A person is standing on the right side of the frame, looking into a large, glowing blue ice cave. The cave's interior is illuminated with a bright blue light, creating a dramatic and ethereal atmosphere. The person is silhouetted against the bright light of the cave entrance.

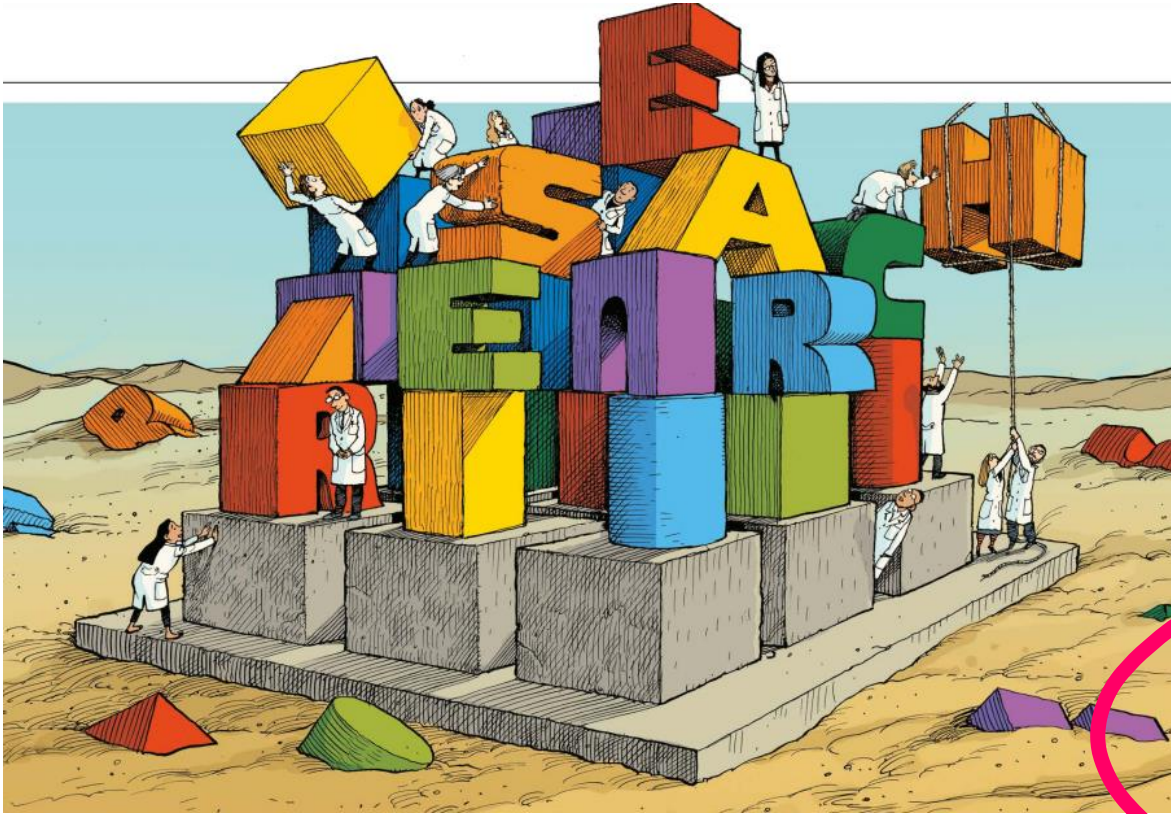
# Newer practices that add transparency and increase trust

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Positive steps: A research publisher's perspective

Chris Graf  
*Director, Research Integrity, Wiley*

# Research integrity: nine ways to move from talk to walk



Nature 586, 358-360 (2020) <https://doi.org/10.1038/d41586-020-02847-8>

Niels Mejlgaard, Lex M. Bouter, George Gaskell, Panagiotis Kavouras, Nick Allum, Anna-Kathrine Bendtsen, Costas A. Charitidis, Nik Claesen, Kris Dierickx, Anna Domaradzka, Andrea Reyes Elizondo, Nicole Foeger, Maura Hiney, Wolfgang Kaltenbrunner, Krishma Labib, Ana Marušić, Mads P. Sørensen, Tine Ravn, Rea Ščepanović, Joeri K. Tjeldink & Giuseppe A. Veltri

