

BUSINESS, INNOVATION AND SKILLS COMMITTEE: INQUIRY INTO OPEN ACCESS

Response by the Wellcome Trust

February 2013

KEY POINTS

- We believe that making research publications that arise from public and charitable funding available in open access form is vital to maximising the societal and economic benefit that flows from this investment.
- We strongly support the leadership role adopted by the UK Government and Research Councils UK in setting a clear policy direction in support of open access. We also fully support the strengthened RCUK open access policy published in July 2012 – including:
 - support for gold (author-pays) open access as the preferred model – as this route ensures papers are available immediately on publication and that the costs in the system are transparent;
 - the requirement for a Creative Commons Attribution (CC-BY) Licence to be used where Research Council funds are used to meet a gold open access fee;
 - the maximum six-month embargo period where a green (self-archiving) approach is used.
- We believe strongly that the cost of publication should be viewed as an integral part of the cost of funding research, and hence also strongly support the provision by RCUK of funding to cover open access fees via institutional block grants.
- We accept that the transition to open access raises some challenges and uncertainties, including how quickly other countries will move to adopt gold open access. We are committed to working with other key stakeholders – including researchers, universities, funders, learned societies and publishers – to address these issues. However, it is our firm belief that the benefits to the UK of supporting open access will more than justify any short term costs.

INTRODUCTION

1. The Wellcome Trust is pleased to respond to the Business, Innovation and Skills Committee inquiry into open access. As a global charitable foundation dedicated to achieving extraordinary improvements in human and animal health, we are committed to ensuring that the outputs of the research we fund – including both research publications and data – can be widely accessed and used in a manner that maximises the resulting benefits to society.
2. In support of this objective, the Wellcome Trust has had an open access policy since 2005 which requires that all research papers that have been accepted for publication in a peer-reviewed journal, and are supported in whole or in part by Wellcome Trust funding, be made freely available through the PubMed Central (PMC) and Europe PubMed Central (Europe PMC) repositories as soon as possible and in any event within six months of the journal publisher's official date of final publication.

3. The Trust also provides grant-holders with additional funding, through their institutions, to cover open access publication charges. In such cases, the publisher is required to deposit the published version of the articles directly into PMC, where it must be made available at the time of publication.
4. In June 2012, we strengthened our open access policy and introduced specific sanctions for Trust-funded researchers who fail to comply. We also announced that from April 2013, we will require that, where our funds are used to meet open access costs, the article must be licenced using the Creative Commons Attribution (CC-BY) licence, to allow full re-use (subject only to proper attribution). Research Councils UK (RCUK) included an identical requirement for CC-BY in its revised open access policy, and we have been working in partnership with RCUK on implementation as discussed below.
5. The Trust manages the Europe PubMed Central open access repository (<http://europepmc.org>), working with 18 other partner funders – including the Medical Research Council (MRC), the Biotechnology and Biological Sciences Research Council (BBSRC), the National Institute of Health Research (NIHR) and the European Research Council (ERC). Europe PubMed Central provides free access to over 2.5 million full-text peer-reviewed research papers and around 25 million abstracts.
6. More recently, the Trust has worked in partnership with the Howard Hughes Medical Institute (HHMI) and the Max Planck Society (MPS) to establish the new open access journal, eLife (<http://elife.elifesciences.org>). The eLife journal is a platform for extending the reach and influence of new discoveries and to showcase new approaches to the presentation, use, and assessment of research.
7. The Trust contributes actively to policy discussions on open access – working with other stakeholders, including other funders, universities, learned societies and publishers. This includes participating in key discussion forums, such as the UK Open Access Implementation Group, and contributing to and convening meetings and events.

The Government's support for open access publishing

8. We strongly support the commitment by the Government and the Research Councils to ensure open access to the published outputs of publicly-funded research. We were delighted that the Government accepted the key recommendations of the Finch review in setting a clear policy direction toward supporting open access via the gold (author-pays) mechanism. A clear policy consensus is building both in Europe and around the world, that research publications that have been supported by the taxpayer should be openly and freely accessible at the point of use. The UK has adopted a strong leadership position in supporting this fundamental principle.
9. The Wellcome Trust has always recognised that the services provided by publishers (in terms of – for example – managing peer review, and ensuring the validity and editorial quality of published manuscripts) are critical to the research enterprise. Publication has a cost, and this cost needs to be met. The Trust considers that the cost of publication should be viewed as an integral part of the cost of funding research. From our perspective it makes no sense to fund research if the dissemination of that research remains unfunded.

