Preprint servers facilitate scientific discourse

Inder M. Verma, Editor-in-Chief, PNAS

Preprints are scientific manuscripts posted online before formal peer-review and publication in journals. Preprints have become prominent in scientific publishing, which is increasingly shaped by an emphasis on speed, transparency, and accessibility. Important as they are, those factors are entwined with the journal’s primary role as an arbiter of the rigor and significance of scientific scholarship. In keeping with our century-old mission of publishing cutting-edge research, PNAS selects important original work for publication. So it stands to reason that the journal will not accept work that has already been published at a level of detail that compromises its originality. The PNAS Editorial Board exercises discretion in judging the originality of submissions.

However, as our prior editorials have noted, an emphasis on originality need not impede the open exchange of scientific information. To that end, while their final versions await formal publication in peer-reviewed journals, preprints fulfill a vital function in ensuring that research results see the light of day in a timely fashion. Far from detracting from journal articles, preprints have many well-acknowledged benefits: They allow authors to collect feedback and improve their work before submitting it for formal peer review; they help researchers avoid tedious, resource-intensive experiments that others have already performed; they address the lamented file-drawer problem, in which null results go unnoticed because they are deemed to be of insufficient interest to journals; and, by chronicling the progress of scientific narratives, they can influence study design, underscore technical nuances, signal the availability of reagents and tools, and foster timely collaborations.

PNAS has long supported unfettered scientific exchange on preprint servers. Since the physicist Paul Ginsparg created arXiv, one of the oldest and most widely used preprint servers, in 1991, we have published articles by authors who have shared their work on preprint servers. With the advent of servers in other disciplines, we have kept pace: In 2016, we were among a vanguard of journals that entered into a formal arrangement with bioRxiv, a preprint server for biology hosted by Cold Spring Harbor Laboratories, which allows authors to directly submit preprints to PNAS using our manuscript submission and tracking system. By easing formatting restrictions, we have made the transfer of manuscripts a seamless process for authors; to date, more than 80 manuscripts have been directly transferred from bioRxiv to PNAS for consideration.

To dispel any misconception that posting a preprint to a server may pose rights-related conflicts upon submission to PNAS, we recently clarified our policy on preprint licenses. We have never refused to consider a manuscript based on the license that an author has chosen for its preprint, options for which include Creative Commons (CC) licenses. PNAS author licenses apply only to the peer-reviewed, copy-edited, and composed version of articles published in the journal. Further, as of mid-September we have made CC BY-NC-ND (Attribution-NonCommercial-NoDerivatives) our default open access license. We believe that this license provides others with the freedom to reuse the authors’ work and allows protection against unwanted commercial reuse or unsanctioned derivative products.

Finally, because we may distribute advance copies of accepted manuscripts under embargo to the news media before online publication in the journal, we ask that authors inform us if a version of their submission has ever appeared on a publicly accessible preprint server. This helps us to ensure equitable dissemination of information to journalists.

Our policy on preprints has always been liberal, exemplifying our unflagging support of scientific exchange while reinforcing our curatorial role in lending credence to research findings.

Published under the PNAS license.