

Statement of
Catherine Nancarrow on behalf of
Public Library of Science (PLoS)

Before the
Subcommittee on Information Policy, the Census and National Archives
Committee on Oversight and Government Reform
Regarding Public Access to Publicly-Funded Research

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First, I would like to express my thanks to Chairman Clay, Ranking Member McHenry, and members of the House Oversight and Government Reform Subcommittee on Information policy, The Census and National Archives – for the opportunity to testify today on the important issue of public access to the results of federally funded research.

I am speaking on behalf of the Public Library of Science or PLoS. PLoS is a non-profit publisher of peer-reviewed journals, but what makes PLoS different from the bulk of journals publishers is that every article we publish is open access; each is freely and publicly available on line as soon as it is published.

My name is Catherine Nancarrow and I am the Managing Editor of PLoS' community journal program. I have over 25 years of experience in STM (scientific, technical, medical) publishing during which I have managed a number of peer-reviewed medical and bioscience journals including the *Western Journal of Medicine* and the *Journal of Immunology*, as well as multivolume health science texts and hand books. In 2004, I was delighted to have the opportunity to join PLoS. I jumped at the chance because of its mission to drive a transition towards comprehensive public access to all research articles.

Policies promoting public access have been embraced by many organizations beyond PLoS, yet concerns have been expressed that they will be detrimental

to the scholarly publishing enterprise. My goal today is to make three key points:

- 1) PLoS has shown that open-access journals can be published according to the highest standards
- 2) We have shown that open-access publishing is economically sustainable, and
- 3) Finally, the real benefit of immediate public access is that the ability to access and reuse journal articles transforms research literature into a profoundly powerful resource for research and education.

To address the point about quality, I need to provide more background about PLoS. PLoS became a publisher in 2003, when open access publishing was still a new idea. At that time, most journals charged a subscription for access, but we (and one or two other pioneers) proposed a different business model. The idea was that if you could recover all costs of publishing up front, there is no need for a subscription. The journals and the articles they contain can then be publicly accessible as soon as the work is published.

Our goal was to show that this approach could work. To do so, PLoS has launched three types of journals – seven in total – since 2003 in an effort to build a sustainable operation. Throughout its history, PLoS has adhered to the highest standards of editorial integrity and publishing ethics, because we knew that we would only develop broader confidence in open access publishing if the quality of the articles that we publish is of the highest standard.

Seven years from when we launched PLoS Biology, our journals are highly regarded as trusted sources of research information and are desirable venues for researchers to publish their work.

Our journals:

- Have international editorial boards comprised of leading researchers across a range of disciplines.
- Are featured in leading popular and science blogs and media outlets.
- Receive substantial numbers of submissions each month and continue to grow.

In addition, many of our journal articles are highly cited, another indication of their significance for the research community.

To address the point of financial viability, PLoS has progressed steadily towards sustainability, and posted its first two profitable quarters in Q1 and Q2 of this year. We are well on target to make a modest profit for the first time this year. This achievement represents a landmark for PLoS, but also for open access publishing as a whole. Further information about PLoS's financial position and progress during 2009 is available in the PLoS Progress Update, which has been provided as a supplement to this testimony.

As well as being economically sustainable as an organization, our individual community journals are also fully self-sufficient. The publication fees we obtain cover all the costs of these journals, and in this way they represent

models for how typical academic journals can maintain high standards of publishing and achieve immediate public access supported by publication fees. This is relevant to all publishers considering a move to open access whether commercial, not-for-profit, university presses, or scientific societies. We are committed to collaborating with and supporting the efforts of other publishers who wish to explore the same publishing model.

PLoS is not alone when it comes to the economic success of open access publishing. Two large commercial publishers – BioMed Central based in London UK, and Hindawi Publishing based in Cairo, Egypt - have also shown that open access publishing based on the publication fee model is successful and sustainable in environments where public policies have been put in place by National funders such as the Wellcome Trust

<http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Open-access/index.htm> and Research Councils UK

<http://www.rcuk.ac.uk/access/default.htm>. Other publishing houses are developing open access publishing programs. A prominent example is the case of Springer who bought BioMed Central in 2008 and is continuing to expand their open access publishing operation.

Given such progress over recent years, it's fair to say that open access publishing is now firmly part of the publishing landscape, and that it is continuing to grow rapidly.

In addition to the actions of publishers, there is demonstrable and critical commitment to open access from the other key stakeholders in publishing – funders, institutions, libraries, policy makers and the research community. This commitment is now essential to drive towards comprehensive public access.

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Just last week, UNESCO announced that "Scientific information is both a researcher's greatest output and technological innovation's most important resource. UNESCO promotes open access.

["http://portal.unesco.org/ci/en/ev.php-](http://portal.unesco.org/ci/en/ev.php-)

[URL_ID=1657&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/ci/en/ev.php-URL_ID=1657&URL_DO=DO_TOPIC&URL_SECTION=201.html)

To the final point about the benefits of immediate public access, we have examples of what is possible when the barriers to access and reuse are removed. Public access promotes and encourages global knowledge flow, and accelerates the pace of research and innovation.

Imagine for example that your life's work is to understand the pathogenesis of a tropical disease and the effects it has on particular populations. Now imagine a web resource that assembles key literature on this disease and allows you to mine this literature for geographical information about disease

outbreaks. And consider the potential if you then could develop a tool that provides a graphical and dynamic output of this information.

Right now, you could do none of this, because only a minority of the literature is publicly accessible and copyright restrictions would require you to seek permission from the various publishers involved. But with open access to the literature, and the elimination of barriers to use and reuse, we are only limited by our imagination.

I will end by highlighting just a few examples of how researchers have made the most of public and open access to PLoS articles:

- Oxford University Professor David Shotton re-worked a research article about a tropical disease caused by *Leptospira* infection. He linked various terms in the article to other sources of information and data, enhanced the figures to provide moveable interactive maps, and enriched tables with downloadable data. Such approaches could be developed to enhance entire collections of articles which could allow content to be embedded and explored within a rich network of information. <http://dx.doi.org/10.1371/journal.pntd.0000228.x001>
- A series of influential editorials in PLoS Computational Biology has been translated in Chinese, repurposed into a series of video presentations, and developed into a course curriculum for professional development at a graduate level. .
(<http://collections.plos.org/ploscompbiol/tensimplerules.php>).

- The NIH public literature archive PubMed Central the vast corpus of publicly accessible literature (including all the content published by PLoS) is being enriched by connections with genetic and molecular databases.

These are just first steps, but they show clearly how public access promotes creative reuse of content and transforms the literature into a more powerful resource for research and teaching. With the elimination of all barriers to access, our use of the literature is only limited by our imagination.

Thank you once again for providing me with the opportunity to speak about this very important issue.