



# Moving Beyond the Journal: A Changing Role for Publishers, Funders and Institutions

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F1000

# Contents page

1. Challenges with the existing publication system
2. Open Science – opportunities and challenges
3. Open science publishing model
4. Funder publishing platforms
5. Next-generation indicators
6. Summary

# Challenges with existing publishing system

- Much research is not accessible – behind paywalls
- Long delays in sharing new findings
- Biases and conflicts in anonymous editorial decisions
- Lack of data supporting the findings → hard to reproduce & reuse
- Much good research never published → skews our understanding
- Significant research waste

# Need to move away from 'publish or perish'

“The whole outdated enterprise is kept alive for one main reason: the fact that employers and funders of researchers assess researchers primarily by where they publish.”

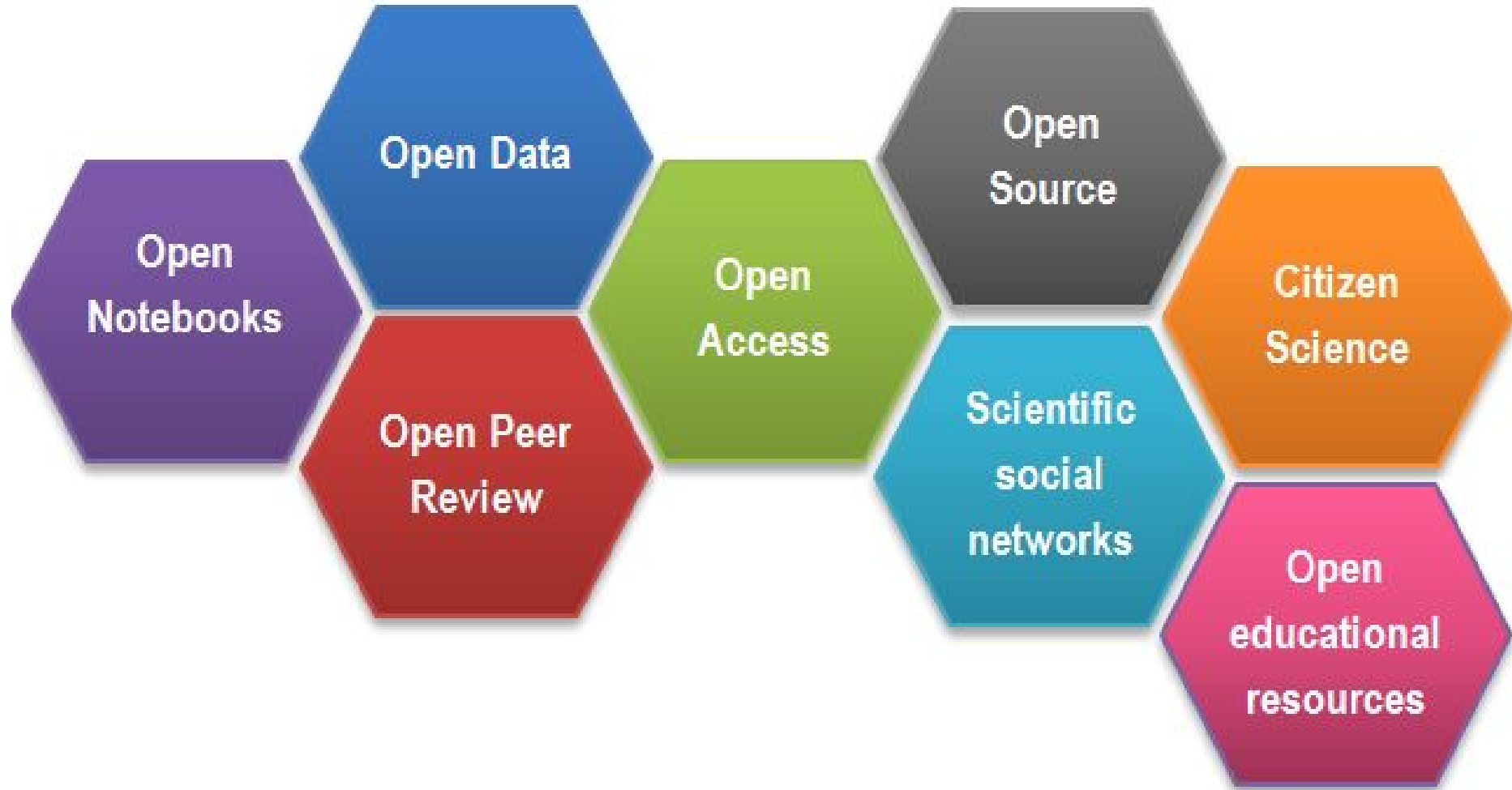
**Richard Smith, former Editor of BMJ**

<http://blogs.bmj.com/bmj/2016/07/12/richard-smith-another-step-towards-the-post-journal-world/>



Source: *Neuroskeptic Perspectives on Psychological Science* 2012;7:643-644  
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# Open Science



# Global shift towards open science



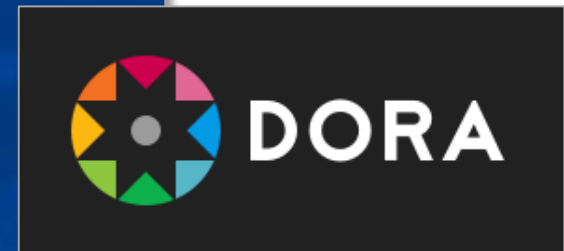
OA2020 – initiative for the large-scale transition to open access



Home > ... > Announcements > 'Plan S' and 'cOAlition S' – Accelerating the transition to full and immediate Open Access to scientific publications

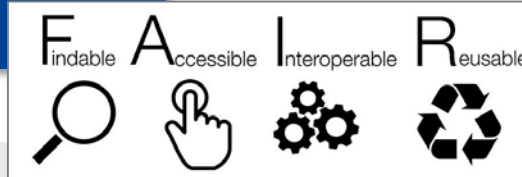
STATEMENT | 4 September 2018

## 'Plan S' and 'cOAlition S' – Accelerating the transition to full and immediate Open Access to scientific publications



### European Open Science Cloud (EOSC)

This is a cloud for research data in Europe. Background, policy information, events and publications related to the EOSC



# Rapid growth in open science tools & infrastructures



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F1000Research  
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arXiv.org

The Open Syllabus  
Project



scienceOPEN



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# Main barriers to uptake of Open Science

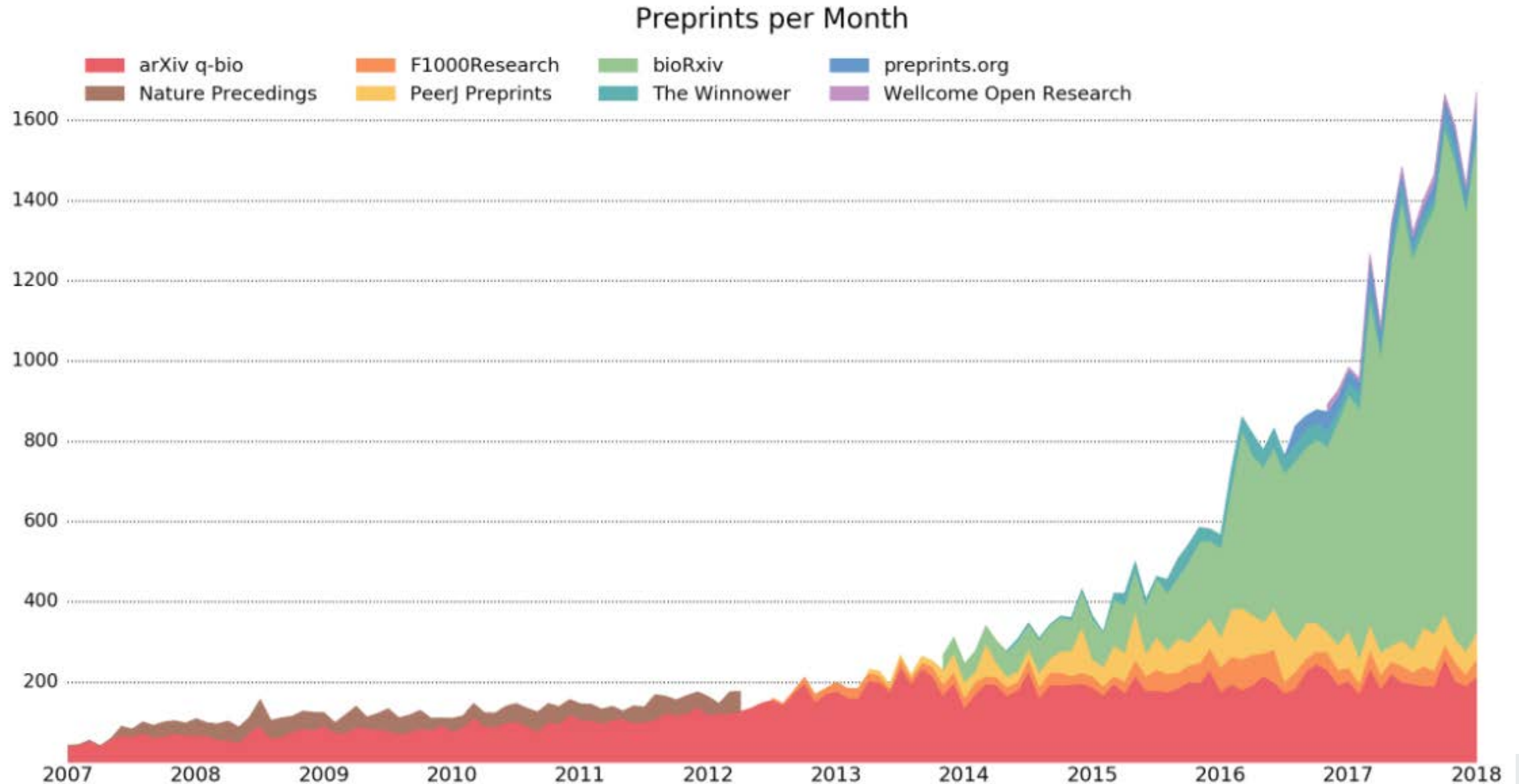
- Researchers typically judged by Impact Factor/brand of research articles
- Impact Factors/brands ingrained in the assessment and evaluation system
- Impact Factors/brands very simple/easy to use – any replacement will naturally be more complex so no incentive to shift without being pushed
- Misconception that Open Science ≠ quality
- Reality on the ground in review panels – hard to ensure *adherence* to policies that state that Impact Factors/brands should not be used in assessment
- Requires change at all levels e.g. all the way up to university league tables



