Open Research – a research funder perspective

Extreme Open Science Initiative workshop
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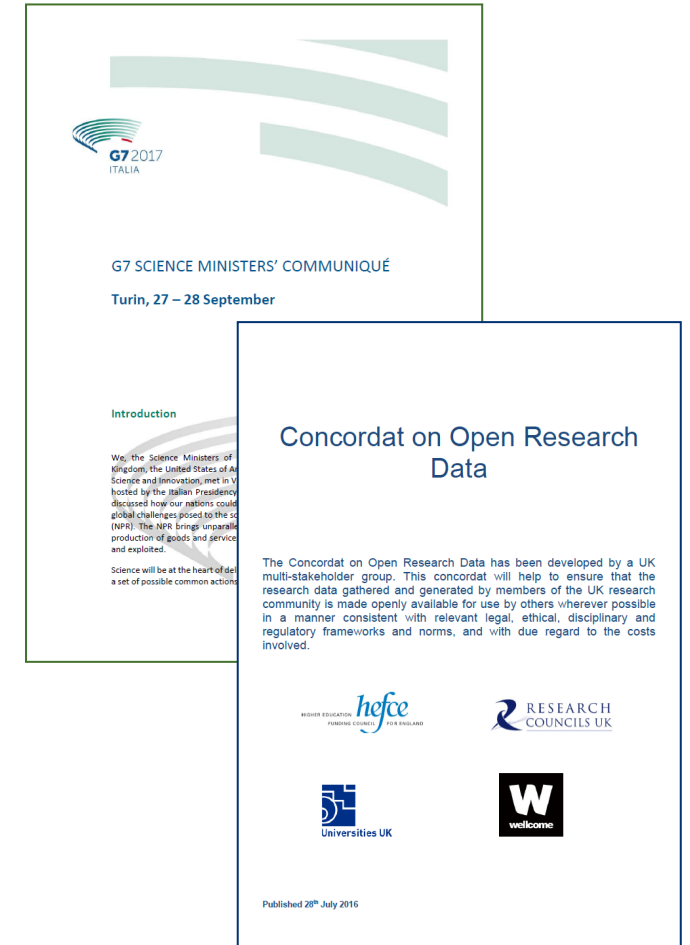d.carr@wellcome.ac.uk
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Wellcome's commitment to Open Research

- committed to ensuring research outputs (papers, data, code & materials) can be accessed and used in ways that maximise health & societal benefit

- making these outputs more widely available holds the potential to:
  - accelerate discovery and its application
  - help ensure findings can be validated and reproduced
  - increase efficiency – reduce duplication and waste

- passionate long-term advocate of open access & data sharing, with long-standing policies
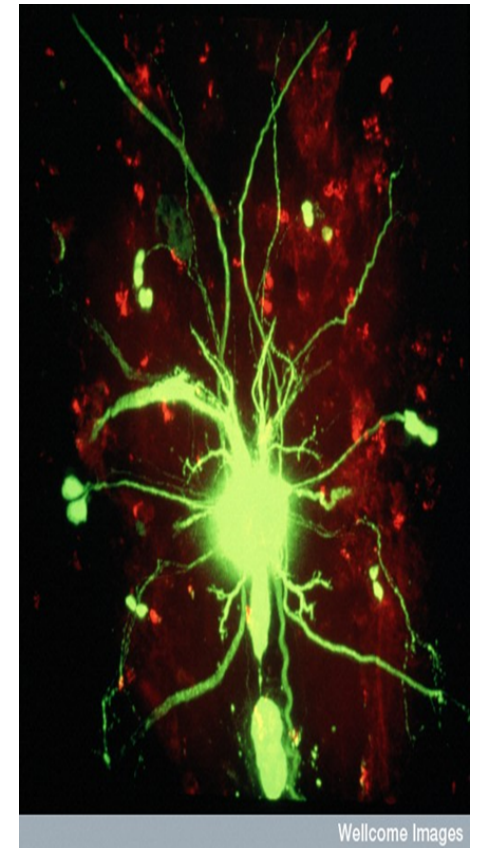
Open Research - a gathering momentum

