



**figshare**  
credit for **all** your research

**DataFest Erasmus 2021**  
**@MarkHahnel**

# Scholarly Publishing Timeline

- **1323:** Compagnie du Gai Sçavoir, the oldest learned society on record, is founded in Toulouse, France.
- **1660:** The [Royal Society of London](#) is founded.
- **1665:** *Journal des Sçavans* and [Philosophical Transactions of the Royal Society of London](#) are first published. Each journal used some form of peer review, although not exactly like today's version. *Philosophical Transactions* published famous scientists such as Newton, Hooke, van Leeuwenhoek, Faraday, and Darwin.
- **1731:** *Medical Essays and Observations*, the first fully peer-reviewed journal, is launched by the Royal Society of Edinburgh.
- **1743:** The [American Philosophical Society](#), the first scholarly society in what is now the US, is created.
- **1848:** The [American Association for the Advancement of Science](#) is founded. AAAS publishes the journal [Science](#) and is the largest general scientific society in the world.
- **1869:** [Nature](#) publishes its first issue.
- **1880:** [Science](#) publishes its first issue.
- **1947:** [Elsevier](#), the longtime publishing giant, launches its first international journal, [Biochimica et Biophysica Acta](#).
- **1990:** [Postmodern Culture](#) becomes the first online-only journal with no printed version available.
- **1991:** [arXiv](#), the science pre-print server, is launched.
- **2003:** The [Public Library of Science](#) (PLOS) is founded.
- **2006:** [PLOS ONE](#), the wildly successful open access [megajournal](#), begins publishing. In 2013, *PLOS ONE* published [31,500 articles!](#)
- **2010:** The [altmetrics manifesto](#), describing potential new ways to gauge the impact of research beyond citations and impact factors, is written.
- **2012:** Several innovative and relatively new journals, including [F1000 Research](#), [PeerJ](#), and [eLife](#), are launched. These journals are experimenting with new forms of peer review, new business models, and new funding sources.

What can be achieved in a decade in Academic Publishing?

What can be achieved in a decade in Repository Land?

2009

## The Fourth Paradigm: Data-Intensive Scientific Discovery.

1. Empirical Evidence - The sky is blue
2. Scientific theory - The sky is blue every day
3. Computational science - Using advanced computing capabilities to understand and solve complex problems

The goal, Dr. Gray insisted, was not to have the biggest, fastest single computer, but rather “to have a world in which all of the science literature is online, all of the science data is online, and they interoperate with each other.”

Implicit in the idea of a fourth paradigm is the ability, and the need, to share data.



# The FOURTH PARADIGM

DATA-INTENSIVE SCIENTIFIC DISCOVERY

EDITED BY TONY HEY, STEWART TANSLEY, AND KRISTIN TOLLE

## All Scientific Data Online

- Many disciplines overlap and use data from other sciences
- Internet can unify all literature and data
- Go from literature to computation to data back to literature
- Information at your fingertips for everyone-everywhere
- Increase Scientific Information Velocity
- Huge increase in Science Productivity

