

# Data sharing lessons learnt at Cambridge: *the whys and hows*

Dr Marta Teperek

Office of Scholarly Communication, University of Cambridge

[@martatepererek](https://twitter.com/martatepererek)

[mt446@cam.ac.uk](mailto:mt446@cam.ac.uk)

14<sup>th</sup> June 2016, Opendata.ch/2016

## This session will cover:

- How **not** to start with RDM services
- The (forgotten?) benefits of data sharing
- RDM services at Cambridge
- Democratic approach to RDM
- Researchers' reactions
- Reflections

## How **not** to start with RDM



In the UK funders consider data management and sharing seriously



## You **must** do it

EPSRC do random checks to make sure data are shared in publications that acknowledge their funding

The logo for EPSRC (Engineering and Physical Sciences Research Council) features the acronym "EPSRC" in a bold, purple, sans-serif font. The text is centered and flanked by two horizontal teal lines, one above and one below the letters.

<https://www.epsrc.ac.uk/files/aboutus/standards/clarificationsofexpectationsresearchdatamanagement/>

## Immediate reaction:

- This is not my priority
- Why would I do that?
- People will steal my results!
- Data management is a waste of time
- Nobody will understand my data
- It would take me 5 years to find all my data!



---

Let's re-think the approach...



## **Approach number 2:**

- Benefits of sharing
- Support available
- Democratic approach



Talking about the benefits:  
Why would you want to share your research?