- High level political drive and support:
  - G7 Science Ministers' statement (Sept 2017)
  - European Commission – Open Science Policy Platform
  - UK Concordat on Open Research Data (2016)
- Cross-national initiatives to build open science infrastructure (e.g. European Open Science Cloud)
- Increased attention on research reproducibility and waste, and on concept of FAIR
- Sharing research outputs in timely manner increasingly seen as part of good research practice
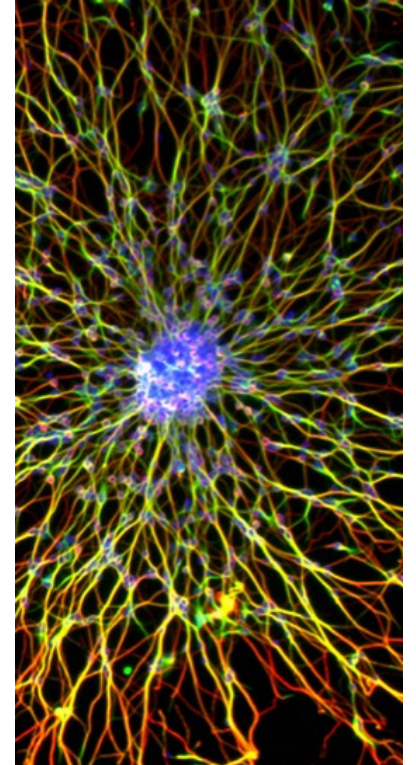
Growing funder consensus...

- major challenges associated with increasingly vast & complex datasets generated by research, but also tremendous opportunities

- funders around the world developing increasingly strong policies around sharing data and other outputs

- strong high-level policy convergence:
  - data should be preserved and shared in a way that maximizes value
  - requirement for data management plans in grant applications
  - data underlying published findings must be accessible (and open wherever feasible)

Wellcome Images

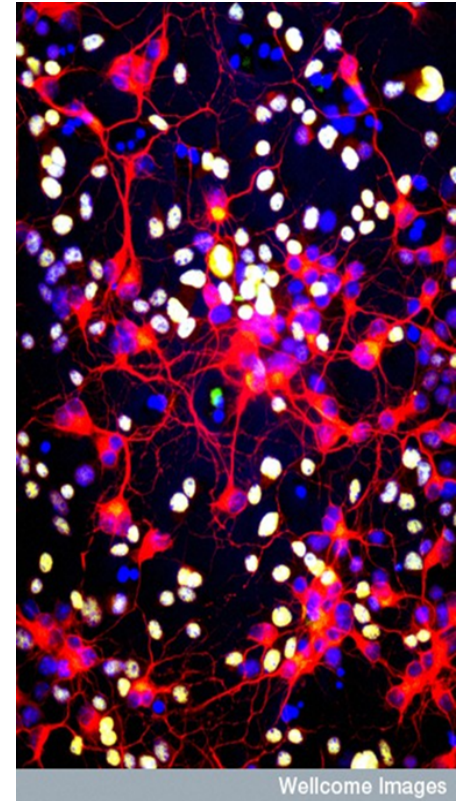# Managing and sharing research outputs – Wellcome's policy

- launched an new policy on managing and sharing data, software and materials in July 2017

- extended our previous policy on data management and sharing to cover other research outputs

- key elements of the policy are:

  - we expect all researchers we fund to maximise access to research data, software and materials with as few restrictions as possible

  - we require an **outputs management plan** - where the research is likely to generate significant outputs of clear value as a resource

  - we commit to review and support costs of output management plans as integral part of grant

Strengthening our requirements

- in revising our policy, we made clear that:

  - data and original software underlying publications must be made available at the time of publication

  - data relevant to a public health emergency should be shared as widely and rapidly as possible, irrespective of timing of publication

  - outputs should be discoverable, have persistent identifiers and be placed in recognised community repositories wherever possible

- we also committed to introduce a check at final report stage to examine the extent to which outputs have been shared in line with the policy
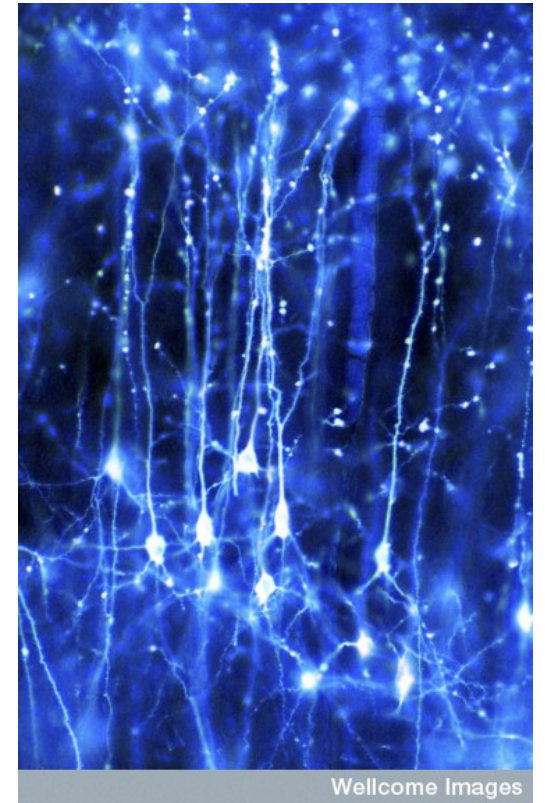
Outputs management plans – key elements

