Open Research @ the Wellcome:

an update on current activities and priorities

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Agenda

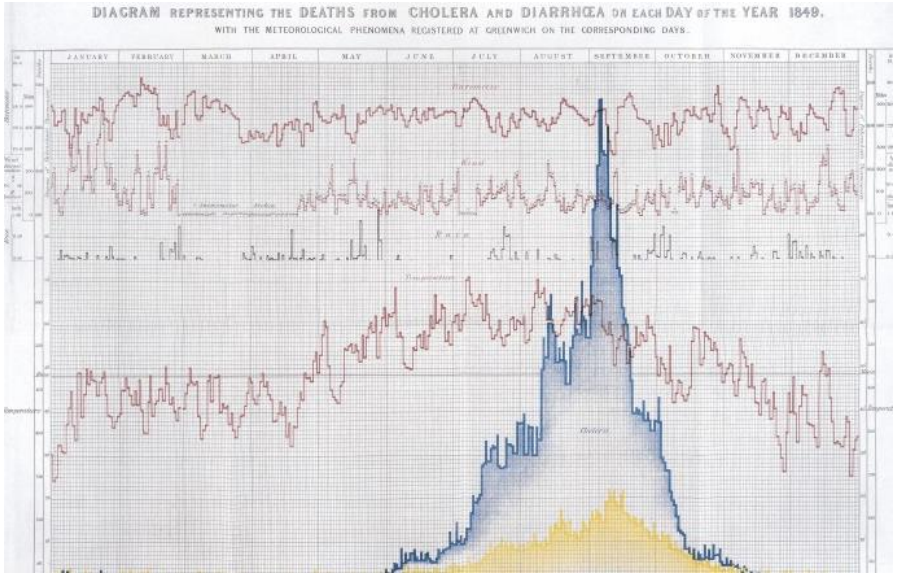
- Overview of Open Research @ Wellcome
- OA publisher requirements
- Wellcome Open Research
- Preprints

Open Research

Open Research

- Project – a nine-month development phase
- Deliverable - a prioritised and costed *Roadmap* setting out how Wellcome could take a leadership role in ensuring **research outputs** which arise from its funding are findable, accessible, interoperable and reusable (FAIR principles)
- Focus – sharing of publications, data and code
- Deadline - Spring 2017

Vision



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

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Why is this important?

- Opening up access to the research outputs helps:
  - **Accelerate discovery and its application for health benefit**
    - Computational analysis of over 7,700 brain images – made openly available – determined that the first physiological sign of Alzheimer's disease is a decrease in blood flow in the brain. Nature Communications
  - **Maximise the return on our research investment**
    - Human Genome Project – Return on Investment of 141:1
  - **Enhance research reproducibility and reduce avoidable waste**
    - Other researchers can re-analyse and replicate published studies

Challenges?

- Infrastructure
- Culture & incentives
- Skills & capacity
- Global equity
- Ethics & governance
- Transition to OA for research publications

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Current activities

- **survey** of Wellcome funded researchers
- **mapping exercise** of current activities
- **landscaping** reviews
- **clinical trial** data
- role of **preprints**
- **Wellcome Open Research**

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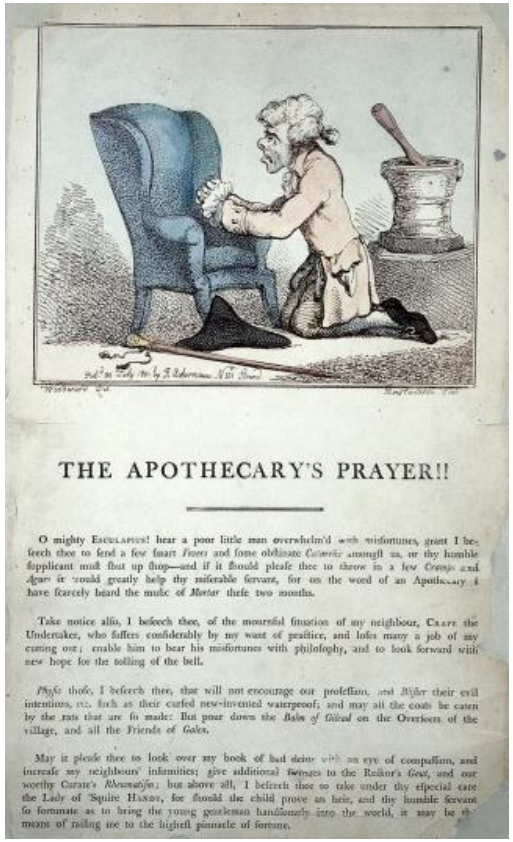
Publisher Requirements