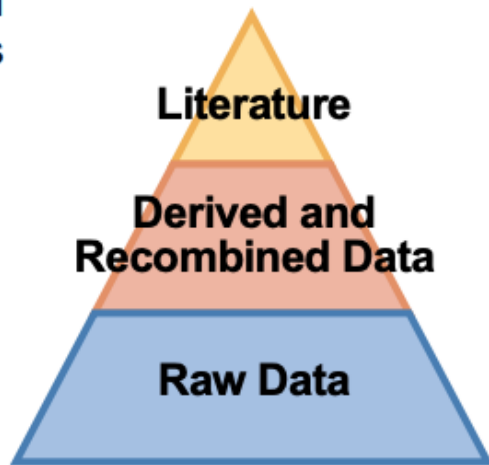
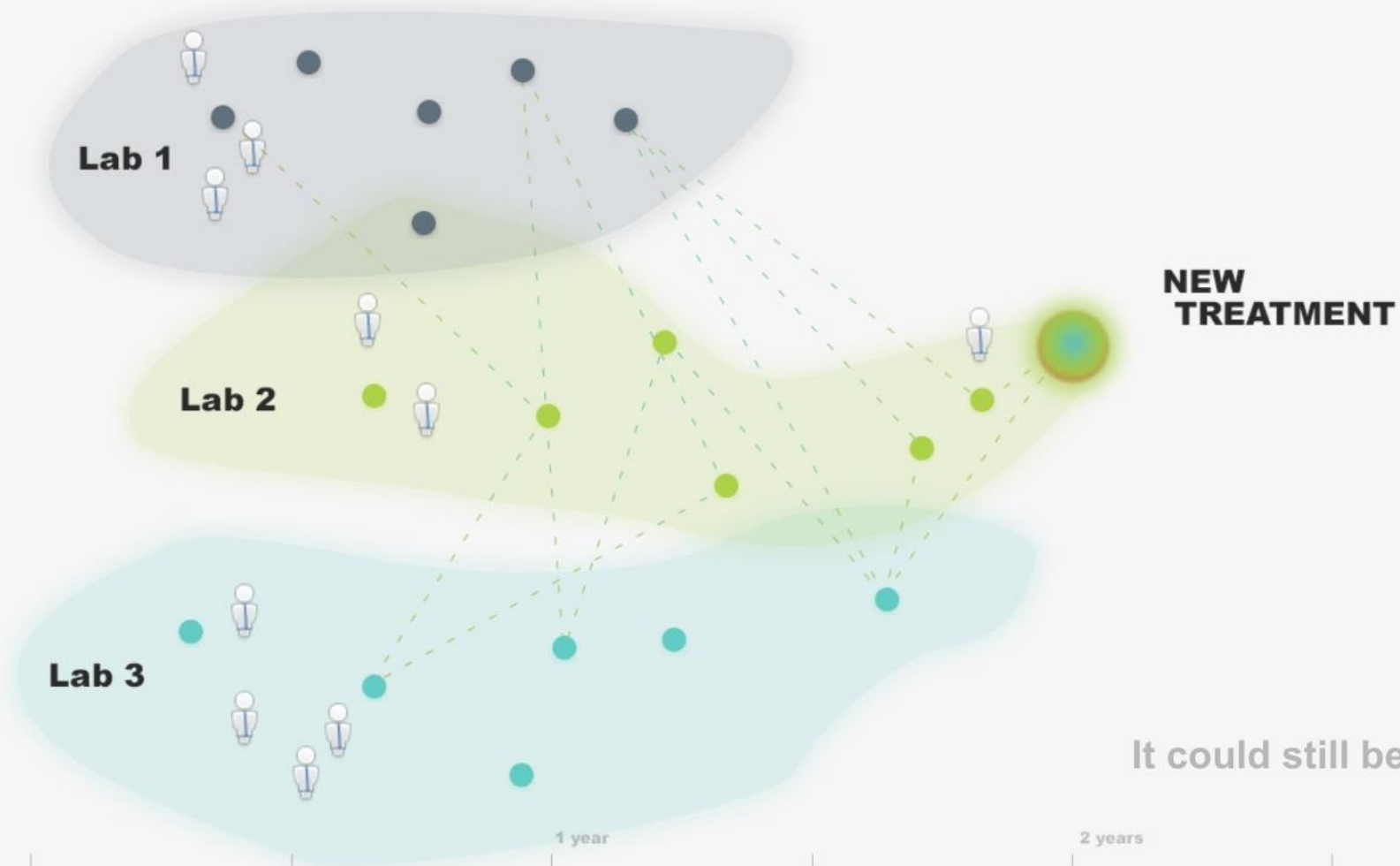
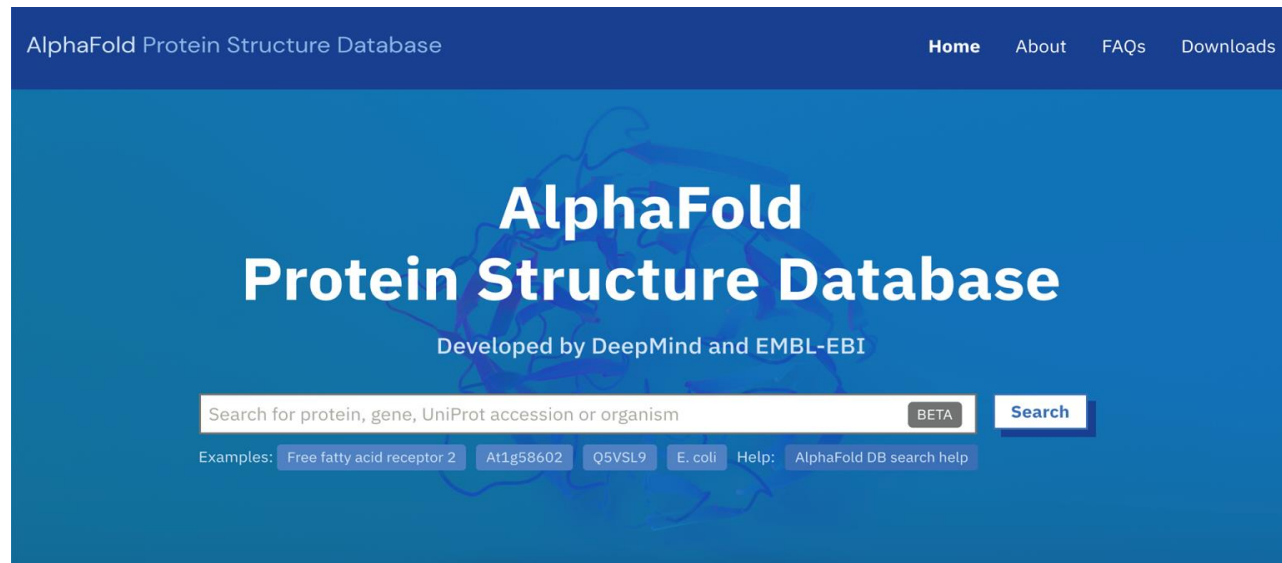


