Content criteria as directed by associated journal | Unknown  | Unknown           | Journal submission: Manuscripts must be submitted to Surgery Open Science first, authors are then provided with the option of displaying the manuscript while under review using SSRN's 'First Look' | Journal submission: Manuscripts must be submitted to Surgery Open Science first, authors are then provided with the option of displaying the manuscript while under review using SSRN's 'First Look' | Unknown      | No reader registration required | Pl: Unknown |
| Therapoid [43] – Verified      | Research manuscripts only (multimedia content accepted in associated discussion forum) | Unknown  | Unknown           | Journal submission: Unrestricted – manuscript can be published in any destination | Journal submission: Unrestricted – manuscript can be published in any destination | Unknown      | No reader registration required | Pl: Yes, added by platform within one month of publication |

Notes: MA: Registry, MR: Reader registration, Pl: Platform, S: Submission, V: Viewable, V: Version, VP: Version publication, L: Location, R: Reader registration.
| Multiple types (including research articles, books, theses) | Any language – English preferred, non-English translations can be provided with English version, as new versions or submitted separately | PDF | By PDF download, PDF viewable in browser without download | URL, Platform-specific ID | Accepts any new versions / each version retains ID with a version number | No reader registration required | Available | Not indexed | Authors can use any license | Can be added by author or journal | Available |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Journal submission: Unrestricted – manuscript can be published in any destination | Journals directly associated with platform: None | Facilitated submission to other journals: Not available | | | | | | | | | |

