



Open Research at Wellcome

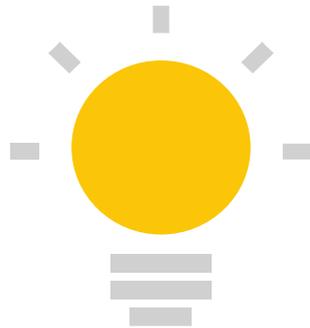
Hannah Hope

h.hope@wellcome.ac.uk

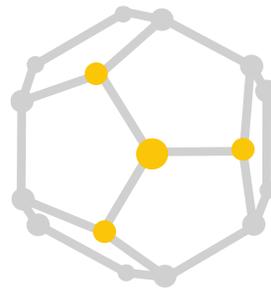
@hjhope

About Wellcome

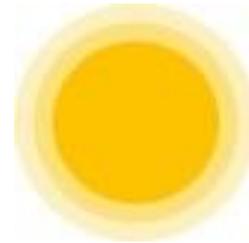
- Invest nearly £1 billion a year in research globally
- Fund research into health: predominantly life sciences but also humanities, social sciences, education and public engagement



Advancing
ideas



Seizing
opportunities



Driving reform

**Our vision is a world where there are
transformative improvements in human
health because research outputs are
managed, shared and used in ways that
unleash their full value**

Open Research



Publications



Data



Code/
Software



Materials

Publications

- Open access policy since 2006 permits green (6 month max embargo) and gold (CC licence required). Policy applies to monographs, book chapters and articles.
- 75 % of Wellcome-funded journal articles comply with our open access policy
- 68 % articles published by 5 publishers, 95 % published by 35 publishers
- In 2015-16 we spent £5.67 million on article and book processing charges



Publications

- Support preprints – encourage their citation in grant applications/reporting
- In terms of data availability of 67853 full-text articles within Europe PMC:
 - 397 contain a Data DOI Citation
 - 1035 contain a Clinical Trial Citation
- A metadata search of Datacite for Wellcome Trust gives 1203 results from roughly 30 data centres/repositories (incl commercial, governmental & institutional)

Searches conducted Feb 2018



Wellcome Open Research

A new way for Wellcome-funded researchers to rapidly publish any results they think are worth sharing.

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Objective

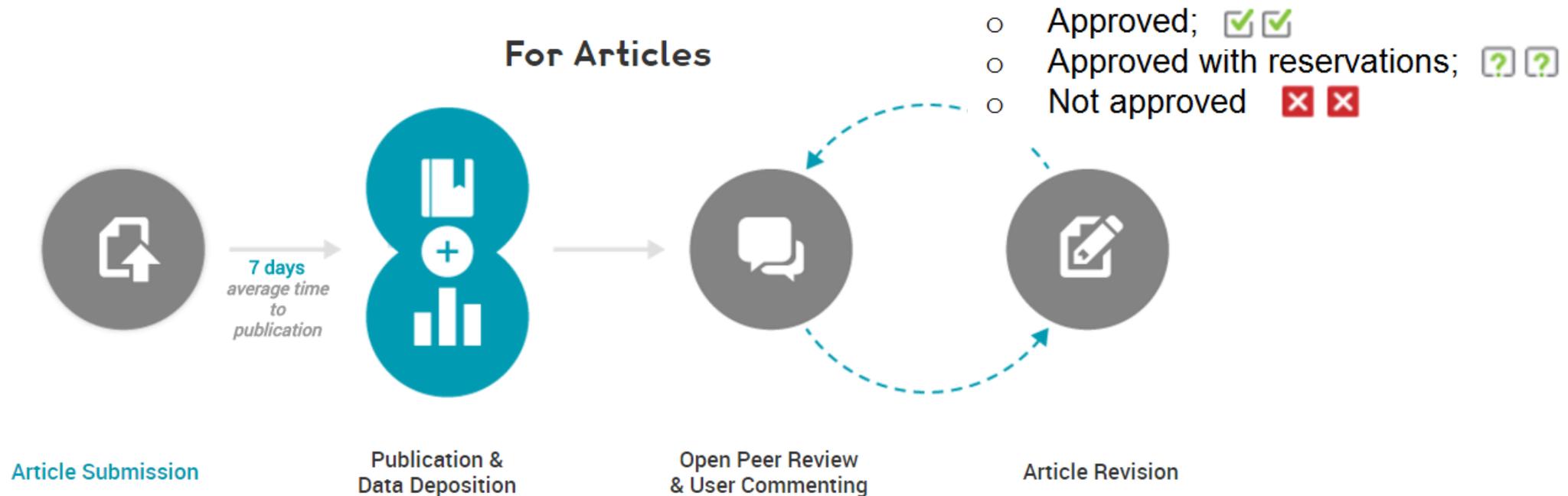
To improve the way research is communicated