Area	Topic	Action*
Support	Research environment	Ensure fair assessment procedures and prevent hypercompetition and excessive publication pressure.
	Supervision and mentoring	Create clear guidelines for PhD supervision (such as on meeting frequency); set up skills training and mentoring.
	Integrity training	Establish training and confidential counselling for all researchers.
Organization	Ethics structures	Establish review procedures that accommodate different types of research and disciplines.
	Integrity breaches	Formalize procedures that protect both whistle-blowers and those accused of misconduct.
	Data practices and management	Provide training, incentives and infrastructure to curate and share data according to FAIR principles.
Communication	Research collaboration	Establish sound rules for transparent working with industry and international partners.
	Declaration of interests	State conflicts (financial and personal) in research, review and other professional activities.
	Publication and communication	Respect guidelines for authorship and ensure openness and clarity in public engagement.

| "Ensure openness and clarity in public engagement..."

# Newer practices

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#1 Preprints

#2 Registered Reports

#2 FAIR Data (or Open Data)

#3 Open Access





A person is standing in a dark cave, looking out towards a bright opening. A waterfall is visible in the distance, and icicles hang from the cave ceiling. The scene is dimly lit, with the light from the cave entrance illuminating the person and the waterfall.

# Preprints

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A preprint is a manuscript posted by its author on a preprint server usually prior to publication and that has not undergone peer-review

Preprint servers include bioRxiv (CSHL), and Authorea (Wiley), and also Zenodo and Open Science Framework

# “I love preprints”

As a young researcher, I find these draft versions of potential journal articles invaluable

Elijah Lowenstein is a PhD candidate in biology at the Max Delbrück Center for Molecular Medicine in Berlin where he works on sensory neuron diversity @Lowensteined



New Results

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## Predominant Patterns of Splicing Evolution on Human, Chimpanzee, and Macaque Evolutionary Lineages

Jieyi Xiong, Xi Jiang, Angeliki Ditsiou, Yang Gao, Jing Sun, Elijah D. Lowenstein, Shuyun Huang, Philipp Khaitovich  
doi: <https://doi.org/10.1101/204255>

Now published in *Human Molecular Genetics* doi: [10.1093/hmg/ddy058](https://doi.org/10.1093/hmg/ddy058)

Abstract

Full Text

Info/History

Metrics

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### ABSTRACT

Although splicing is widespread and evolves rapidly among species, the mechanisms driving this evolution, as well as its functional implications, are not yet fully understood. We analyzed the evolution of splicing patterns based on transcriptome data from five tissues of humans, chimpanzees, rhesus macaques, and mice. In total, 1,526 exons and exon sets from 1,236 genes showed significant splicing differences among primates. More than 60% of these differences represent constitutive-to-alternative exon transitions while an additional 25% represent changes in exon inclusion frequency. These two dominant evolutionary patterns have contrasting conservation, regulation, and functional features. The sum of these features indicates that, despite their prevalence, constitutive-to-alternative exon transitions do not substantially contribute to long-term functional transcriptome changes. Commonly

Posted October 16, 2017.