*Where primary research is research based on empirical data and secondary research is derived from primary research, such as literature reviews and meta-reviews; †See SSRN for general platform information*
| PreprintServer | Stated not peer reviewed on manuscript record webpage [M] / general server webpages [S] | Advisory Board [A]/includes Researchers [R] | Commitment to FAIR (Findable, Accessible, Interoperable and Reusable) principles / Data availability statement [DAS] | Screening checks performed between submitting and posting (stating when this process involves active researchers) | Permanence of content [P] / Reasons for retraction [R] / Web presence of removed content [W] | Mechanisms to report concerns about posted content | Sustainability of the service [S] / Preservation of content [P] |
|----------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| OSF Communities |                                                                                                           |                                             |                                                                                                |                                                                                   |                                                                                               |                                                                                                 |                                                                                                 |
| AfrArxiv [1] – Verified | M: No S: Yes A: Yes R: Yes Yes, endorses, stated on website DAS: Not requested or required |                                             | 'Moderated submission check for quality standard, good scientific practices, open science principles, including data/code availability | P: Permanent with some removal options in extraneous circumstances R: Plagiarism, false or inaccurate content W: Basic information remains on a tombstone page | Email administrator; helpdesk support from COS (Centre for Open Science) | S: COS receive external financial support [e.g. grant, individual]; operators report no sources of income, staffed on voluntary basis P: COS Preservation Fund to maintain read access for 50+ years | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years |
| AgriXiv [2] – Verified | M: No S: No A: Yes R: Yes Yes |                                             | No information | P: Permanent with some removal options in extraneous circumstances R: Plagiarism, false or inaccurate content W: Basic information remains on a tombstone page | Email administrator; helpdesk support from COS | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years |
| Arabxiv [3] – Verified | M: No S: No A: Yes R: Yes A: Unknown DAS: Unknown |                                             | Arabxiv editors check: ensuring it is academic research | P: Permanent with some removal options in extraneous circumstances R: Plagiarism, false or inaccurate content W: Basic information remains on a tombstone page | Email administrator; helpdesk support from COS | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years |
| EcoEvolve [4] – Verified | M: No S: Yes A: Yes R: Yes A: Unknown DAS: Unknown |                                             | Steering committee member (including active researchers) checks: competing interests, plagiarism, misconduct or integrity checks, ethical and legal compliance, funder acknowledgment | P: Permanent with some removal options in extraneous circumstances R: Plagiarism, false or inaccurate content W: Basic information remains on a tombstone page | Email administrator; helpdesk support from COS | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years |
| FocUSArchive [5] – Verified | M: No S: No A: Yes R: Yes Yes |                                             | There is a moderation process, no further information known | P: Permanent with some removal options in extraneous circumstances R: Plagiarism, false or inaccurate content W: Basic information remains on a tombstone page | Email administrator; helpdesk support from COS | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years | S: COS receive external financial support [e.g. grant, individual]; no further information to report from operators P: COS Preservation Fund to maintain read access for 50+ years |
| Preprint | M | S | A | R | DAS | Action | Notes |
|----------|---|---|---|---|-----|--------|-------|
| Fruniv [6] – Verified | M: No | S: No | A: Yes | R: Yes | DAS: Unknown | Email administrator; helpdesk support from COS | S: COS receive external financial support (e.g. grant, individual); nothing to report from operators; P: COS Preservation Fund to maintain read access for 50+ years. |
| INA-Rxiv [7] – Verified | M: No | S: Yes | A: Yes | R: Yes | DAS: Unknown | Email administrator; helpdesk support from COS | S: COS receive external financial support (e.g. grant, individual); service moving to another host; P: COS Preservation Fund to maintain read access for 50+ years. |
| MaxXiv [8] – note: no longer on the OSF – Verified | M: No | S: Yes | A: Yes | R: Yes | DAS: Unknown | Email administrator; helpdesk support from COS; Community moderation via commenting | S: COS receive external financial support (e.g. grant, individual); operation supported by BITSS funders and revenue; P: COS Preservation Fund to maintain read access for 50+ years. |
| MetaMaxXiv [9] – Verified | M: No | S: No | A: Yes | R: Yes | DAS: Not requested or required | Email administrator; helpdesk support from COS | S: COS receive external financial support (e.g. grant, individual); nothing to report from operators; P: COS Preservation Fund to maintain read access for 50+ years. |
| MindRxiv [10] – Verified | M: No | S: Yes | A: Yes | R: Yes | DAS: Not requested or required | Email administrator; helpdesk support from COS | S: COS receive external financial support (e.g. grant, individual); nothing to report from operators; P: COS Preservation Fund to maintain read access for 50+ years. |
| NutrXiv [11] – Verified | M: No | S: No | A: Unknown | R: Unknown | DAS: Unknown | Email administrator; helpdesk support from COS | S: COS receive external financial support (e.g. grant, individual); nothing to report from operators; P: COS Preservation Fund to maintain read access for 50+ years. |
| Repository            | M: | A: | R: | S: | DAS:                  | P: | R: | W: | P: | S: | Email administrator; helpdesk support from COS | P: | M: | S: | Email administrator; helpdesk support from COS | P: | M: | S: | Email administrator; helpdesk support from COS | P: | M: | S: |
|----------------------|----|----|----|----|-----------------------|----|----|----|----|----|-----------------------------------------------|----|----|----|-----------------------------------------------|----|----|----|-----------------------------------------------|----|----|----|
| OSF Preprints        | No | Yes| Yes| Yes| Not requested or required| Permanent with some removal options in extraneous circumstances | Plagiarism, false or inaccurate content | Basic information remains on a tombstone page | COS Preservation Fund to maintain read access for 50+ years |
| PaleorXiv            | No | Yes| Yes| Yes| Not requested or required| A moderator from the PaleorXiv steering committee (including active researchers) checks for plagiarism, relevance of material, ensuring it is academic research | Permanent with some removal options in extraneous circumstances | Plagiarism, false or inaccurate content | Basic information remains on a tombstone page | COS receive external financial support (e.g., grant, individual) | COS Preservation Fund to maintain read access for 50+ years |
| PsyArXiv             | No | Yes| Yes| Yes| Not requested or required| Moderation team checks for: ethical and legal compliance, relevance of material, copyright violations, spam | Permanent with some removal options in extraneous circumstances | Plagiarism, false or inaccurate content | Basic information remains on a tombstone page | COS receive external financial support (e.g., grant, individual) | COS Preservation Fund to maintain read access for 50+ years |
| SocArXiv             | No | Yes| Yes| Yes| Unknown               | There is a moderation process, no further information known | Permanent with some removal options in extraneous circumstances | Plagiarism, false or inaccurate content | Basic information remains on a tombstone page | COS receive external financial support (e.g., grant, individual) | COS Preservation Fund to maintain read access for 50+ years |
| SportRxiv            | No | Yes| Yes| Yes| Not requested or required| SportRxiv editors (including active researchers) check for: basic scientific standards, authors are genuine, all authors provide permission to post | Permanent with some removal options in extraneous circumstances | Plagiarism, false or inaccurate content | Basic information remains on a tombstone page | COS receive external financial support (e.g., grant, individual) | COS Preservation Fund to maintain read access for 50+ years |
| Thesis Commons       | No | Yes| Yes| Yes| Not requested or required| There is no moderation process beyond that for OSF Preprints (OSF staff check for spam) | Permanent with some removal options in extraneous circumstances | Plagiarism, false or inaccurate content | Basic information remains on a tombstone page | COS receive external financial support (e.g., grant, individual) | COS Preservation Fund to maintain read access for 50+ years |
| Open Research Central infrastructure | M: Yes | S: Yes | R: Yes | A: Yes |
|--------------------------------|-------|-------|-------|--------|
| ID | Verification | YES | YES | YES | YES |
| AAS Open Research [18] – Verified | M: Yes | S: Yes | R: Yes | A: Yes |
| AMRC Open Research [19] – Verified | M: Yes | S: Yes | R: Not yet | A: Still finalising advisory board |
| Gates Open Research [20] – Verified | M: Yes | S: Yes | R: Yes | A: Yes |
| HRB Open Research [21] – Verified | M: Yes | S: Yes | R: Yes | A: Not yet |
| MN Open Research [22] – Verified | M: Yes | S: Yes | R: Not applicable | A: Not yet |
| Wellcome Open Research [23] – Verified | M: Yes | S: Yes | R: Yes | A: Yes |