- Make the process faster and more transparent, and make it easier for researchers to provide information that supports reproducibility
- Expand the range of scientific content that is publishable
- Increase diversity in the publishing market
- Help to “shift the needle” and inform new policies on researcher assessment

The model – F1000 Research

The Publishing Process

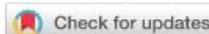
For Articles



Peer review-approved articles are deposited in Europe PMC, PMC and indexed in PubMed

Benefits to authors

- **Fast** – articles published within a week
- **Inclusive** – can publish all your research outputs
- **Open** – fulfils Wellcome's OA and data sharing requirements
- **Reproducible** – data published alongside article
- **Transparent** – open, author-driven, peer review
- **Easy** – costs are met directly by Wellcome



RESEARCH ARTICLE

REVISED Free serum haemoglobin is associated with brain atrophy in secondary progressive multiple sclerosis [version 2; referees: 3 approved]

✉ Alex Lewin^{1,5*}, ✉ Shea Hamilton ^{2*}, Aviva Witkovar², Paul Langford ², Richard Nicholas³, Jeremy Chataway⁴, ✉ Charles R.M. Bangham ²

* Equal contributors

 Author details

 Grant information

Abstract

Background: A major cause of disability in secondary progressive multiple sclerosis (SPMS) is progressive brain atrophy, whose pathogenesis is not fully understood. The objective of this study was to identify protein biomarkers of brain atrophy in SPMS.

Methods: We used surface-enhanced laser desorption-ionization time-of-flight mass spectrometry to carry out an unbiased search for serum proteins whose concentration correlated with the rate of brain atrophy, measured by serial MRI scans over a 2-year period in a well-characterized cohort of 140 patients with SPMS. Protein species were identified by liquid chromatography-electrospray ionization tandem mass spectrometry.

Results: There was a significant ($p < 0.004$) correlation between the rate of brain atrophy and a rise in the concentration of proteins at 15.1 kDa and 15.9 kDa in the serum. Tandem mass spectrometry identified these proteins as alpha-haemoglobin and beta-haemoglobin, respectively. The abnormal concentration of free serum haemoglobin was confirmed by ELISA ($p < 0.001$). The serum lactate dehydrogenase activity was also highly significantly raised ($p < 10^{-12}$) in patients with secondary progressive multiple sclerosis.

Conclusions: The results are consistent with the following hypothesis. In progressive multiple sclerosis, low-grade chronic intravascular haemolysis releases haemoglobin into the serum; the haemoglobin is subsequently translocated into the central nervous system (CNS) across the damaged blood-brain barrier. In the CNS, the haemoglobin and its breakdown products, including haem and iron, contribute to the neurodegeneration and consequent brain atrophy seen in progressive disease. We postulate that haemoglobin is a source of the iron whose deposition along blood vessels in multiple sclerosis plaques is associated with neurodegeneration. If so, then chelators of haemoglobin, rather than chelators of free serum iron, may be effective in preventing this neurodegeneration.



METRICS

1375

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Referee Status: 

Invited Referees

Version(s)	1	2	3
REVISED Version 2 published 23 Dec 2016			
		read report	read report
		↑	↑
Version 1 published 15 Nov 2016			
	read report	read report	read report

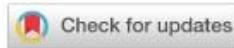
- 1 **Hans Lassmann**, Medical University of Vienna, Austria
Simon Hametner, Medical University of Vienna, Austria
- 2 **George Harauz**, University of Guelph, Canada
Vladimir V. Bamm, University of Guelph, Canada
- 3 **Franz Fazekas**, Medical University of Graz, Austria
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Comments on this article

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Referee Status: ✔✔

RESEARCH ARTICLE

REVISED A hidden burden of neonatal illness? A cross-sectional study of all admissions aged less than one month across twelve Kenyan County hospitals [version 1; referees: 2 approved]

✉ Georgina A.V. Murphy ^{1,2}, Vivian N. Nyakangi ¹, David Gathara¹, Morris Ogero¹, Mike English ^{1,2}, Clinical Information Network

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Morris Ogero
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Mike English
 Roles: Conceptualization, Funding Acquisition, Methodology, Supervision, Writing – Review & Editing

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The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

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This article is included in the [KEMRI | Wellcome Trust gateway](#).