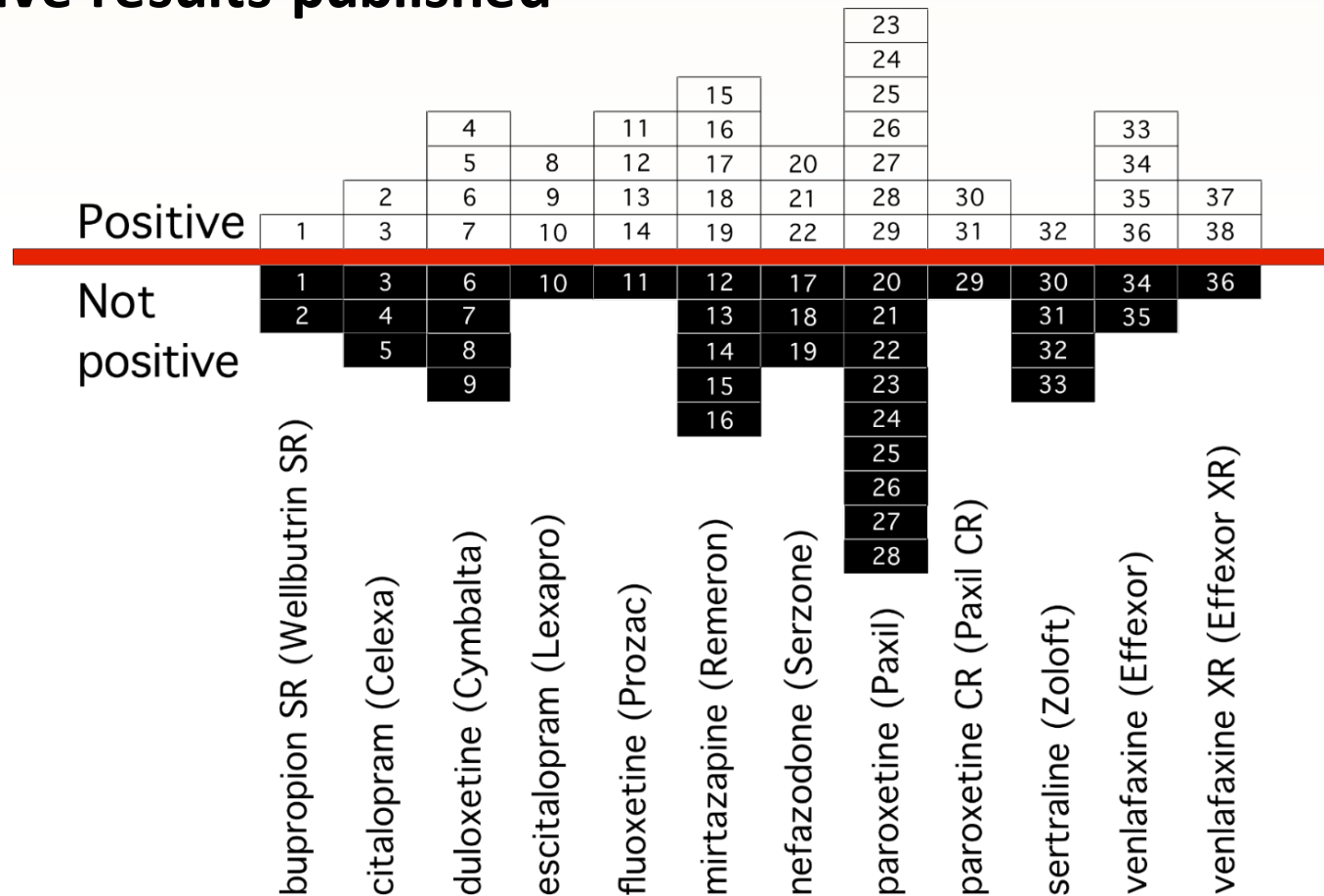


Some other very important reasons to share

Research relies on the principle that we share  
our findings

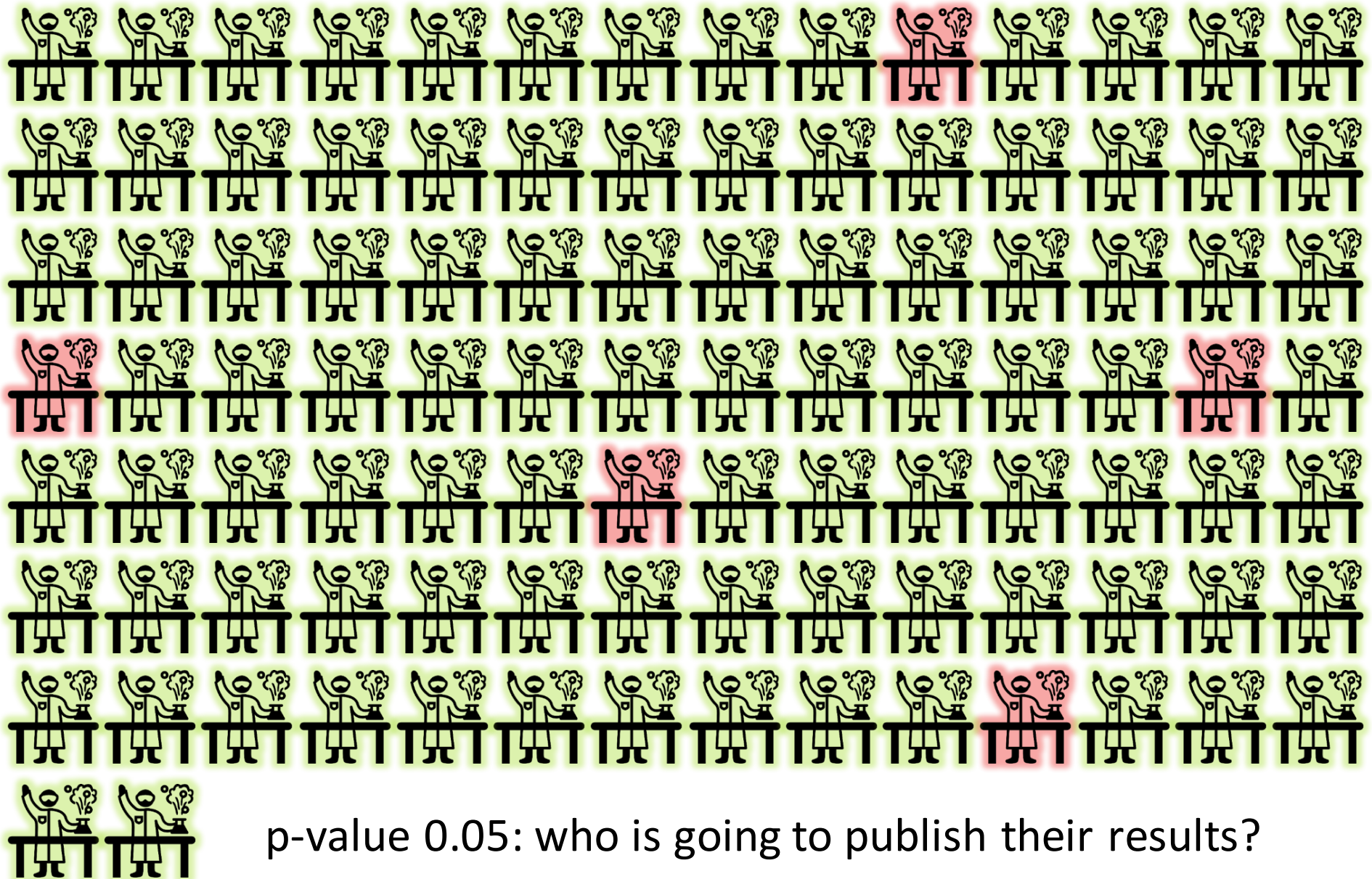
*Ideas and results need to be shared to move  
human knowledge forward*