| Others | M: No | S: Yes | R: Yes | A: Yes |
|--------------------------------|-------|-------|-------|--------|
| ID | Verification | YES | YES | YES | YES |
| arXiv [24] – Verified | M: No | S: Yes | R: Yes | A: Yes |
| Authors [25] – Verified | M: No | S: Yes | R: Not applicable | A: No advisory board |
| bioRxiv [26] – Verified | M: Yes | S: Yes | R: Yes | A: Yes |

| F1000's in-house editorial team check for: competing interest declaration, plagiarism, authors are genuine and at least one eligible for platform, authors provide permission to post, ethical and legal compliance, clinical trial registration, data/code availability, minimum reporting standards | Permanent with some removal options in extraneous circumstances | Controversy of copyright, plagiarism, false or inaccurate content, ethical and legal issues | Basic information remains on a tombstone page | Community moderation via commenting |

| Permanent with no removal options as long as archive exists | Permanent with no removal options in extraneous circumstances | Social media is direct with authors (except copyright violations or significant issues) | External financial support | Internal (Cold Spring Harbor Laboratory) and external financial support | Multiyear grant funding from Chan

| Permanent | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists |

| Permanent with some removal options in extraneous circumstances | Controversy of copyright, plagiarism, false or inaccurate content, ethical and legal issues | Basic information remains on a tombstone page | Community moderation via commenting | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances |

| Permanent | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with withdrawal options and (rare) removal in extraneous circumstances | Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists |

