

The background of the slide features a stylized, low-poly illustration of two hands, one on the left and one on the right, holding a globe. The hands and globe are rendered in a light blue color against a darker blue background. The globe shows the outlines of continents.

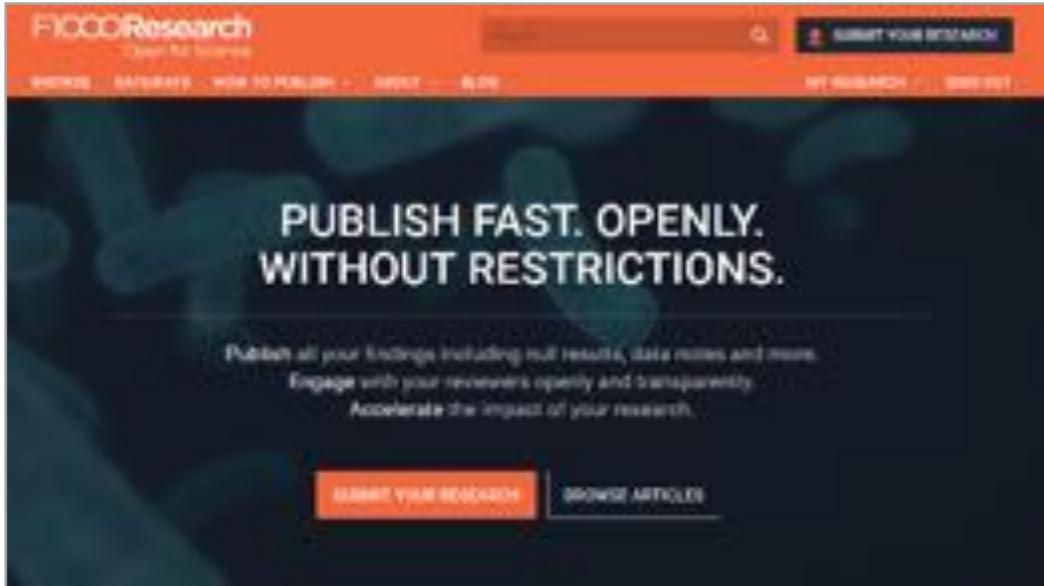
Open Research Publishing Platforms: open, rapid, holistic reporting of outputs