10. We therefore support fully the new Research Councils UK (RCUK) open access policy – including its commitment to provide funding to universities via institutional block grants to meet the costs of gold open access APCs. The Wellcome Trust has provided open access funds to institutions using a similar model since our policy was introduced. We believe it provides the most effective and flexible mechanism to ensure that researchers and institutions can access the funds required for publication – particularly given that many of the published outputs may not emerge until after the funding period for a particular grant has come to an end.
11. We also believe that the RCUK policy strikes an appropriate balance in stating a clear preference for gold open access, but allowing articles to be made available via the ‘green’ (self-archiving) route where a gold option is not available. We likewise share a strong preference for gold open access because it ensures that the research is made freely available for access and re-use immediately on publication and that the costs in the system are transparent. We also believe it provides the only sustainable model in the long-term. However, we accept that some publishers are not ready to introduce an author-pays option¹ at this stage, and thus our policy allows articles made available under the “green” model to be embargoed for a maximum of six months. The Research Councils have adopted an identical policy (albeit with a permissible embargo of 12 months for research funded by AHRC and ESRC for a transitional period).
12. We are aware that many publishers and societies have argued that embargo periods of this length run the risk of damaging subscriptions and thus their viability. But the available evidence does not back up these claims. Indeed, the European Commission’s PEER project (<http://www.peerproject.eu/>) which set out to measure whether “green” self-archiving is harmful to subscriptions, did not support these fears. This large-scale project – which involved publishers, repositories and researchers and the deposition of over 53,000 manuscripts – concluded that “there is no evidence that self-archiving has harmful effects on journal viability”².
13. As a major funder of research in the medical humanities, we are aware that concerns over limiting embargo periods to a year or less are particularly acute in the humanities and social sciences. However, in the context of our own funding, six months is the absolute maximum we are prepared to permit research findings to be locked behind subscription paywalls. Given that the Research Councils have set a clear preference³ for their research to be published under a gold author-pays model, (and are providing funding to meet these charges), the maximum permissible embargo period for RCUK-funded papers that go via the “green” model, seems to us to be fair and reasonable.
14. It will be very important for RCUK to actively monitor compliance with its new policy, so it can understand and respond to any barriers to uptake. In doing so, we would urge RCUK to spell out the consequences to its funded researchers and institutions for non-compliance. As noted above, the Wellcome Trust strengthened its sanctions last year – making it clear that funding would be withheld if research was not made available through Europe PMC in line with the policy. Although it is too soon to determine the

¹ When an APC is paid, articles must be made freely available at the time of publication. No embargo is permissible when an APC is levied.

² See http://www.peerproject.eu/fileadmin/media/presentations/PEER-Executive_Partners_Statements_29_May_2012.pdf Slide 11

³ See: <http://blogs.rcuk.ac.uk/2012/10/24/rcuk-open-access-policy-our-preference-for-gold/>

impact that this policy change has had, the indications are that we are beginning to see an increase in compliance.

The costs of article processing charges and their implications

Costs to funders

15. Supporting open access article processing charges (APCs) obviously incurs additional costs for the research funder, which will have knock-on implications for the volume of research they are able to support. However, whilst these costs are not insignificant, the evidence suggests they represent a relatively small proportion of a funder's overall research spend.
16. The analysis we have done estimates that if *all* research funded by the Trust was routed through an author-pays model and we picked up 100% of these costs (even though in reality most of the research we fund is part funded by another research funder), the annual cost to the Trust would be somewhere between 1% and 1.5% of our total research spend. Recent data on gold open access costs from the University of Edinburgh supports this analysis⁴. In the context of our own funding, we believe very strongly that the benefits flowing from open access more than justify this level of additional cost.