# The key: separate publication from evaluation

- Now that we have moved on from print, there is no need for journals:
  - readers don't need them to find articles – search PubMed, Google Scholar, Scopus etc
  - only authors need them for the reflected benefit they provide via their brand
- If a researcher has discovered a new finding, they should be able to share it with the community and then defend it to their peers.
- The research community should be able to view new discoveries without delay.
- Readers would benefit from reading the views of expert peers on a new discovery.
- Peer reviewers should receive due credit for this important contribution to the scholarly discourse.
- New discoveries should be judged on the quality of *the finding itself*, not on the venue of publication.

# Significant growth of preprints



# F1000Research: Preprints + Journal-like model

Submission and preprint-like stage  
Open Access

Formal *invited* peer review  
Indexing in bibliographic databases



## Broad range of article types:

Research Articles  
Data Notes  
Software Tools  
Methods Articles  
Systematic Reviews etc

## Data accessible

Attention & usage  
metrics available

## Review status:

Approved



Approved with reservations



Not approved



# Transparent peer review and discussion

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METHOD ARTICLE

**UPDATE** A CRISPR/Cas9-based method and primer design tool for seamless genome editing in fission yeast

**[version 3; referees: 2 approved]**

✉ María Rodríguez-López <sup>1</sup>, Cristina Cotobal <sup>1</sup>, Oscar Fernández-Sánchez<sup>1</sup>, Natalia Borbarán Bravo <sup>1</sup>, Wang<sup>1</sup>, Mikel Zaratigui<sup>2</sup>

[Author affiliations](#)  
[Grant information](#)

**Abstract**

In the fission yeast *Schizosaccharomyces pombe*, we have established a CRISPR/Cas9-based system for seamless genome editing. This system is based on homologous recombination and uses a selectable marker. The CRISPR/Cas9 system, which allows for seamless genome editing, is used to delete other genomic 'scars'. The published method involves manual design of the single guide RNA (sgRNA), and digestion of a large plasmid with a problematic restriction enzyme to clone the sgRNA. To increase the efficiency of this approach, we have established and optimized a PCR-based system to clone the sgRNA without restriction enzymes into a plasmid with a dominant *natMX6* (nourseothricin) selection marker. We also provide a web-tool, CRISPR4P, to support the design of the sgRNAs and the primers required for the entire process of seamless DNA deletion. Moreover, we report the preparation of G1-synchronized and cryopreserved *S. pombe* cells, which greatly increases the efficiency and speed for transformations, and may also facilitate standard gene manipulations. Applying this optimized CRISPR/Cas9-based approach, we have successfully deleted over 80 different non-coding RNA genes, which are generally lowly expressed, and

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	Invited Referees	
Version(s)	1	2
<b>UPDATE</b> Version 3 published 05 May 2017		
<b>REVISED</b> Version 2 published 03 Jan 2017	✓ read report	✓ read report
Version 1 published 23 Nov 2016	✓ read report	? read report

1 **Silke Hauf**, Virginia Tech, USA  
2 **Damien Hermand**, The University of Namur, Belgium  
**Carlo Yague-Sanz**, The University of Namur, Belgium  
**Olivier Finet**, The University of Namur, Belgium

All reports (4), Responses and comments (2)

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14 days to 1st referee (median)





27 days to 2nd referee (median)

34.5 days to indexed (median)



RESEARCH ARTICLE

## REVISIED Classification and characterisation of brain network changes in chronic back pain: A multicenter study [version 2; referees: 3 approved]

Hiroaki Mano<sup>1\*</sup>, Gopal Kotecha<sup>2\*</sup>, Kenji Leibnitz <sup>1</sup>, Takashi Matsubara<sup>3</sup>, Christian Sprenger<sup>4</sup>, Aya Nakae<sup>5,6</sup>, Nicholas Shenker<sup>2</sup>, Masahiko Shibata<sup>5</sup>, Valerie Voon<sup>7</sup>, Wako Yoshida<sup>8</sup>, Michael Lee <sup>7</sup>, Toshio Yanagida<sup>1</sup>, Mitsuo Kawato<sup>8</sup>, Maria Joao Rosa<sup>9,10</sup>,  Ben Seymour <sup>1,4,6,8</sup>

\* Equal contributors

 [Author details](#)

### Abstract

**Background.** Chronic pain is a common, often disabling condition thought to involve a combination of peripheral and central neurobiological factors. However, the extent and nature of changes in the brain is poorly understood.

**Methods.** We investigated brain network architecture using resting-state fMRI data in chronic back pain patients in the UK and Japan (41 patients, 56 controls), as well as open data from USA. We applied machine learning and deep learning (conditional variational autoencoder architecture) methods to explore classification of patients/controls based on network connectivity. We then studied the network topology of the data, and developed a multislice modularity method to look for consensus evidence of modular reorganisation in chronic back pain.


**Results.** Machine learning and deep learning allowed reliable classification of patients in a third, independent open data set with an accuracy of 63%, with 68% in cross validation of all data. We identified robust evidence of network hub disruption in chronic pain, most consistently with respect to clustering coefficient and betweenness centrality. We found a consensus pattern of modular reorganisation involving extensive, bilateral regions of sensorimotor cortex, and characterised primarily by negative reorganisation - a tendency for sensorimotor cortex nodes to be less inclined to form pairwise modular links with other brain nodes. Furthermore, these regions were found to display increased connectivity with the pregenual anterior cingulate cortex, a region known to be involved in endogenous pain control. In contrast, intraparietal sulcus displayed a propensity towards positive modular reorganisation, suggesting that it might have a role in forming modules associated with the chronic pain state.

**Conclusion.** The results provide evidence of consistent and characteristic brain network changes in chronic pain, characterised primarily by extensive reorganisation of the network architecture of the sensorimotor cortex.



