

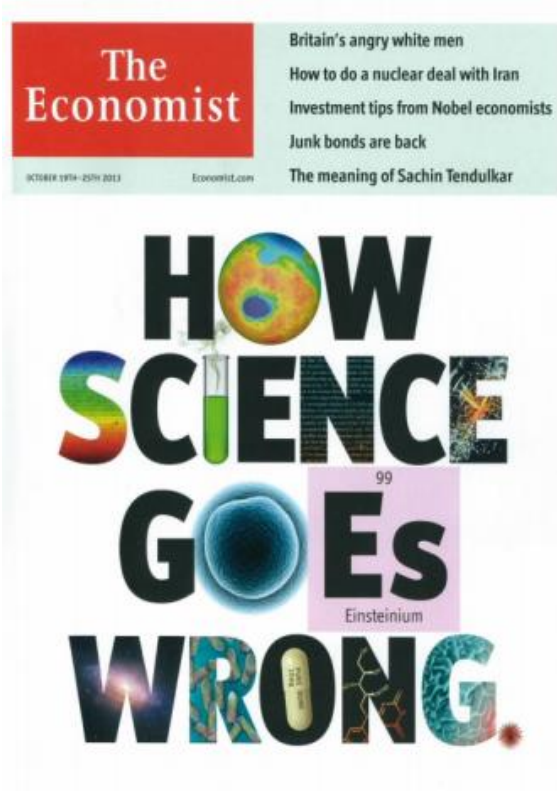


Session III : Incentivizing data sharing and reuse

Sharing Clinical Trial Data Workshop, Nov 2019

Dr Georgina Humphreys, Open Research, Wellcome

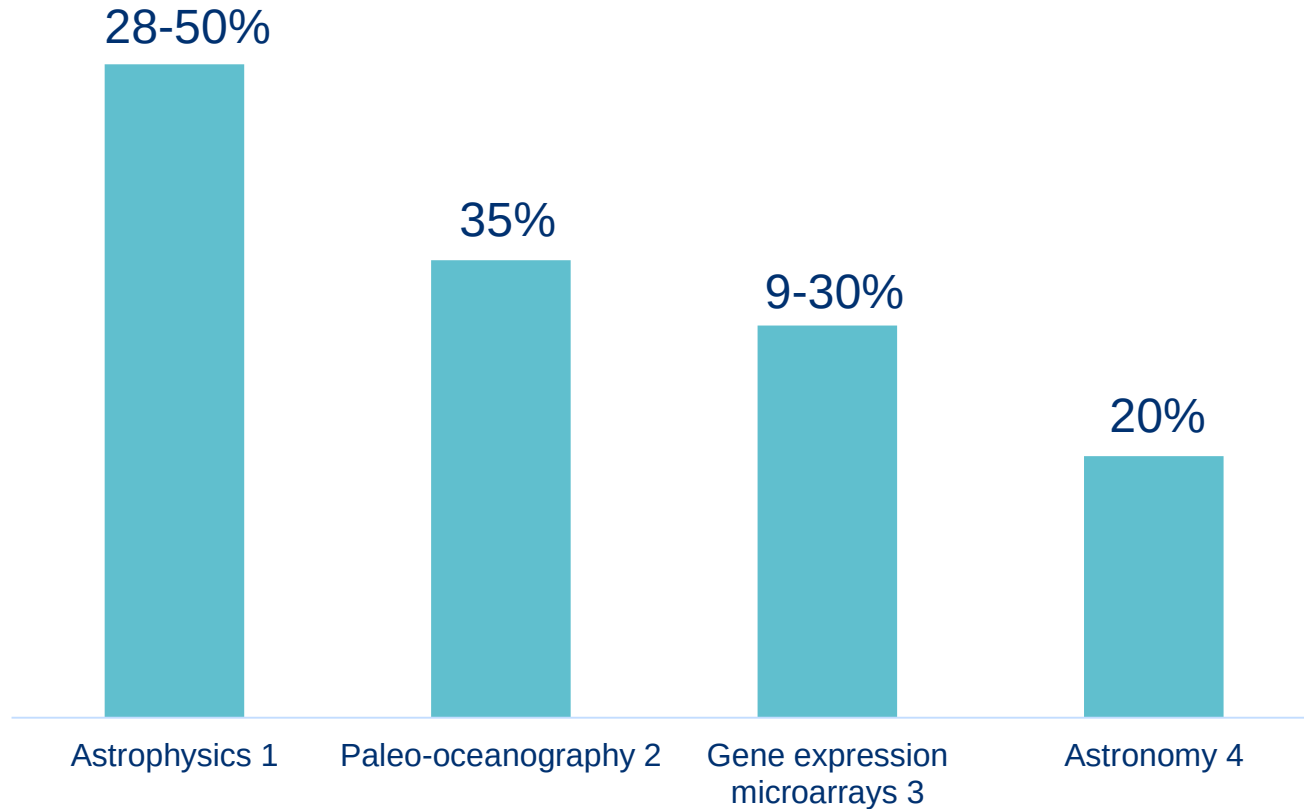
Challenge of unavailable data



- Irreproducible biology research costs US \$28 billion per year¹
- Pharma companies report 75%+ failure rates replicating conclusions of peer-reviewed papers^{2,3}
- >50% of researchers couldn't reproduce their own experiments
- >70% couldn't reproduce the work of others⁴