## FDA record of clinical trials with 12 antidepressants: Only positive results published



From Dr Eric Turner:

[https://figshare.com/articles/Peer review After Results are Known Are we PARKing the Cart Before the Horse /3381379](https://figshare.com/articles/Peer_review_After_Results_are_Known_Are_we_PARKing_the_Cart_Before_the_Horse_/3381379)





**GENOME**  
**RESEARCH**

**Sperm is epigenetically programmed to regulate gene transcription in embryos**

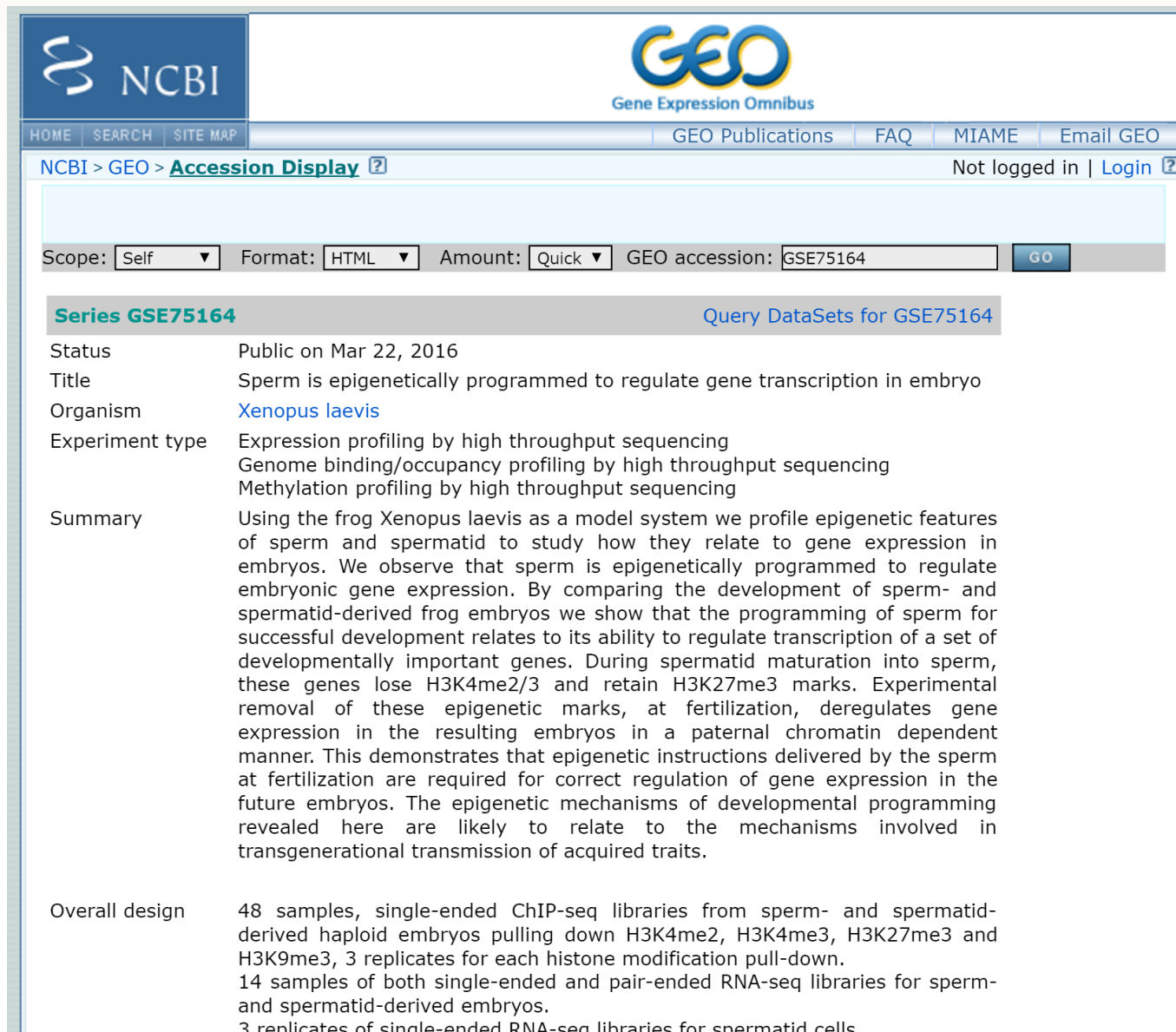
\*Corresponding authors. E-mail: [j.jullien@cam.ac.uk](mailto:j.jullien@cam.ac.uk); [mt446@cam.ac.uk](mailto:mt446@cam.ac.uk)

**or**

**Data access**

All ChIP-seq, RNA-seq, MBD-seq, and MNase-seq data sets have been submitted to the NCBI Gene Expression Omnibus (<http://www.ncbi.nlm.nih.gov/geo/>) under accession number GSE75164.