FIGURE 3



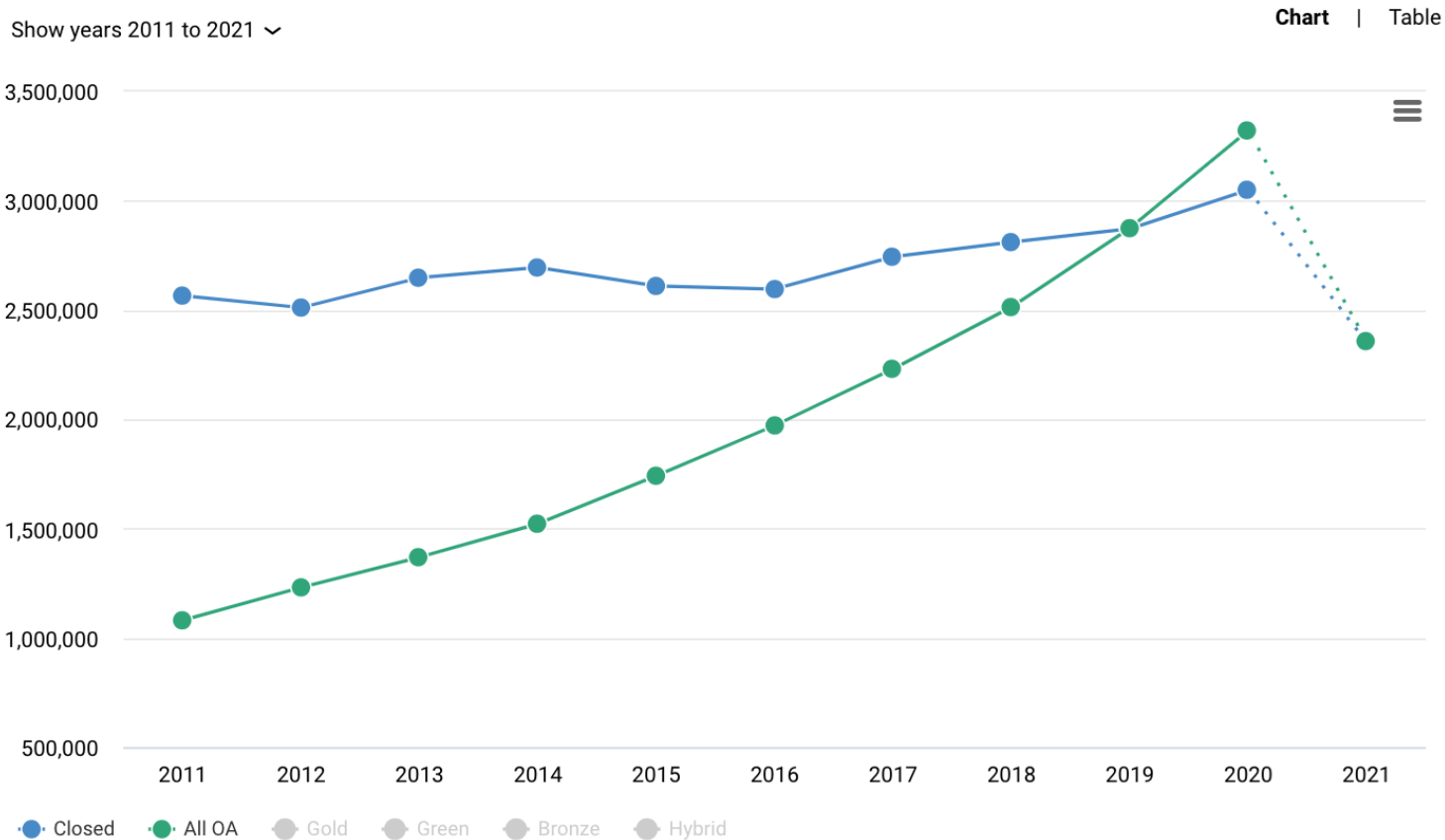
It could still be faster...