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Version(s)	1	2	3
Version 2 published 10 Oct 2018			
Version 1 published 01 Mar 2018	 read report	 read report	 read report



REVISIED

Version 2  
published  
10 Oct 2018Version 1  
published  
01 Mar 2018

read report

read report

read report

- 1 **Apkar Vania Apkarian**, Northwestern University, USA
- 2 **Tor D. Wager** , University of Colorado Boulder, USA
- 3 **Jiro Kurata** , Tokyo Medical and Dental University Hospital of Medicine, Japan

[All reports \(3\)](#), [Responses and comments \(3\)](#)

### Comments on this article

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# Transparent peer review and discussion

Referee Report 05 Dec 2016

**Damien Hermand**, Namur Research College, The University of Namur, Namur, Belgium  
**Olivier Finet**, Namur Research College, The University of Namur, Namur, Belgium  
**Carlo Yague-Sanz**, Namur Research College, The University of Namur, Namur, Belgium

? Approved with Reservations

The implementation of the CRISPR/Cas9 system in fission yeast by the Zaratiegui laboratory created a large interest within the community and many laboratories have tried to set up the method with apparently low success. Therefore, the present work by the ... [Continue reading](#)

REPORT A CONCERN

Views  
96  
Cite

Author Response 03 Jan 2017

**Jürg Bahler**, Department of Genetics, Evolution and Environment, University College London, UK  
We thank the reviewers for their helpful and constructive comments. Below we provide a point-by-point response to the specific issues raised (pasted in italic).

o In Figure 2, in

... [Continue reading](#)

REPORT A CONCERN

+ Respond or Comment

Referee Report 05 Dec 2016

**Silke Hauf**, Department of Biological Sciences and Biocomplexity Institute, Virginia Tech, Blacksburg, VA, USA

✓ Approved

Rodriguez-Lopez and colleagues report improvements on CRISPR/Cas9-mediated genome editing in *S. pombe* (fission yeast). Their work builds on a previous paper by Jacobs, Zaratiegui *et al.* (2014). In this earlier paper, Jacobs *et al.* describe an expression vector for Cas9 ... [Continue reading](#)

REPORT A CONCERN

Views  
63  
Cite

Author Response 03 Jan 2017

**Jürg Bahler**, Department of Genetics, Evolution and Environment, University College London, UK  
We thank the reviewer for her helpful, constructive comments. Our response to the specific issues raised (pasted in italic) is presented below.

o The authors change the auxotrophic selection

... [Continue reading](#)

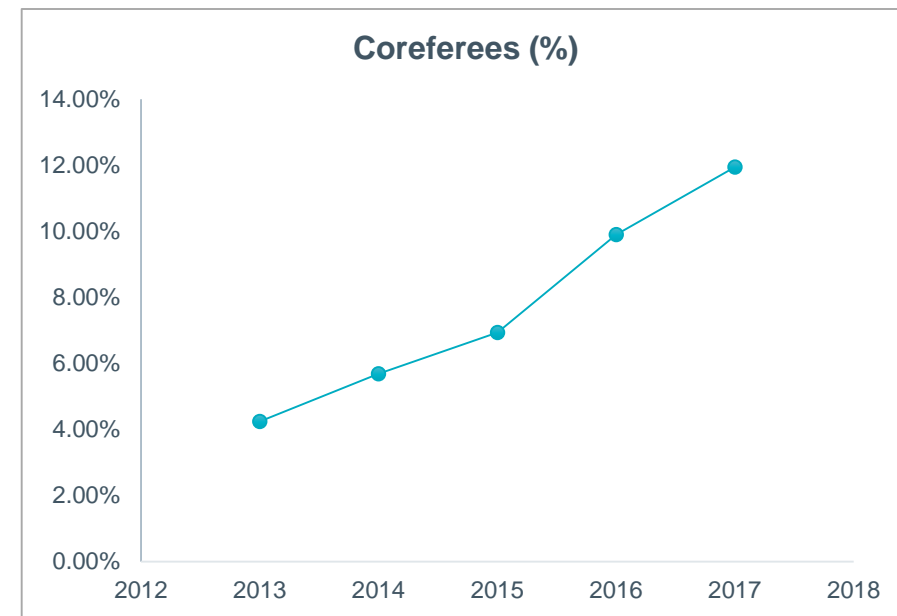
Reviewers:

→ get credit for contributing to discussion

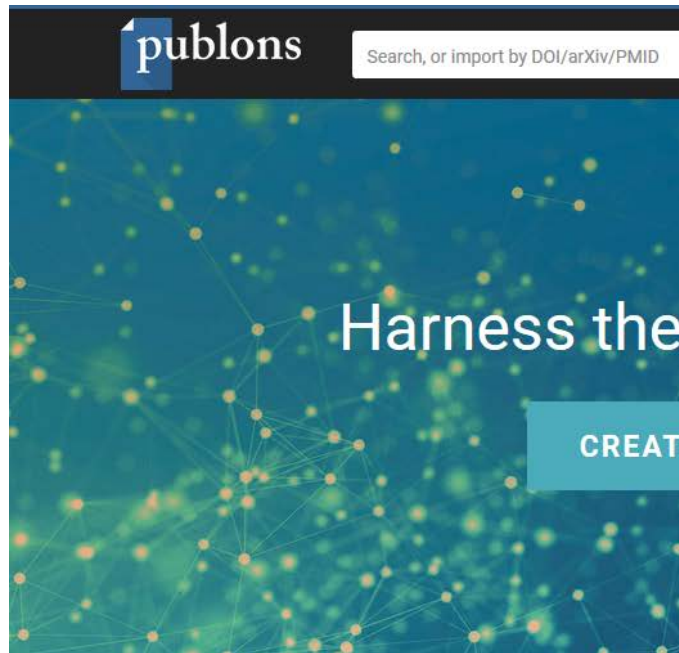
21. Schwarzkopf S: Referee report for: Brain-to-brain (mind-to-mind) interaction at distance: a confirmatory study [v2; ref status: approved 1, not approved 1, <http://f1000r.es/4en>]. *F1000Res.* 2014; **3**: 182. [Publisher Full Text](#)

→ focus on helping authors improve their work

→ good training for ECRs



# Recognising Peer Review



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**Mitchell Bekritsky**

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orcid.org/0000-0003-1420-1172

Print view

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- Employment (1)
- Works (3)
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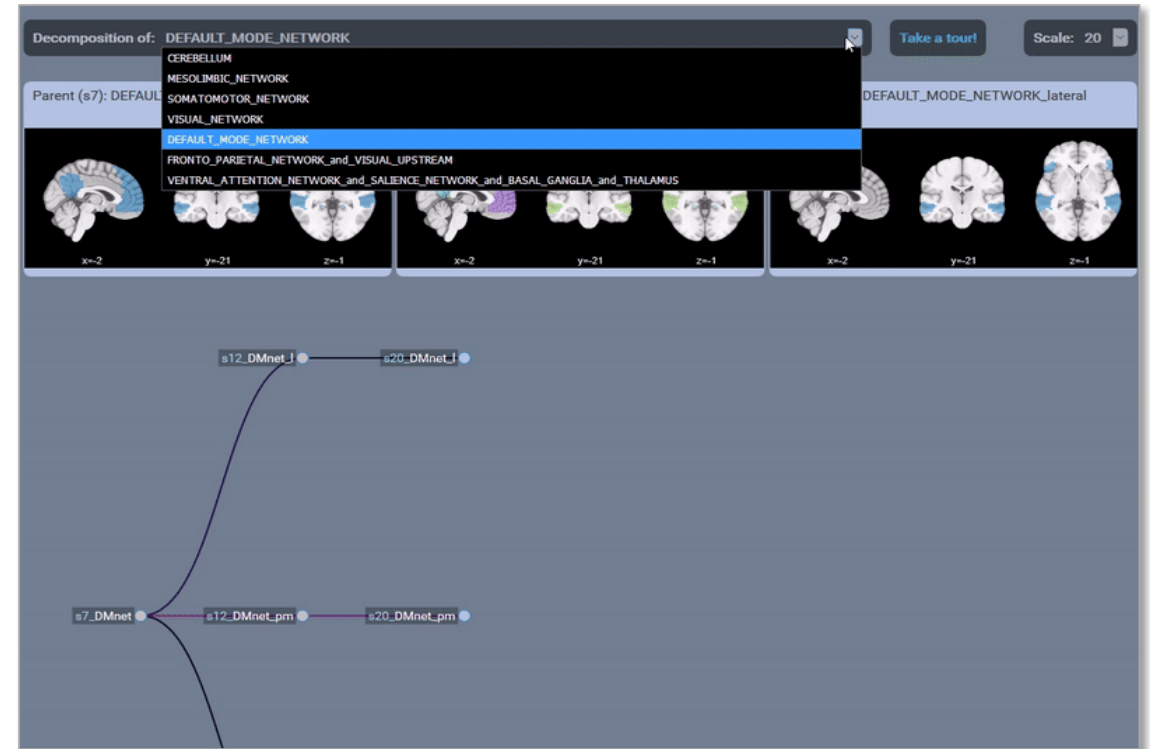
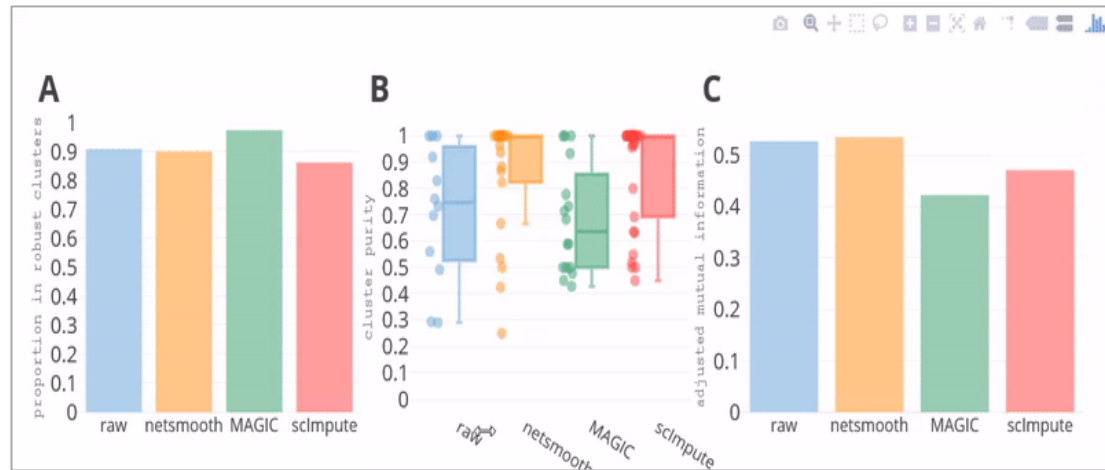
review activity for F1000Research(1)  
journal, F1000Research