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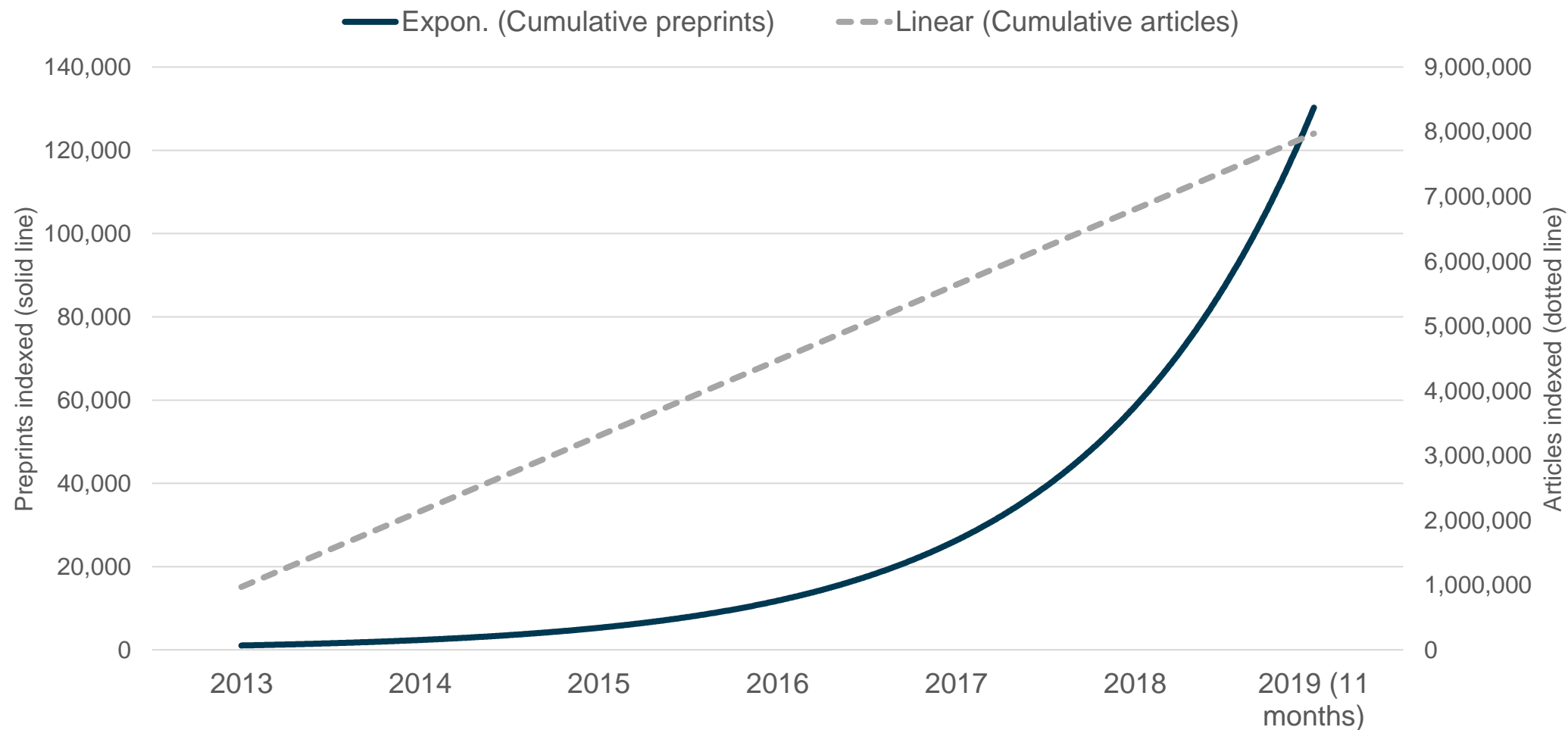
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# Growth rate for preprints indexed by Europe PMC

The trendlines are based on cumulative year-on-year totals



| What does Wiley think about preprints?

# Preprints add speed, and openness

At Wiley we love preprints: Preprints complement journals and journal articles



A person with a backpack is standing on the right side of the image, looking towards a bright opening in a dark cave. A waterfall is visible in the background, and icicles hang from the cave ceiling on the left. The scene is dimly lit, with the light from the cave entrance illuminating the waterfall and the person's silhouette.