1. Freedman, L. P., Cockburn, I. M. & Simcoe, T. S. *PLoS Biol.* 13, e1002165 (2015) <http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002165>
2. Begley, C. G. & Ellis, L. M. *Nature* 483, 531–533 (2012)
3. Prinz, F., Schlange, T. & Asadullah, K. *Nature Rev. Drug Discov.* 10, 712 (2011)
4. Baker (2015) <http://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970>

Researcher benefit



Research articles with open data are cited on average **25% more**, based on a study of ~500k articles⁵

1. Dorch et al (2015) <https://arxiv.org/abs/1511.02512>

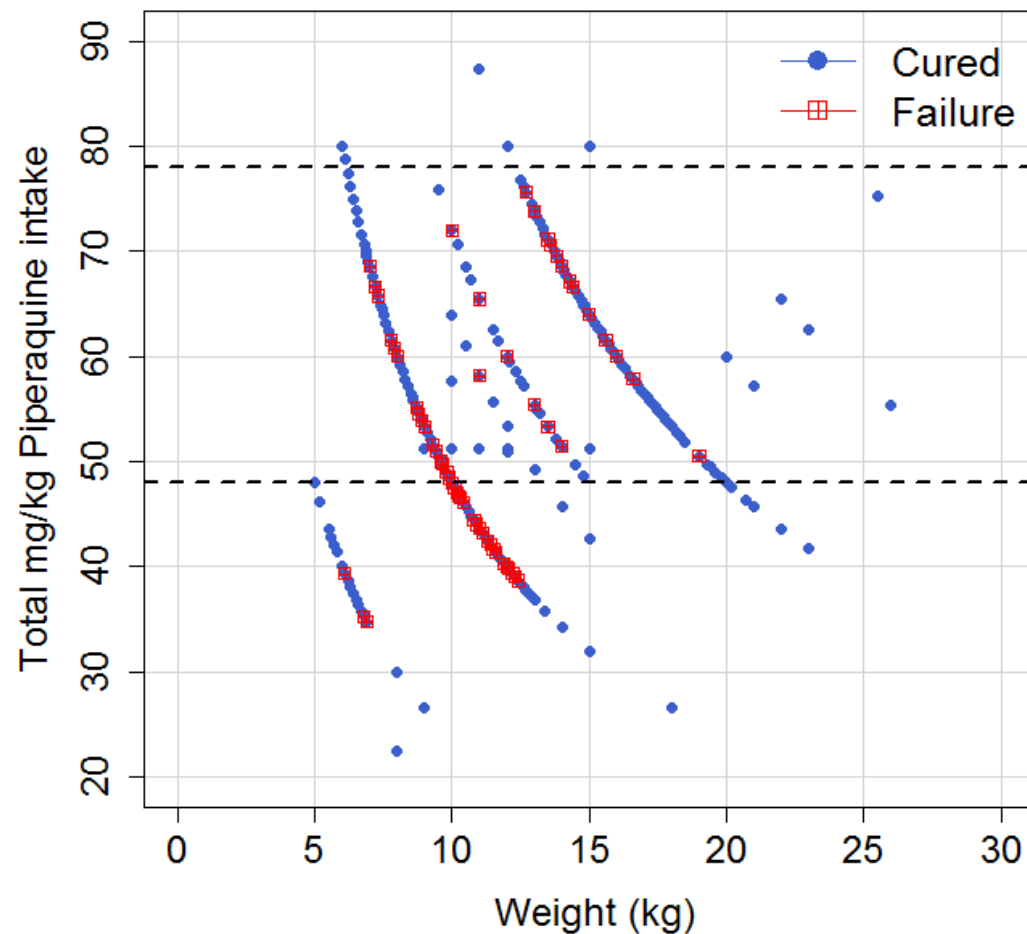
2. Sears et al (2011) https://figshare.com/articles/Data_Sharing_Effect_on_Article_Citation_Rate_in_Paleoceanography/1222998/1

3. Piwowar & Vision (2013) <https://doi.org/10.7717/peerj.175>

4. Henneken & Accomazzi (2011) <https://arxiv.org/abs/1111.3618>

5. Colavizza et al (2019) arxiv.org/abs/1907.02565

Impact of data sharing WWARN study group



7,072 patients from 26 studies (2004-2013)

Previous WHO recommended
therapeutic range 48-78 mg/kg
for piperazine

In April 2015 WHO updated malaria
[treatment guidelines](https://www.who.int/publications/malaria/treatment-guidelines)

Maximising the value of research data

1. Implementing our [outputs management policy](#)
2. Making research outputs FAIR e.g. [pilot with Springer Nature](#), [WOR](#)
3. Enabling Open Research – resources and culture e.g. [DORA](#), [NAS roundtable](#), [clinicalstudydatarequest.com](#) and [Vivli](#)
4. Supporting innovation in open research e.g. [Open Research funding](#)

Data for Science and Health

“Life is a circle; we use other people’s data in other sectors, then they should use ours’ too, if we want this world to move forward and improve services in all sectors.”

Citizen from Malawi, 2019