Review date	Type	Role	Actions
2017-10	review	reviewer	hide details   view

Review identifier(s): DOI: 10.5256/f1000research.13552.r26608  
Convening organization: F1000Research(London, United Kingdom)  
Review subject: Tools for annotation and comparison of structural variation [version 1; referees: 1 approved, 1 approved with reservations] journal-article F1000Research.  
DOI: 10.12688/f1000research.12516.1  
Source: F1000  
Created: 2017-10-16

# Interactive figures

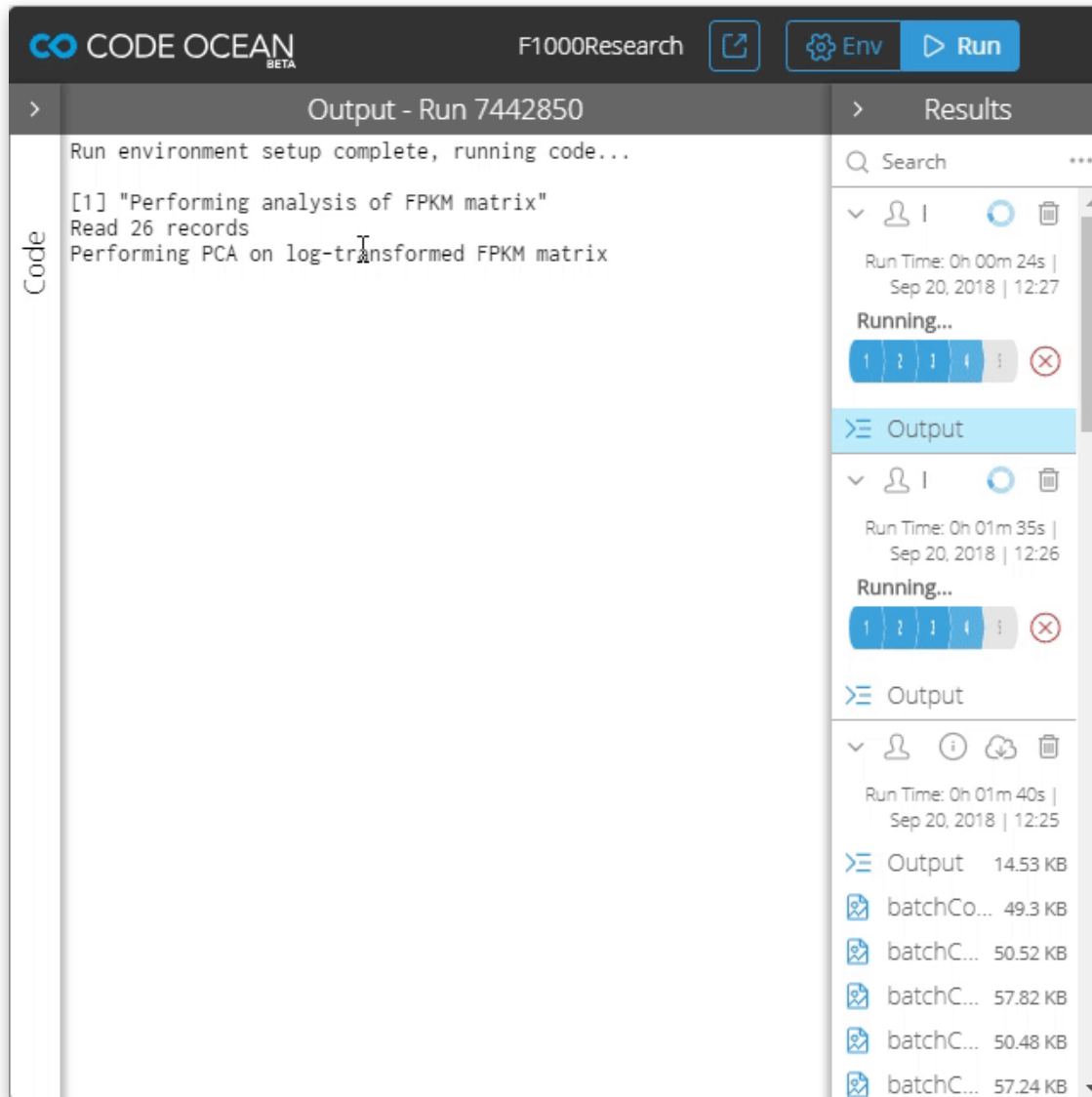
- Provide an extended viewer for in article visualisations
- Have a “widget” integration where we can run Shiny apps.



- Have an integration with plot.ly to host interactive figures in R.



# Computational reproducibility



The screenshot shows the CODE OCEAN interface. The top bar includes the CODE OCEAN logo, the user name 'F1000Research', and buttons for 'Env' and 'Run'. The main area is split into two panes. The left pane, labeled 'Code', shows the output of a code execution: 'Run environment setup complete, running code...', '[1] "Performing analysis of FPKM matrix"', 'Read 26 records', and 'Performing PCA on log-transformed FPKM matrix'. The right pane, labeled 'Results', shows a search bar, a list of runs, and a list of output files. The runs are labeled 'Running...' and show run times and dates. The output files are listed with their names and sizes.

- Embedded into articles to improve reproducibility.
- Authors simply upload their code and data then users can rerun the analysis.
- Users can edit the code to see how the results differ by changing the parameters.
- Users can run their own analyses by uploading their data.

# Funder-/institution-controlled platforms



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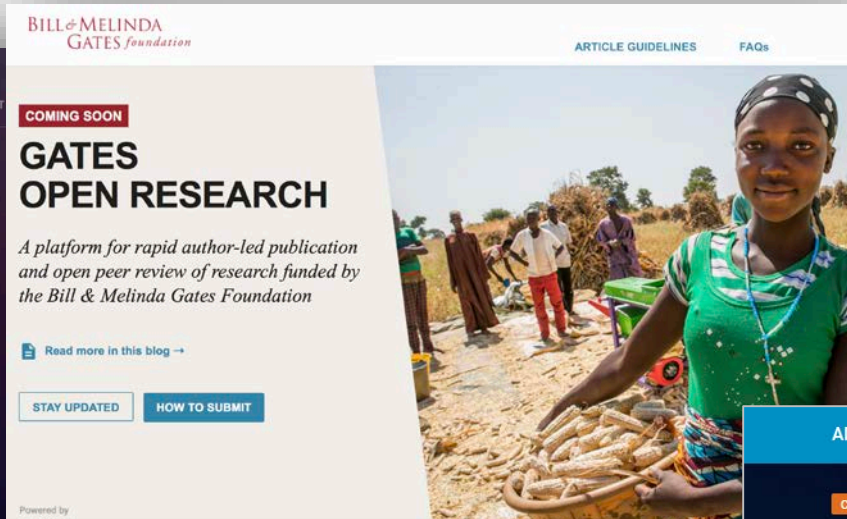
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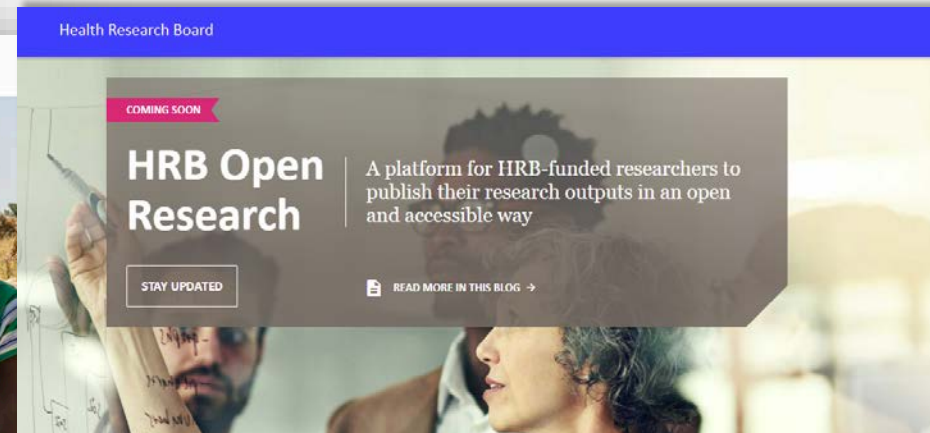
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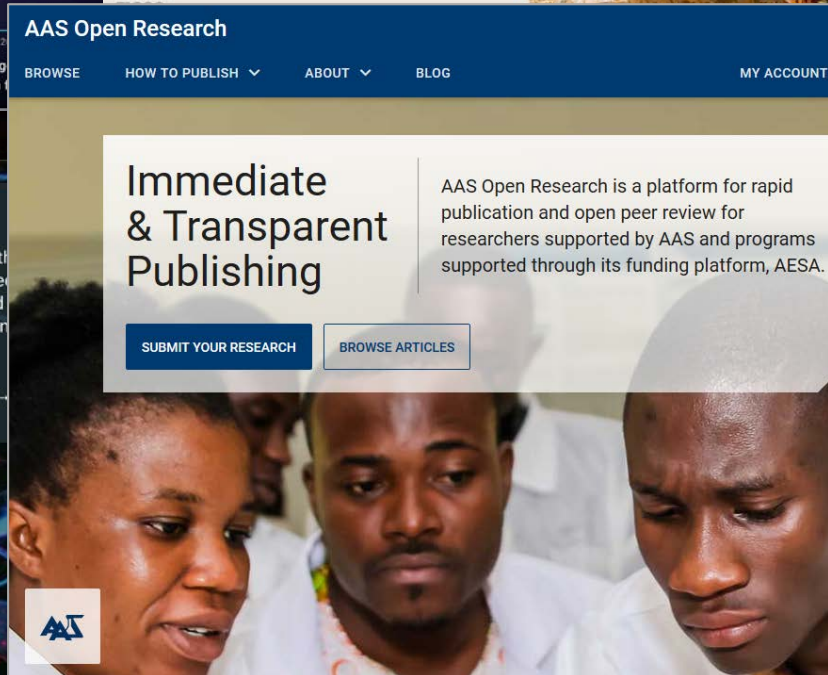
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AMRC Open Research