Oct 3, 2021, 07:34pm EDT | 29,397 views

# AlphaFold Is The Most Important Achievement In AI—Ever

# Open Access





PETER PIOT

HEIDI LARSON

SCIENCE 09.01.2018 08:00 AM

# Fake news and distrust of science could lead to global epidemics

Distrust in scientific expertise puts public health at risk

## NEWS

[Home](#) | [Coronavirus](#) | [Climate](#) | [UK](#) | [World](#) | [Business](#) | [Politics](#) | [Tech](#) | [Science](#) | [Health](#)[Health](#)

# Ivermectin: How false science created a Covid 'miracle' drug

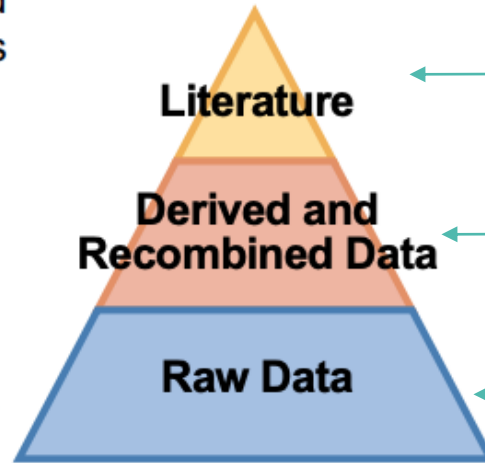
By Rachel Schraer & Jack Goodman  
BBC Reality Check

Major problems included:

- The same patient data being used multiple times for supposedly different people
- Evidence that selection of patients for test groups was not random
- Numbers unlikely to occur naturally
- Percentages calculated incorrectly
- Local health bodies unaware of the studies

## All Scientific Data Online

- Many disciplines overlap and use data from other sciences
- Internet can unify all literature and data
- Go from literature to computation to data back to literature
- Information at your fingertips for everyone-everywhere
- Increase Scientific Information Velocity
- Huge increase in Science Productivity



Peer Review - Independent assessment by field experts

What can we check for here?  
Who does said checks?

What can we check for here?  
Who does said checks?