| Permanent with no removal options as long as archive exists | Policy not yet in place | Not applicable (at this time) | Permanent with no removal options as long as archive exists | Policy not yet in place | Not appl...
| Journal                        | M: Yes | S: Yes | R: Yes | A: Yes | Unknown | P: Unknown | R: Unknown | W: Unknown | Z: Unknown |
|-------------------------------|-------|--------|--------|-------|---------|------------|-----------|------------|-----------|
| Cell Press Sneak Peek         | M: Yes| S: Yes | R: Yes | A: Yes| Unknown | P: Unknown | R: Unknown | W: Unknown | Z: Unknown |
| ChemRxiv [28]                | M: Yes| S: Yes | R: Yes | A: Yes| Unknown | P: Unknown | R: Unknown | W: Unknown | Z: Unknown |
| ChinaXiv [29]                | M: No | S: No  | A: Yes | R: Yes| Unknown | P: Unknown | R: Unknown | W: Unknown | Z: Unknown |
| ISSOA Ar [30] – Verified      | M: Yes| S: Yes | R: Yes | A: Yes| Unknown | P: Unknown | R: Unknown | W: Unknown | Z: Unknown |
| F1000 Research [31] – Verified| M: Yes| S: Yes | R: Yes | A: Yes| Unknown | P: Unknown | R: Unknown | W: Unknown | Z: Unknown |
| Preprint Platform | M: | S: | A: | R: | Notes |
|------------------|----|----|----|----|-------|
| JMI Preprints [32] | No | Unknown | Unknown | Unknown | False or inaccurate content, ethical and legal issues. Basic information remains on a tombstone page. |
| medRxiv [33] – Verified | Yes | Yes | Unknown | Unknown | Submission is checked for: competing interests declared, plagiarism, misconduct or integrity checks, minimal reporting standards, ethical and legal compliance, clinical trial registration, funder acknowledgment, submission is within scope and no danger to human health. |
| MbioArXiv Preprint Archives [34] | Yes | Yes | Yes, endorsements stated on website | Yes | Permanent with some removal options in extraordinary circumstances. |
| NeuroImage: Clinical - First Look [35] – Verified | Yes | Yes | Unknown | Unknown | No information. |
| PeerJ Preprints [36] – Verified | Yes | Yes | None | Encouraged | PeerJ staff check for: competing interests declared, misconduct or integrity checks, ethical and legal compliance, funder acknowledgment. |

**Notices:**

- M: Manuscript
- S: Supporting Information
- A: Article
- R: Rejected
- P: Permanent
- W: Withdrawn
- DAS: Documentation and Archival Status
- B: Basic Information

**Checking Requirements:**

- Competing interests declared
- Plagiarism
- Misconduct or integrity checks
- Minimal reporting standards
- Ethical and legal compliance
- Clinical trial registration
- Funder acknowledgment
- Submission is within scope
- No danger to human health

**Additional Notes:**

- Basic information remains on a tombstone page.
- Documentation and archival status are required.
- Evidence of competition of interests and misconduct checks.
- Minimal reporting standards and ethical compliance are verified.
- Clinical trial registration is confirmed.
- Funder acknowledgment is included.
- Submission is within scope and not a danger to human health.

**Archival Status:**

- Permanent
- Withdrawn
- Manuscript
- Supporting Information
- Article
- Rejected

**Supporting Information:**

- Supported by

**Verifications:**

- Verified
- Encouraged
- Required
- Recommended
- Active researchers check

**Statements:**

- Endorsed
- Supported by
- Published in PLoS ONE
- Published in European PMC
- Published in Portico
- Published in PubMed
- Published in PMC
- Published in PubMed Central

**Additional Details:**

- DOI
- Data Center
- Backup kept in secondary server
- Scientific Advisory Board
- Peer review
- Email administrator
- Community moderation via commenting
- Other business model not based on direct preprinting charges or associated journal

