



## **Faster future: preprints**

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MedComms Networking Brunch, 17 October 2018

# What is a preprint?

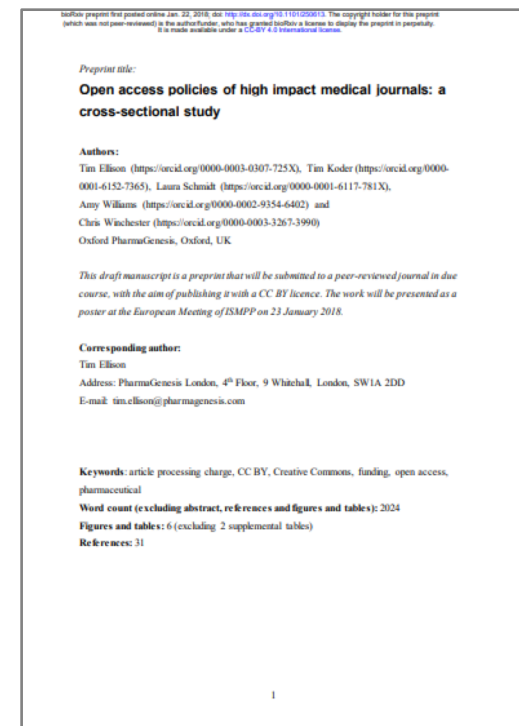
- “A scholarly manuscript posted by the author(s) in an openly accessible platform, usually before or in parallel with the peer review process”<sup>1</sup>



The screenshot shows the bioRxiv preprint server interface. The title is "Open access policies of high impact medical journals: a cross-sectional study" by Tim Ellison, Tim Koder, Laura Schmidt, Amy Williams, and Christopher Winchester. The DOI is <https://doi.org/10.1101/250613>. The abstract text is as follows:

**Abstract**

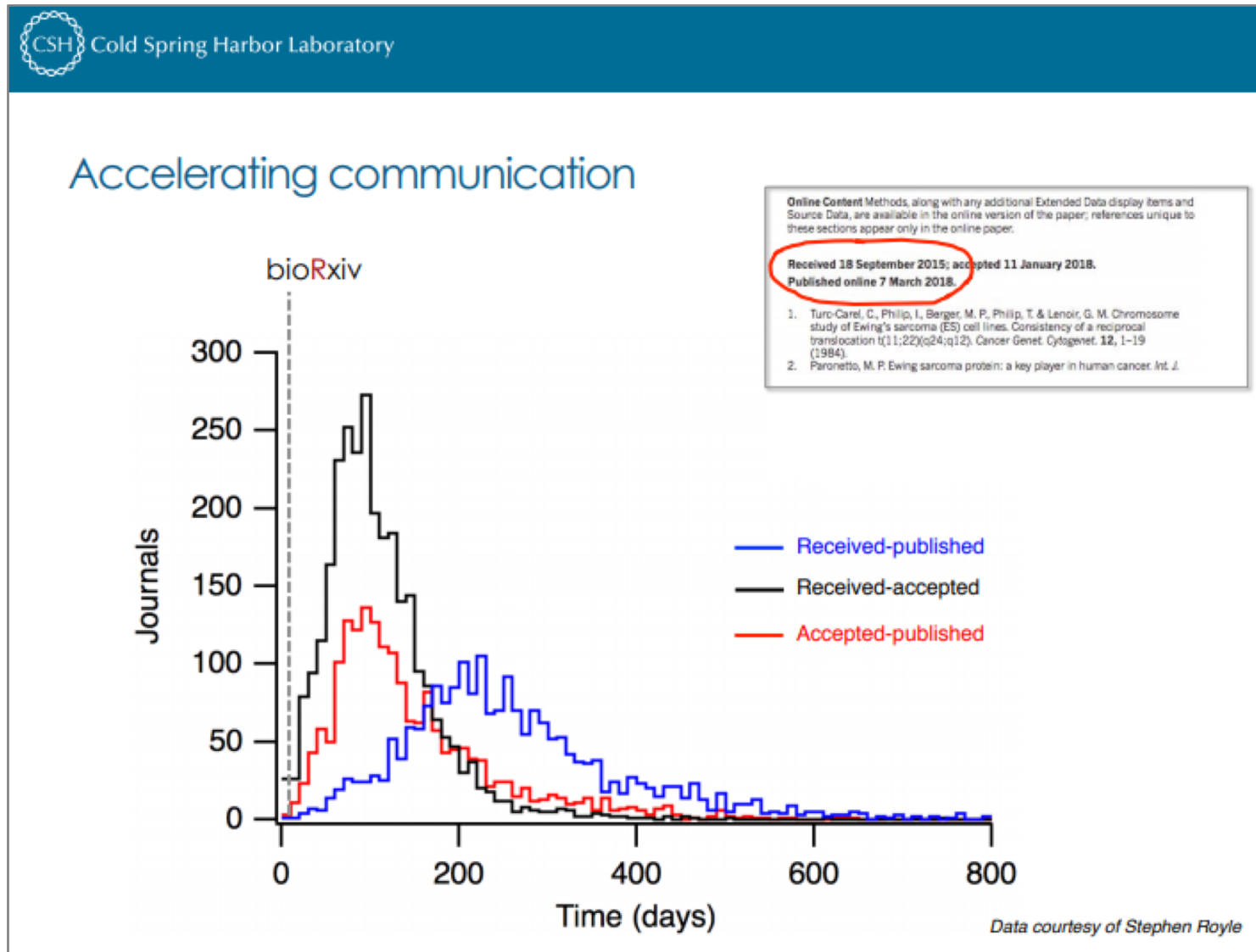
Introduction: Journal publishers increasingly offer governmental and charitable research funders the option to pay for open access with a Creative Commons Attribution (CC BY) licence, which allows sharing and adaptation of published materials for commercial as well as non-commercial use. The Open Access Scholarly Publishers Association recommends this licence as the least restrictive Creative Commons licence available. We set out to investigate whether pharmaceutical companies are offered the same options. Methods: Using Journal Selector (Sylogent, Newtown, PA, USA), we identified journals with a 2015 impact factor of at least 15 on 24 May 2017, and excluded journals that only publish review articles from the analysis. Between 29 June 2017 and 26 July 2017, we collected information about the journals' open access policies from their websites and/or by email contact. We contacted the journals by email again between 6 December 2017 and 2 January 2018 to confirm our findings. Results: Thirty-seven non-review journals listed in the Journal Selector database, from 14 publishers, had a 2015 impact factor of at least 15. All 37 journals offered some form of access with varying embargo periods of up to 12 months. Of these journals, 23 (62%) offered immediate open access with a CC BY licence under certain circumstances (e.g. to specific research funders). Of these 23, only one journal confirmed that it offered a CC BY licence to commercial funders/pharmaceutical companies. Conclusion: The open access policies of most medical journals with high impact factors restrict the dissemination of medical