Objectives

- **Reduce** the number of articles where an APC is paid, and the article doesn't comply with our OA policy
- **Clarify** what Wellcome requires when it pays an APC
- **Simplify** compliance for authors, institutions, funders and publishers



THE APOTHECARY'S PRAYER!!

O mighty Esculapius! hear a poor little man overwhelm'd with misfortunes, grant I beseech thee to fend a few fmart *Fevers* and fome obftinate *Catarrhs* amongft us, or thy humble fupplicant muft fhut up fhop—and if it fhould pleafe thee to throw in a few *Cramps* and *Agues* it would greatly help thy miferable fervant, for on the word of an Apothecary I have fcarcely heard the mufic of *Mortar* thefe two months.

Take notice alfo, I befeech thee, of the mournful fituation of my neighbour, Chape the Undertaker, who fuffers confiderably by my want of practice, and lofes many a job of my cutting out; enable him to bear his misfortunes with philofophy, and to look forward with new hope for the tolling of the bell.

Blefs thofe, I befeech thee, that will not encourage our profeffion, and *Blaft* their evil intentions, viz. fuch as their curfed new-invented waterproof, and may all the coats be eaten by the rats that are fo made: But pour down the *Balm of Gilead* on the Overfeers of the village, and all the Friends of *Gales*.

May it pleafe thee to look over my book of bad debts with an eye of compaffion, and increafe my neighbours' infirmities; give additional fatigues to the Rafkin's *Goat*, and our worthy Curate's *Rheumatifm*; but above all, I befeech thee to take under thy efpecial care the Lady of Squire Handy, for fhould the child prove an heir, and thy humble fervant fo fortunate as to bring the young gentleman handfomely into the world, it may be the means of raifing me to the higheft pinnacle of fortune.

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Example 1

24 August 2016 - Volume 30 - Issue 13 - p 2137–2139
doi: 10.1097/QAD.0000000000001157
Correspondence

Direct-acting antivirals for acute hepatitis C in HIV-infected MSM

Millard, James Daniel; Henry, Jaimie; Rizvi, Syed Shoaib; Nelson, Mark

OPEN

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DOI:10.1097/QAD.0000000000001156

OPEN

Direct-acting antivirals for acute hepatitis C in HIV-infected MSM

An epidemic of acute hepatitis C (AHC) has been described amongst HIV-infected MSM [1–8]. Traditionally, treating AHC in this population has had clear advantages over waiting to treat in the chronic phase, with improved sustained virological response (SVR) rates and reduced length of therapy [9–12]. Treatment is offered to those who fail to demonstrate a 2 log decline at week 4 or still have detectable hepatitis C virus (HCV) RNA at week 12 and hence are unlikely to clear spontaneously [13]. The treatment of chronic HCV has been revolutionized by the advent of directly acting antivirals (DAAs) [14]. However, the role of these agents in AHC is unclear, particularly in light of the now excellent efficacy in chronic infection. Guidelines still recommend therapy with pegylated interferon and ribavirin, and DAAs are not currently licensed for AHC [9,15]. Nonetheless, we have encountered several cases in which we have felt the use of DAAs warranted for AHC. The demographics and essentials of the HIV and AHC history of these patients are presented in Table 1.