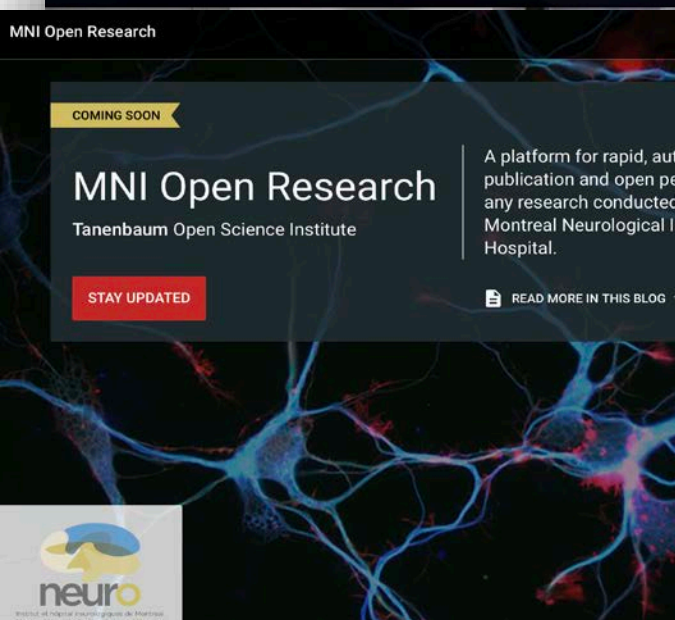
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## AMRC Open Research

A platform for rapid author-led publication and open peer review of research funded by AMRC member charities

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MNI Open Research

**COMING SOON**

## MNI Open Research

Tanenbaum Open Science Institute

A platform for rapid, author-led publication and open peer review of any research conducted at the Montreal Neurological Institute Hospital.

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neuro



# 日本経済新聞

2018年10月11日(木)

トップ 経済・政治 ビジネス マーケット テクノロジー 国際・アジア スポーツ

速報 朝刊

## ビル・ゲイツ氏、論文公開で世界主導

### 論文は誰のものか

ネット・IT IoT 科学&新技術

2018/10/6 6:30 | 日本経済新聞 電子版

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「迅速性、透明性のある出版物です」。学術論文を公開する英文サイト「ゲイツオープンリサーチ」を開くと、こんなうたい文句が目に入る。

運営するのは米マイクロソフト創業者のビル・ゲイツ夫妻による「ビル&メリンダ・ゲイツ財団」。サイトを開設した2017年に数百人の研究者を助成し、その論文をサイトで公開している。

論文をただ載せるのではない。学術誌を発行する出版社の「専売特許」だったはずの論文の評価機能も…

### Mr. Bill · Gates, led the world by literature publication

Who is the thesis?

Net · IT IoT Science & New technology

2018/10/6 6:30 | Nihon Keizai Shinbun electronic version

Save share print Other

“It is a publication with quickness and transparency.” When opening an English website “Gates Open Research” to publish academic papers, such a sort of phrase can be seen.

It is the “Bill & Melinda Gates Foundation” by Mr. Bill Gates of Microsoft founder, USA. In 2017 when the site was established, it helped hundreds of researchers and published the paper on the site.

I can not just put a paper on it. Evaluation function of the paper which should have been “monopoly patent” of publisher issuing academic journal ...

# Central portal for publication

The screenshot displays the Open Research Central website. At the top, the logo and name 'Open Research Central' are prominent, along with the tagline 'The central portal for open research publishing'. Below this, there are navigation links for 'IMMEDIATE PUBLICATION | OPEN DATA', 'OPEN PEER REVIEW | OPEN ACCESS', and a search bar. A 'SUBMIT YOUR PAPER' button is visible. The main content area is titled 'Organisations providing open research publishing options for their researchers' and features a grid of logos for various organizations, including F1000 Research, Emerald Publishing, Wiley, Gf, Israel Science Foundation, HRB, AESA, AS, amrc, Alzheimer's Research UK, ATAXIA, AUTISTICA, BRACE, epilepsy research UK, WE ARE MACMILLAN, MRC, MRC, MS Society, Pancreatic Cancer, Parkinson's Society, Royal Hospital for Neuro-disability, spinal research, Stroke, United Kingdom Cancer Research, BRAIN FORCE CHARITY, The Cure Parkinson's Trust, Lady, The Alzheimer's Society, Canadian Institutes of Health Research, NCJ, neuro, AI, JCU, EMBL-EBI, and the National Institute for Health Research, incf, ISCB, elixir, and GODAN.

## Improving how research is assessed

Join the organizations and individuals who have signed the Declaration on Research Assessment.

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### Re-invigorating commitments:

- 1323 new individual signatures to a total of 12,779
- 146 new organizational signatures to a total of 580

### Examples of good practices:

- 6 funding agencies
- 6 research institutes
- 2 professional societies

# Range of outputs and associated metrics

**F1000Research**  
Open for Science

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RESEARCH ARTICLE [EDIT VERSION](#)

## A reanalysis of mouse ENCODE comparative gene expression data [version 1; referees: 3 approved with reservations]

Yoav Gilad, Orna Mizrahi-Man

### METRICS

VIEWS	26018	DOWNLOADS	2502
CITATIONS			
PubMed 21			

Blogged by 11  
Mentioned in 3 Google+ posts  
On 3 Facebook pages  
Picked up by 2 news outlets  
Tweeted by 278

### Open Peer Review

Referee Status: ? ✓ ✓ ✓

Version(s)	Invited Referees			
	1	2	3	4
Version 1 published 19 May 2015	? read report	✓ read report	✓ read report	✓ read report

- Rafael Irizarry, Harvard School of Public Health, USA
- Michael Eisen, University of California, Berkeley, USA
- Mick Watson, University of Edinburgh, UK
- Lior Pachter, University of California, Berkeley, USA

All reports (4), Responses and comments (1)

### Comments on this article

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## Data availability

All data are available from the Mouse ENCODE consortium; see [Table S1](#) for specific source URLs and accession numbers.

## Software availability

We provide supplementary files of the python codes used to process and prepare the data for analysis with R, and the data files for the python codes. We also provide the R codes we used to perform the different analyses as supplementary files, as well as the input for the R codes.