<http://dx.doi.org/10.1101/gr.201541.115>



NCBI > GEO > **Accession Display** <sup>?</sup> Not logged in | [Login](#) <sup>?</sup>

Scope:  Format:  Amount:  GEO accession:

**Series GSE75164** [Query DataSets for GSE75164](#)

Status	Public on Mar 22, 2016
Title	Sperm is epigenetically programmed to regulate gene transcription in embryo
Organism	<a href="#">Xenopus laevis</a>
Experiment type	Expression profiling by high throughput sequencing Genome binding/occupancy profiling by high throughput sequencing Methylation profiling by high throughput sequencing
Summary	Using the frog <i>Xenopus laevis</i> as a model system we profile epigenetic features of sperm and spermatid to study how they relate to gene expression in embryos. We observe that sperm is epigenetically programmed to regulate embryonic gene expression. By comparing the development of sperm- and spermatid-derived frog embryos we show that the programming of sperm for successful development relates to its ability to regulate transcription of a set of developmentally important genes. During spermatid maturation into sperm, these genes lose H3K4me2/3 and retain H3K27me3 marks. Experimental removal of these epigenetic marks, at fertilization, deregulates gene expression in the resulting embryos in a paternal chromatin dependent manner. This demonstrates that epigenetic instructions delivered by the sperm at fertilization are required for correct regulation of gene expression in the future embryos. The epigenetic mechanisms of developmental programming revealed here are likely to relate to the mechanisms involved in transgenerational transmission of acquired traits.
Overall design	48 samples, single-ended ChIP-seq libraries from sperm- and spermatid-derived haploid embryos pulling down H3K4me2, H3K4me3, H3K27me3 and H3K9me3, 3 replicates for each histone modification pull-down. 14 samples of both single-ended and pair-ended RNA-seq libraries for sperm- and spermatid-derived embryos. 3 replicates of single-ended RNA-seq libraries for spermatid cells



**Jisc** R&D Email Feedback

# Research Data Discovery Service (Alpha)

[Datasets](#) [Organisations](#) [About](#) [Reports](#) [FAQ](#)

Home > Datasets

Filter by location Clear

Map data © OpenStreetMap contributors  
Tiles by MapQuest

Search datasets... Search

Order by Relevance ▼

[Advanced Search](#)

11,121 datasets found

Cathedral Close St Mary Major, Exeter 1971-1976 (Exeter archive site 10)

<https://researchdata.jiscinvolve.org/wp/2016/02/04/932/>

At the same time:

Development of RDM services

*Adequate provisions need to be in place for people to do the right thing.*

# Research Data Management

[Home](#)[Data Management Guide](#)[Support](#)[Data Repository](#)[Research Data Policies](#)[FAQ](#)[News](#)[Ev](#)

**UPLOAD YOUR DATA**

Have a question? E-mail [info@data.cam.ac.uk](mailto:info@data.cam.ac.uk)

[www.data.cam.ac.uk](http://www.data.cam.ac.uk)

## Data Management Consultancy Request Form




Please fill in the form below and we will get back to you as soon as possible to arrange a meeting.

[www.data.cam.ac.uk/consultancy](http://www.data.cam.ac.uk/consultancy)

+ guidance  
+ example  
plans

**Funder's name \***

**Deadline for the submission of the grant proposal \***  
   

**Your name \***

**Your e-mail address \***

Please enter your e-mail address carefully – we will use it to get in touch with you.

**Upload your draft plan \***

## Events

15  
JUN[Research Integrity](#)

**Wednesday 15 June , 10:00 AM - 11:00 AM , Mill Lane Lecture Room 5 - Mill Lane, Cambridge**

16  
JUN[Scholarship in the digital age – a survival guide for researchers](#)

**Thursday 16 June , 11:30 - 15:30 , S1, Alison Richard Building, West Road, University of Cambridge**

23  
JUN[Working towards an Open Research future](#)

**Thursday 23 June , 14:00 to 17:30 (BST) , The Cambridge Union - 9A Bridge Street, Cambridge, CB2 1UB**

26  
JUL[Research Data Management for Librarians](#)

**Tuesday 26 July , 14:30-16:30 , Mill Lane Lecture Room 5 - 1 Mill Lane, Cambridge**

28  
JUL[The Data Dialogue. Time to Share: Navigating Boundaries & Benefits](#)

**Thursday 28 July , 9:30 - 17:00 , Murray Edwards College, The University of Cambridge.**

2  
AUG[Altmetrics: A Primer for Librarians](#)

**Tuesday 2 August , 14:30-15:30 , Mill Lane Lecture Room 5 - 1 Mill Lane, Cambridge**

## Newsletter sign-up

Email Address \*

First Name

Last Name

Are you a Cambridge researcher?