Rebecca Lawrence, PhD
Managing Director, F1000 Group
rebecca.lawrence@f1000.com

F1000

F1000

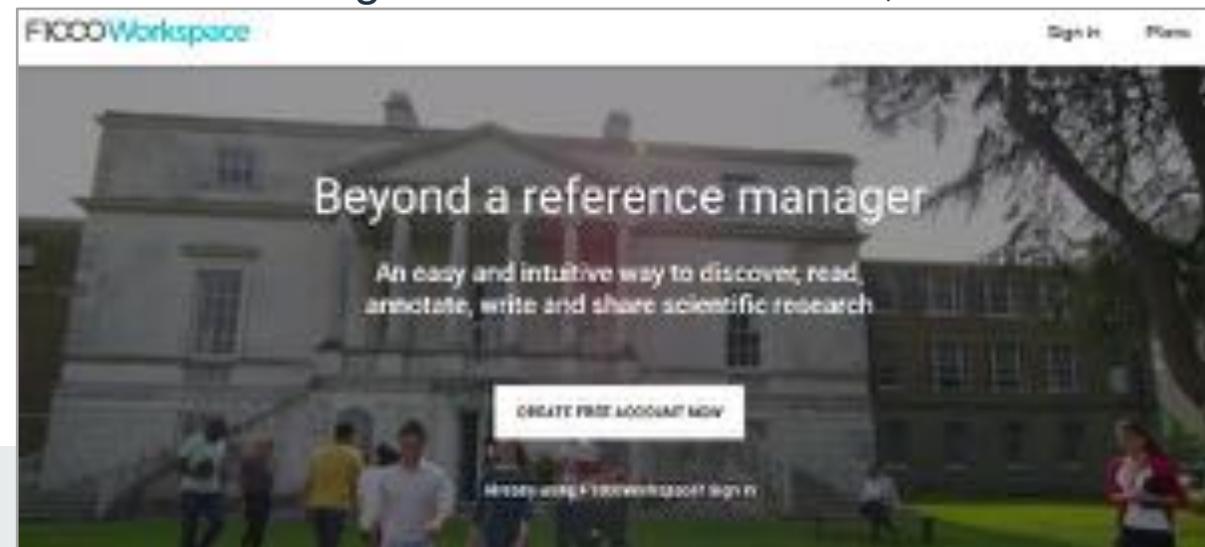
Open science publishing

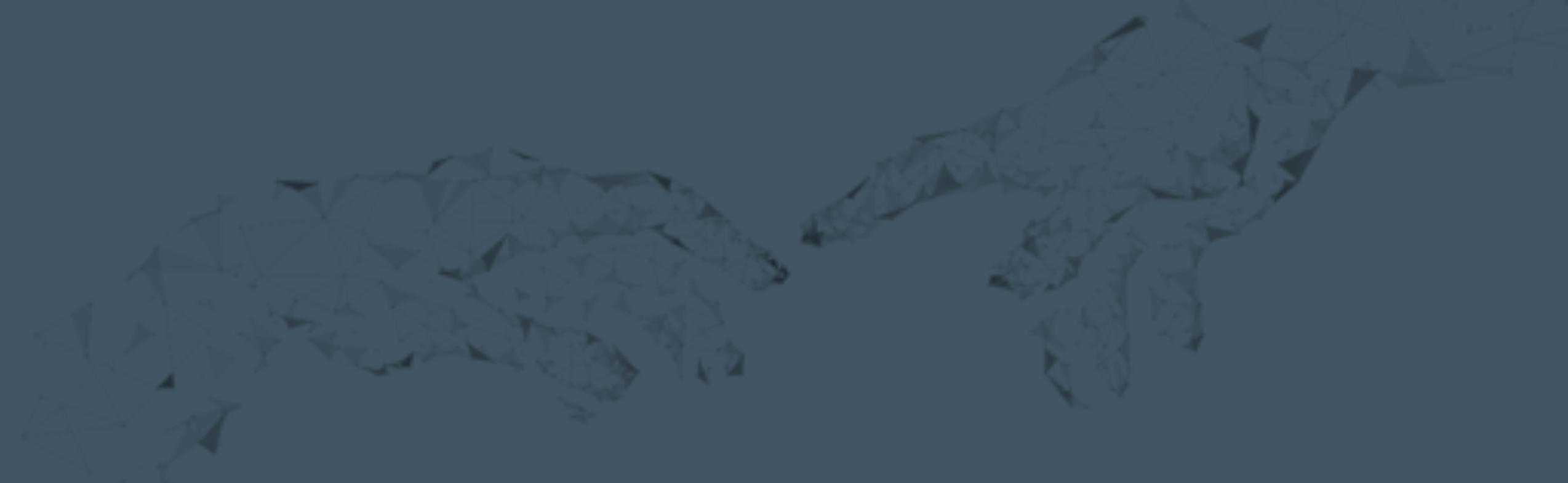


Expert-based article recommendations



Tools to manage & discover references, and write





A changing landscape for research

The Open Syllabus Project

meta

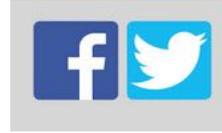
Knowledge Unlatched

KUDOS

Resource Identification Portal

Europe PubMed Central

SCOAP³



THE CONVERSATION

protocols.io

bioRxiv beta
THE PREPRINT SERVER FOR BIOLOGY

elixir

CODE OCEAN

how we share, discover & talk about science is evolving fast

SOCARXIV
OPEN ARCHIVE OF THE SOCIAL SCIENCES

Earth ArXiv

EOSC pilot
The European Open Science Cloud for Research Pilot Project

arXiv.org

figshare

Crossref

publons



PLOS ONE

COS
CENTER FOR OPEN SCIENCE

eLIFE

iD

DataCite
FIND, ACCESS, AND REUSE DATA

F1000 Research

Wellcome Open Research

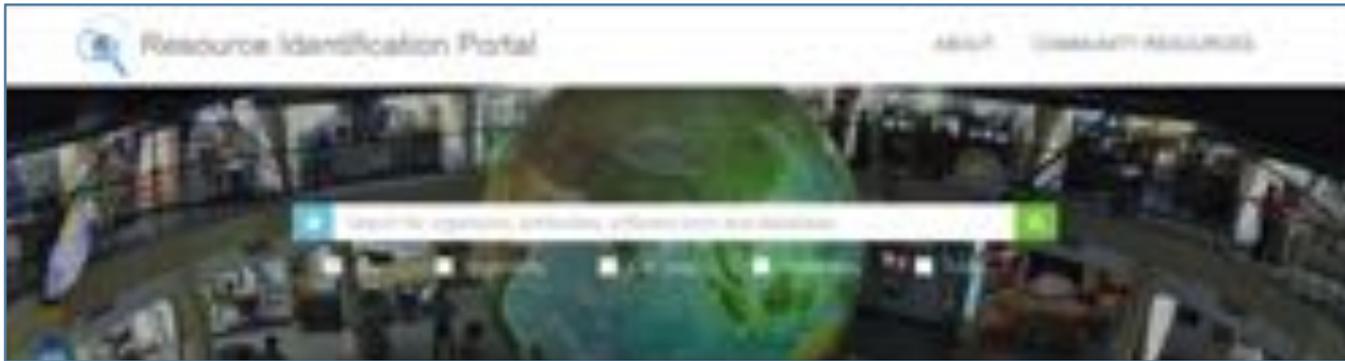
scienceOPEN

Widening range of research outputs available

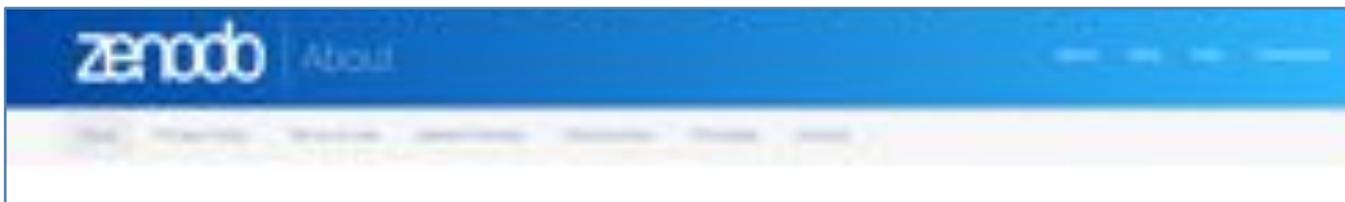


Data

*all with a
trackable &
persistent DOIs*



Resources



Software

A shift to more open & collaborative science



Source: <https://www.fosteropenscience.eu/content/what-open-science-introduction>

