

Response to

**Request for Information (RFI): Optimizing Funding Policies and Other Strategies to Improve the Impact and Sustainability of Biomedical Research**

<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-084.html>

Note: the comment must be submitted in response to any or all of the four prompts below. Each response can be a maximum of 500 words. Note also that any formatting, including line breaks, will be removed in the submission, which is why there are no line breaks in the submission.

1. Key issues that currently limit the impact of NIH's funding for biomedical research and challenge the sustainability of the biomedical research enterprise. We welcome responses that explain why these issues are of high importance.

Professional and scholarly publishers are key partners of biomedical researchers and the NIH in advancing the impact of research conducted with NIH funding. By supporting the communication of research results – through the dissemination of both high-quality peer reviewed articles that report on research, and associated products that include research data – and by maintaining the integrity and longevity of the scholarly record, publishers are an essential part of the research enterprise. The impact of NIH's research is enabled by the communication of results, which in turn depends on the existence and sustainability of publishers to vet, curate, improve, and maintain scientific communication.

In a rapidly changing digital environment, care must be taken to make sure that there continues to be a diverse and viable publishing ecosystem. Not only does a well-functioning and diverse publishing enterprise help advance the impact of NIH research, it also helps improve the sustainability of the research enterprise. Publishers make significant investments in the development, dissemination and discovery of scholarly communications about research that are not currently funded by NIH. The sustainability of NIH's funding program would be negatively impacted by policies that undermine the sustainability of publishers, which would shift a greater proportion – or even all – of these costs onto NIH's budget.

Another key issue is the limited sharing of data and negative results by researchers, which leads to gaps in knowledge and unnecessary repetition of research dead ends. NIH should focus attention in this area, and publishers stand ready to explore ways in which we can help (see response to comment 3 below, as well as earlier submission to NIH and OSTP on this issue).

2. Ideas about adjusting current funding policies to ensure both continued impact and sustainability of the NIH-supported research enterprise. We welcome responses that point

to specific strengths or weaknesses in current policies and suggest how we can build on or improve them.

There are several adjustments to NIH's public access policies that could be made to insure the continued impact and sustainability of the NIH-supported research enterprise.

First, NIH should rigorously assess the current impact of the policy in a scientific manner, recognizing its distortions to the scholarly communication system. Two studies (<http://www.fasebj.org/content/early/2011/03/29/fj.11-183988.abstract> and <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3688741/>) have shown that there are negative impacts on some journals from the policy, and that the policy may not be helping those it purports to support. However, more study is needed, and the NIH should support such "science of science policy" research.

Second, NIH should share usage data for articles in PubMed and PubMed Central (PMC) with the publishers that originally published and may hold copyright to those articles. Such data sharing will help improve the scientific literature, support the development of altmetrics to better understand the impact of publications, and ensure the broadest possible discoverability and impact of articles that report on NIH-funded research.

Third, NIH should avoid investing limited funding in the duplication of services that are already provided by others in the research ecosystem. Scholarly publishers already provide access to articles, digitize them into various formats, ensure the long term availability and integrity of the scholarly literature, and provide many other value-added services. The sustainability of the NIH-supported research enterprise is put at risk by unnecessary investments in these services, which also may compete with and undermine the sustainability of scientific communication.

Fourth, NIH should support the existing literature by linking to published journal articles in their version of record on publisher websites. Services like CHORUS ([www.chorusaccess.org](http://www.chorusaccess.org)) can help NIH develop these capabilities and preserve limited funds for research itself.

Finally, NIH should work with publishers to make PMC a true public-private partnership, leveraging existing resources and infrastructure to preserve funding for research and ensuring that any new or proposed features do not compete with services that could better be provided in the private sector. Here, it is important to note that what success PMC has had is significantly due to publishers depositing on behalf of authors at considerable effort and expense. Adding an AAP or STM representative to the PMC National Advisory Committee would be an important first step in this direction. The importance of such contributions to the system reinforces the

need for closer collaboration and the avoidance of practices that could undermine the ability of publishers to continue their participation.

### 3. Ideas for new policies, strategies, and other approaches that would increase the impact and sustainability of NIH-funded biomedical research.

NIH has already begun work to improve the sharing of data collected pursuant to research it funds, and also has begun pilot projects on the communication of negative results. This not only improves the transparency of research funded by NIH, but enhances the impact of the funded research by ensuring others can build upon the detailed findings of funded researchers. Publishers stand ready to explore ways in which we can partner in both of these efforts, which are consistent with initiatives being pursued elsewhere in the research community by publishers and other stakeholders. We understand that NIH is aware of issues involved when asking researchers to share their data, and the burdens that such requirements create. Mandates have not proven helpful in this respect, and instead NIH should seek to capitalize on efforts underway that make sharing easier through technological and cultural means. Initiatives that further incentivize the sharing of data, negative results, and research reports that are outside of the formal publishing system (such as progress reports and presentations) could greatly increase the impact of that research. Such initiatives should be a priority for NIH; publishers, many of whom are already investigating such projects, would welcome the opportunity to explore potential productive partnerships on these issues.

NIH should work to leverage existing efforts wherever possible to facilitate sharing of data, whether based at universities, in non-profit collaboratives, in other government agencies, or in the private sector. In addition, NIH must support such efforts with funding as much as possible, and should share in the costs of their development and operation. Where the government owns the repository, efforts should be made to use existing standards and ensure unfettered access for all stakeholders. However, we recommend that the government not invest limited funding creating new repositories where they may duplicate services already being provided by others in the research ecosystem. More details on this recommendation were included in our response to the NIH RFI on “Sustaining Biomedical Data Repositories” (NOT-ES-15-011).

On data, NIH should promote a comprehensive framework for reliable digital data preservation, access and interoperability through the promotion of standards and clear rules developed by the scholarly community. NIH could also support pilot projects, data curation programs and interpretation initiatives for the relevant scholarly disciplines. Finally, NIH could use its web presence to provide a clearinghouse to the data they hold or which is funded by their grants. For the sharing of negative results, NIH should create incentives and support new outlets for such sharing, including new journal communities.

#### 4. Any other issues that respondents feel are relevant.

Ever since the journal was created 350 years ago, publishers have been devoted to improving the impact of research by turning raw reports into knowledge products that can support new innovation. Our members understand better than most how critical the issue of sustainability is to any effort to disseminate information. Throughout our history and into the digital age, publishers have been devoted to the integrity and preservation of the scholarly record, and that requires a commitment to ensuring the sustainability of the products we create. AAP/PSP and STM appreciate that NIH is taking the issues seriously.

In particular, we welcome the opportunity to explore how we might collaborate on integrating NIH's efforts and policies with the broader efforts of all stakeholders in the scholarly communication system to maximize the dissemination and discoverability of knowledge, consistent with publishing models that are economically sustainable and ensure the integrity and long-term availability of the scholarly record upon which any innovation is built. Such sustainability is essential to support America's historic and future economic strength and innovation leadership, as well as the impact of the research that NIH funds.