 Yes No

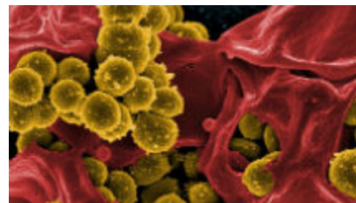
Department

## Apollo - University of Cambridge Repository

This repository holds the research output of members of the University of Cambridge. It is delivered and managed by the University Library's [Office of Scholarly Communication](#) team.



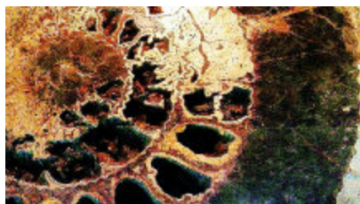
**School of Arts and Humanities**



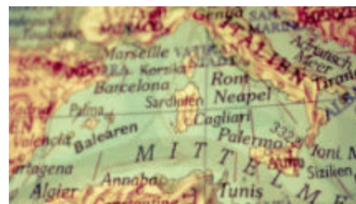
**School of Clinical Medicine**



**School of Technology**



**School of the Biological Sciences**



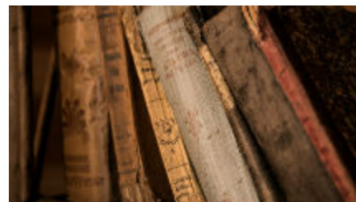
**School of the Humanities and Social Sciences**



**School of the Physical Sciences**



**Colleges**



**Other Communities**

Share your  
research

## Easy to use webform to upload data

### Non-positive data can be shared as well

Create a new data submission ↕

### Data submission form

We accept depositions up to 20GB. If your dataset exceeds 20GB, please [contact us](#). If you have

I understand and agree to the terms and conditions \*

Please confirm if you have read and accepted the data deposition [terms and conditions](#)

**Title \***

  
**List all authors of this dataset \***



Funder names arranged alphabetically. Click on the hyperlink to see the full-length policy.

Key policy highlights

Date the policy was last checked or updated.

[www.data.cam.ac.uk/funders](http://www.data.cam.ac.uk/funders)

<p><b>MRC</b> <a href="#">Read the policy</a></p>	<p>The MRC expects valuable data arising from MRC-funded research to be made available to the scientific community with as few restrictions as possible so as to maximize the value of the data for research and for eventual patient and public benefit. Such data must be shared in a timely and responsible manner.</p> <p>Grant holders shall review and update their data management plans annually. MRC also provides a detailed <a href="#">guideline</a> on dealing with personal data in medical research.</p>	<p>April 2016</p>
<p><b>NERC</b> <a href="#">Read the policy</a></p>	<p>Possible sanctions: "those who do not meet the data management requirements [...] risk having award payments withheld or becoming ineligible for future funding"</p> <p>Data needs to be deposited into a <a href="#">NERC data centre</a> within 2 years of collection</p>	<p>April 2016</p>
<p><b>NIH</b> <a href="#">Read the policy</a></p>	<p>"Data sharing is essential for expedited translation of research results into knowledge, products and procedures to improve human health."</p>	<p>April 2016</p>
<p><b>NIHR</b> <a href="#">Read the statement</a></p>	<p>"Data generated through participation of patients and the public should be put to maximum use by the research community. When you submit your final report to NIHR they will ask you to make a statement about your data archiving position. Possible responses might state that all available data:</p> <ul style="list-style-type: none"> <li>■ Can be obtained from the corresponding author.</li> <li>■ Is included as an appendix to</li> </ul>	<p>April 2016</p>

The Unlocking Research blog has clarification of funder policies and information on our negotiations with them.

The logo for EPSRC (Engineering and Physical Sciences Research Council) features the acronym in a bold, purple, sans-serif font with a thin horizontal line above and below it.

<https://unlockingresearch.blog.lib.cam.ac.uk/?p=151>



<https://unlockingresearch.blog.lib.cam.ac.uk/?p=337>

The logo for the UK Concordat on Open Research Data is a teal rounded rectangle containing the text "UK Concordat on Open Research Data" in white, sans-serif font.

<https://unlockingresearch.blog.lib.cam.ac.uk/?p=285>

The logo for Wellcome Trust features the word "wellcome" in a bold, black, sans-serif font, with "trust" in a smaller, regular weight font to its right.