- Data, software and materials

  – The outputs your research will generate

  – When you intend to share these outputs

  – Where the outputs will be made available

  – How the outputs will be accessible to others

  – Whether limits to sharing are required

  – How outputs will be preserved

- Intellectual property

- Resources required

Addressing the challenges

- implementation and monitoring of funder policies is work in progress

- there are significant hurdles to outputs sharing

  - reward and assessment structures

  - repository infrastructure lacking in some areas

  - shortage of skills and lack of career paths for data specialists

  - need for platforms and tools to enable discoverability and re-use

- different disciplines at very different places in developing resources and practices to support data sharing

- committed to working with other funders, journals researchers and institutions to address these challenges.
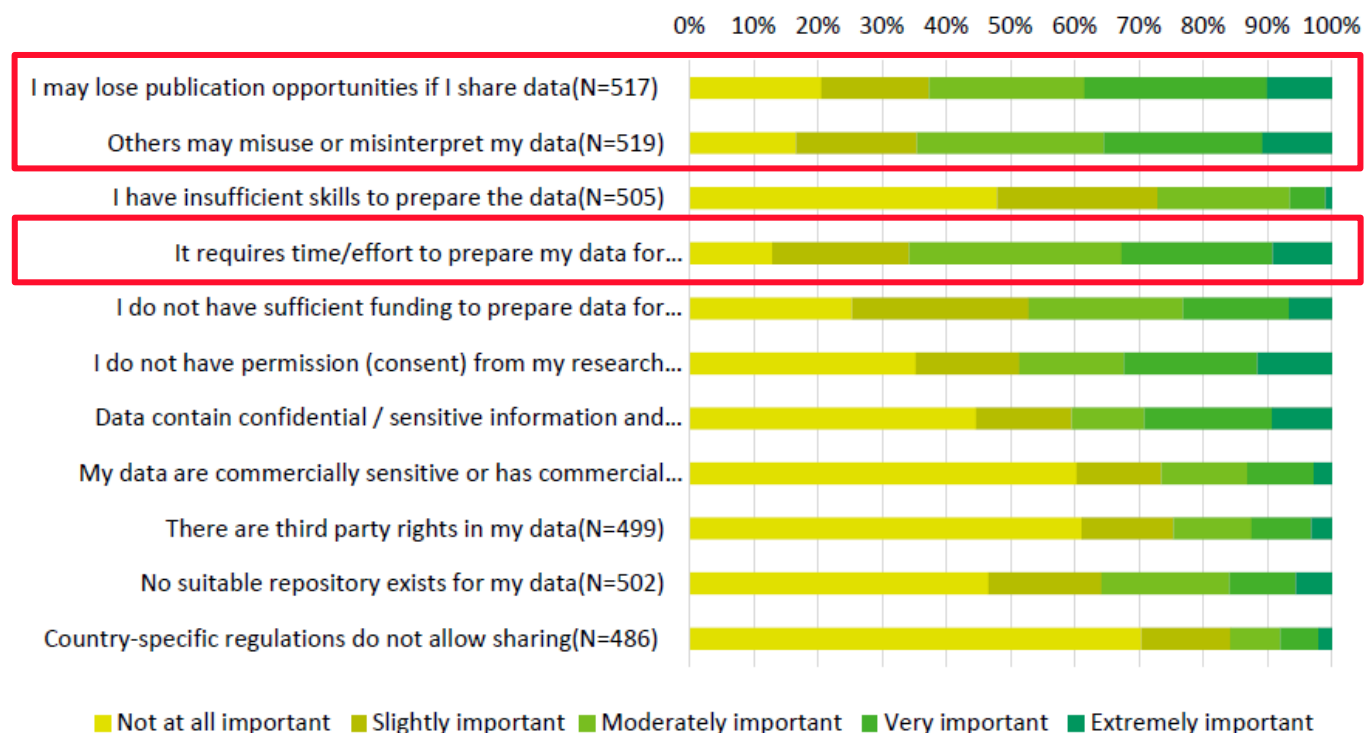