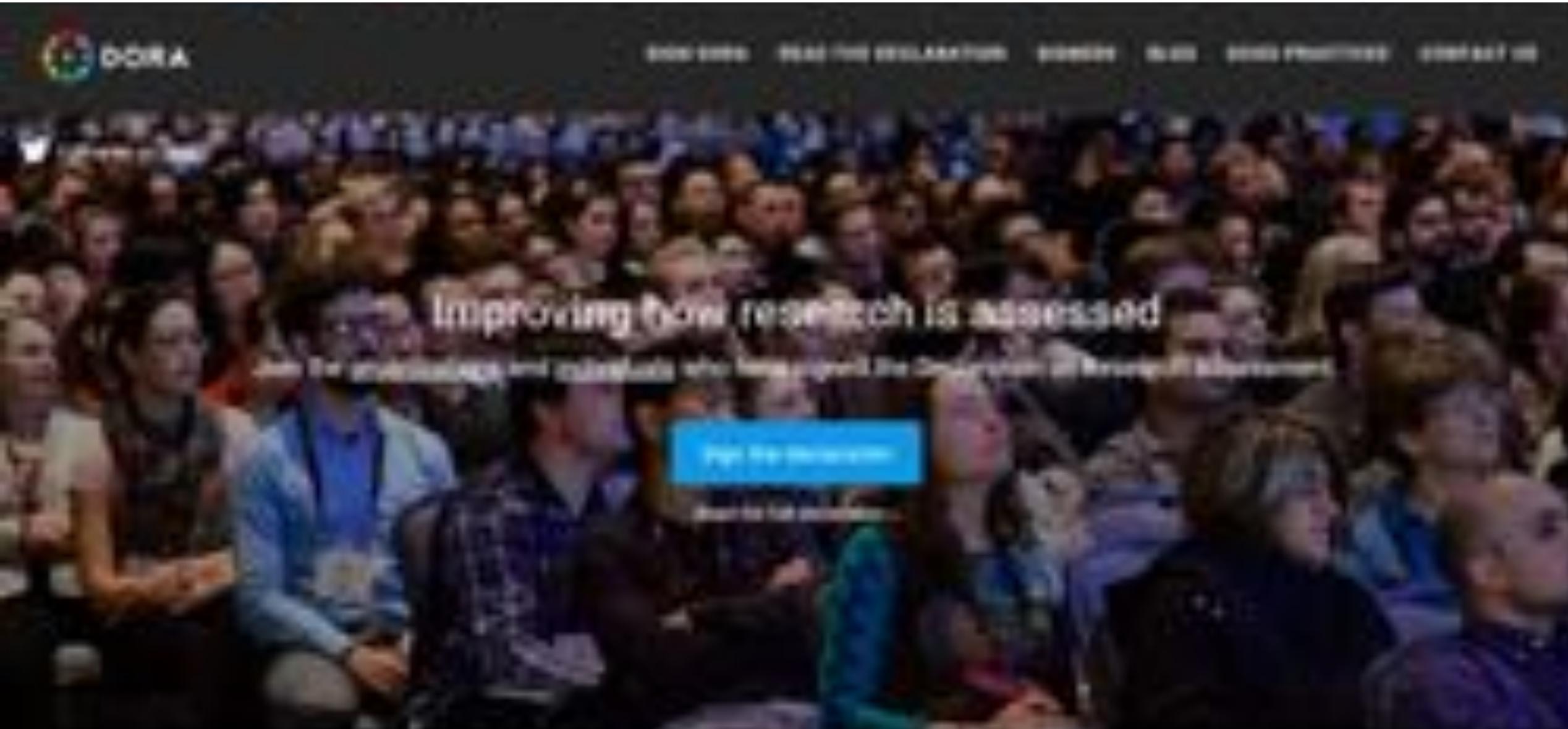
Massive cost of publishing

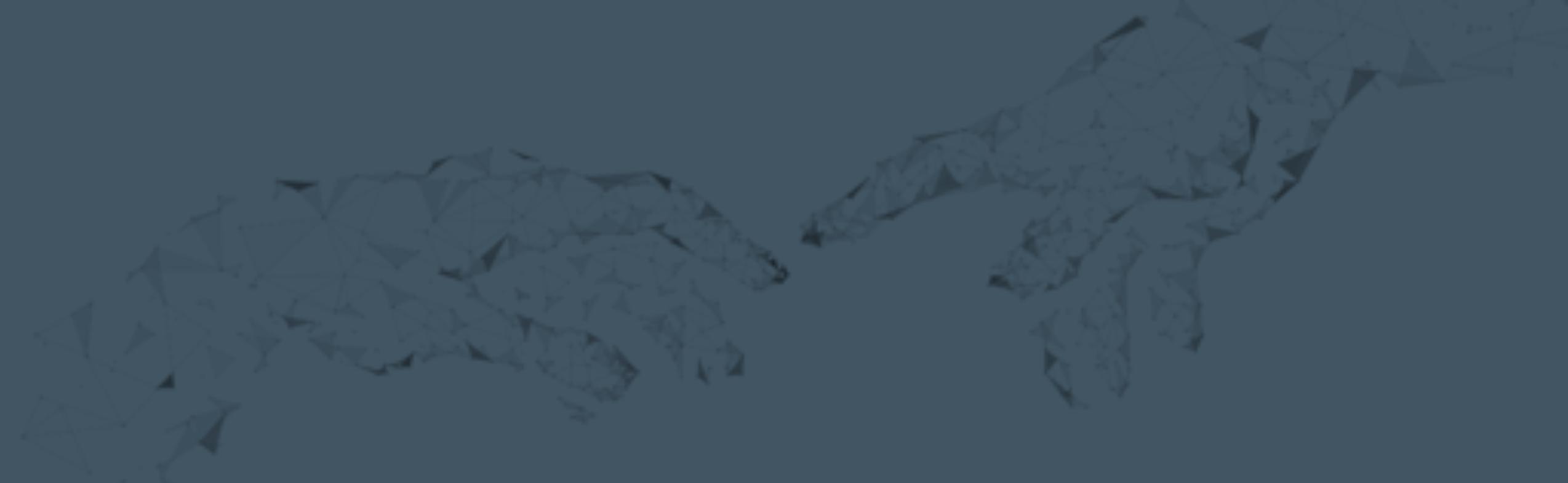


- Much research behind paywalls
- Long delays in publishing
- Peer review non-transparent
- Lack of access to data
- Much good research never published
- Significant research waste

Need to improve how researchers are assessed

<https://sfdora.org>





New models of scholarly publishing

Rapid publication models: growth in preprints

Source: 2018 <http://asapbio.org/>



F1000Research: Preprints + Journal-like model

Submission and preprint-like stage
Open Access



Broad range of article types:

Research Articles
Data Notes
Software Tools
Methods Articles
Systematic Reviews etc

F1000Research: Preprints + Journal-like model

Submission and preprint-like stage
Open Access



Broad range of article types:

Research Articles
Data Notes
Software Tools
Methods Articles
Systematic Reviews etc

✓iThenticate®

Droplets



Resource Identification Portal

✓protocols.io



Plagiarism checks

Image manipulation checks

Ethical checks

FAIR data compliance

FAIR software compliance

Open materials & methods

Adherence to recognised standards

Open Access compliance

F1000Research: Preprints + Journal-like model

Submission and preprint-like stage
Open Access



Formal *invited* peer review
Indexing in bibliographic databases



Articles that pass peer review are indexed in PubMed, Scopus, etc.

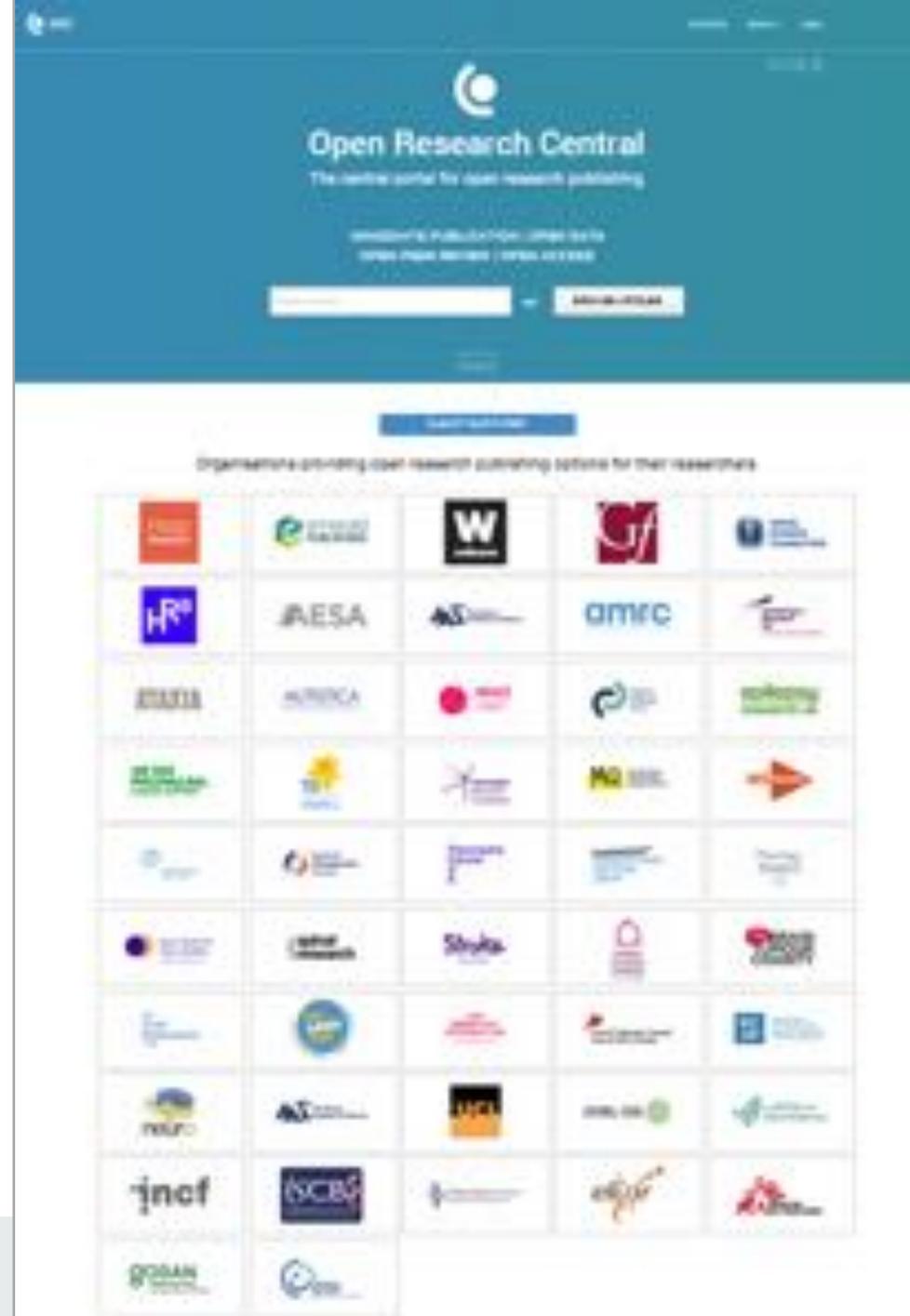
Broad range of article types:

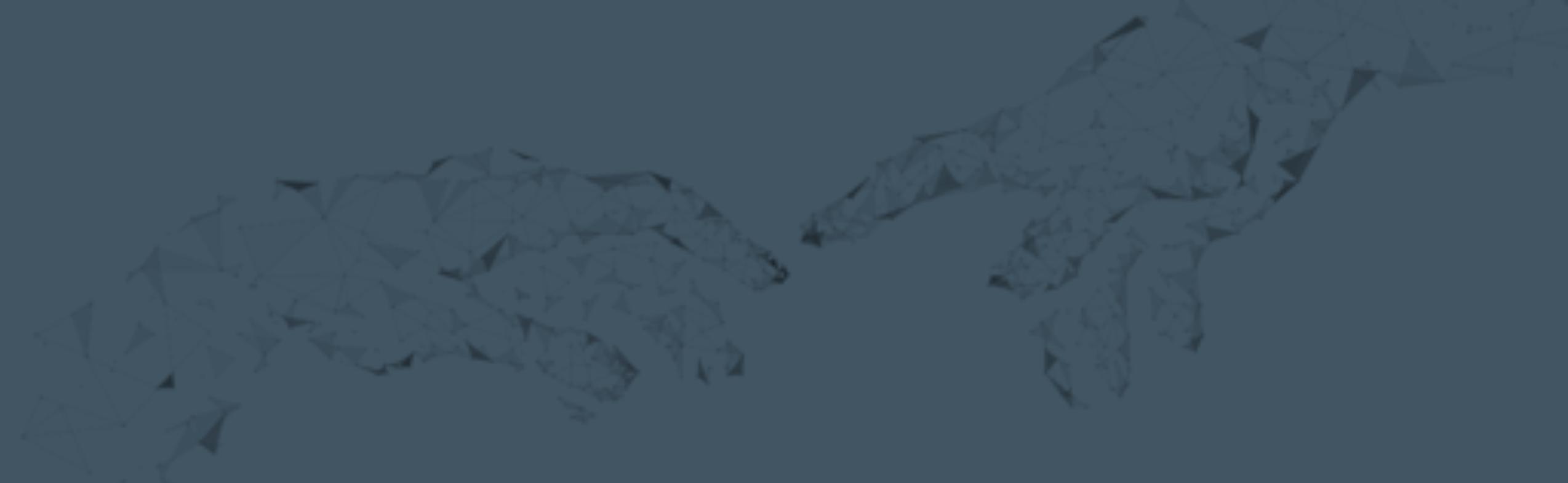
Research Articles
Data Notes
Software Tools
Methods Articles
Systematic Reviews etc

Review status:

Approved 
Approved with reservations 
Not approved 

Central portal for publication



A low-poly, geometric illustration of two hands reaching towards each other, set against a dark blue background. The hands are rendered in a light blue color with a faceted, crystalline texture. The left hand is on the left side, and the right hand is on the right side, with their fingers slightly curled as if about to grasp something. The overall style is modern and abstract.

Incentivising a shift to new models

How to incentivise a shift towards new models

- I **Leadership & innovation** – testing new approaches (e.g. Wellcome Open Research, Gates Open Research, DORA)



DORA

sfdora.org



@DORAssessment

Signed by >500 organizations and >12,500 individuals

Supporting organizations



Leadership & change: research funders



How we judge research outputs when making funding decisions

wellcome

Published: 8 August 2018

Open access

Robert Kiley, Head of Open Research, and Jim Smith, Director of Science, discuss the steps Wellcome is taking to fulfil the principles of the San Francisco Declaration on Research Assessment (DORA).

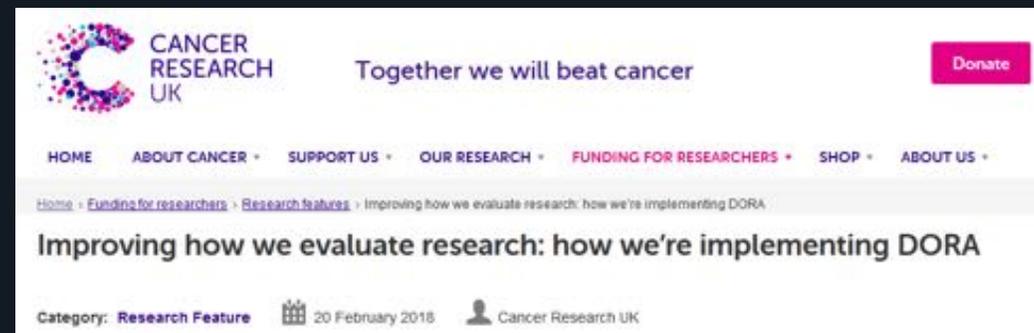
When we published our [open access policy](#) over a decade ago, we made it clear that what counts when we make funding decisions is the intrinsic merit of the work and not the journal or publisher.

Credit: Science Photo Library
A researcher's skills, qualities and attitudes can never be expressed in a single metric.