## Archived software files as at the time of publication

Zenodo. Data files and codes used in the reanalysis of the mouse encode comparative gene expression data. DOI: [10.5281/zenodo.17606](https://doi.org/10.5281/zenodo.17606)

## License

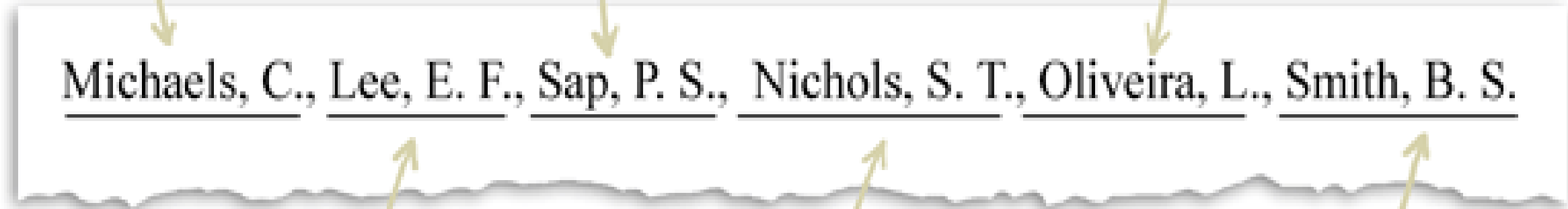
These codes are provided under the MIT license.

# THE AUTHOR LIST: GIVING CREDIT WHERE CREDIT IS DUE

**The first author**  
Senior grad student on the project. Made the figures.

**The third author**  
First year student who actually did the experiments, performed the analysis and wrote the whole paper. Thinks being third author is "fair".

**The second-to-last author**  
Ambitious assistant professor or post-doc who instigated the paper.



**The second author**  
Grad student in the lab that has nothing to do with this project, but was included because he/she hung around the group meetings (usually for the food).

**The middle authors**  
Author names nobody really reads. Reserved for undergrads and technical staff.

**The last author**  
The head honcho. Hasn't even read the paper but, hey, he got the funding, and his famous name will get the paper accepted.

Term	Definition
<b>Conceptualization</b>	<i>Ideas; formulation or evolution of overarching research goals and aims.</i>
<b>Methodology</b>	<i>Development or design of methodology; creation of models.</i>
<b>Software</b>	<i>Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components.</i>
<b>Validation</b>	<i>Verification, whether as a part of the activity or separate, of the overall replication/reproducibility of results/experiments and other research outputs.</i>
<b>Formal Analysis</b>	<i>Application of statistical, mathematical, computational, or other formal techniques to analyse or synthesize study data.</i>
<b>Investigation</b>	<i>Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection.</i>
<b>Resources</b>	<i>Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools.</i>
<b>Data Curation</b>	<i>Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later re-use.</i>
<b>Writing – Original Draft</b>	<i>Preparation, creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation).</i>
<b>Writing – Review &amp; Editing</b>	<i>Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision – including pre- or post-publication stages.</i>
<b>Visualization</b>	<i>Preparation, creation and/or presentation of the published work, specifically visualization/data presentation.</i>
<b>Supervision</b>	<i>Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team.</i>
<b>Project Admin</b>	<i>Management and coordination responsibility for the research activity planning and execution.</i>
<b>Funding Acquisition</b>	<i>Acquisition of the financial support for the project leading to this publication.</i>



# CrediT: from authorship to contributorship

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**RESEARCH ARTICLE**

**REVISED** The age of heterozygous *telomerase* mutant parents influences the adult phenotype of their offspring irrespective of genotype in zebrafish [version 2; referees: 2 approved]

Catherine M. Scahill<sup>1</sup>, Zsofia Digby<sup>1,2</sup>, Ian M. Sealy<sup>1</sup>, Richard J. White<sup>1</sup>, Neha Wali<sup>1</sup>, John E. Collins<sup>1</sup>, Derek L. Stemple<sup>1</sup>, Elisabeth M. Busch-Nentwich<sup>1,3</sup>

**Author details:**

<sup>1</sup> Wellcome Trust Sanger Institute, Wellcome Genome Campus, Hinxton, UK  
<sup>2</sup> Department of Veterinary Medicine, University of Cambridge, Cambridge, UK  
<sup>3</sup> Department of Medicine, University of Cambridge, Cambridge, UK

Catherine M. Scahill  
 Roles: Conceptualization, Investigation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing

Zsofia Digby  
 Roles: Investigation, Visualization

Ian M. Sealy  
 Roles: Data Curation, Formal Analysis, Visualization

Richard J. White  
 Roles: Data Curation, Formal Analysis, Visualization

Neha Wali  
 Roles: Investigation

John E. Collins  
 Roles: Conceptualization

Derek L. Stemple  
 Roles: Funding Acquisition, Resources

Elisabeth M. Busch-Nentwich  
 Roles: Conceptualization, Funding Acquisition, Resources, Supervision, Writing – Original Draft Preparation, Writing – Review & Editing

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Version(s)	1	2
<b>REVISED</b> Version 2 published 22 Feb 2018	✓ read report	✓ read report
Version 1 published 04 Sep 2017	? read report	? read report

1 **Noriyoshi Sakai**, National Institute of Genetics, Japan  
 2 **Karl-Lenhard Rudolph**, Leibniz Institute For Age Research, Germany

All reports (4), Responses and comments (2)

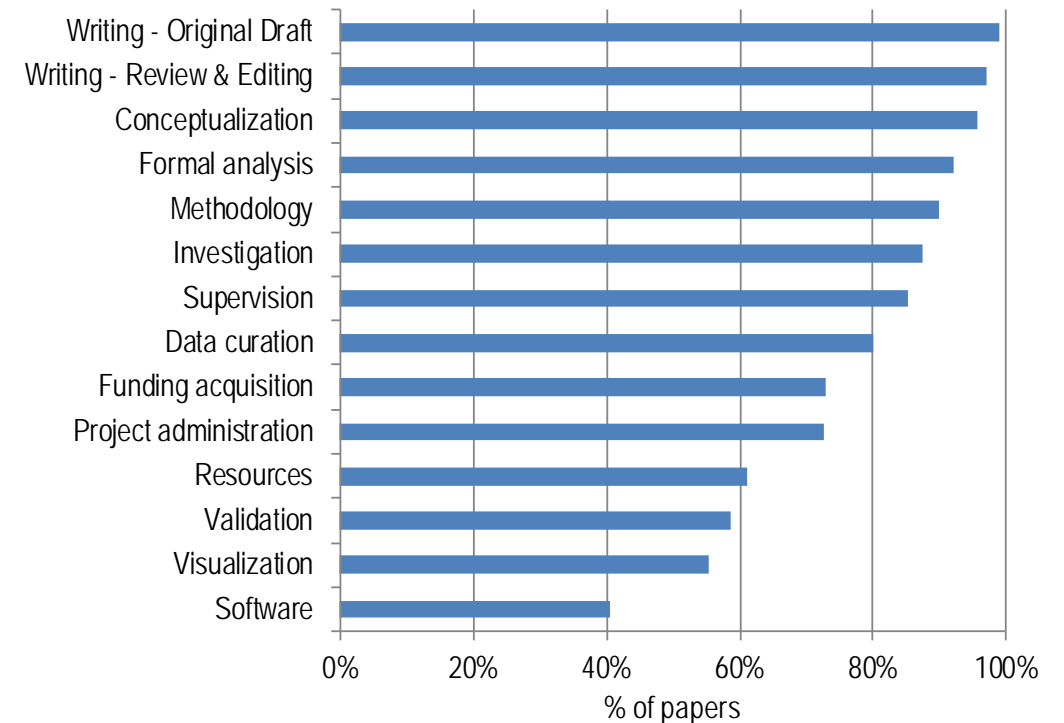
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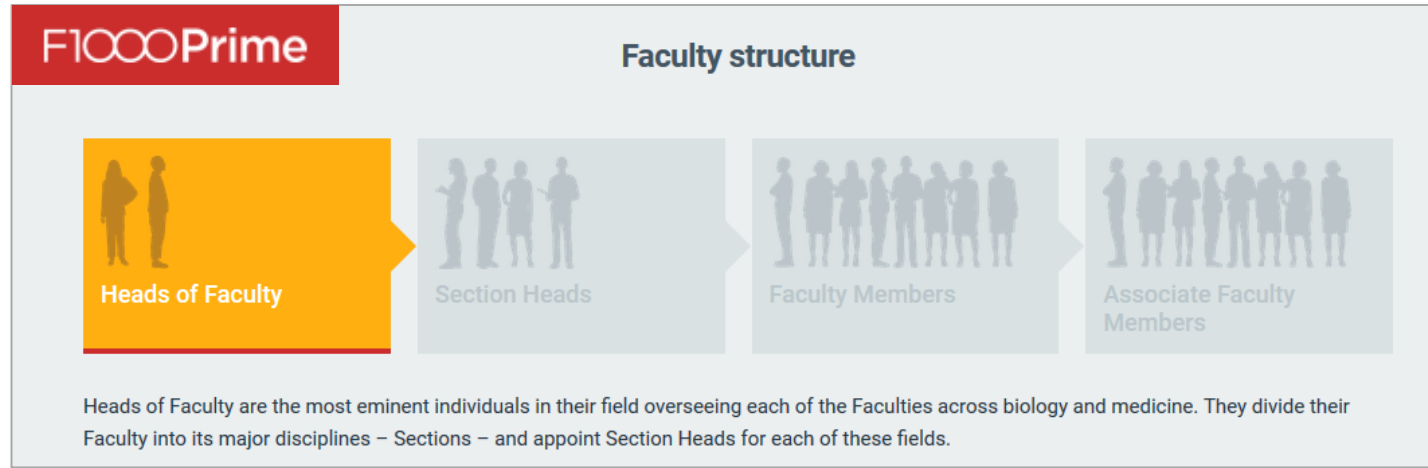
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Vincent Larivière, Cassidy Sugimoto, preliminary results