**Journal Publishing:**

- PeerJ
- Associated journal publishing
| Preprints with The Lancet [37] – Verified | M: Yes | S: Yes | A: Unknown | R: Unknown | W: Unknown | S: Unknown | P: Unknown | R: Unknown | W: Unknown |
|------------------------------------------|-------|-------|-----------|-----------|-----------|----------|-----------|-----------|-----------|
| SSRN staff and a Lancet ed for check for competing interests declared, ethical and legal compliance, funder acknowledgment, clinical trial registration, relevance of material | Unknown | Unknown | Unknown | Unknown | Unknown | Unknown | Unknown | Unknown | Unknown |

| Preprints.org [38] | M: Yes | S: Yes | A: Yes | R: Yes | None as yet | DAS: Encouraged | P: Permanent with some removal options in extraneous circumstances | Email administrator | S: Supported by associated journal publishing (MDPI) | P: Currently no long-term preservation strategy |
|-------------------|-------|-------|-------|-------|-------------|-----------------|------------------|----------------|------------------|----------------|
| Preprints staff and advisory board members [including active researchers] check for: plagiarism (as needed), authors are genuine, ethical and legal compliance, basic scientific content, data/code availability | None as yet | DAS: Not requested or required | In-house editorial team checks for: competing interests declared, plagiarism (only for submissions to BMC journals), ethical and legal compliance, funder acknowledgment, clinical trial registration, relevance of material, basic scientific content, language, potential for harm | None as yet | DAS: Not requested or required | In-house editorial team checks for: competing interests declared, plagiarism, misconduct and integrity checks, ethical and legal compliance, authors are genuine, all authors provide permission to post, clinical trial registration, funder acknowledgment, data/code availability | Permanent with some removal options in extraneous circumstances | Permanent with some removal options in extraneous circumstances | Email administrator | S: Supported by associated journal publishing (MDPI) | P: Currently no long-term preservation strategy |

| Research Square [39] – Verified | M: Yes | S: Yes | A: Not yet | R: Not applicable | None as yet | DAS: Not requested or required | Permanent with some removal options in extraneous circumstances | Email administrator | S: Other business model not based on direct preprinting charges or associated journal publishing [publishing services by Research Square] | P: Preprints permanently archived in Portico |
|--------------------------------|-------|-------|-----------|--------------|-------------|----------------------|------------------|----------------|------------------|----------------|
| In-house editorial team checks for: competing interests declared, plagiarism (only for submissions to BMC journals), ethical and legal compliance, funder acknowledgment, clinical trial registration, relevance of material, basic scientific content, language, potential for harm | None as yet | DAS: Not requested or required | Permanent with some removal options in extraneous circumstances | Email administrator | S: Other business model not based on direct preprinting charges or associated journal publishing [publishing services by Research Square] | P: Preprints permanently archived in Portico |

| SciELO Preprints [40] – Verified | M: No | S: No | A: Yes | R: Yes | Yes, endorses, without stating on website | DAS: Not requested or required | Permanent with some removal options in extraneous circumstances | Email administrator | S: Internal financial support (SciELO program) | P: Plan to use LOCKSS-compatible preservation strategy [once full operation launched] |
|--------------------------------|-------|-------|-------|-------|-----------------|----------------------|------------------|----------------|------------------|----------------|
| SciELO editors [including active researchers] will check for: competing interests declared, plagiarism, misconduct and integrity checks, ethical and legal compliance, authors are genuine, all authors provide permission to post, clinical trial registration, funder acknowledgment, data/code availability | Yes, endorses, without stating on website | DAS: Not requested or required | Permanent with some removal options in extraneous circumstances | Email administrator | S: Internal financial support (SciELO program) | P: Plan to use LOCKSS-compatible preservation strategy [once full operation launched] |