# Registered Reports

---

Peer review of a study design before data are collected – can get you an “in principal acceptance” before you start your study

Designed to improve reproducibility

Governed by the Center for Open Science (COS), and available from 100s of journals <https://cos.io/rr/>

# How do Registered Reports work?




- Researchers submit the study proposal to a journal *before* the study starts
- Stage 1 peer review focuses on the importance of the research question and proposed methodology
- If peer review is positive, the paper is accepted in principle
- The Stage 1 Registered Report can be registered in a repository or published by the journal.
- On completion of the study, Stage 2 peer review ensures the study is consistent with the proposed research plan and that it draws appropriate conclusions.
- The Stage 2 Registered Report is published.

# What do Registered Reports look like?



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## A phase III randomized controlled trial of radiation dose optimization in non-Hodgkin lymphoma-diffuse large B-cell lymphoma (DOBL study): Study protocol and design

Jayant S. Goda , Shirley C. Lewis, Siddartha Laskar, Sadhna Kannan, Nehal Khanna, Hasmukh Jain, Bhausaheb Bagal, Sridhar Epari

First published: 14 February 2019 | <https://doi.org/10.1002/cnr2.1161>

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<https://onlinelibrary.wiley.com/doi/10.1002/cnr2.1161>



REGISTERED REPORT STAGE 2

## Increasing propensity to mind-wander by transcranial direct current stimulation? A registered report

Nya Mehnwolo Boayue, Gábor Csifcsák, Per Aslaksen, Zsolt Turi, Andrea Antal, Josephine Groot, Guy E. Hawkins, Birte Forstmann, Alexander Opitz, Axel Thielscher, Matthias Mittner 

First published: 24 January 2019 | <https://doi.org/10.1111/ejn.14347>

Edited by Prof. Paul Bolam. Reviewed by Felix Schoenbrodt, Shogo Kajimura, James Bonaiuto and James Bonaiuto

All peer review communications can be found with the online version of the article.

[Read the full text >](#)

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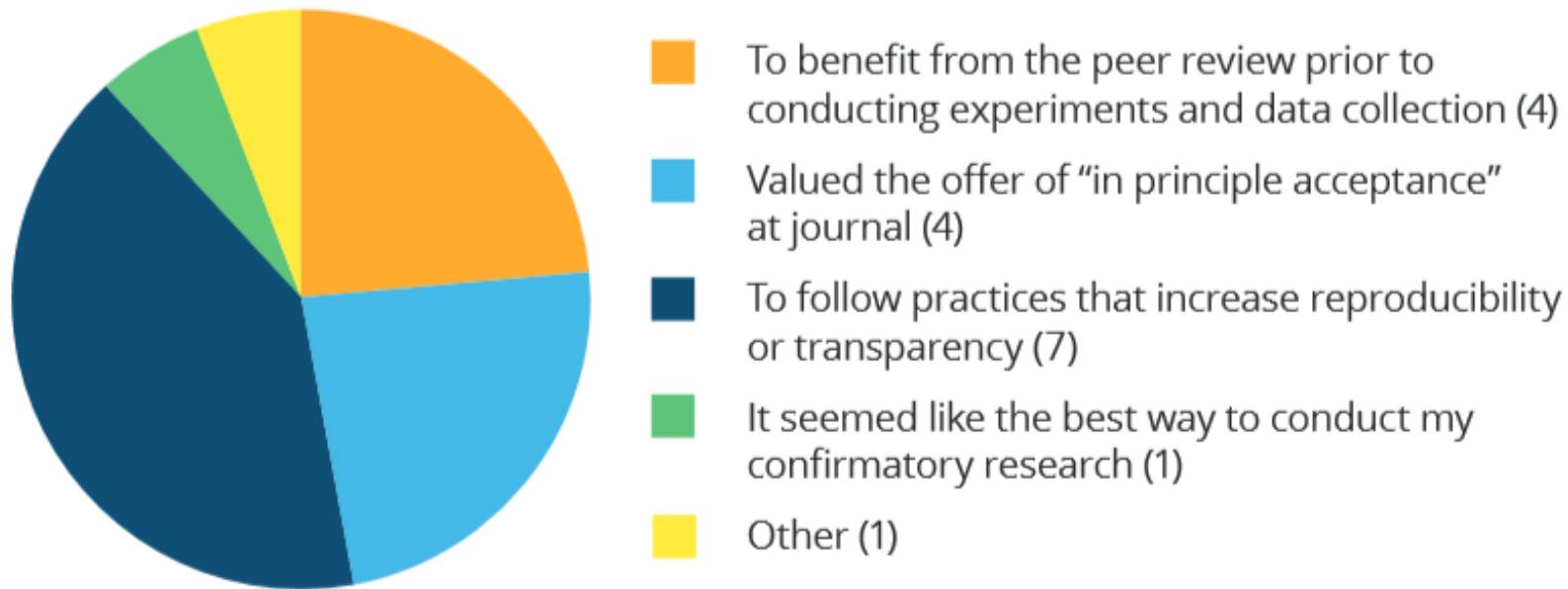
<https://onlinelibrary.wiley.com/doi/abs/10.1111/ejn.14347>