# F1000Prime – article-based expert assessment



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- Faculty include 10 Nobel Laureates, 16 Lasker Award winners, >150 NAS members, etc
- >200,000 recommendations, across >4000 journals

## BROWSE BY FACULTY

All | **Biology** | **Medicine**

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Biochemistry

Bioinformatics, Biomedical Informatics & Computational Biology

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Cardiovascular Biology

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Cell Biology

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Developmental Biology

Diabetes & Endocrinology

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# Example F1000 Faculty

**F1000Prime** F1000 Faculty

ARTICLE RECOMMENDATIONS RANKINGS F1000PRIME REPORTS F1000 FACULTY BLOG

Faculty / Nephrology / Hemodynamics, Vascular Biology & Hypertension Secondary

Section Head since 16 Nov 2005



**Sadayoshi Ito**  
Division of Nephrology, Endocrinology and  
Tohoku University Hospital  
Aoba-ku, Sendai, Miyagi  
Japan

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**BIOGRAPHY**

**ACADEMIC POSITION:**  
Departmental Chair, Division of Nephrology, Endocrinology and Metabolic Diseases, Tohoku University Hospital, Sendai, Japan.

**RESEARCH INTERESTS:**  
Dr Ito's group carry out and/or participate in various clinical studies on the pathophysiology and pathophysiology using various approaches including molecular biology, immunopathology, and clinical epidemiology.


Research themes are as follows: 1) glomerular hemodynamics, 2) glomerular injury, 3) glomerular channels, 4) arachidonic acid metabolism by renal tubule cells, 5) glomerular sclerosis (FGS) and diabetic glomerulosclerosis, 6) proliferative glomerulonephritis, 7) pathogenesis of lipoprotein-induced glomerular injury (HSNST) mRNA in experimental nephrosis.

**F1000Prime** F1000 Faculty

ARTICLE RECOMMENDATIONS RANKINGS F1000PRIME REPORTS F1000 FACULTY BLOG

Faculty / Ecology / Theoretical Ecology

Section Head since 20 Oct 2004



**Yoh Iwasa**  
Dept of Biology, Faculty of Science  
Kyushu University  
Fukuoka  
Japan

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**BIOGRAPHY**

**ACADEMIC POSITION:**  
• Director of the Institute for Advanced Study, Kyushu University  
• Chair of Theoretical Biology, Department of Biology, Kyushu University

**EDUCATION:**  
• BA Kyoto University (Japan)  
• PhD Kyoto University (Japan)


**MEMBERSHIPS:**  
• Foreign Honorary Member of the American Academy of Arts and Sciences  
• Member of Ecological Society of Japan (Japan)  
• Member of Society for Evolutionary Study Japan (Japan)  
• Member of Japanese Society for Mathematical Biology

**F1000Prime** F1000 Faculty

ARTICLE RECOMMENDATIONS RANKINGS F1000PRIME REPORTS

Faculty / Dermatology / Acquired & Inherited Bullous Disorders

Section Head since 16 Nov 2005



**Masayuki Amagai**  
Department of Dermatology  
Keio University School of Medicine  
Tokyo  
Japan

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**BIOGRAPHY**

**ACADEMIC POSITION:**  
Professor and Chair of the Department of Dermatology, Keio University School of Medicine, Tokyo, Japan.


**AWARDS AND HONORS:**  
• 2000 The JSID Award from Japanese Society for Investigative Dermatology  
• 2002 Alfred Marchionini Award at World Congress of Dermatology  
• 2003 William Montagna Lectureship Award from the American Society for Investigative Dermatology  
• 2005 CERES Research Award for research on the pathogenesis of bullous pemphigoid  
• 2006 JSPS Prize from Japan Society for the Promotion of Science  
• 2006 JSI Award from Japanese Society for Investigative Dermatology

**F1000Prime** F1000 Faculty

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Faculty / Oncology / Head & Neck Cancers

Section Head since 11 May 2016 Show previous roles



**Makoto Tahara**  
Department of Head and Neck Medical Oncology  
National Cancer Center Hospital East  
Kashiwa, Chiba  
Japan

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**BIOGRAPHY**

**F1000Prime** F1000 Faculty

ARTICLE RECOMMENDATIONS RANKINGS F1000PRIME REPORTS F1000 FACULTY BLOG MYF1000 COMPOSE RECOMMENDATION SIGN OUT

Faculty / Ophthalmology / Anterior Uveitis & Posterior Uveitis

Section Head since 06 Apr 2011



**Annabelle A Okada**  
Department of Ophthalmology  
Kyorin University School of Medicine  
Tokyo  
Japan

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**BIOGRAPHY**

**ACADEMIC POSITION:**  
Annabelle A Okada, MD, DMSc is a Professor of Ophthalmology in the Department of Ophthalmology at Kyorin University School of Medicine in Tokyo, Japan. She serves as Director of both the Ocular Inflammation Service and the Macular Disease Service at the Kyorin Eye Center of Kyorin University Hospital, the first truly comprehensive clinical and research eye center in Japan established in 1999.

**EDUCATION:**  
Dr Okada graduated from Harvard College with an AB in Biochemistry (magna cum laude) and from Harvard Medical School's Harvard-MIT Health Sciences and Technology division with a MD (cum laude). She then went on to complete an internal medicine internship at the Massachusetts General Hospital and an ophthalmology residency at the Massachusetts Eye and Ear Infirmary. Dr Okada moved to Japan in 1992 where she earned a doctorate in medical sciences at the Tokyo Medical University and also did a uveitis fellowship. She then completed a vitreoretinal surgical fellowship at Osaka University before starting her current affiliation with Kyorin University in 1999.

# Example recommendation

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1 Recommendations Interesting Hypothesis New Finding

## A single phosphorylation site of SIK3 regulates daily sleep amounts and sleep need in mice.

Honda T Fujiyama T Miyoshi C Ikkyu A Hotta-Hiraashima N Kanno S Mizuno S Sugiyama F Takahashi S Funato H Yanagisawa M Author affiliations

PUBLISHED: 2018 Oct 09 CITE AS: Proc Natl Acad Sci USA. 2018 Oct 09; 115(41):10458-10463 <https://doi.org/10.1073/pnas.1810823115>

RECOMMENDATIONS ABSTRACT COMMENTS

Rated **\*\*\* Exceptional** 17 Oct 2018 EDIT

**Carol MacKintosh** F1000 Faculty Member  
Cell Biology / Cell Signaling  
University of Dundee  
Dundee, Tayside  
UK

Classified as  
New Finding Interesting Hypothesis

Whether insomniac or out like a light, how and why we fall asleep are fascinating mysteries whose secrets are being uncovered by three papers from the Universities of Tsukuba and Texas.

From thousands of randomly mutagenized mice, *Sleepy* animals were identified that fall asleep for far longer than usual, specifically in a type of sleep characterised by non-rapid eye movement (NREM) brainwave patterns. Their REM sleep was normal. The *Sleepy* phenotype was traced to a single splicing mutation that deletes an exon in the gene encoding SIK3, a protein kinase in the AMPK branch of the kinome (1).

The *Sleepy* mutation activated SIK3. This finding motivated a phosphoproteomic study that identified around 80 Sleep-Need-Index-Phosphoproteins (SNIPPs) whose phosphorylation was increased in brains of the Sleepy mice and sleep-deprived wild-types, compared with controls. Furthermore, inhibition of SIK3 activity decreases both phosphorylation of SNIPPs and slow wave activity during NREM in both *Sleepy* and sleep-deprived wild-type mice. Interestingly, most SNIPPs are involved in synaptic connections between neurons (2).