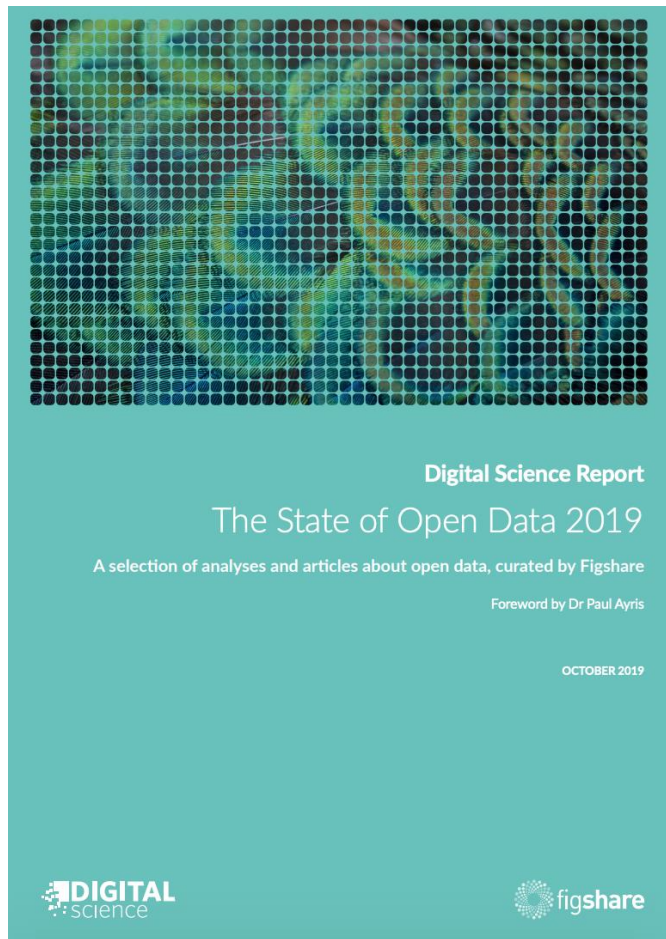
FIGURE 3

# A post mandate world

Where do research institutions and libraries fit in all of this?

Technology  
People  
Culture

# Data Publishing Culture

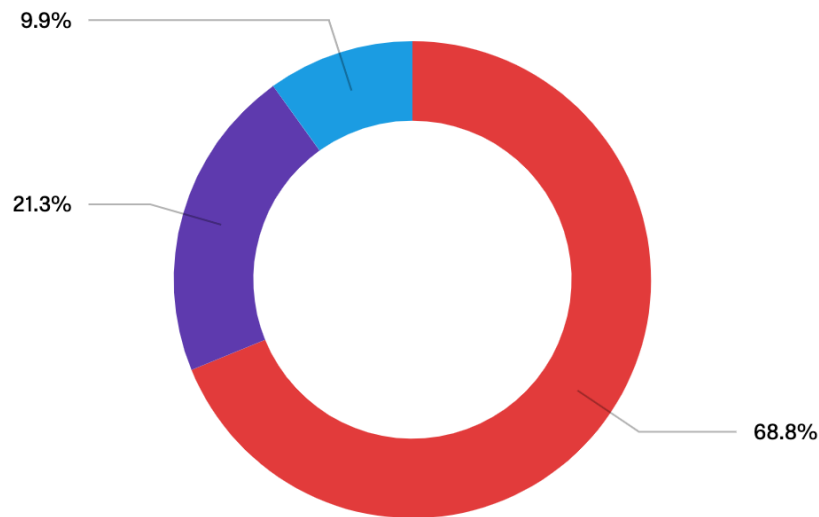


This year's survey received a record number of survey participants with around **8,500 responses** from the research community.

While most trends are encouraging around the adoption and acceptance of open data, the research community is now demanding more enforcement of the mandates that have been adopted by many governments, funders, publishers and institutions around the world.

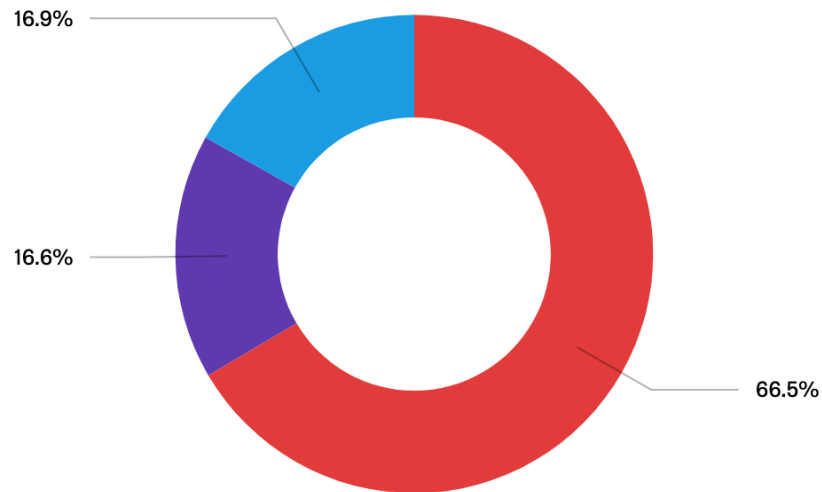


Should funders make the sharing of research data part of their requirements for awarding grants?



Yes No I don't know

Should funders withhold funding from (or penalise in other ways) researchers who do not share their data if the funder has mandated that they do so?