Application includes:

- List of research outputs
- Contributions to mentorship
- Output sharing plan to advance potential health benefits
- Plans for public engagement

Guidance provided to advisory panel members



CANCER RESEARCH UK

Together we will beat cancer

Donate

HOME ABOUT CANCER SUPPORT US OUR RESEARCH FUNDING FOR RESEARCHERS SHOP ABOUT US

Home > Funding for researchers > Research features > Improving how we evaluate research: how we're implementing DORA

Improving how we evaluate research: how we're implementing DORA

Category: Research Feature 20 February 2018 Cancer Research UK

Application includes:

- List of research outputs
- Summary of 3-5 achievements
- Space to describe other measures of impact

Reminds peer reviewers and committee members of DORA principles throughout funding process

Leadership & change: publishers

PLOS and DORA

The San Francisco Declaration on Research Assessment (DORA) recognizes the need to improve the ways in which the outputs of scientific research are evaluated.

PLOS is a signatory of DORA and pledges to follow the five DORA guidelines for publishers:

- Dedicated page on website describing how its journals comply with DORA recommendations
- Full portfolio of real time metrics

- Shows citation distributions for its journals
- all metrics side-by-side - rounded to single digit

 **EMBOpress**

Impact Factor (2017): 10.6 (Thomson Reuters)
 5-year Impact Factor (2016): 9.9 (Thomson Reuters)
 Immediacy Index (2016): 2.9 (Thomson Reuters)
 Eigenfactor (2017): 0.08 (eigenfactor.org)
 Article Influence (2016): 5.2 (eigenfactor.org)
 SJR (2016): 6.6 (JournalM3trics)
 SNIP (2016): 1.5 (JournalM3trics)
 h5 (2012-2016): 95 (Google Scholar)

F1000 Research

- Broad portfolio of use, re-use, reach & attention indicators
- Indicators around peer review
- Real time

Open Peer Review

Referee Status: ? ✓ ✓ ✓ ✓

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

Invited Referees

- 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

All comments (33)

METRICS

VIEWS	26018	DOWNLOADS	2502
CITATIONS			
Published 			
21			

- Blogged by 11
- Mentioned in 3 Google+ posts
- On 3 Facebook pages
- Picked up by 2 news outlets
- Tweeted by 278
- 2 readers on CiteULike
- 116 readers on Mendeley

How to incentivise a shift towards new models

- **Leadership & innovation** – testing new approaches (e.g. Wellcome Open Research, Gates Open Research, DORA)
- **Build evidence-base** around ‘what works’ in OS

Build the evidence base: research on research



“Science remains the key driver of human progress, yet we have little evidence on how to best fund science and incentivize high-quality work.”

John Ioannides (2018), Professor of Medicine & Health Policy

F1000Research Science Policy Research Gateway

F1000Research

SCIENCE POLICY RESEARCH

Science Policy Research

HOME ABOUT THIS GATEWAY HOW TO PUBLISH ABOUT F1000RESEARCH SUBMIT TO THE GATEWAY

About this Gateway

How effective are the ways that we conduct, fund and publish research? How do we know if research is being shared, used and re-used in the most effective ways to bring about improvements in our knowledge and potential impact. How do we best incentivise and assess research and researchers? How do we evolve the way we do research to optimise the use of technology?

This collection brings together research on all aspects of the research system – building an evidence base for the science of science. The collection is necessarily broad ranging and covers research funding policy and practice, peer review, research outputs and meta-data, research incentives and rewards, research metrics and indicators, scholarly publishing and infrastructure.

Gateway Areas

Gateway Advisors

-  Gemma Derrick
Lancaster University, UK
-  Samuel Rytick
University of Sussex, UK
-  Steven Wooding
University of Cambridge, UK

Gateway Areas

- Research Funding
- Peer Review
- Research Subjects and Impact
- Research Metrics and Indicators
- Scholarly Publishing Infrastructure
- Researcher Culture

How to incentivise a shift towards new models

- **Leadership & innovation** – testing new approaches (e.g. Wellcome Open Research, Gates Open Research, DORA)
- **Build evidence-base** around ‘what works’ in OS
- **Policy requirements (e.g. OA mandates; Horizon Europe)**



Europe's Future:

Open **Innovation**

Open **Science**

Open to the **World**

Policy requirements: e.g. Plan S



<https://www.scienceurope.org/coalition-s/>

How to incentivise a shift towards new models

- **Leadership & innovation** – testing new approaches (e.g. Wellcome Open Research, Gates Open Research, DORA)
- **Build evidence-base** around ‘what works’ in OS
- Policy requirements (e.g. OA mandates; EU Horizon 2020)
- **Provide routes for ‘behaviours’ to be recognised & rewarded**

Look at outputs more holistically - I

The screenshot shows a Wellcome Open Research article page. The article title is "A CRISPR/Cas9-based method and primer design tool for seamless genome editing in fission yeast" with a sub-header "[version 3; referees: 2 approved]". The article is by Maria Rodriguez-Lopez, Cristina Cotozal, Oscar Fernández-Sánchez, Natalia Borbarán Bravo, Risky Okriani, Heike Aberdroth, Gordan Uka, Mimoza Hoti, Jin Wang, Mikel Zaratiegui, and Jörg Bähler. The abstract describes a method for gene manipulations in fission yeast using CRISPR/Cas9. The page includes a metrics sidebar with 1722 views and 473 downloads, and an "Open Peer Review" section showing a table of invited referees and their reports on three versions of the article.

Wellcome Open Research

BROWSE HOW TO PUBLISH ABOUT BLOG SUBMIT YOUR RESEARCH MY ACCOUNT SIGN IN

METHOD ARTICLE [Check for updates](#)

UPDATE A CRISPR/Cas9-based method and primer design tool for seamless genome editing in fission yeast
[version 3; referees: 2 approved]

Maria Rodriguez-Lopez¹, Cristina Cotozal¹, Oscar Fernández-Sánchez¹, Natalia Borbarán Bravo¹, Risky Okriani¹, Heike Aberdroth¹, Gordan Uka¹, Mimoza Hoti¹, Jin Wang¹, Mikel Zaratiegui², Jörg Bähler¹

Author affiliations
Grant information

Abstract

In the fission yeast *Schizosaccharomyces pombe* the prevailing approach for gene manipulations is based on homologous recombination of a PCR product that contains genomic target sequences and a selectable marker. The CRISPR/Cas9 system has recently been implemented in fission yeast, which allows for seamless genome editing without integration of a selection marker or leaving any 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 *natMX5* (nourseothricin) selection marker. We also provide a web-tool, CRISPR4R, 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