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# Feedback from 17 researchers

Authors were enthusiastic about Registered Reports:

- Format is easy to use
- Stage 1 process very helpful
- Increased reproducibility or transparency in support of the initiative
- All would recommend the Registered Report format to their peers



- Preprint: <https://osf.io/preprints/metaarxiv/ndvek>
- Poster: <https://zenodo.org/record/3516211#.Xe112vZ2tEx>

*"The experience was nothing less than amazing! The reviewers were incredibly helpful and contributed pages of comments and suggestions."*

Matthias Mittner,  
Associate Professor,  
The Arctic University of Norway

<https://www.wiley.com/network/researchers/latest-content/one-researcher-s-perspective-on-registered-reports>

**WILEY**



A person is standing in a dark cave, looking out at a bright waterfall. The cave walls are covered in icicles and the waterfall is a bright white stream of water. The person is silhouetted against the bright light of the waterfall.

# FAIR Data

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Shared data, FAIR data, Open Data

FAIR data are data which meet principles of findability, accessibility, interoperability, and reusability.

# Horizon Europe challenges funded researchers to deliver FAIR data



It requires open access to publications, to research data, and to research data management plans, starting 2021

<https://op.europa.eu/en/publication-detail/-/publication/b4201f97-83ea-11e8-ac6a-01aa75ed71a1/language-en>



# Pretty soon all science will be data science

Jean-Claude Burgelman at the United Nations Open Science Conference, November 2019



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<https://research.un.org/c.php?g=961229&p=6989510>

<https://www.fosteropenscience.eu/resources>

**WILEY**

## Data availability statements

# What's the view from Wiley?

Journals will increasingly ask you for a “data availability statement”

### AUTHORS' CONTRIBUTIONS

LM conceived the idea and carried out analyses. LM and RV designed the methodology. LM and RV wrote the manuscript.

#### Open Research

##### DATA AVAILABILITY STATEMENT

Breeding Bird Survey data available from the BBS-USGS Patuxent Wildlife Research Center, <https://www.pwrc.usgs.gov/bbs/> (Pardieck et al., [2016](#) ).