Yes No I don't know

*“Linking papers to their supporting data in a repository was associated with on average a **25% increase in citations**”*

<https://doi.org/10.1371/journal.pone.0230416>

PLOS ONE

advanced search

 OPEN ACCESS  PEER-REVIEWED

RESEARCH ARTICLE

# The citation advantage of linking publications to research data

Giovanni Colavizza, Iain Hrynaszkiewicz, Isla Staden, Kirstie Whitaker, Barbara McGillivray 

Published: April 22, 2020 • <https://doi.org/10.1371/journal.pone.0230416>

107  
Save

40  
Citation

11,051  
View

967  
Share

Article

Authors

Metrics

Comments

Media Coverage

Peer Review



Download PDF

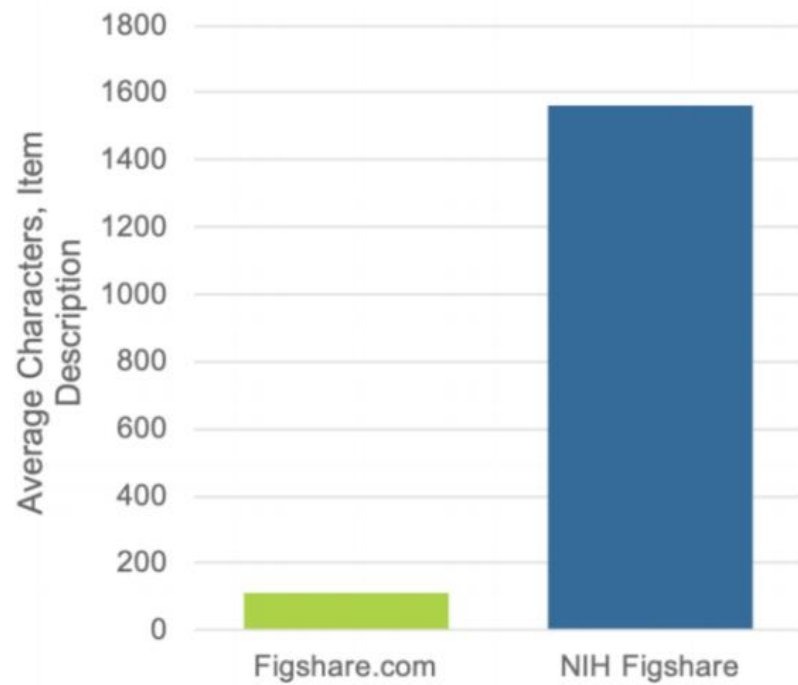
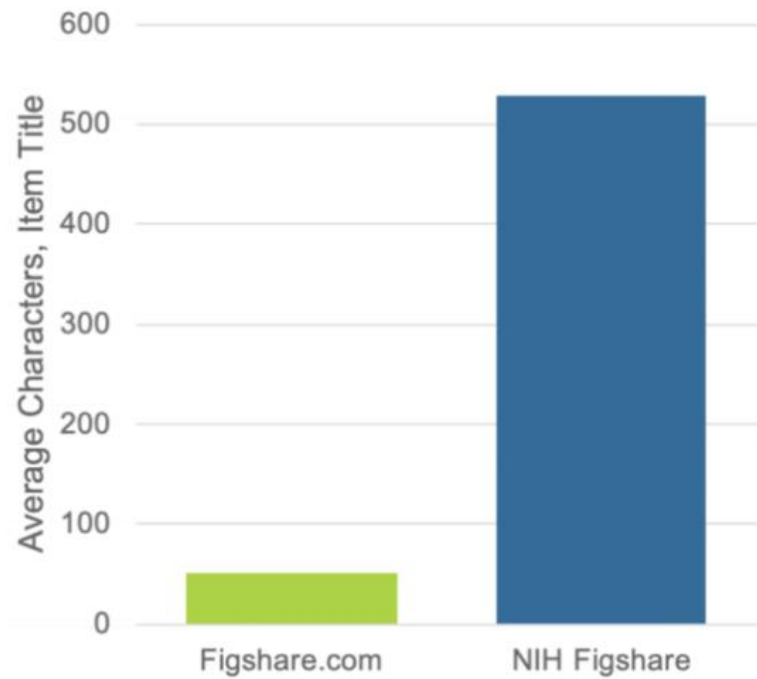