<https://unlockingresearch.blog.lib.cam.ac.uk/?p=525>



<https://unlockingresearch.blog.lib.cam.ac.uk/?p=528>

## **Huge** engagement programme:

- We have spoken with over 1,800 academics
- 75 individual information sessions about data sharing
- 37 different training events and workshops

*In 18 months since January 2015*



## Frequently Asked Questions

Thanks to all the people who have attended our open data sessions during the first half of 2015. We were able to collect all the questions we received from researchers and research students and have prepared a list of Frequently Asked Questions.

We would also like to thank **Ben Ryan from the EPSRC** for carefully checking our advice and for his comments that helped us improve the answers.

We have arranged the list of FAQ into eight categories, thematically grouped:

[What needs to be shared and when?](#)

[Questions about exemptions from research data sharing](#)

[Questions about resources to support research data sharing](#)

[Questions about data repositories and linking to data](#)

[Questions about personal/sensitive/commercial data](#)

[Questions about source code sharing](#)

## Huge engagement programme:

These are actual questions from our discussions with over 1,800 researchers

<http://www.data.cam.ac.uk/data-faq>

## Various communication channels



### January 2016 Research Data Management Newsletter

1. [Wellcome Trust and Cancer Research UK coming to Cambridge sharing](#)
2. [Workshop: Strategies for managing social media research data](#)
3. [Call for abstracts - are you using social media data in your research?](#)
4. [Call for access to the RCUK Research Data Facility](#)
5. [Summer School of Research Data Science - applications open](#)
6. [Advances in Data Modelling and Knowledge Representation - call for papers](#)
7. [Ethics of Big Data in Practice - Lent Term workshop series](#)
8. [Call for researchers working with data](#)

**OPEN DATA**  
UNIVERSITY OF CAMBRIDGE

TWEETS 1,347 FOLLOWING 650 FOLLOWERS 904 LIKES 878

**Open Data Cambridge**  
@CamOpenData  
University of Cambridge support service for research data management and sharing  
Cambridge  
data.cam.ac.uk  
Joined March 2015  
142 Photos and videos

**Open Data Cambridge** @CamOpenData · Jun 10  
Very exciting! See more useful equipment like this on the Cambridge Equipment Database! [equipment.admin.cam.ac.uk](http://equipment.admin.cam.ac.uk) #RFES

**Vicky Lupson** @VLupson  
Exciting day for #WBIC\_CAM delivery of the #PET/MRI scanner #GE #MRI

*Twitter: @CamOpenData  
Over 900 followers!*

*Newsletter: over 1,700 subscribers!*

<http://www.data.cam.ac.uk/datanews>

## Various communication channels

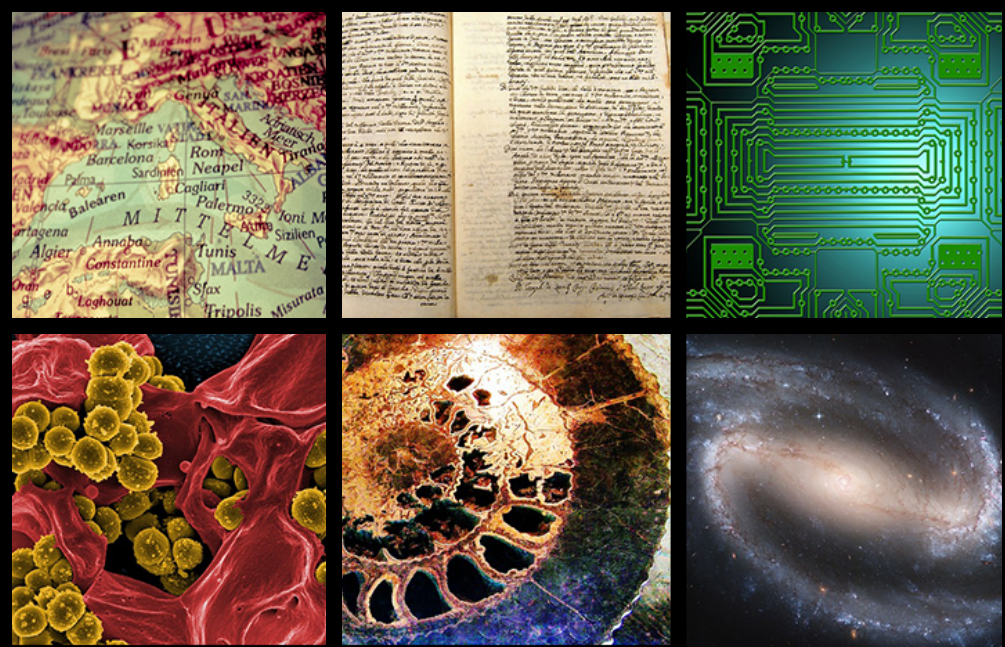
Share your data





✉ info@data.cam.ac.uk  
🌐 www.data.cam.ac.uk  
🐦 @CamOpenData

Research Data Services:

- ⇌ Data repository
- ⇌ Funding policy information
- ⇌ Data management plan assistance



 OPEN DATA  
www.data.cam.ac.uk

 UNIVERSITY OF  
CAMBRIDGE

[www.lib.cam.ac.uk/librarians/oa/oa\\_promo.html](http://www.lib.cam.ac.uk/librarians/oa/oa_promo.html)

## **DEMOCRATIC** approach to RDM

Empower researchers to shape RDM services



## Let researchers shape the services

**1. What should research data management support look like at the University of Cambridge?**

### [Quick questionnaire](#)

Please help us shape research data management support available at the University of Cambridge. We have prepared a short questionnaire, and we would greatly appreciate your feedback. The questionnaire takes 1 min to fill in.



# Never dismiss questions and worries + be honest

## “Open Data – moving science forward or a waste of money & time?”



Video:

<https://upload.sms.cam.ac.uk/media/2113537>

<https://storify.com/CamOpenData/odpd15>

## Unlocking Research

University of Cambridge Office of Scholarly Communication

[Home](#) [About this blog](#) [Upload your manuscripts](#)

### Open Data – moving science forward or a waste of money & time?

November 27, 2015 | Uncategorized | Blog posts, CERN, compliance, data, funders, Medical Research Council, open data, policy, publishing, research, research data management, reward, social media

On the 4 November the Research Data Facility at Cambridge University invited some

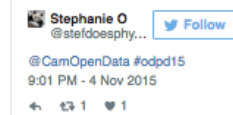
As seen on [scoop.it](#)

### Open Data Panel Discussion

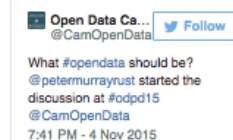
Open discussion on new funders' requirements for sharing research data, whether Open Science and sharing research data can benefit society, and help move science forward? and if Open Data is a waste of time and money?

by [Open Data Cambridge](#) a month ago 512 Views

Getting excited for the event.



The day is finally here. Peter Murray-Rust gets us started about What [#opendata](#) should be.



<https://unlockingresearch.blog.lib.cam.ac.uk/?p=392>

# Let researchers shape the policy

## They are the ones to adhere to it



The Office of Scholarly Communication would like to consult researchers on a number of ideas geared towards helping researchers to make all of their work openly available and rewarding the quality of the whole research process. We count on **YOU** to tell us what current problems in academic research are and what ideas would be useful to include in a planning document.

Everyone is welcome to come to this event and contribute their ideas.

<https://www.eventbrite.com/e/improving-the-research-process-discussing-an-open-research-position-tickets-25391407383>

## Let researchers work with you (empower the champions)

And take advice from people who know better

Become a member of the Research Data Management Project Group

### Who can apply to be a member of the Group?

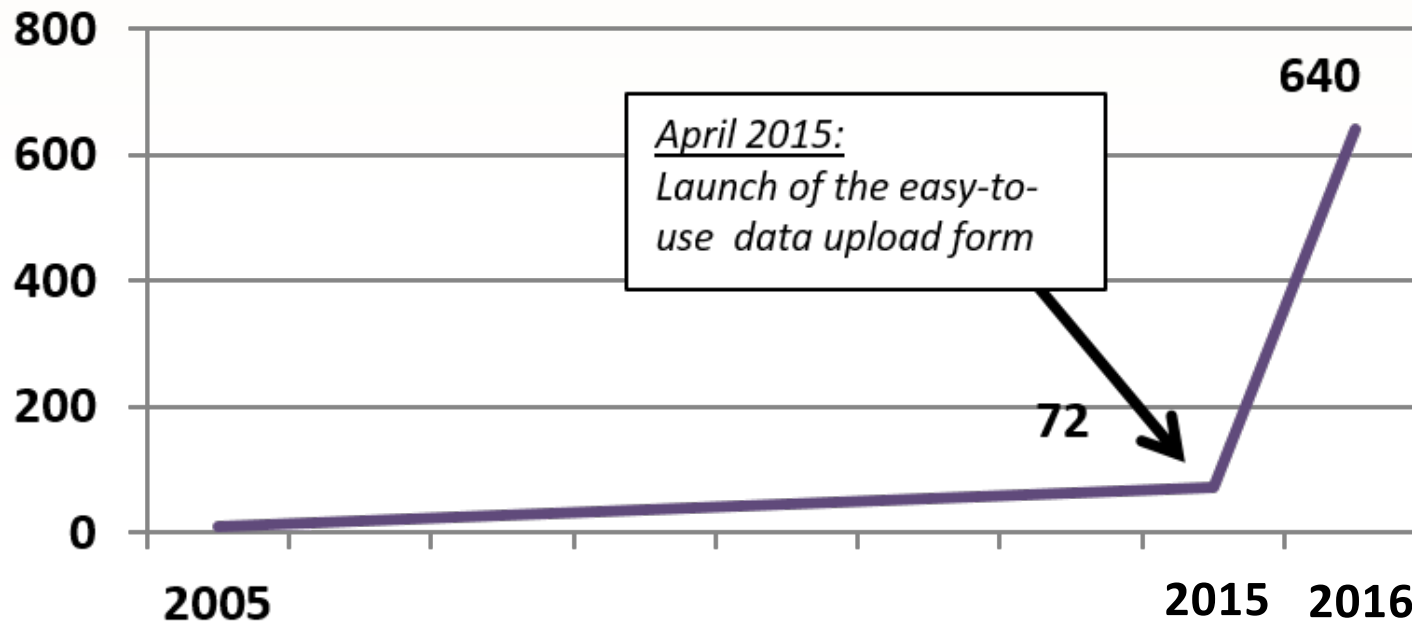
- Any member of the University of Cambridge with interest in research data management and sharing who is willing to work together towards improving RDM practices at the University