The screenshot shows the preprint content page. The title is "Open access policies of high impact medical journals: a cross-sectional study". The authors are Tim Ellison, Tim Koder, Laura Schmidt, Amy Williams, and Chris Winchester. The text includes a statement: "This draft manuscript is a preprint that will be submitted to a peer-reviewed journal in due course, with the aim of publishing it with a CC BY licence. The work will be presented as a poster at the European Meeting of ISMPP on 23 January 2018." The corresponding author is Tim Ellison, with address: PharmaGenesis London, 4th Floor, 9 Whitehall, London, SW1A 2DD, and email: [tim.ellison@pharmagenesis.com](mailto:tim.ellison@pharmagenesis.com). The keywords are: article processing charge, CC BY, Creative Commons, funding, open access, pharmaceutical. The word count (excluding abstract, references and figures and tables) is 2024. The figures and tables are 6 (excluding 2 supplemental tables). The references are 31.

1. Committee on Publication Ethics. Discussion document on preprints. March 2018. Available at: [https://publicationethics.org/files/u7140/COPE\\_Preprints\\_Mar18.pdf](https://publicationethics.org/files/u7140/COPE_Preprints_Mar18.pdf)
2. Ellison T *et al.* *bioRxiv* 2018. Available at: <https://www.biorxiv.org/content/early/2018/01/22/250613>

# Speed is the main benefit of preprints



Data courtesy of Stephen Royle, University of Warwick.

Slide from: Sever R. Communicating at the speed of science. bioRxiv. Available at: <https://itbcde.aviesan.fr/Local/bcde/files/217/01.sever.pdf>.

