Guiding principles for researchers to aid the responsible media reporting of research posted as preprints.

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Content

Definitions

Introduction

Guiding principles for researchers on interacting with the media about research posted as preprints

Definitions

**Preprint:** A form of scholarly communication that has been made publicly available by its authors. Most preprints are deposited on preprint servers and are generally permanently available. They are accompanied by metadata such as a list of authors and date of posting. Many preprint servers allow preprints to be versioned and some offer more advanced functions, like commenting, community endorsement, and direct submission of preprints to scholarly journals.

**Preprint server:** A digital archive for preprints.

Most preprint servers screen preprints for adherence to straightforward criteria before they are posted. While meeting these criteria is not an indication of scientific validity, posting a preprint on a preprint server can facilitate its scrutiny by the scientific community. The level of such scrutiny for a given preprint can vary from none at all to extensive impartial evaluation by a number of experts in the field; it can vary between preprints on the same server.

**Peer review:** The formal invited assessment of the scientific validity of a piece of research by independent experts in the field.

**Community review:** Public feedback on a preprint.

**Published:** In this document, ‘published’ refers to a version of work that is made publicly available in a journal after it has undergone peer review.
Introduction

Any document that looks like a scientific article can be disseminated publicly and could be used to inform other research, policies, reporting, or public behavior. Although there are benefits to this sharing of research, such as encouraging pre-publication peer discussion of the research, there are also real-world dangers if apparently scientific content is accepted without peer review or community review.

Importantly, the scientific appraisal of original research and its public availability are often uncoupled. It is in the interest of public trust to be transparent about when an article is known to have been assessed by experts and when this is not known.

Here, we present guiding principles for researchers on the responsible reporting of their research in the media. This document is one of a set developed via the collective efforts of preprint servers, researchers, institutions, scientific journals, journalists, and science writers to encourage responsible science reporting and mutually complementary best practice across these fields.

Although the focus of these principles is on research posted as preprints, it is important to remember that peer review does not guarantee validity of the research and these principles are equally applicable to research published in peer reviewed journals.
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For researchers when using social media, writing blogs, or communicating with journalists.

When communicating about their research on social media, on blogs and with journalists, researchers should be mindful of the potential for misinterpretation of their research and:

1. Label the research as a preprint (where that is the case).
2. Prominently state whether or not it has undergone peer review.
3. Prominently highlight the limitations of the work.
4. Provide narrow interpretations that are unlikely to be exaggerated or misconstrued when communicating research findings to a lay audience.
5. Make every effort to ensure that the research is presented so that non-experts can understand it with minimal room for misinterpretation.
6. Make every effort to anticipate the potential for their research to be propagated in ways that are far from the original intent.
7. Avoid overhyping the significance of the research findings.
8. Consider using a structured format, similar to that recommended by the UK Academy of Medical Sciences for press releases. For example, in biomedical fields, structured information to be included in social media post(s) might include the following.
   a. Brief lay summary
   b. Type of research: [observational / interventional etc]
   c. Model system: [Humans / mice / in vitro biochemistry]
   d. Sample size: [Number of patients, etc]
   e. Peer review status [Preprint / (open) peer review etc]
   f. Other caveats/limitations
9. Be familiar with any guidelines provided by their institution on the responsible use of social media to promote their research. Guiding principles for institutions to aid the responsible media reporting of research can be found at www.asapbio.org/public.
10. Work in collaboration with their institutional press office if approached by the media to comment on research they have carried out at the institution, regardless of whether or not the research is actively promoted by the institution.