Open Peer Review

Referee Status: ✓✓

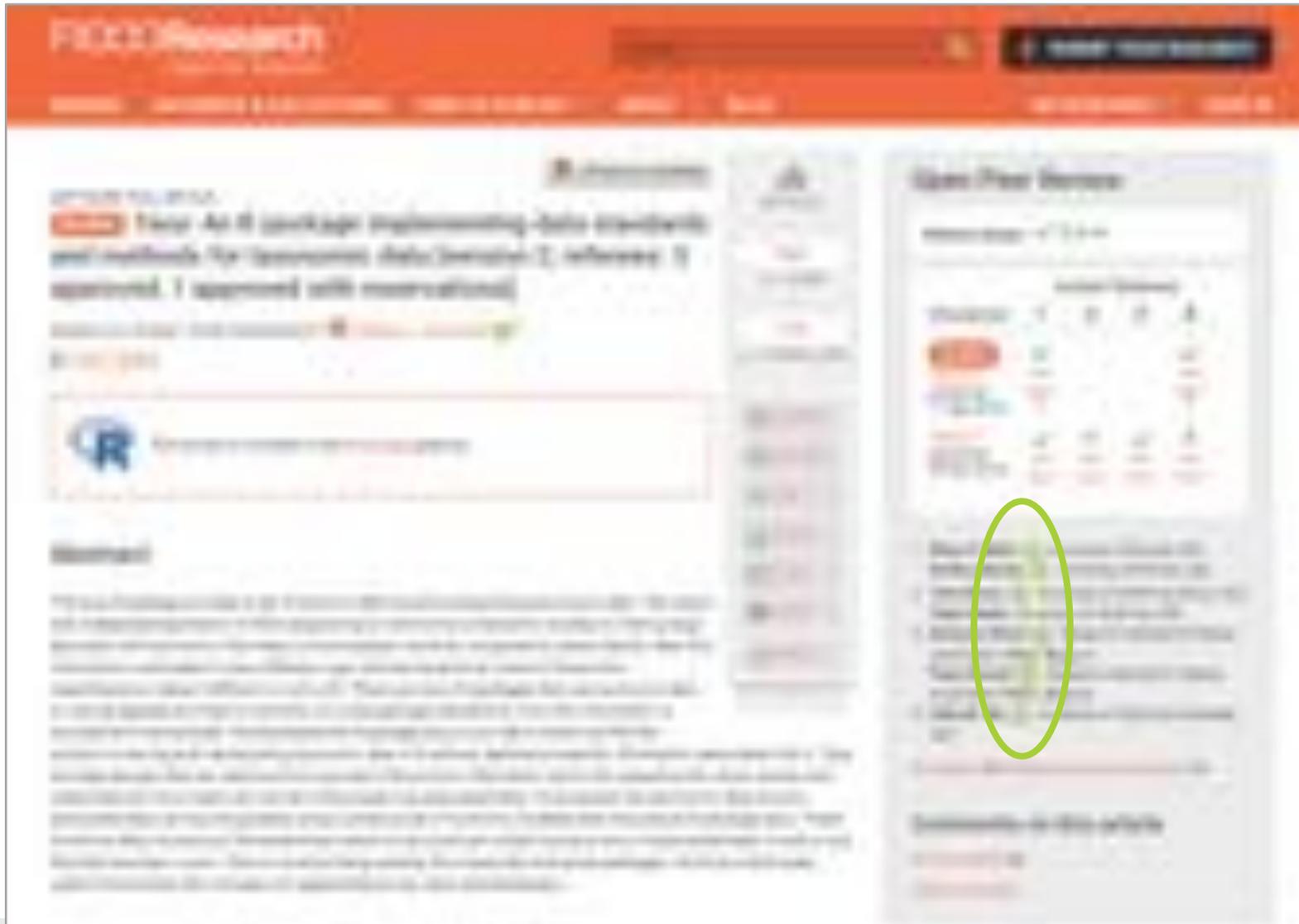
	Invited Referees	
Version(s)	1	2
UPDATE Version 3 published 05 May 2017	✓	✓
REVISED Version 2 published 03 Jan 2017	↑	↑
Version 1 published 23 Nov 2016	✓	?

1. **Silke Hauf**, Virginia Tech, USA
2. **Dominik 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)

- Non-static view of articles:
- versioning
 - continuous publishing
 - living figures