Costs to the higher education sector

17. In terms of the overall cost to the higher education sector, the Finch report estimated that the transition to open access may require additional funding of between £50 million and £60 million per year. However, while it is important to acknowledge that there are likely to be additional costs, whether they will be this high in practice is far from certain. In order to minimise them as far as possible, it will be essential for institutions and funders to combine their negotiating power to ensure that as a greater volume of articles are published via the author-pays route, the amount paid in subscription fees by UK institutions is reduced. Given their combined purchasing power, UK institutions should be in a strong position to work with publishers to secure differential pricing models that achieve this objective.
18. There have been associated concerns that APCs charged by journals will rise in an unchecked manner. Evidence to-date, however, shows that the average APC charged to Trust funded researchers has remained steady over the past three years. Moreover, we believe that the continued emergence of innovative new players – such as eLife and PeerJ, coupled with the rise of the PLOS ONE-type journals (e.g. *BMJ Open*, *mBio*, *Cell Reports*, *Scientific Reports*, *Open Biology* and so forth) – will continue to exert downward market pressure on APCs.
19. We would also stress that one of the core fundamental benefits of the move to gold open access publishing will be to ensure a far greater level of overall transparency on the

⁴ See Andrew, T. Gold open access: counting the costs (*Ariadne* 2012; www.ariadne.ac.uk/issue70/andrew). This shows that the average APC levied for Trust-funded research at the University of Edinburgh is £1741. As the Trust is associated with around 5000 research articles a year, this means that if every article was published under the author-pays model, the total cost to the Trust would be £8.7m. As the Trust annual research spend is around £746m, the cost of meeting all APC fees would equate to a spend of 1.17% of our research budget.

costs of publication than exists under current subscription models. This will help to ensure that publishers come under pressure to justify the APC they charge in light of the service they provide.

Administrative burden on universities

20. The UK policy to support open access has also created concerns that universities, and indeed some publishers, are not adequately equipped to manage the administrative burden associated with increased volumes of gold open access payments. JISC and the Wellcome Trust commissioned research last year on behalf of the Open Access Implementation Group (OAIG) to examine these issues and the possible role of intermediary organisations in helping to address them.
21. The report⁵ identified the key elements needed to create an efficient and sustainable market and the possible value-added services that intermediaries could provide. It also highlighted a clear view among stakeholders that work is required to develop and implement standards to facilitate more effective flows between authors, publishers, universities and funders of information relating to APCs. The OAIG will progress discussions with these key stakeholders as a key priority for 2013.

Rights of use and re-use and the implications of the CC-BY licence

22. As noted above, when we strengthened our open access policy last year, the Wellcome Trust introduced the same provision as RCUK that, where our funds are used to meet a gold open access charge, articles must be available under a the Creative Commons Attribution (CC-BY) licence. We are working closely with RCUK to engage key stakeholders on this shared requirement, which will come into force in April 2013.
23. Specifically, the Trust and RCUK wrote jointly to 53 publishers, who are responsible for publishing around 80% of our funded research, and have held follow-up meetings with several to discuss implementation of the new policy. These discussions are progressing well and we are pleased that several publishers have already responded positively – for example, see recent press releases from Nature Publishing Group⁶ and Wiley⁷.
24. Our move to require the CC-BY licence flows from our firm belief that the full research and economic benefit of published research will only be realised when there are no restrictions on access to, and re-use of, this information. For example, it enables such content to be used in the context of innovative value-added applications – such as text mining – which can uncover new associations and discoveries from across the body of published literature. From a funder perspective, the CC-BY licence achieves this aim, and has emerged as the standard licence for open access publishing.
25. Two major types of concern have been expressed regarding this requirement – both of which we believe to be flawed. The first is that authors will lose control over how their articles are re-used. It is indeed true that, under this licence, research outputs can be re-used (e.g. to create a translation, be included in a new anthology etc.) without seeking the author's permission. However, at all times the new work must attribute the original

⁵ [http://repository.jisc.ac.uk/4949/1/Gold_OA_intermediary_final_report_\(2\).pdf](http://repository.jisc.ac.uk/4949/1/Gold_OA_intermediary_final_report_(2).pdf)

⁶ See http://www.nature.com/press_releases/cc-licenses.html

⁷ See <http://eu.wiley.com/WileyCDA/PressRelease/pressReleaseld-104537.html>

article which the derivative is based on. Moreover, the CC-BY licence *does* protect authors against having, for example, poor translations done or against having their articles reprinted in anthologies where the context might be offensive, through the author's moral rights, which give authors the right to be correctly attributed and to object to derogatory treatment of the work.