Patient 1 was monitored for 4 weeks, failed to reduce his viral load by 2 log and was thus considered for AHC therapy. He had a background of depression and was a healthcare professional in an important role. Two companies were therefore approached to access an all-oral, interferon-free DAA regimen, as DAAs were not licensed at this time, both of whom agreed to provide medication. Patient 2 presented with evidence of hepatic failure, with deranged clotting and low albumin, which failed to resolve after more than 10 days of supportive inpatient therapy. Similarly, although patient 4 had initially normal synthetic function, after a week he developed hepatic failure. Given the clinical severity and, in the case of patient 2, background of depression, we aimed to avoid interferon-based therapy and obtained access to DAAs. Patient 3 was concerned about transmission risk, keen to initiate therapy and had access to DAAs privately.

All patients were commenced on Harvoni, a fixed dose combination of 90 mg of the NS5A inhibitor ledipasvir and 400 mg of the nucleotide analogue NS5B polymerase inhibitor sofosbuvir, once per day. Length of therapy and the addition (or otherwise) of ribavirin was based on current understanding of the length of therapy required for AHC at the time of treatment initiation, HCV RNA viral load and evidence of underlying liver disease; with patient 1 (low viral load, no underlying liver disease and prior to evidence for the possible efficacy of shorter courses [16]) receiving 12 weeks of Harvoni alone, patients 2 and 4 (high viral load and evidence of underlying liver disease on the basis of Fibroscan or liver biopsy) commencing 12 weeks of Harvoni and ribavirin and patient 3 (modest viral load, no underlying liver disease and after publication of evidence for the possible efficacy of shorter courses [16]) receiving only 8 weeks of Harvoni.

Three patients (1, 2 and 4) were receiving protease inhibitor therapy for their HIV infection at the time of the AHC diagnosis. To minimize any potential drug–drug interactions and reduce any liver toxicity, patients 1 and 2 had their HIV therapy switched to integrase inhibitor based therapy (Truvada and Raltegravir in the case of patient 1 and Triumeq, after a 3-week pause to allow liver function test recovery, in the case of patient 4).

Example 2

Version deposited at PMC

Published online 2016 March 3. doi: 10.1016/j.celrep.2016.02.038

Localized Translation of *gurken/TGF-α* mRNA during Axis Specification Is Controlled by Access to Orb/CPEB on Processing Bodies

Alexander Davidson,[1] Richard M. Parton,[1] Catherine Rabouille,[2,3] Timothy T. Weil,[4,*] and Ilan Davis[1,**]

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Article

Localized Translation of *gurken/TGF-α* mRNA during Axis Specification Is Controlled by Access to Orb/CPEB on Processing Bodies

Alexander Davidson[1], Richard M. Parton[1], Catherine Rabouille[2, 3], Timothy T. Weil[4], Ilan Davis[1]

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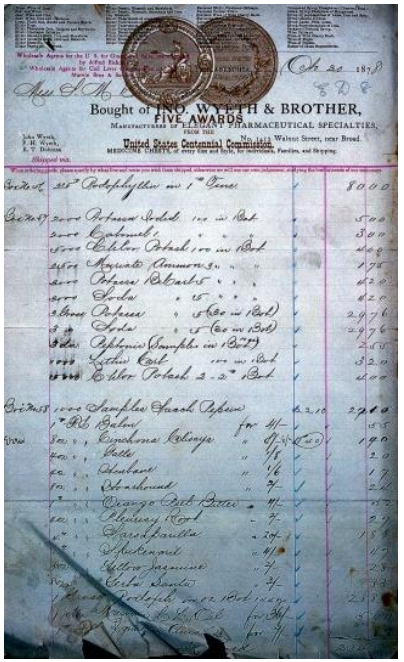

