**Group 3. 9-10:30 - Preprints and Journals**

**Discussion points**

* *Can journals and preprints co-exist in biology and can the roles and policies of each be clarified, so that it is easier for scientists to decide how to communicate their work?*
* *Should journals acknowledge preprints as a form of scientific communication and publish work that was disseminated previously using this format?*
* *Would commentary linked to a preprint on a preprint server help or hinder the traditional, journal-based peer review process?*
* *Should there be any general guidelines for authors that would help the coordination of preprint submissions with journal submissions and peer review?*
* *How should retraction of specific data or an entire work be handled for preprints?*
* *Are there certain types of papers that should not be disseminated without peer review?*
* *Are there specific issues concerning preprints that are of such concern to journals that publishers would object to conducing experiments with preprints until the issues have been resolved? What are those issues and what makes them problematic?*

**Discussion**

Overview

The discussion was framed as a series of short statements from the participants on the topic and questions posed. The importance of ‘flattening the communication landscape’ in order to disseminate work without delay and to capture information not otherwise published was emphasized. Framing the discussion, it was noted that preprints allow uncoupling communicating results from certifying them with peer review.

The forum included a whole spectrum of opinions from replacing broken publishing system with post publication peer review to adding preprint as a layer to the peer reviewed literature. There was consensus that peer review and in fact editorial quality control is important. There was also mostly agreement that preprints and journals can in fact co-exist and that most journals have policies compatible with publication irrespective of preprint posting. In fact, preprints may act as a release valve on publishing pressures, which may allow journals to experiment in order to improve publishing.

The forum concluded that progress would be made by evolution rather than revolution: there would likely be small steps for now allowing the system to evolve through experiments. It was regarded as very important that concerns of trainees and early-career researchers be kept as high priorities in recognition of the greater risk and their vulnerability as we experiment.

The complexity of the information continuum from bench to journal and the step change of information volumes make it hard for research assessment systems to cope – it is clear that preprints won’t replace the stratification of applicants by research output.

In the absence of experience with commenting on preprints, the panel did not have a strong view of the level of enhancement preprint commenting would bring to the editorial process, but there was no explicit concern to consider informed comments where available. Some journals have already set up efficient infrastructure for preprint to journal transfers or co-submission. It remains to be seen how much of an incentive for engagement with preprints this will be. Current preprints allow correction through versioning, and while the issue of medically sensitive information was raised in passing, there was no clear view on exclusion of such information. The primary function of preprints was seen as supporting the dissemination of research findings with minimal delay. As such there was no strong support for inclusion of non-research content such as reviews and commentary, which might in fact pitch cause some journals to become protective in their policies as such content does not always rely on peer review and may benefit from editorial attention provided by journals.

Overall, journals were not seen as standing in the way of an emergent preprint culture in the biological sciences. Indeed, that it was possible to enhance the pre-publication peer-review journal model by expanding how scientists interact around a paper. Discussants noted the importance to understand which preprint platforms currently exist and what could exist in an ideal world – that a clearer picture has to emerge where value is created, what preprints stand for. An “ecosystem of communication” was described that would be facilitated by preprints.

1. The forum discussed key sensitivities seen at journals, in particular regarding authorship, medical data and sloppy data. Fraud was seen as less likely to be an issue as pressures to post remains limited. However, it is not enough that researchers may be ‘embarrassed’ by posting. Preprints should not develop quality control processes like journals – that is what journals are good at and the inherent cost and scalability would dampen use. However, medical research may be an exception. There is a need for basic screens for ‘science vs. nonsense’, but no subjective/political judgements. There should be no format restrictions – any research that is reported in a reproducible manner should be admissible. It remains an open question is whether review/commentary should be excluded from preprints.
2. The danger of preprints is that sensitive information slips out: the press may jump on unvalidated preprint information in the race for news. To address this, there is a need clear labels to distinguish between preprints and papers including clear tags, different citation style and search engines should point to the difference. The term preprint was deemed to be archaic and somewhat misleading.
3. Continuum of information sharing from preprint to paper needs to be linked: need forward and backward linking; need versioning continuum.
4. Journal policies need to be clear to community, although it is hard for large organizations to envisage standardized policies. A joint declaration may be warranted o make a start as would be an aggregator site with journal names/policies. The establishment of priority was seen to be a difficult issue that was not entirely resolved. Journals need clear conceptual advance and ‘scooping’ policies.
5. A single or a few subject specific repositories with common standards were seen as preferrable.