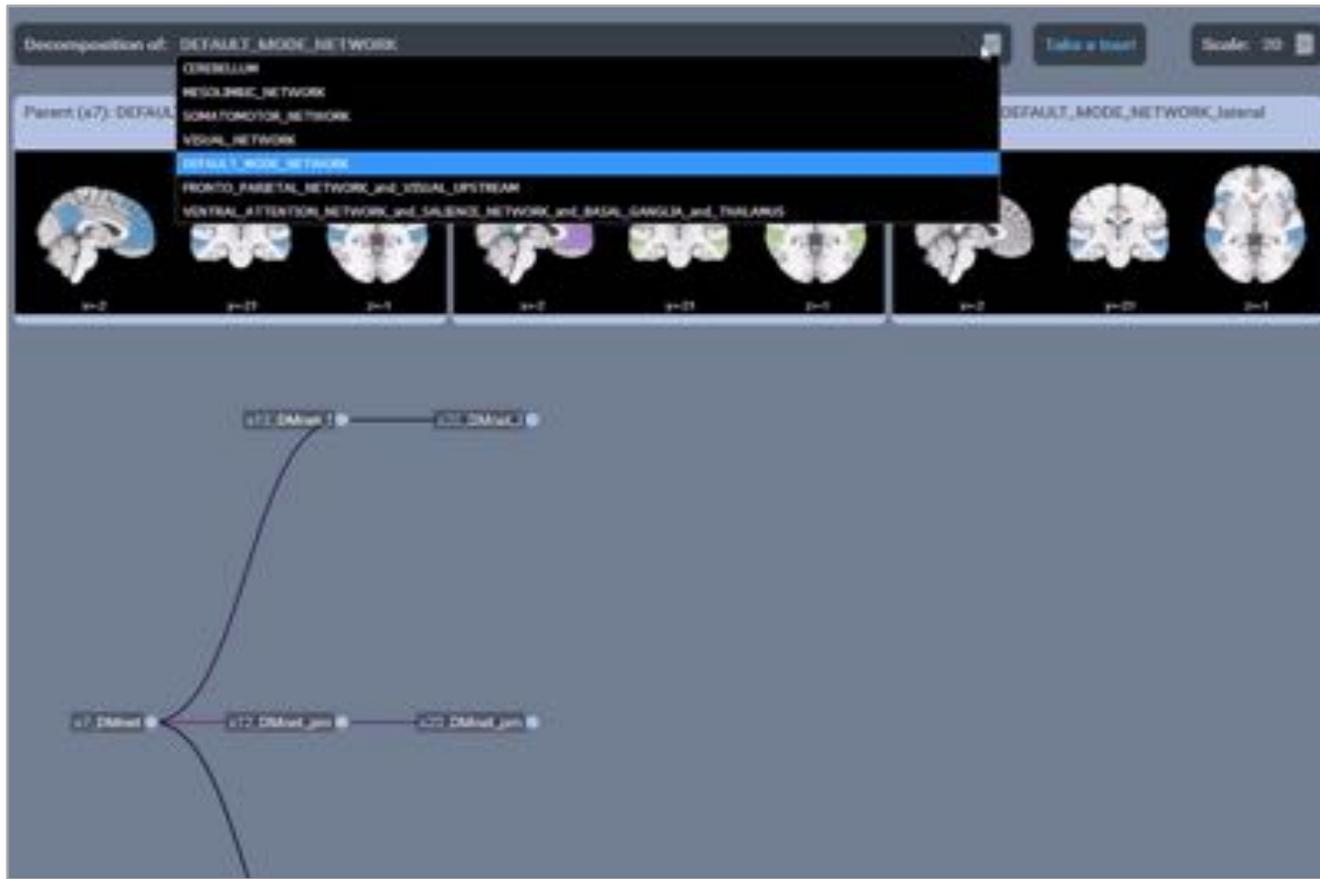
Look at outputs more holistically - III



Credit for expert input
(‘peer review’)

Look at outputs more holistically - IV

Support review and use of associated data and code



The screenshot shows the CODE OCEAN interface for a run titled 'Output - Run 7442850'. The code section contains the following text:

```
Run environment setup complete, running code...  
[1] "Performing analysis of FPKM matrix"  
Read 26 records  
Performing PCA on log-transformed FPKM matrix
```

The results section on the right shows three separate runs, each with a 'Running...' status and a progress bar. The first run has a run time of 0h 00m 24s. The second run has a run time of 0h 01m 35s. The third run has a run time of 0h 01m 40s. Below the runs, there are several output files listed with their sizes:

- batchCo... 49.3 KB
- batchC... 50.52 KB
- batchC... 57.82 KB
- batchC... 50.48 KB
- batchC... 57.24 KB

Look at outputs more holistically - V

The screenshot shows the Gates Open Research website interface. At the top, there is a search bar and navigation links for 'BROWSE', 'GATEWAYS', 'HOW TO PUBLISH', 'ABOUT', 'MY ACCOUNT', and 'SIGN IN'. Below the navigation, there are two tabs: 'Articles' and 'Documents', with 'Documents' highlighted by a red box. The main content area displays a list of research outputs, including a policy document titled 'An Open Toolkit for Tracking Open Science Partnership Implementation and Impact' and two grant reports titled 'Electroporation of Ascaris suum eggs' and 'Urinator'. A sidebar on the right contains a 'PUBLISH YOUR RESEARCH' section with an 'ARTICLES' heading and a 'SUBMIT AN ARTICLE' button.

Digital footprint for all outputs types

Range of outputs and associated metrics

F1000Research
Open for Science

BROWSE GATEWAYS HOW TO PUBLISH ABOUT

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			
Published 21			

Blogged by 11
Mentioned in 3 Google+ posts
On 3 Facebook pages
Picked up by 2 news outlets
Tweeted by 118

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)

[Add a Comment](#)

All comments (33)

[Email](#) [Share](#)

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 code 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.

FUNDERS Stroke Association | Bundesministerium für Bildung und Forschung | British Heart Foundation | National Centre for the Replacement, Refinement and Reduction of Animals in Research

Indicators of quality: existing and new

The collage consists of three overlapping screenshots. The top-left screenshot shows a webpage with a yellow box highlighting a checkmark under the heading 'Editorial Checks'. The bottom-left screenshot shows a 'preLights' badge for an article titled 'The genomic basis of colour pattern in the ladybird'. The right screenshot shows an 'F1000Prime' article recommendation for 'The Liverpool Care Pathway for the Dying Patient: a critical analysis of its rise, demise and legacy in England. [version 1; referees: 2 approved]' by Seymour J. Clark D, with a '3' in a star badge and 'Exceptional' rating.

- Badges to capture level of
 - checks (e.g. plagiarism, reporting)
 - 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 curating across all published findings (not just what sent to them)

How to incentivise a shift towards new models

- **Leadership & innovation** – testing new approaches (e.g. Wellcome Open Research, Gates Open Research, DORA)
- **Build evidence-base** around ‘what works’ in OS
- Policy requirements (e.g. OA mandates; EU Horizon 2020)
- **Provide routes for ‘behaviours’ to be recognised & rewarded**
- **Making it easy and connected – interoperability**

Recognising peer review effort

ORCID
Connecting Research and Researchers

EDIT YOUR RECORD ABOUT ORCID CONTACT US HELP

3,978,320 ORCID iDs and counting. See more...

Mitchell Bekritsky

ORCID ID
orcid.org/0000-0003-1420-1172

Print view

Country
United Kingdom

- Education (2)
- Employment (1)
- Works (3)
- Peer review (1)

