Preprints in biology and medicine

John Inglis Ph.D.
Cold Spring Harbor Laboratory

CHORUS Forum, February 25, 2022
Preprints transform research communication

• Traditional publication = distribution after peer review
  • Slow – months or years
  • Controlled by editors and reviewers
  • Content often paywalled
  • Authors can’t update or correct

Preprint posting = distribution before peer review

• Fast – days
• Controlled by authors
• Free to all
• Rapid feedback possible
• Versioning supported
• Community-based, not-for-profit, rooted in academia
• Funded by Cold Spring Harbor Laboratory and CZI Science
• Discipline-specific
• Publisher and journal-independent
• An author service, not a product, publication, or a component of journal submission
• 4500 new submissions per month (both servers), 85-90% pass screening
Manuscript screening and independent assessment

- Screening done by in-house content team and independent PI's
- Each submission is checked to determine
  - It’s science and within scope for the server
  - It reports research, not opinion or unsupported hypothesis
  - It passes a plagiarism test
  - It doesn’t promote conspiracy theories
  - The research isn’t potentially dual-use of concern
  - Ethics approval is appropriate and patient consent declared
  - Clinical trials are registered
  - Patient data aren’t identifying
  - The conclusions will not cause harm
- Authors can post new versions at any time up to manuscript acceptance by a journal
  - Same DOI, versions distinguished by different URLs
- Reviews/evaluations/comments/attention are aggregated in a dashboard
Preprint publication

- Link is made to the version published by a journal (with different DOI)
- Over 70% of bioRxiv preprints are published within 2 years
- Some authors consider the preprint enough
Information sources to treat with caution

Preprints

• Preprints are new to biology and medicine
• They are screened, not peer-reviewed
• Their conclusions are preliminary and should be reported that way
• What’s appealing in a preprint may not survive community scrutiny or peer review
• Preprints may be updated or withdrawn
• Independent experts can help reporters decide what’s newsworthy and how to frame it
Information sources to treat with caution

Op-Eds

Experts venturing outside their field

Peer-reviewed papers