## What are the other benefits of preprints?

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Free of charge



Transparency



Establish precedence

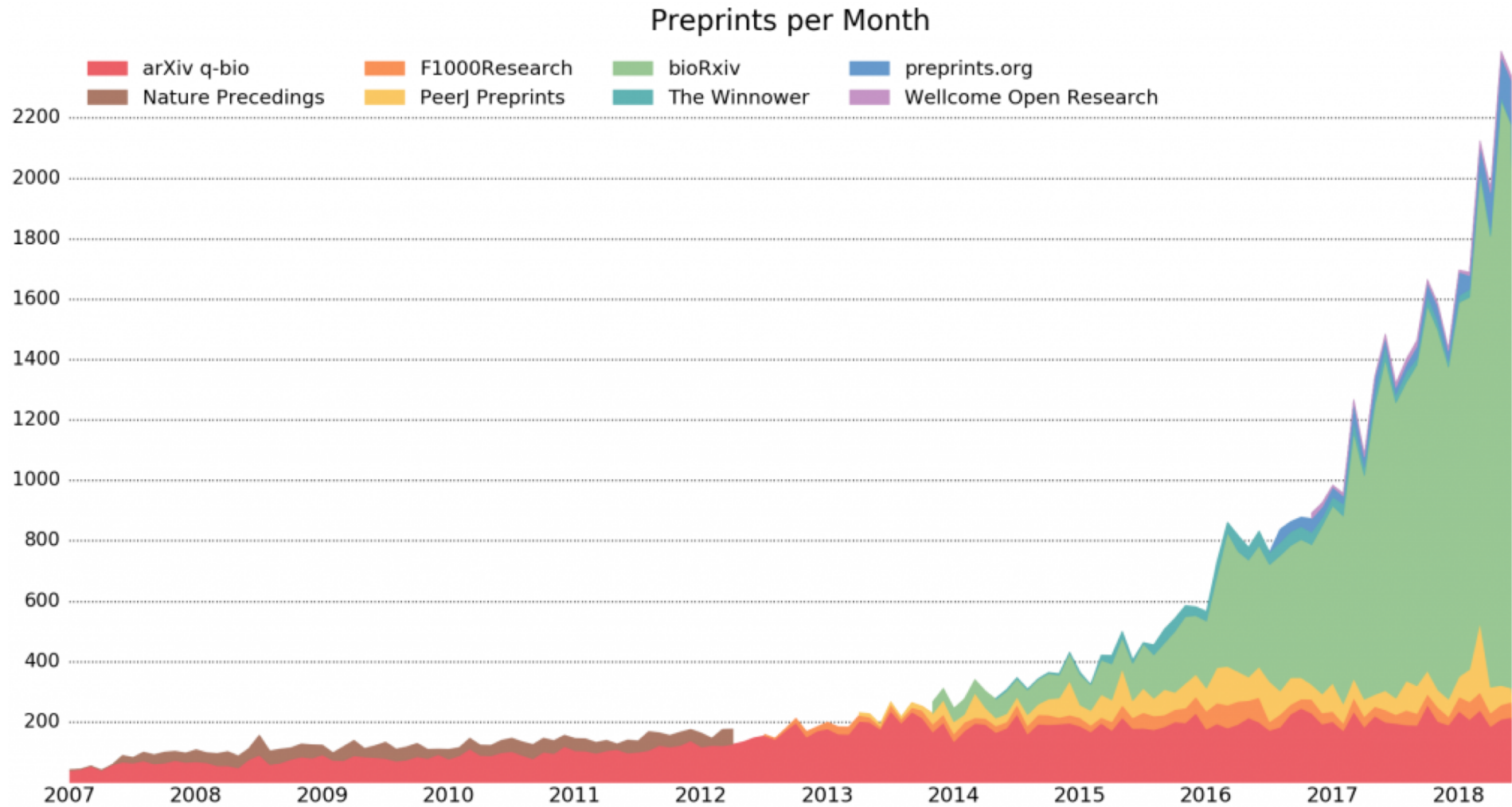


Feedback



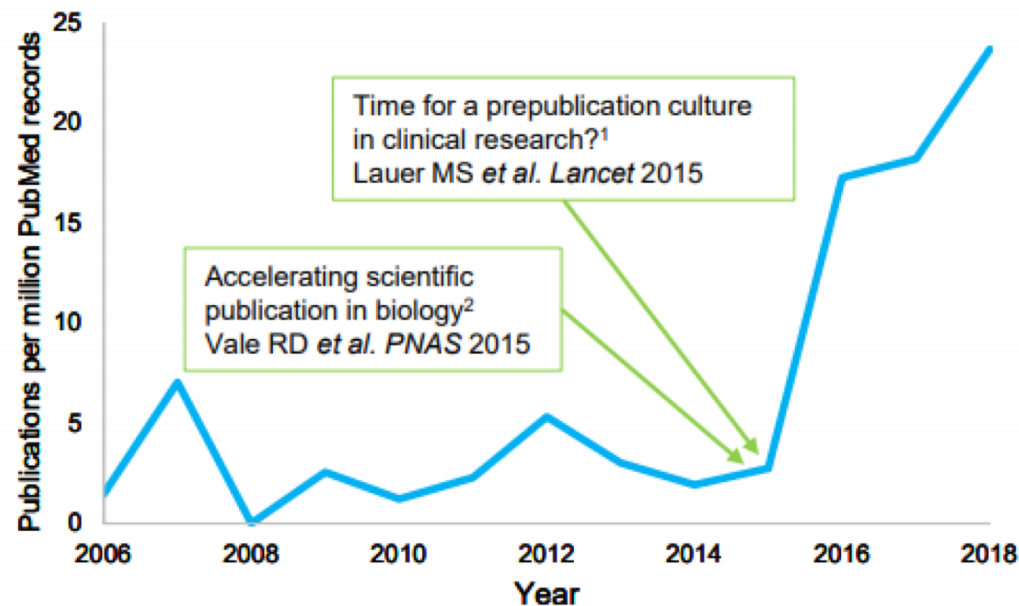
Citable and findable

# The rise of preprints



# Preprints in medicine are controversial

- Calls for the use of preprints in medicine<sup>1</sup> have prompted much debate<sup>2,3,5–13</sup>
- Approximately 1% of 18 811 preprints posted on bioRxiv before 1 January 2018 reported industry-authored research, most of which was basic science<sup>4</sup>



PubMed search, 10 April 2018. "preprint"[TI] OR "preprints"[TI] OR "prepublication"[TI]

Previously presented by H. Lang at the 14<sup>th</sup> Annual Meeting of ISMPP on May, 1, 2018

Plan for new medical preprint server receives a mixed response

The preprint dilemma

Preprints and Cardiovascular Science  
Prescient or Premature?

Biomedical Journals and Preprint Services: Friends or Foes?

Prepublication and clinical practice: challenges ahead

Preprints for the life sciences

Has the time come for preprints in biology?

Preprint servers: Vet reproducibility of biology preprints

**'Hug a preprint, biologists!'**

1. Lauer MS *et al. Lancet* 2015;386:2447–9; 2. Tabor E. *Lancet* 2016;387:750; 3. Maslove DM. *JAMA* 2018;319:443–4. 4. Lang H *et al. 14<sup>th</sup> Annual Meeting of ISMPP* 2018. Available at: <https://doi.org/10.21305/ismppus2018.002>; 5. <http://www.sciencemag.org/news/2017/09/plan-new-medical-preprint-server-receives-mixed-response>; 6. Kaiser J. *Science* 