| SSRN [41] – Verified | M: No | S: No | A: Yes | R: Yes | Unknown | SSRN staff check for relevance of material | Content may be removed by author (or operator/owner) | Email administrator | S: Unknown | P: Unknown |
|---------------------|-------|-------|-------|-------|---------|------------------|----------------|----------------|----------|----------|
| Unknown | Unknown | SSRN staff check for relevance of material | Content may be removed by author (or operator/owner) | Email administrator | S: Unknown | P: Unknown | S: Unknown | P: Unknown | S: Unknown | P: Unknown |
| Surgery Open Science - First Look [42] | M: No | A: Unknown | Unknown | W: Unknown | P: Unknown | S: Unknown | R: Unknown | Unknown | Unknown |
|----------------------------------------|-------|------------|---------|------------|------------|------------|------------|---------|---------|
| Therapoid [43] - Verified              | M: No | A: Yes     | None as yet | DAS: Not requested or required | F: Permanent with some removal options in extraneous circumstances | R: Contravention of copyright, plagiarism, false or inaccurate content, ethical and legal issues | W: No web presence retained | S: Unknown | P: Unknown |
| ViXna [44]                             | M: Yes| A: Yes     | Mostly compliant, without endorsing, without stating on website | DAS: Not requested or required | F: Content may be removed by author (or operator/owner) | R: Contravention of copyright, plagiarism, false or inaccurate content, ethical and legal issues | W: No web presence retained | Email administrator | S: Sustainable low-cost web hosting service secured, previously run on donations |
| Preprint Server   | Usage metrics & features | Open Research Infrastructure | Other features | OSF Communities |
|-------------------|--------------------------|-----------------------------|---------------|----------------|
|                    |                          | Number of views             | Number of downloads | Number of citations (e.g. Google Scholar) |
|                    |                          | Number of comments          | Social media interactions | Note: no longer on the OSF platform |
|                    |                          | Other features              | Citations from platform | Not Altmetric: blog & gateway |
|                    |                          |                             | Crosslinks | Other links |
|                    |                          |                             | Email alerts | Scholar alert |
|                    |                          |                             | Other links | Scholar alert |

Table 4: Usage metrics & features

| Preprint Server   | Usage metrics & features | Open Research Infrastructure | Other features | OSF Communities |
|-------------------|--------------------------|-----------------------------|---------------|----------------|
|                    |                          | Number of views             | Number of downloads | Number of citations (e.g. Google Scholar) |
|                    |                          | Number of comments          | Social media interactions | Note: no longer on the OSF platform |
|                    |                          | Other features              | Citations from platform | Not Altmetric: blog & gateway |
|                    |                          |                             | Crosslinks | Other links |
|                    |                          |                             | Email alerts | Other links |
|                    |                          |                             | Other links | Scholar alert |

[1] AfricArxiv
[2] AgrifXiiv
[3] Arabixiv
[4] EcoEvoRxiv
[5] FocUSSArchiv
[6] Frexiv
[7] INA-Rxiv
[8] MarXiv
[9] MetaArXiv
[10] MindRxiv
[11] NutriXiv
[12] OSFPreprints
[13] PalEOArXiv
[14] PsyArXiv
[15] SocArxiv
[16] SportRxiv
[17] ThesisCommons
[18] OpenResearchCentralInfrastructure