Dr Jonathan Clarke, Wellcome Images

Researcher attitudes & practices

Concerns persist around fear of misuse of data, loss of publication opportunities and resource & time required to share data…

Van den Eynden, Veerle; Knight, Gareth; Vlad, Anca; Radler, Barry; Tenopir, Carol; Leon, David; Manista, Frank; Whitworth, Jimmy; Corti, Louise (2016): Survey of Wellcome researchers and their attitudes to open research. figshare. (https://dx.doi.org/10.6084/m9.figshare.4055448.v1)
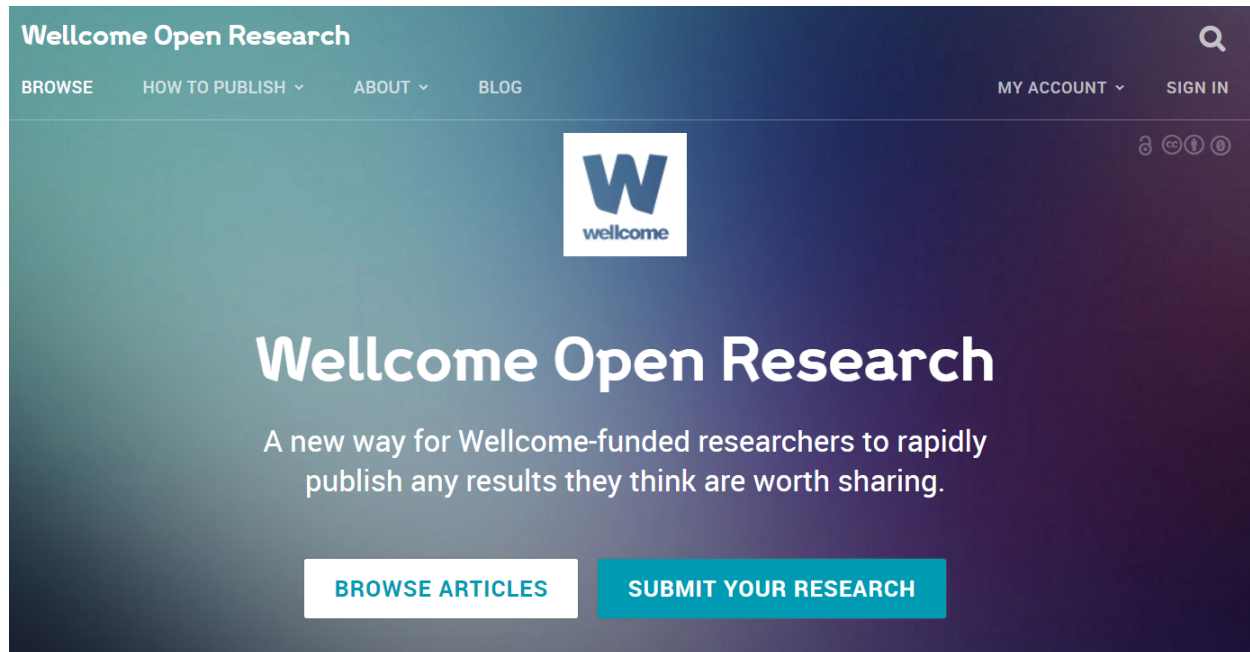
Developing Open Research

Developing Open Research

- Dedicated **Open Research team** established at Wellcome in 2017 to lead and coordinate work:

  - **Funder-led activities** – developing major initiatives in areas where funders can take a lead in supporting the community and driving change.

  - **Community-led activities** – supporting researchers and innovators to develop and test cutting-edge approaches to openness; piloting discipline-specific initiatives.

  - **Policy leadership** – taking a lead in developing our policies and practices as a funder to support, incentivise and sustain open research.