2017;357:1344–9; 7. Nallamothu BK and Hill JA. *Circulation* 2017;136:1177–9; 8. Annesley T *et al. Clin Chem* 2017;63:453–8; 9. Editorial. *Lancet Neurol* 2017;16:409; 10. Berg JM *et al. Science* 2016;352:899–901; 11. Bhalla N. *Mol Biol Cell* 2017;27:1185–7; 12. Calne R. *Nature* 2016;535:493; 13. Callaway E and Powell K. *Nature* 2016;530:265.



## Considerations for pharma

- Are preprints seen as promotional?
- Risks of medical misinformation?
- Do preprints sacrifice quality for speed?
- How can comments be tracked and addressed appropriately?



## What's happening now and in the future?

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**THE LANCET**  
**SSRN**

Europe PMC

**medRxiv**  
THE PREPRINT SERVER FOR HEALTH SCIENCES



## Resources

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- ASAPbio preprint info centre: <http://asapbio.org/preprint-info>
- bioRxiv: [www.biorxiv.org](http://www.biorxiv.org)
- Is pharmaceutical industry research posted as preprints?  
<https://doi.org/10.21305/ismppus2018.002>
- Open Pharma blog. What do preprints mean for medical publishing?  
<https://openpharma.blog/2018/05/31/what-do-preprints-mean-for-medical-publishing>
- Preprints in biology and medicine, John Inglis:  
[www.slideshare.net/BaltimoreNISO/inglis-preprints-in-biology-and-medicine](http://www.slideshare.net/BaltimoreNISO/inglis-preprints-in-biology-and-medicine)
- The YODA project, medRxiv: <http://yoda.yale.edu/medrxiv>
- Papers:
  - Lauer MS *et al.* *Lancet* 2015;386:2447–9.
  - Tabor E. *Lancet* 2016;387:750.
  - Maslove DM. *JAMA* 2018;319:443–4.