Success Criteria

- Wellcome-funded authors publish on this platform
- A range of authors, at different stages in their careers, publishing a range of different publication types
- Articles are read, cited and generate impact
- Other funders seek to establish their own platforms
- Other publishers emulate some of the key features of Wellcome Open Research

How are we doing?

First 15 months:



Total published



Total indexed

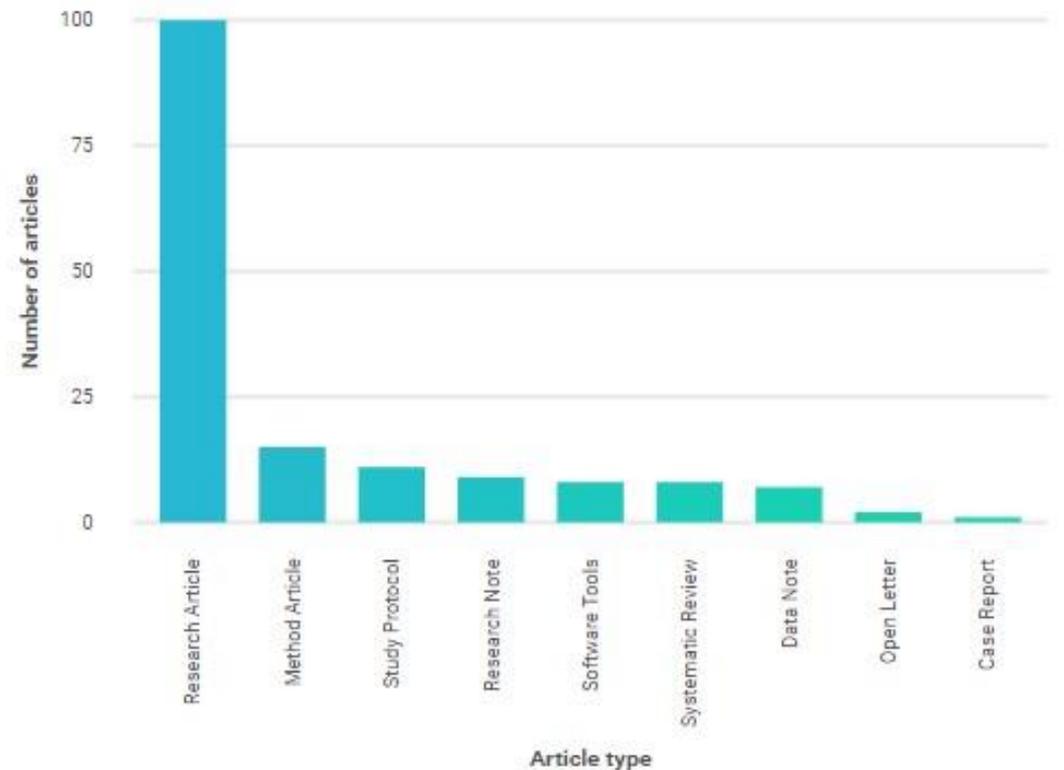


Total reports published



Days from submission to indexing (mean)