Note: no longer on the OSF platform.
| Platform                                      | Status       | Checkpoints | Notes                                 |
|----------------------------------------------|--------------|-------------|---------------------------------------|
| AMRC Open Research [19] – Verified           |              |             | 'Link to Google Scholar citations'    |
| Gates Open Research [20] – Verified          |              |             | 'Link to Google Scholar citations, Gateways' |
| HRB Open Research [21] – Verified            |              |             | 'Link to Google Scholar citations'    |
| MNI Open Research [22] – Verified            |              |             | 'Link to Google Scholar citations'    |
| Wellcome Open Research [23] – Verified       |              |             | 'Link to Google Scholar citations, Blog and gateways' |
| Others                                       |              |             |                                       |
| arXiv [24] – Verified                        |              |             |                                       |
| Authorea [25] – Verified                     |              |             | 'Forking (copying an article that may or may not be authored by you), follow the article' |
| bioRxiv [26] – Verified                      |              |             | 'Channels, PRreview reviews linked, PreLights blog linked, Pinbacks to blog, FCL bioOverlay and Twitter thread embedded' |
| Cell Press Sneak Peek [27] – Verified        |              |             | Unknown 'other'                       |
| ChemRxiv [28]                                |              |             | Unknown 'other'                       |
| ChinaXiv [29]                                |              |             | 'News, Author blacklist'              |
| ESSOA[r [30] – Verified                      |              |             | 'Fluidit, QR-code, bookmarks, reference management tools' |
| F1000 Research [31] – Verified               |              |             | 'Link to Google Scholar citations'    |
| JMIR Preprints [32]                          |              |             |                                       |
| medRxiv [33] – Verified                      |              |             |                                       |
| M RoFR Preprint Archives [34]                |              |             | None                                  |
| Neuroimage: Clinical First Look [35] – Verified |              |             | Unknown 'other'                       |
| Platform | Features |
|----------|----------|
| PeerJ Preprints [36] – Verified | Socket Open Science - Read-Look [36] – Verified |
| Prereprints.org [38] | Scholarly Journal Preprints [38] – Verified |
| Research Square [39] – Verified | Preprints with The Lancet [39] – Verified |
| SSRN [41] – Verified | Preprints with the New England Journal of Medicine [42] – Verified |
| The Lancet [42] – Verified | The Copyright Holder for this Preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under a Creative Commons Attribution 4.0 International license available under a Creative Commons Attribution 4.0 International license |
| (SSRN subscription) | (when regular operation launches in 2020) |
| The rapid [43] – Verified | Embedded Bookmark feature for reading and sharing materials |
| Surgery Open Science - Read-Look [43] – Verified | Peer review comments |
| First Look [44] | Unknown others |

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Table 5: Metadata contents

| Preprint Server     | Title | DOI or identifier | Publication or deposition date | Author name(s) | Author affiliation(s) | Funder acknowledgement(s) | Subject category | License | Abstract | Full-Text content | References | Relational link to journal publication version (where it exists) | Other |
|---------------------|-------|------------------|--------------------------------|-----------------|------------------------|--------------------------|-------------------|---------|----------|-------------------|------------|---------------------------------------------------------------|-------|
| OSF Communities     | AfroArXiv [1] – Verified | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | |
|                     | AgricArXiv [2] – Verified  | ⊗ | ⊗ | ⊗ | ⊗ | | ⊗ | ⊗ | ⊗ | | | |
|                     | ArabArXiv [3] – Verified | ⊗ | ⊗ | ⊗ | | ⊗ | ⊗ | ⊗ | | | | |
|                     | EcolEvoArXiv [4] – Verified | ⊗ | ⊗ | ⊗ | | | ⊗ | ⊗ | | | | |
|                     | FocUS Archive [5] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | GenXiv [6] – Verified | ⊗ | ⊗ | ⊗ | | | ⊗ | ⊗ | | | | |
|                     | INA-Rxiv [7] – Verified | ⊗ | ⊗ | ⊗ | | ⊗ | ⊗ | | | | | |
|                     | MarxArXiv [8] – Verified | ⊗ | ⊗ | ⊗ | | ⊗ | ⊗ | | | | | |
|                     | MetaArXiv [9] – Verified | ⊗ | ⊗ | ⊗ | | | ⊗ | ⊗ | | | | |
|                     | MindRxiv [10] – Verified | ⊗ | ⊗ | ⊗ | | | ⊗ | ⊗ | | | | |
|                     | NutriRxiv [11] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | OSF Preprints [12] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | PaleXiv [13] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | PsyArXiv [14] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | SocArXiv [15] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | SportRxiv [16] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | Thesis Commons [17] – Verified | ⊗ | ⊗ | ⊗ | | | | | | | | |
|                     | Open Research Central infrastructure | ⊗ | ⊗ | ⊗ | | | | | | | | |
| Journal                          | Competing interests | Referee (yes/no) | Commenter (name, affiliation, comment text) | Study type | Article type |
|---------------------------------|---------------------|------------------|---------------------------------------------|------------|--------------|
| AAS Open Research [18] - Verified | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| AMRC Open Research [19] - Verified | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| GatesOpen Research [20] - Verified | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| HRB Open Research [21] - Verified | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| MNI Open Research [22] - Verified | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| Wellcome Open Research [23] - Verified | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| Others                          | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| aXiv [24] - Verified            | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| Authorea [25] - Verified        | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| BioRxiv [26] - Verified         | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| Cell Press Sneak Peek [27] - Verified | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| ChemRxiv [28]                  | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| ChinaXiv [29]                  | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| ESSOA [30] - Verified           | ☺                  | ☺                | ☺                                          | ☺          | ☺            |
| F1000 Research [31] - Verified  | ☺                  | ☺                | ☺                                          | ☺          | ☺            |