Did it work?

Researchers' feedback on our services



## Number of data submissions received

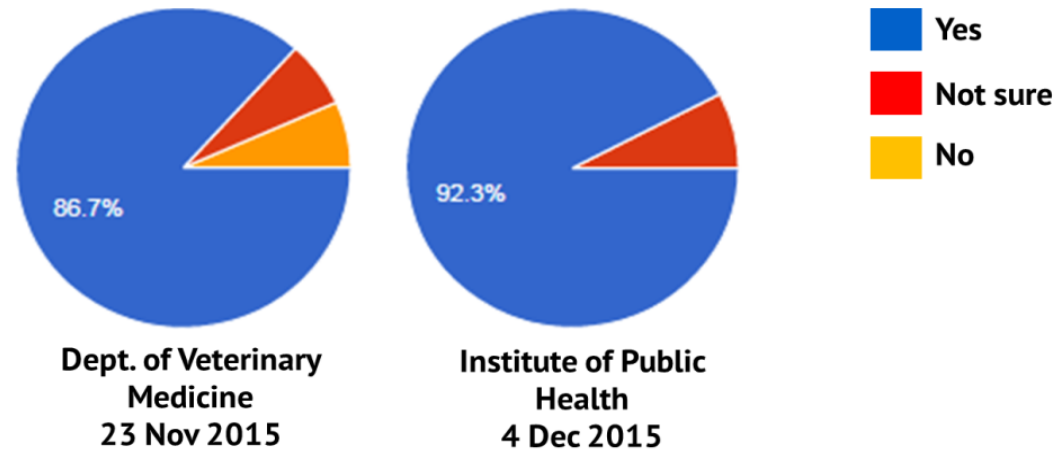


In a bit more than a year 10X more data submissions than during a decade 2005 - 2015

## **Behaviour change – data shared earlier and earlier**

- Researchers used to panic and share their data at the last minute (compliance requirements)
- More and more frequently:
  - Data shared before publication – access for peer-reviewers
  - Placeholder requests for data in preparation
- Data sharing seems to be more and more embedded in the publication process

Do you think this Research Data Management workshop is essential for first year PhD students?



Anonymous feedback:

“I thought this was **the best workshop I've attended so far**. Very professional delivery, good balance of participant interaction.”

“**Course should be mandatory** and done at the beginning of the year. It was excellent - thank you. **I wish I did it at the beginning.**”

“I really think **it’s very important what you are doing, it is the future** and you are proactively embracing it + helping shape it in this community which badly needs it, **we are very grateful as a community for what you are doing.**”

Group Leader, Department of Genetics

“I am really happy I got in touch with you. **Your help was extremely important** to me, as **I previously had no idea how to do this.** Thank you so much.”

Postdoc, Department of Psychology

“I meant to send this to you last week – the first paper that cites 'Kymata' data directly in the references has just been published!

This is a **direct result of my discussions with you about the best way to cite this data in a paper** – and I think it looks really good, so thanks again for your advice :)”

Group Leader, Department of Psychology



---

And over 40 applications to join the RDM  
Project Group!

# Collaboration and open communication: key to succeed with RDM provisions



# Thank you

Questions: [mt446@cam.ac.uk](mailto:mt446@cam.ac.uk)

[www.data.cam.ac.uk](http://www.data.cam.ac.uk)



@martateperek

@CamOpenData

<https://unlockingresearch.blog.lib.cam.ac.uk/>