Print

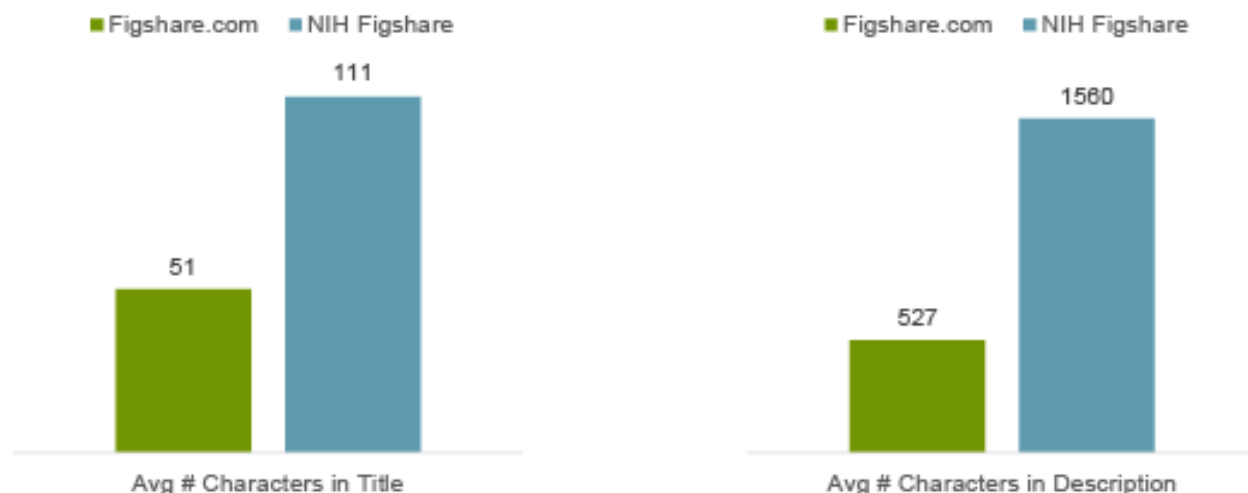
Share

# People & Technology





## When comparing NIH Figshare to Figshare.com, NIH Figshare has



**Titles that are 2x in length and descriptions that are 3x in length**

*Data and Code uploaded to [NIH.figshare.com](https://nih.figshare.com) vs [Figshare.com](https://figshare.com) users who indicated NIH funding and uploaded datasets or code  
July 23, 2019 – July 15, 2020*



DATASET

### **Dataset**

Dataset posted on 21.09.2020

Haiying Cui



DATASET

### **Dataset**

Dataset posted on 09.03.2020

Chao Feng



DATASET

### **dataset**

Dataset posted on 13.12.2018

Gildas Lepennetier



DATASET

### **Dataset**

Dataset posted on 06.10.2021

Marije Goudriaan



DATASET

### **Dataset**

Dataset posted on 13.11.2020

Izabela Zajac-Gawlak



DATASET

### **Dataset**

Dataset posted on 09.11.2020

Jana Pelclová



DATASET

### **Dataset**

Dataset posted on 25.12.2018

Jing Chen ▾




DATASET

### **dataset**


Dataset posted on 02.10.2021

Hang Zheng




DATASET

**Dataset**  
Dataset posted on 21.09.2020  
[Haiying Cui](#)




DATASET

**Dataset**  
Dataset posted on 09.03.2020  
[Chao Feng](#)




DATASET

**dataset**  
Dataset posted on 13.12.2018  
[Gildas Lepennetier](#)




DATASET

**Dataset**  
Dataset posted on 06.10.2021  
[Marije Goudriaan](#)




DATASET

**Dataset**  
Dataset posted on 13.11.2020  
[Izabela Zajac-Gawlak](#)




DATASET

**Dataset**  
Dataset posted on 09.11.2020  
[Jana Pelclová](#)



DATASET

**Dataset**  
Dataset posted on 25.12.2018  
[Jing Chen](#) ▾



DATASET

**dataset**  
Dataset posted on 02.10.2021  
[Hang Zheng](#)

AlphaFold Protein Structure Database

Home

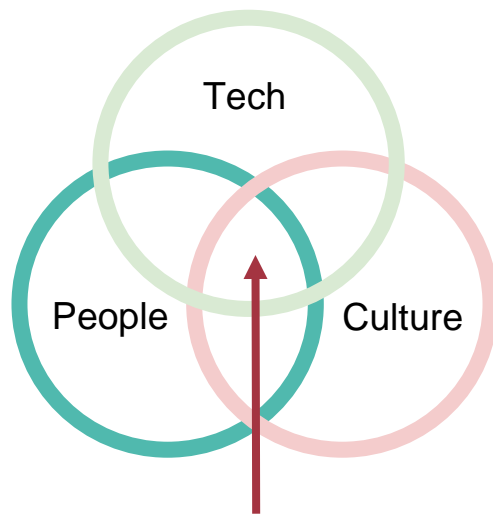
# AlphaFold Protein Structure Database

Developed by DeepMind and EMBL-EBI

BETA

Examples: [Free fatty acid receptor 2](#) [At1g58602](#) [Q5VSL9](#) [E. coli](#) Help: [AlphaFold DB search help](#)





Repositories  
Libraries  
Archives

Erasmus University Rotterdam

Browse Search on Erasmus Univers... Q

Log in

Erasmus University Rotterdam

Discover research from Erasmus University Rotterdam (EUR)

69,069 views 28,502 downloads more stats...