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2 Recommendations Interesting Hypothesis New Finding +2 more

## Coupling of bone resorption and formation by RANKL reverse signalling.

Ikebuchi Y Aoki S Honma M Hayashi M Sugamori Y Khan M Kariya Y Kato G Tabata Y Penninger JM Udagawa N Aoki K Suzuki H Author affiliations

PUBLISHED: 2018 Sep CITE AS: Nature. 2018 Sep; 561(7722):195-200 <https://doi.org/10.1038/s41586-018-0482-7>

RECOMMENDATIONS ABSTRACT COMMENTS

Rated **\*\*\* Exceptional** 25 Sep 2018 EDIT

**Subburaman Mohan** F1000 Faculty Member  
Physiology / Endocrinology  
Loma Linda VA Healthcare Systems  
Loma Linda, CA  
USA

Classified as  
Good for Teaching Novel Drug Target New Finding Interesting Hypothesis

The importance of coupling of bone formation to resorption in the maintenance of bone homeostasis has been well established for over three decades. Under conditions of metabolic bone disease or menopausal bone loss, the rate of resorption is greater than the

More

Rated **\*\* Very Good** 05 Oct 2018 EDIT

**Alvin M Matsumoto** F1000 Faculty Member  
Pharmacology & Drug Discovery / Endocrine & Metabolic Pharmacology  
University of Washington School of Medicine  
Seattle, WA  
USA

Classified as  
Novel Drug Target New Finding Interesting Hypothesis

This is an interesting paper that presents a potential novel mechanism for the coupling of

**Coupling of bone resorption and formation by RANKL reverse signalling.**

Ikebuchi Y<sup>1</sup> Aoki S<sup>1</sup> Honma M<sup>2</sup> Hayashi M<sup>1</sup> Sugamori Y<sup>2</sup> Khan M<sup>3</sup> Kariya Y<sup>1</sup> Kato G<sup>4</sup> Tabata Y<sup>5</sup> Penninger JM<sup>6</sup> Udagawa N<sup>7</sup> Aoki K<sup>3</sup> Suzuki H<sup>1</sup>

<sup>1</sup> Department of Pharmacy, the University of Tokyo Hospital, Faculty of Medicine, the University of Tokyo, Tokyo, Japan

<sup>2</sup> Department of Pharmacy, the University of Tokyo Hospital, Faculty of Medicine, the University of Tokyo, Tokyo, Japan. [mhonma-ky@umin.ac.jp](mailto:mhonma-ky@umin.ac.jp)

<sup>3</sup> Department of Basic Oral Health Engineering, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan

<sup>4</sup> Department of Bio-Matrix (Pharmacology), Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan

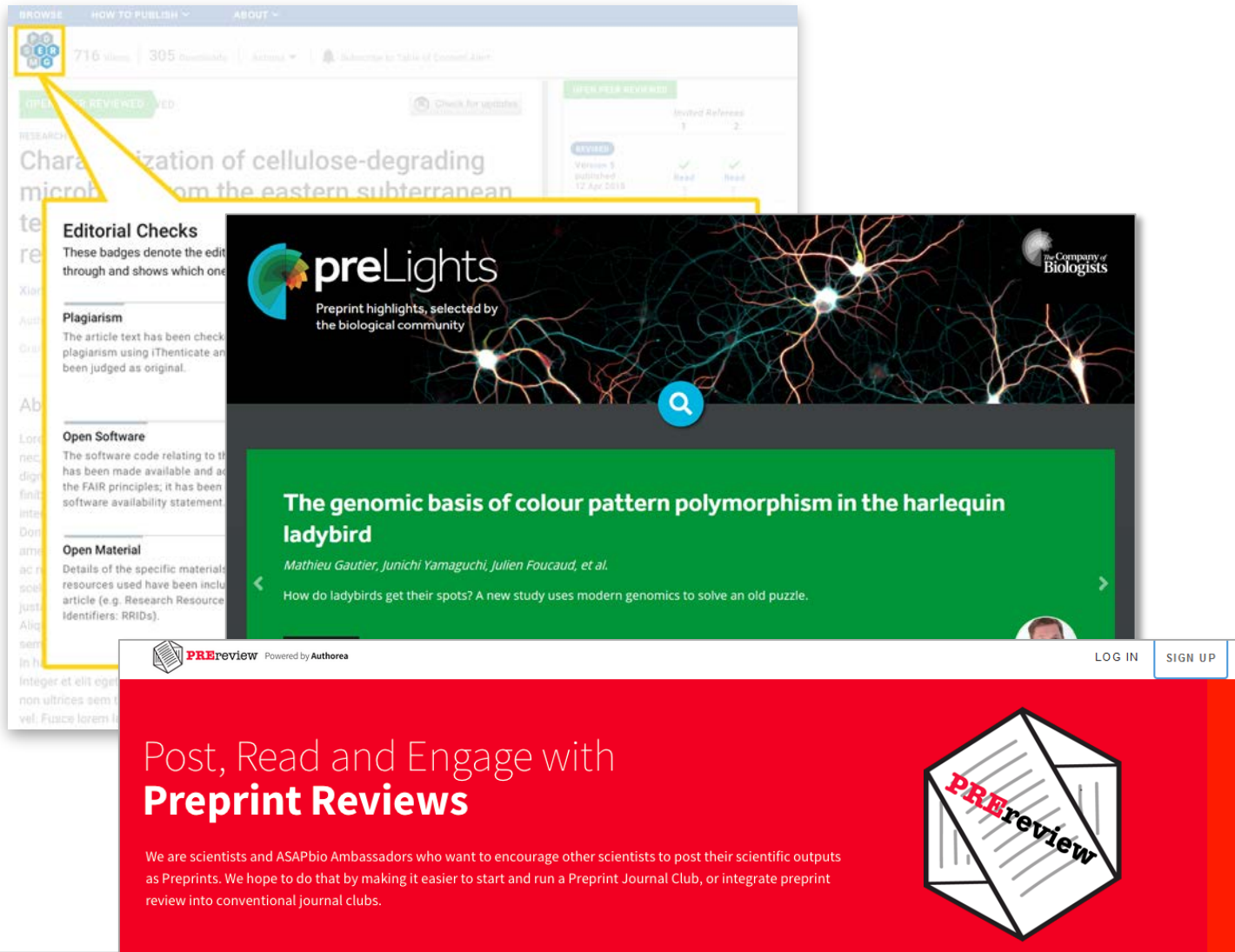
<sup>5</sup> Laboratory of Biomaterials, Department of Regeneration Science and Engineering, Institute for Frontier Life and Medical Sciences, Kyoto University, Kyoto, Japan

<sup>6</sup> Institute of Molecular Biotechnology of the Austrian Academy of Sciences, Vienna Biocenter, Vienna, Austria

<sup>7</sup> Department of Biochemistry, Matsumoto Dental University, Shiojiri, Japan

Health  
Physiology  
Muscle & Connective Tissue

# Indicators of quality: existing and new



The image shows a screenshot of a preprint article page. At the top left, there is a navigation menu with 'BROWSE', 'HOW TO PUBLISH', and 'ABOUT'. Below this, there are statistics: '716 views', '305 downloads', and a 'Subscribe to Table of Contents alert' button. The main content area features a large image of a neural network with the text 'preLights Preprint highlights, selected by the biological community' and 'the Company of Biologists' logo. Below the image, there is a green banner with the title 'The genomic basis of colour pattern polymorphism in the harlequin ladybird' and the authors 'Mathieu Gautier, Junichi Yamaguchi, Julien Foucaud, et al.'. A search icon is visible on the right side of the banner. On the left side of the page, there is a sidebar with 'Editorial Checks' and 'Plagiarism' sections. The 'Editorial Checks' section lists: 'Open Software' and 'Open Material'. The 'Plagiarism' section states: 'The article text has been checked for plagiarism using iThenticate and has been judged as original.' At the bottom of the page, there is a red banner with the text 'Post, Read and Engage with Preprint Reviews' and a logo for 'PREreview Powered by Authorea'. The logo is a white cube with the text 'PREreview' written on it. The red banner also contains the text: 'We are scientists and ASAPbio Ambassadors who want to encourage other scientists to post their scientific outputs as Preprints. We hope to do that by making it easier to start and run a Preprint Journal Club, or integrate preprint review into conventional journal clubs.'

- Badges to capture level of checks (e.g. plagiarism, reporting) and of review (e.g. expert peer review, community review)
- Relative Citation Ratio
- Expert recommendations (e.g. F1000Prime, PreLights, PreReview, Research Highlights)
- Journals & societies could move from publishing new findings to instead providing curation across all published findings (not just what is sent to them)

# Summary



- The tools and technologies exist to resolve many issues with the traditional way of communicating new discoveries
- Change is cultural - little will change unless we tackle the rewards & incentives structure head-on
- We no longer need the journal; researchers should be able to communicate new findings when they are ready
- New models exist and have been thoroughly tested to enable a better way of communicating research
- Research funders, governments and institutions are crucial to embracing and enabling researchers to change to such a system
- Publishers should shift from gatekeepers to service providers to the scientific community
- We are starting to see such a shift at an increasing pace worldwide – join us!

# Questions?

[rebecca.lawrence@f1000.com](mailto:rebecca.lawrence@f1000.com)