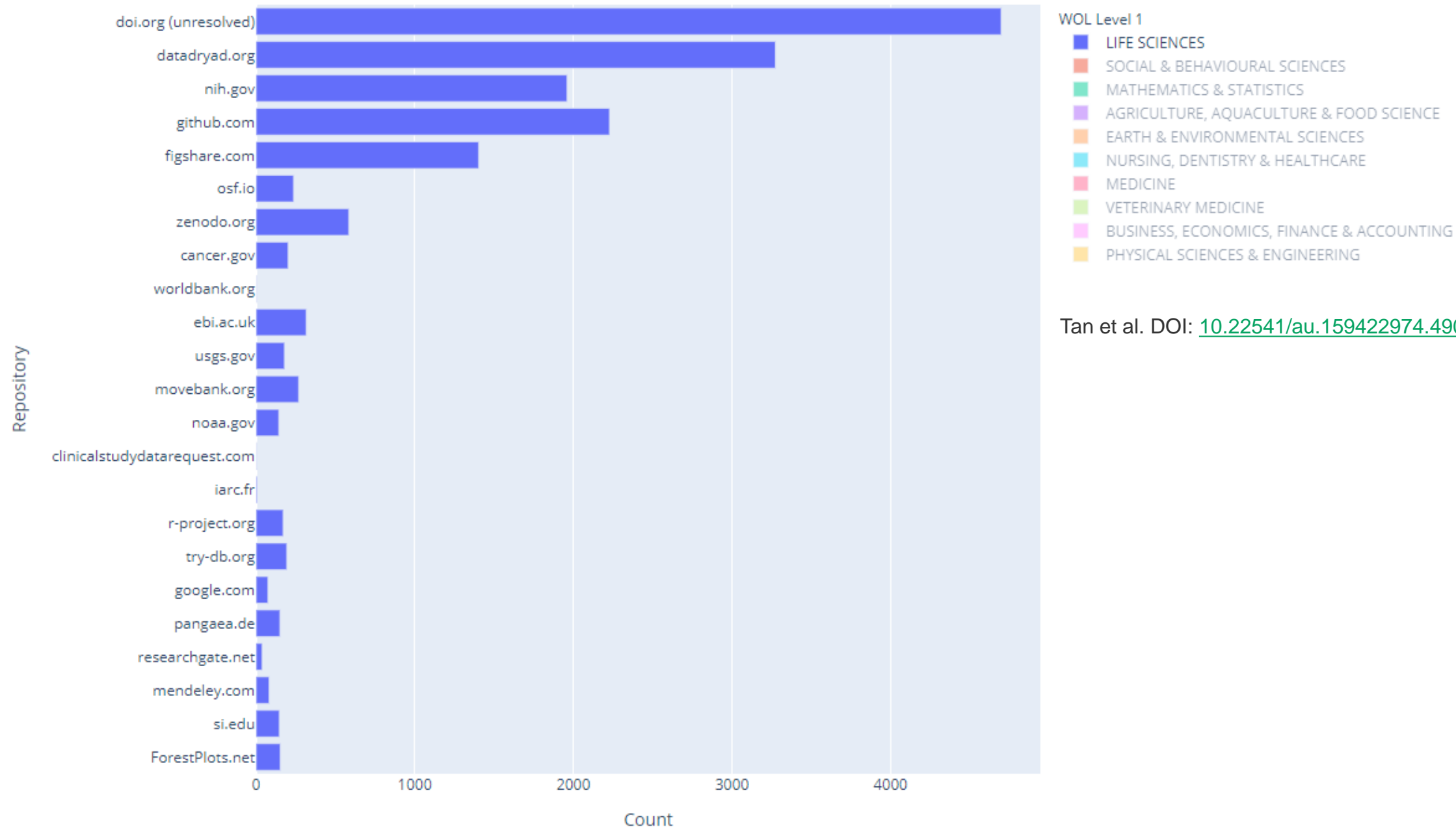
## Data Availability Statement example

<https://authorservices.wiley.com/author-resources/Journal-Authors/open-access/data-sharing-citation/data-sharing-policy.html>

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## Top domains found in data availability statements



Tan et al. DOI: [10.22541/au.159422974.49069472](https://doi.org/10.22541/au.159422974.49069472)

A person with a backpack stands in a dark cave, looking out at a bright waterfall. The scene is illuminated by the light from the waterfall, creating a strong contrast between the dark interior and the bright exterior.

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... accounting for both age and discipline

From analysis of three samples of 100,000 journal articles

Heather Piowar is a researcher in research data availability and reuse, and cofounder of Impactstory, @researchremix



| What do publishers like Wiley think about open research?

# Open access choices

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Publishers like Wiley support open access choices





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practices put  
greater  
openness and  
clarity within  
easy reach

## Research integrity: nine ways to move from talk to walk

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