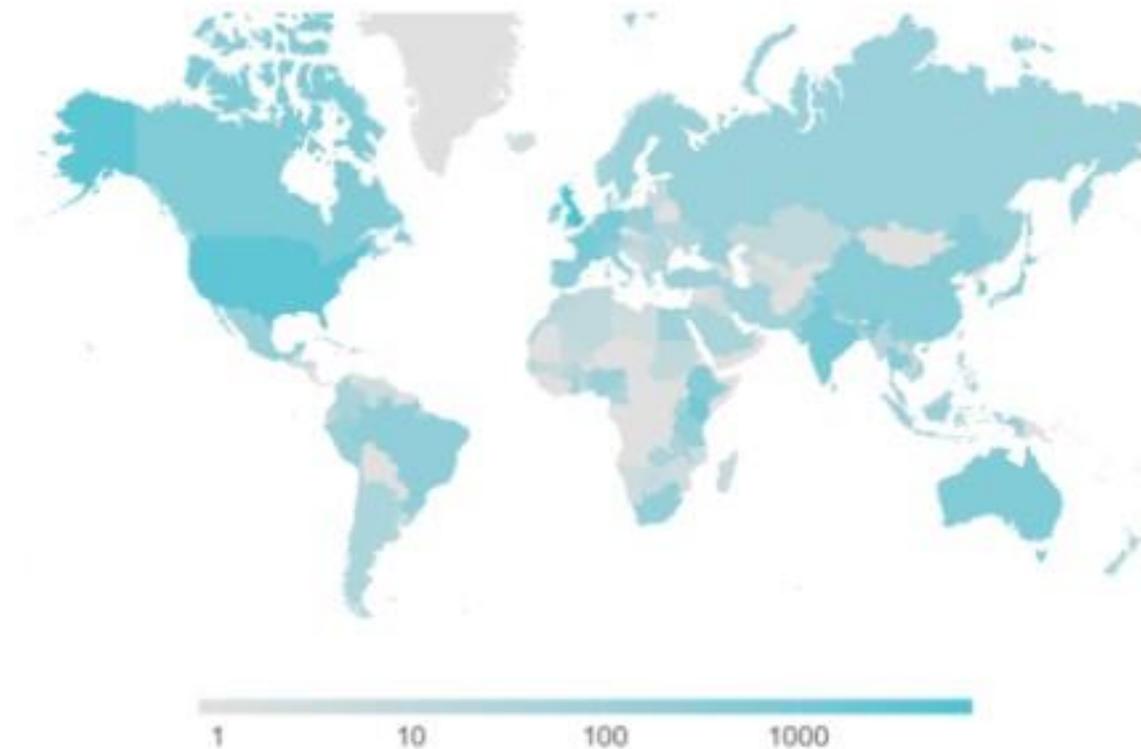
Publications per article type



How are we doing?