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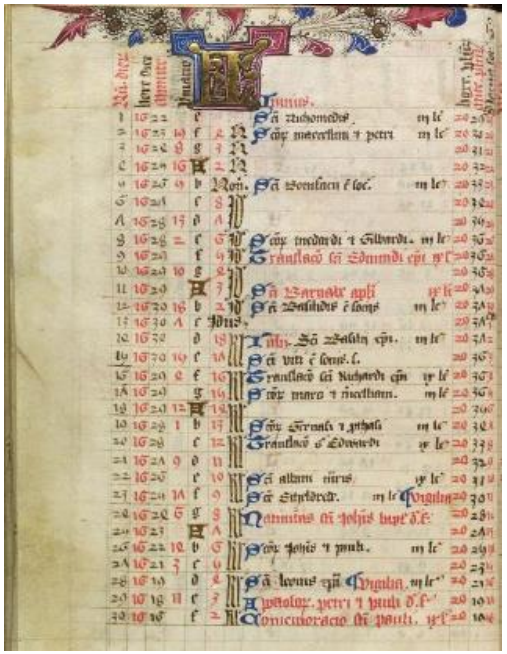
Implementation timeline

- By **15 December 2106** - publishers requested to say whether they can meet the requirements
- **6 January 2017** – Wellcome publishes a full list of publishers who can comply with our requirements
- **1 April 2017** – requirements implemented for papers submitted from this date



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Outreach

- Have directly contacted “top” 35 publishers – who between them publish **95%** of Wellcome-funded research
- Running a workshop for Institutional OA representatives
- Hope to work with ALPSP and PA to promote these requirements
    - Develop good practice guidelines on APC invoices and a model refund policy?

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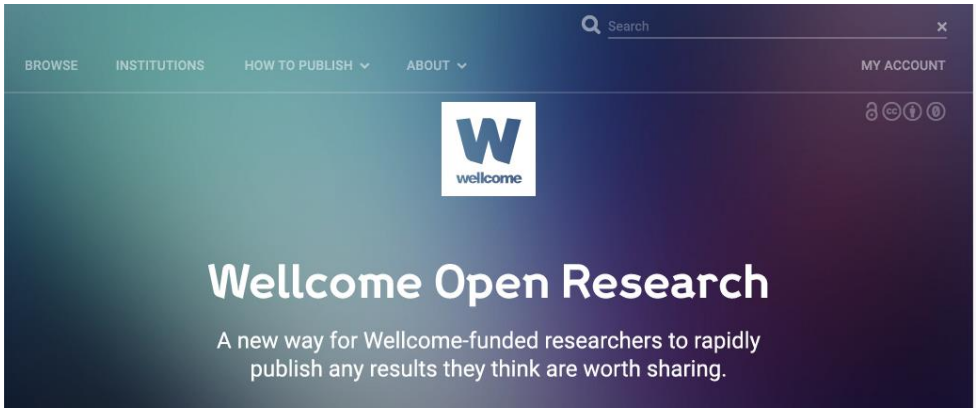
Wellcome Open Research

Wellcome Open Research

- A publishing platform where Wellcome-funded researchers can publish any results they think are worth sharing



http://wellcomeopenresearch.org

Objectives

- 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**
- One of a number of activities – along with support for **eLife**, **preprints**, **paying APCs** etc. – Wellcome undertaking in this space

Benefits to researchers

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

Success measures

- Wellcome-funded researchers **publish** on this platform
  - *From early career researchers (PhD students) through to Principal Research Fellows & Investigators*
- A *range* of research of outputs are published
  - *Null/negative studies, datasets, case reports, protocols etc*
- Other **funders** seek to establish their own platforms
- Other **publishers** consider adopting similar practices

Preprints

Preprints

- Growing interest in using preprints
  - They provide researchers with a fast way to disseminate their work, establish priority of their discoveries, and obtain feedback. They also offer a more current understanding of a investigator's work.
- Work within Wellcome to amend grant application/EoG forms so preprints can be cited
- Developing guidance for grant reviewers
- Working with ASAPbio

ASAPbio

bioRxiv beta

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Questions?

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