- Partnership & ongoing engagement with the research community at heart of our approach

1. Funder-led activities

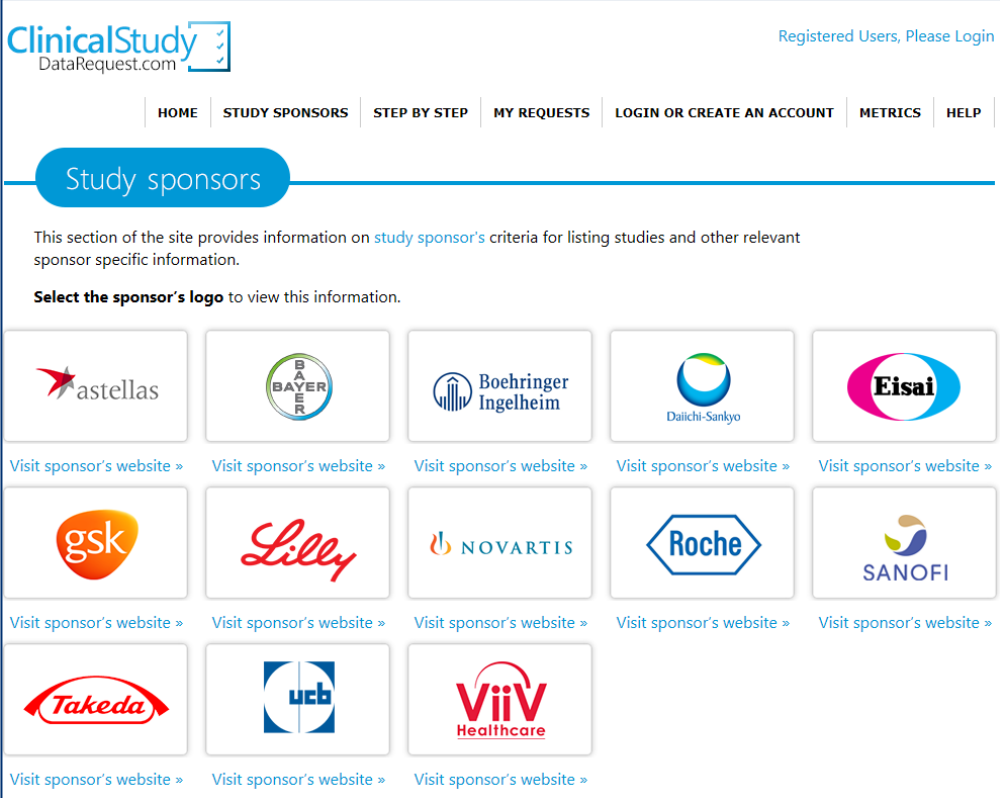# Wellcome Open Research

www.wellcomeopenresearch.org

Publishing platform where Wellcome-funded researchers can publish *any* results they think are worth sharing – with aim of making the sharing of research

- Faster
- Transparent
- Reproducible
- Inclusive
- Cost-effective

Enabling access to clinical trial data (ClinicalStudyDataRequest.com)

- CSDR platform provides access to anonymised individual-level clinical trial data from 13 pharma companies

- Wellcome provides secretariat for independent review panel

- working with other funders to pilot use of CSDR to provide access to academic clinical trials – assisting groups with listing and anonymising data

www.clinicalstudydatarequest.com

2. Community-led activities

The Open Science Prize

- Partnership with US National Institutes of Health & Howard Hughes Medical Institute

- Supported prototyping and development of tools & services to build on data and content

- Six prototypes supported (from 96 entries)

- Eventual grand prize: Nextstrain.org – real-time tracking of virus evolution

New funding opportunities

- Research Enrichment – Open Research (launched November 2017)

  – open to Wellcome grantholders and applicants

  – awards of up to £50k for open research approaches that increase the impact of their grant

  – See: https://wellcome.ac.uk/funding/research-enrichment-open-research

- Prizes and challenges (coming 2018)

  – 'pioneer' awards to pilot cutting-edge approaches to open research

  – themed challenges for innovative data re-use

3. Policy leadership

Shaping policy and practice

- implementing and reviewing our policies and guidance

- working with other funders to develop a 'blueprint' to enhance incentives

- maximising the value of outputs management plans

- developing strategy for long-term funding of research infrastructures

- supporting work to develop key success factors and indicators for open science

https://wellcomecollection.org/works/tddbvrau

Closing thoughts

- very strong momentum behind open research but significant challenges remain

- as a funder, we are committed to:

  - stimulating innovative approaches to openness that enrich the research enterprise

  - building the evidence base on the benefits (and risks) of open approaches to research

  - working in partnership with other funders and with researchers, institutions, resource providers and publishers to address infrastructural, skills and cultural barriers

- we strongly support the pioneering efforts of SGC researchers and keen to stay engaged in the extreme open science initiative

Any Questions?