26. The second concern is that it will be more difficult to secure permission from third parties to include copyrighted material in a CC-BY article. Existing open access publishers – such as PLOS, Hindawi and BioMed Central – have between them published over 200,000 CC-BY licensed articles, many of which contain third-party content. Their experience suggests that this is not a major barrier, and can be readily managed by applying a different licence to third-party content.⁸

Level of gold open access uptake in the rest of the world and the competitiveness of UK higher education institutions

27. Research published by Laasko and Bjork⁹ shows that the number of articles published under a gold APC model has grown from less than 800 articles in the year 2000 to over 136,000 in 2011. The same research also shows that of the 1.66 million articles indexed by Scopus in 2011, 11% were published in full, immediate OA journals.
28. As noted above, there is a growing international policy consensus around the importance of ensuring open access to the outputs of publicly-funded research. For example, the European Commission's communication, "towards better access to scientific information: boosting the benefits of public investments in research" published in July 2012 set a clear expectation of open access to scientific publications generated via the Horizon 2020 programmes via the gold or green route – making clear that funds provided through the programme may be used to meet publication costs. The associated recommendation to member states calls on them to develop clear open access policies.
29. Similarly, the US National Institutes of Health has had a clear open access mandate, underpinned by legislation, for many years. Although it is not easy to calculate exactly how many NIH-funded research articles are made available under a gold (rather than green) model a search of PubMed Central shows that 21% of *all* the articles published in the OA journal PLOS ONE were funded by the NIH¹⁰. Further, this high level of OA publishing can also be seen in "hybrid" OA journals. By way of example, 48% of articles routed through the American Chemical Society's "Open Choice" option were funded by NIH¹¹. This data supports the notion that NIH-funded authors are finding the funds to publish via the gold route, and should help dispel the notion that "gold" OA publishing is limited to UK researchers.

⁸ So, by way of example, the article available at <http://www.ijbnpa.org/content/9/1/37> is licenced under the CC-BY licence, whereas Figure 1 (<http://www.ijbnpa.org/content/9/1/37/figure/F1>) is Crown Copyright.

⁹ Laasko and Bjork. Anatomy of open access publishing: a study of longitudinal development and internal structure. *BMC Medicine*, 2012, 10:124. Online at: <http://www.biomedcentral.com/content/pdf/1741-7015-10-124.pdf>

¹⁰ Search of PMC (<http://www.pubmedcentral.nih.gov>) on 30th January 2013 shows that of the 54,112 articles published in PLOS ONE, some 11,271 (21.5%) were funded by NIH.

¹¹ A search of PubMed Central, conducted on 5th February 2013, shows that of the 1239 articles published under the ACS's hybrid OA option, 596 of these were funded by the NIH.

30. Whilst we believe strongly that the momentum towards gold open access will continue to grow, we accept that there are uncertainties over how quickly take up in the rest of the world will proceed. As noted above, it will be crucial to ensure that any risk that UK institutions end up 'paying twice' through subscriptions and APCs is mitigated by ensuring that expenditure on APC's is included in negotiations around subscription costs.
31. We would argue strongly, however, that the UK will not be disadvantaged by taking a lead in supporting gold open access in the intervening period. On the contrary, it will ensure that UK funded research findings are visible and more readily accessed by potential users – generating new opportunities for collaboration and innovation and benefits for the UK research enterprise and economy.
32. Of course, it is important to emphasise that supporting open access in no way compromises the ability of researchers and institutions to protect intellectual property in an appropriate manner. It simply ensures that, when research findings are ready to be disseminated through publication, they reach the widest possible audience and can be accessed and used to benefit society.