ALL CATEGORIES GROUPS SEARCH

sort by: Posted date

**Connecting to society via Open Data**  
Presentation posted on 29.10.2021  
Lotte Houteven

**COLLECTION: ERIM October DataFest**  
Posted on 26.10.2021  
ERIM

**Claim your datasets via your ORCID record - DataFest**  
Presentation posted on 26.10.2021  
Judith Gulpers

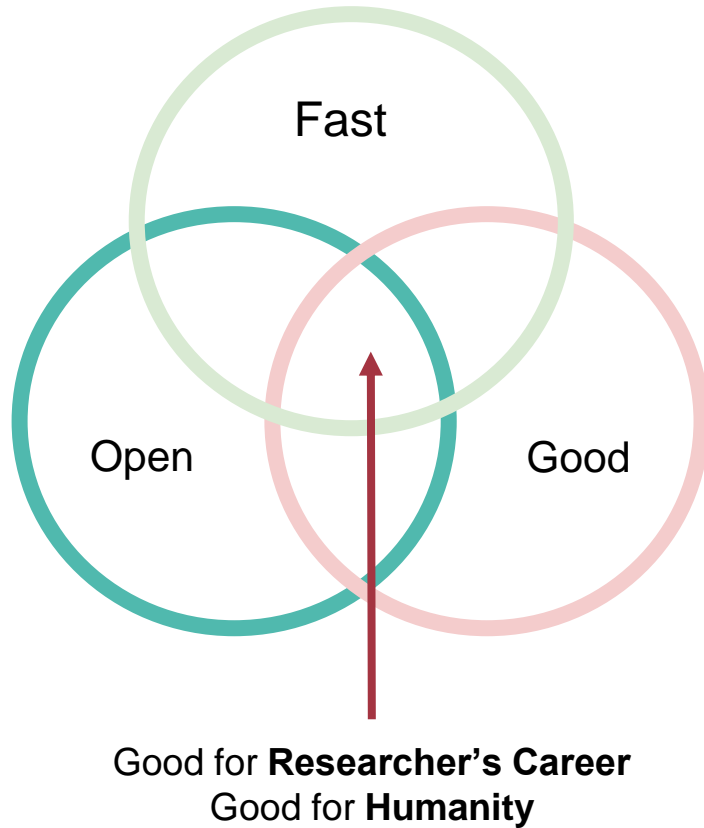
**The "open = better" heuristic in management research**  
Presentation posted on 26.10.2021  
Gabriele Paolacci

**2021\_ERIM\_OS\_Survey**  
Online resource posted on 18.10.2021  
Lizette Guzman Ramirez

**Myth busters: ERIM researchers tackle concerns on Open ...**  
Presentation posted on 18.10.2021  
Thomas Peeters

**robustHD: An R package for robust regression with high...**  
Software posted on 15.10.2021  
Andreas Alfons

**Aandacht voor het welzijn van jonge mensen**  
Online resource posted on 15.10.2021  
Kayla Green



*“The speed at which any given scientific discipline advances will depend on how well its researchers collaborate with one another”*

Jim Gray

### **Fast publishing**

Immediate release of papers and data

### **Good Publishing**

Peer review of papers, checks for data

### **Open Publishing**

Openly available to everyone on the planet



**Mark Hahnel**

Function: CEO

email: [mark@figshare.com](mailto:mark@figshare.com)

@markhahnel

@figshare

# Some of Figshare's Core Beliefs:

- Academic research outputs should be as open as possible, as closed as necessary
- Academic research outputs should never be behind a paywall
- Academic research outputs should be human and machine readable/query-able
- Academic infrastructure should be interchangeable
- Academic researchers should never have to put the same information into multiple systems at the same institution
- Identifiers for everything
- The impact of research is independent of where it is published and what type of output it is