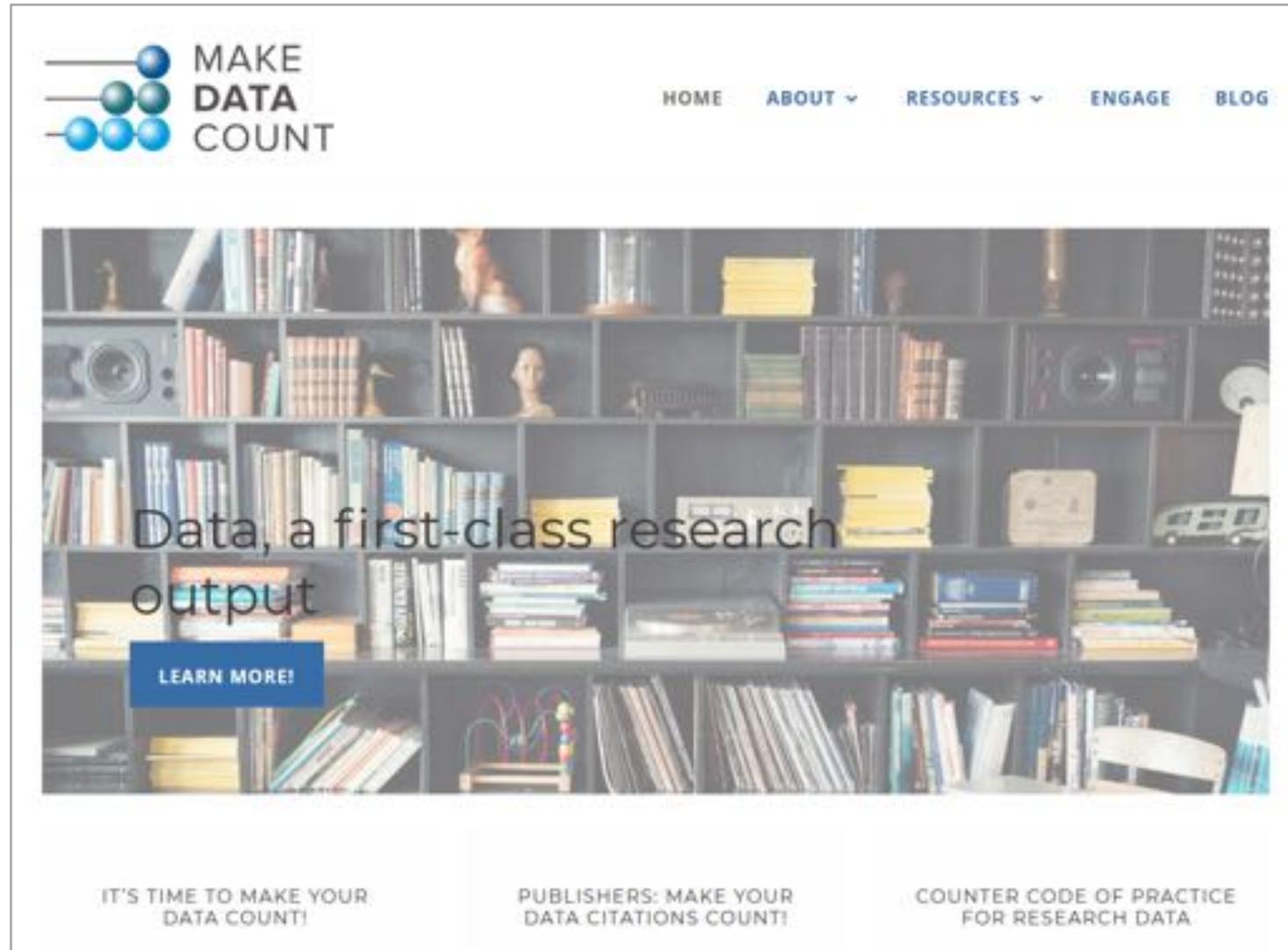
review activity for F1000Research(1)
journal, F1000Research

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

Blurred screenshot of an ORCID iD profile. A green circle highlights a peer review activity in the 'Peer review' section.

Making data count



The screenshot shows the homepage of the 'MAKE DATA COUNT' website. At the top left is the logo, which consists of three blue spheres of varying sizes on horizontal lines, followed by the text 'MAKE DATA COUNT'. To the right of the logo is a navigation menu with the items 'HOME', 'ABOUT', 'RESOURCES', 'ENGAGE', and 'BLOG'. Below the navigation is a large banner image of a bookshelf filled with books and various objects. Overlaid on the bookshelf is the text 'Data, a first-class research output' and a blue button that says 'LEARN MORE!'. At the bottom of the page, there are three columns of text: 'IT'S TIME TO MAKE YOUR DATA COUNT!', 'PUBLISHERS: MAKE YOUR DATA CITATIONS COUNT!', and 'COUNTER CODE OF PRACTICE FOR RESEARCH DATA'.



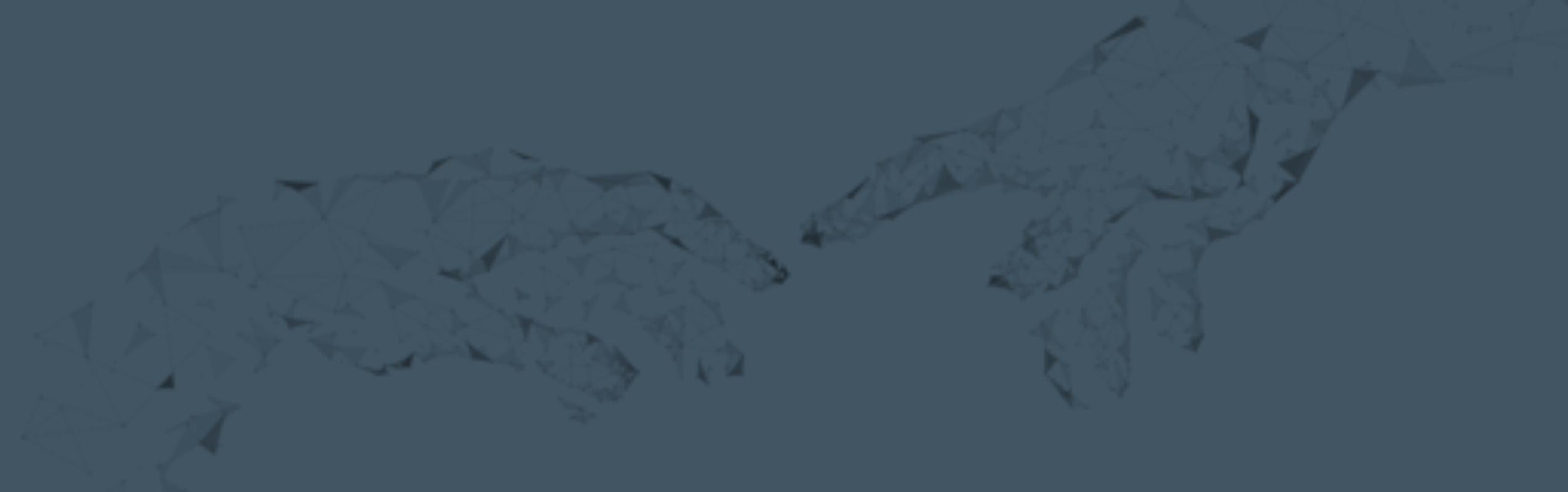
Publications

 Current award Beverleys Test Award ▾
[+ Add new entry](#)

 Displaying Publications ▾ Sorted by Date Added ▾ Filtered by Attributed to this award ▾

+ Publications: what should I report in this section?

Select All	Description	In this award	In personal portfolio
<input type="checkbox"/>	<p>Costa TRD, Bangovan A, Ukleja M, Redzej A, Santini JM, Smith TK..... Waksman G. (2016). Structure of the Bacterial Sex F Pilus Reveals an Assembly of a Stoichiometric Protein-Phospholipid Complex.. Cell, 166 (6), pp. 1436-1444.e10</p> <p>Added by: Dr Beverley Sherbon</p> <p>Date Added: 13 Sep 2018</p> <p>PubMed DOI Repository</p> <p>  72</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<p>Eil R, Vodnala SK, Clever D, Klebanoff CA, Sukumar M, Pan JH..... Restifo NP. (2016). Ionic immune suppression within the tumour microenvironment limits T cell effector function.. Nature, 537 (7621), pp. 539-543</p> <p>Added by: Dr Beverley Sherbon</p> <p>Date Added: 13 Sep 2018</p> <p>PubMed DOI Repository</p> <p>  126</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Summary

Questions?

rebecca.lawrence@f1000.com