Keywords: Competing interests, Referee (yes/no), Commenter (name, affiliation, comment text), Study type, Article type

No information

ORCID, keywords

Competing interests, Article is a Faculty Review (yes/no), Referee (name, affiliation, report), Commenter (name, affiliation, report, comment text), Study type, Article type

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| Journal currently submitted to | JMI R Preprints [32] | medRxiv [33] – Verified | MIRIT Preprint Archives [34] | Neurimage: Clinical - First Look* [35] – Verified | PeerJ Preprints [36] – Verified | Preprints with The Lancet* [37] – Verified | Preprints.org [38] | Research Square [39] – Verified | SciELO Preprints [40] – Verified | SSRN [41] – Verified | Surgery Open Science – First Look* [42] – Verified | Therapie [43] – Verified | Vixra [44] |
|-------------------------------|-----------------------|------------------------|-----------------------------|---------------------------------|------------------------|-------------------------------|-------------------|---------------------------------|-------------------|-----------------|---------------------------------|-----------------|-------------------|
| Comment text: Study type, Article type |          |                 |                             |                                 |                        |                               |                   |                                 |                   |                |                                 |                 |                   |
| ORCID if provided, Language, Version |          |                 |                             |                                 |                        |                               |                   |                                 |                   |                |                                 |                 |                   |
| No information |          |                 |                             |                                 |                        |                               |                   |                                 |                   |                |                                 |                 |                   |
| No information |          |                 |                             |                                 |                        |                               |                   |                                 |                   |                |                                 |                 |                   |
|                |          |                 |                             |                                 |                        |                               |                   |                                 |                   |                |                                 |                 |                   |
|                |          |                 |                             |                                 |                        |                               |                   |                                 |                   |                |                                 |                 |                   |
|                |          |                 |                             |                                 |                        |                               |                   |                                 |                   |                |                                 |                 |                   |

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24. arXiv https://arxiv.org
25. Authorea https://www.authorea.com
26. bioRxiv https://www.biorxiv.org/
27. Cell Press Sneak Peek https://papers.srm.com/sol3/jeljour_results.cfm?form_name=jourналbrowse&journal_id=3184969
28. ChemRxiv http://chemrxiv.org
29. ChinaXiv http://chinaxiv.org
30. ESSOArXiv https://www.ess ovarxiv.org
31. FI1000 Research https://www.ess ovarxiv.org
32. JMIR Preprints https://preprints.jmir.org/
33. medRxiv https://www.medrxiv.org
34. MRoF Preprint Archives https://www.mtolf.org/index.php/MRoFPreprint_Archives
35. NeuroImage: Clinical – First Look https://papers.srm.com/sol3/jljour_results.cfm?form_name=jourналbrowse&journal_id=3178959
36. PeerPreprints https://peeri.com/preprints/
37. Preprints with The Lancet https://papers.srm.com/sol3/jljour_results.cfm?form_name=jourналbrowse&journal_id=3184962
38. Preprints.org https://www.preprints.org/
39. Research Square https://www.researchsquare.com
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42. Surgery Open Science – First Look https://papers.srm.com/sol3/jljour_results.cfm?form_name=jourналbrowse&journal_id=3303306
43. Therapoid https://therapoid.net
44. ViXra http://viXra.org