

Preprints

Relevance to Open Ecosystem

Sharing manuscripts prior to (or during) the formal peer review process allows for rapid communication of new findings, and can benefit the research community and the public by accelerating the pace of discovery. A <u>statement</u> by the World Health Organization argues the importance of such acceleration through pre-publication especially in the face of public health crises like disease outbreaks. Preprints can also allow researchers to establish priority, receive diverse feedback, increase visibility for their work, and garner more citations. Preprints are even streamlining the publication process as more journals allow direct submissions from preprint servers.

Considerations

Among the key issues that will inform an organization's approach to preprints are the following:

- **Deposit location.** Where should researchers deposit their preprints? Is it sufficient to share via a personal or university website, or will the policy require deposit to a trusted, open repository? If the latter, which repositories will be considered? Accepted repositories may differ by discipline.
- **Quality and Impact.** Since preprints are not peer-reviewed and often have no citations, how will program staff and reviewers assess their quality and impact for grant applications and reporting?
- *Incentives and Evaluation.* How will preprints be incentivized and counted in grant applications and reporting? Will they receive less or equal consideration compared to journal articles? How will the policy deal with preprints that do not end up being published in a peer-reviewed journal?
- **Sensitive/Restricted Information.** How will the policy deal with preprints in fields such as medicine, where information released prior to peer review can be sensitive or even restricted? Several preprint servers do not accept preprints of a clinical or medical nature.
- **Discoverability.** How will potential readers discover preprints? Depending on where these documents are deposited, they may or may not be indexed by services like Google Scholar.
- *Licensing & Reuse.* How will preprints be licensed? Will the policy focus on free to read access, or also reuse rights (including, but not limited to, text and data mining) of preprint content?
- **Publication:** While many journals accept preprints, some do not. How will the policy deal with cases in which grantees want to publish in a journal that does not support preprints? The percentage of respected journals in a field accepting preprints may vary widely by discipline.

Approaches

Funder positions and policies on preprints can take several different forms. Some consist of supportive language written into calls for proposals and grant reporting guidelines to indicate to researchers that including and citing preprints is allowed. Others include language that preprinting manuscripts is not only allowed but also encouraged. Both of these signal to researchers that preprints are a valued product and can help promote a culture of sharing results through preprinting. Some policies provide more specific details on how preprints



should be included in researcher biosketches, grant applications, or final grant reports. Some policies signal support by providing dedicated space on forms for grantees to include their published preprints. Others also include specific guidelines for reviewers that preprints can be considered in evaluations.

Examples of Funder Policies that Allow or Encourage Preprints

- As part of their <u>open access policy</u>, the <u>Bill & Melinda Gates Foundation</u> encourages grantees to share preprints on a server under an open (CC BY) license.
- The <u>European Research Council</u> allows grant applicants to include preprints as part of their <u>research</u> <u>track record</u> and encourages reviewers to consider these in <u>evaluations</u>.
- Other examples of similar policies come from the <u>National Institutes of Health</u>, <u>Howard Hughes</u> <u>Medical Institute</u>, and <u>Wellcome Trust</u>.

Other funders have embedded a requirement for preprinting into their open access policies. Some of these require all manuscripts to be uploaded to a preprint server, while others only apply to certain types of research, such as medical research with public health impact.

Examples of Funder Policies that Require Preprints

- As part of their <u>open access policy</u>, the <u>Michael J. Fox Foundation</u> requires that "All articles...must be posted in an open access preprint repository with free, immediate readership rights".
- The <u>open access policy</u> for <u>Aligning Science Across Parkinson's (ASAP)</u> also requires grantees to share preprints, and ties the sharing of other products like data and code to the timing of preprint deposit.
- The <u>Wellcome Trust</u> open access <u>policy</u> requires deposit in specific cases "where there is a significant public health benefit to preprints being shared widely and rapidly, such as a disease outbreak".
- <u>Fast Grants call</u> for applications for COVID-19 research funding requires preprints be uploaded to a trusted repository at the time of submission to a journal.

Resourcing

Administrators may be concerned about how policy changes can create additional operational work to already busy staff. Policies can require discussion within the organization, integration into current workflows, and the engagement of operational staff (e.g., for compliance checking, etc.). The operational load will depend on the type of policy implemented. Inserting supportive language on preprints into organizational documents and guidelines may represent the lowest load, since such a policy does not require regular compliance checking. However, staff may want to periodically verify that grant reviewers are considering preprints in their evaluations. A policy requiring preprints will represent greater operational load, if compliance checking is carried out.

There is a range of activities that organizations can take to manage open policies. At the low-touch end of the spectrum, organizations can require researchers to document how they intend to comply. Depending on internal resources, some organizations spot-check these plans, while others simply rely on the honor system. Other



organizations take a more engaged approach, requiring proof of compliance from researchers and checking this against internal expectations and guidelines. Additionally, funders are increasingly able to rely on emerging

research infrastructure such as author and funder registries to automate aspects of the reporting process. Each organization can make its own appropriate determination about the resources they are able to devote to these activities, and to what extent they want to monitor preprint deposits by grantees.

Next Steps

<u>ASAPbio</u> (Accelerating Science and Publication in biology) maintains a website with a number of resources on preprints that could be useful for policy development. These include a page with information on different <u>funder</u> <u>preprint policies</u>, with links to policies and examples of the language used to encourage or require preprints; a page on <u>university preprint policies</u>, which may be useful in seeing how academics are incentivizing and evaluating these open research products; and a <u>directory of preprint servers</u>, which could be linked to in the policy to help grantees decide where to deposit.

Additional resources that could provide valuable guidance on policy development, and also help in educating program staff, grantees, and reviewers about preprints include:

- ASABbio's preprint FAQ provides answers to many common concerns and questions about the benefits of preprints, journal compatibility, and scooping. There is also a <u>licensing FAQ</u>.
- Searchable databases such as <u>Transpose</u> (TRANsparency in Scholarly Publishing for Open Scholarship Evolution) and <u>Sherpa Romeo</u> make it easy to find out which journals allow preprinting.
- Peer-reviewed articles such as <u>'The Case for Open Preprints in Biology'</u> and <u>'Ten simple rules to consider</u> <u>regarding preprint submission'</u> both argue the case and provide recommendations for preprinting.
- The article <u>'Preprints for the life sciences'</u> provides a funder perspective on both benefits and challenges, and suggests four possible actions funders can take to support preprints. These actions span the spectrum from supportive statements to funding open infrastructure for preprint deposit, discoverability, and preservation.

The <u>Open Research Funders Group (ORFG)</u> can provide support and insight into best practices and available resources. The ORFG <u>Incentivization Blueprint</u> provides model language that can be adopted and adopted by funders and other organizations. It offers a stepwise approach to deploying a policy that can grow to encompass not only open access articles, but data, code, and other research outputs.

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