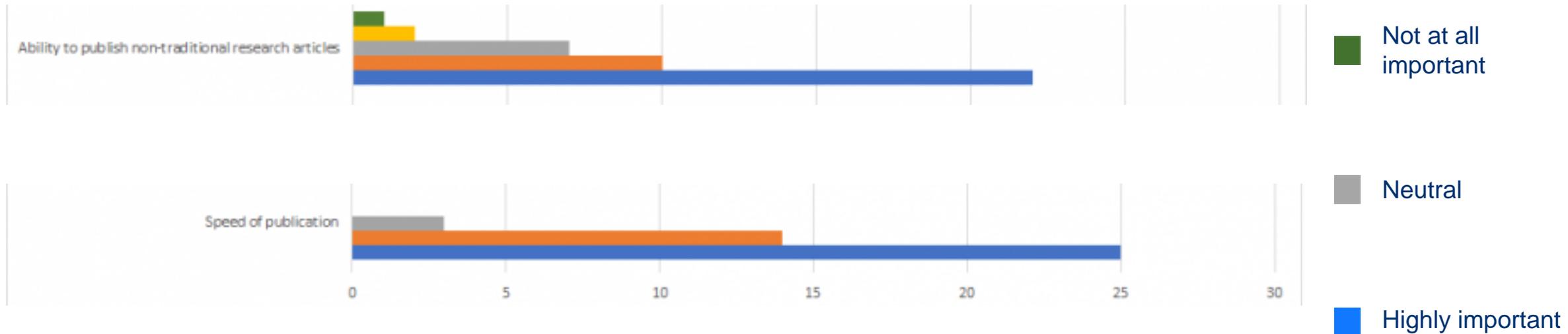
Global readership

Sessions per country



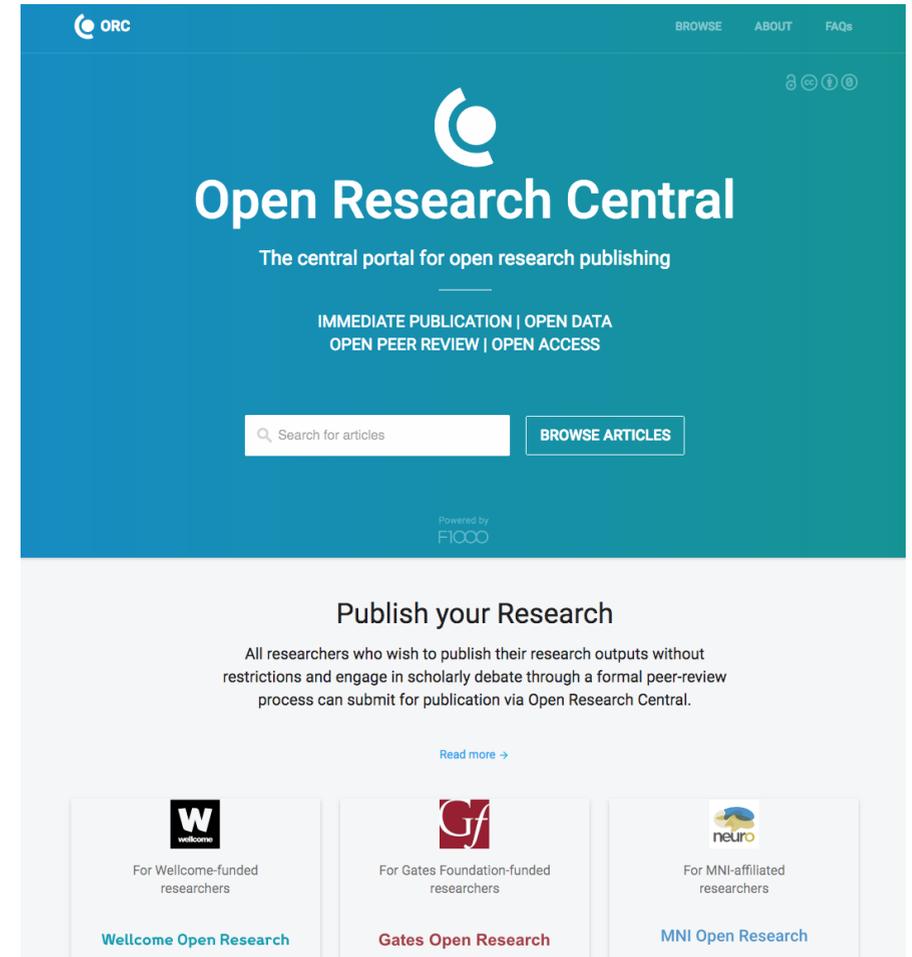
How are we doing?

What our authors say:



How are we doing?

- 5 platforms launched by other funders/institutions
- Created central portal through which articles on all platforms can be accessed:
<https://openresearchcentral.org/>
- F1000 proposing to transition Open Research Central to being governed by the international research community



The screenshot shows the Open Research Central website homepage. The header is dark blue with the ORC logo and navigation links for BROWSE, ABOUT, and FAQs. The main content area is white with a large blue header containing the ORC logo and the text "Open Research Central" and "The central portal for open research publishing". Below this, there are links for "IMMEDIATE PUBLICATION | OPEN DATA" and "OPEN PEER REVIEW | OPEN ACCESS". A search bar and a "BROWSE ARTICLES" button are present. The footer is light blue and features the text "Publish your Research" and a paragraph about publishing research outputs. Below this, there are three columns for "Wellcome Open Research", "Gates Open Research", and "MNI Open Research", each with a logo and a link.

Where next?

- Diversity of article types published: null results and reproducibility studies
Only 6 null results published out of 161 articles
- Supporting data reuse: pilot with Wellcome-funded Avon Longitudinal Study of Parents And Children (ALSPAC)
Allow researchers who use ALSPAC data to publish data notes within WOR, to showcase available dataset.
- Gateways - providing personalized portals for institutions or organizations, with links to other resources
- Increased use of tools such as Code Ocean and Plotly to create living articles

Conclusions

- Wellcome Open Research is a new way for Wellcome researchers to publish their work
- The model has been positively received by authors
- Articles are read, starting to see first citations
- Seeing wider support for the model



Any Questions?

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