Specific points raised by discussants

1. the level of quality control at preprints needs to be more clearly defined
2. the preprint unit may be smaller than a research paper.
3. Preprints should include not only publishable research and information should be limited to primary research.
4. we need a clear nomenclature to distinguish between preprint *post* and peer reviewed research *paper*; in this context, the policies of some journals to post referee comments was highlighted.
5. The importance of correcting preprints through versioning and the possible extension of this from preprint to paper and well as forward linking from preprint to papers was raised.
6. The issue if journals should consider preprints as prior art was discussed and a universal journal policy for the consideration of conceptual advance was suggested, which would state that preprints would not ‘scoop’ peer reviewed research papers;
7. ‘one click’ transfer from preprint to journals were mentioned as helpful for authors
8. the parallelism of information between journals and preprints was subject of some comments: could referee reports on rejected papers be add as comments to preprints? Should post publication preprint posts be encouraged or even allowed? Which version will be regarded as the point of record?
9. Should preprints focus on subfields of science or be general.
10. How can journals experiment with their selection process if preprints were broadly adopted.
11. A young researcher emphasized that journals ought to be receptive to preprints, noting the tight time constraints of postdoctoral research and that preprints afford a better way to document progress without delays inherent to publishing.
12. A ageneral lack of sufficiently clear journal policies was noted. Large publishers note that the chief editors of their journal set such policies, so coordination is difficult and policies have to evolve.
13. A clinical researcher emphasized that clinical research is ‘a different world’ to basic biology in that the biggest need is to address the information that is currently never shared: 1/3rd of clinical research is never communicated. However, the category of ‘preprint’ is suspect and it remains unclear what should happen to information that is never published validated by peer review. Ethics and confidentiality have to be guaranteed also on preprints. The publishers of bioRxiv noted they were very cautious about medical information.
14. An editor suggested journal should allow posting. Science follows community practice – preprints are an electronic mimic of something scientists have always done at conferences: preprint are progress reports. Things get complicated for journals if we assign priority to preprints and it is useful to consider patent law here.
15. A single repository with common standard: centralized is better.
16. Journals spend a lot of time on ‘bad behaviour’. Material & Data sharing. What journal policies should apply to preprints. (authorship/data sharing/materials sharing /reproducibility/ dual use).
17. Journalists should use preprint information carefully and editors need to be prepared if they are called by journalists before formal publication. Press picking up information: how to deal with it. Can it backfire by posting lots of bad information. Will press jump on preprints to get the scoop?
18. One senior researcher and chief editor noted that it is essential that the public distinguish between peer reviewed articles & preprints. Is it enough that people are ‘embarrassed’ by posting. Peer reviewers add to scholarship, they add insights. What is the goal of preprints: establish priority and document progress. Delays by publishing affect career progression. Will this make grants bigger? Bad Practice will happen on preprints as much as on journals; maybe fraud not.
19. The publishers of bioRxiv commented that posting vs. publishing should be differentiated, emphasizing that preprints are not peer reviewed; Suggestions forbetter terminology were invited.
20. It was suggested to set up a central repository of journal policies and journal name list.
21. PubMed listing of preprints was questioned and the point made that no journal function should be devolved to preprints: that is what journals do well. Google/PubMed/Search engines for preprints were suggested and a Pittsburg university search engine cited as example. . Journal badges were suggested to be extended to preprint to clearly label the information.
22. One publisher surmised that the publishing system is deeply broken. The commentator noted ‘Journals have outlived their usefulness – they bring no benefit’, adding that preprints are important for two reasons: they are immediate and there is no selection. The discussant suggested that peer review is essential and can be an integral part of preprints as for example practiced at Faclty1000 research, which was described as post publication transparent peer review. This mechanism was supported by other discssants.
23. One communications and open access suggested that licensing was not needed for preprints.
24. Preprints were suggested to reduce some “bad behaviors” apparent with blinded peer review and might remove some incentive for obstructive or overly-demanding reviews.
25. Preprints might aid in recognition and attribution to the scientists who actually did the work.
26. Do we need quality control on preprints? Control authorship? Control medical data? Checks are necessary to ensure comprehensible information and should screen for for plagiarism. No political agenda or screen for importance of work, no filter for format or article style.
27. Versioning, and forward and backward linking was deemed to be important

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