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Re: Federal Regulation Supplement: Revisions to Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards (NASA Case 2015-N030)

To Ms. Richards:

The Professional and Scholarly Publishing Division of the Association of American Publishers (AAP/PSP) and the International Association of Scientific, Technical, and Medical Publishers (STM) appreciate the opportunity to comment on the National Aeronautics and Space Administration's (NASA's) revisions to the uniform administrative requirements, cost principles, and audit requirements for federal awards, particularly the addition of terms and conditions related to access to research results in keeping with the "NASA Plan: Increasing Access to the Results of Scientific Research" (the Plan). Our members see themselves as integral partners with the scholarly research community in the U.S. and with NASA as it seeks to promote research and innovation. We hope this input will be helpful and look forward to working with NASA as it seeks to provide broader access to products produced during and related to research funded by the Agency.

AAP/PSP and STM are the major US and international trade associations for professional and scholarly publishers. Our 150+ members focus on creating and preserving the best scholarly communication, validated through peer review and disseminated worldwide to inspire new avenues of thought and advance discovery and innovation. AAP/PSP and STM members include non-profit professional societies, commercial publishers, and university presses that create books, journals, computer software, databases, and electronic products in virtually all areas of human inquiry and activity. Collectively, they represent tens of thousands of publishing employees, editors and authors, and other professionals throughout the world who regularly contribute to the advancement of American science, medicine, learning, culture and innovation. They comprise the bulk of a \$10 billion publishing industry that contributes significantly to the U.S. economy and enhances the U.S. balance of trade.

Our members make significant intellectual contributions that shape the scholarly record and investments that improve the quality, discoverability, and availability of peer-reviewed articles and other publications. They publish the vast majority of materials used in the U.S. by scholars and other professionals, and they are the worldwide disseminators and archivists of this content in both print and electronic form. A major goal of our members' publishing activities is to help produce and provide access to high-quality peer-reviewed articles in a useful and user-friendly digital environment that enables researchers and other readers to discover, analyze, and link to the latest breakthroughs and developments in scholarly research. In particular, publishers of scientific and medical journals have, for more than 100 years, played an integral role in building and documenting the U.S. scientific research enterprise. In this context, it is important to emphasize that the publications produced by our members and which report on NASA-funded research are not the "result" of federal grants, but represent significant investments by the publishing organizations to improve, disseminate, interpret, and steward high-quality peer-reviewed articles that contribute to the research conversation. Such articles are made widely available on publisher platforms to anyone, immediately upon publication, through a variety of access mechanisms.

AAP/PSP, STM, and our members have supported the principle that the public should have access to articles that report on federally funded research. AAP/PSP publicly supported the February 22, 2013 Executive Office of the President Office of Science and Technology Policy (OSTP) memo on "Increasing Access to the Results of Federally Funded Scientific Research", and our members have been working for years on efforts to promote sustainable public access. These efforts include free or low-cost access to articles for target communities through Research4Life (in partnership with the United Nations), the Emergency Access Initiative (in partnership with the National Institutes of Health), patientINFORM (in partnership with health advocacy organizations), and patientACCESS, among others. They also include innovative business models like article rental and delayed access that allow for easy free or low-cost access in a sustainable system. Many of our members also voluntarily provide free access to all articles that they publish after a delay that is appropriate for their journals' disciplines and practices. Our members, as well as AAP/PSP and STM on their behalf, have participated in and supported many public-private partnerships to deliver value to the public, and they are supporting the collaborative effort of CHORUS (the Clearinghouse for Open Research of the United States) to deliver public access in a way that minimizes costs for the public, agencies, researchers, and publishers alike.

In this spirit, we appreciate this opportunity to comment on the revisions published in the federal register, and will also take this opportunity to comment on some aspects of the Plan that are implicitly referred to by these revisions. We hope that these comments will also be taken into consideration as NASA continues its work to increase access to the results of research funded by the Agency. Although the Plan envisions further public consultation to happen through its committees and for revision and evaluation to occur internally to NASA, we offer our community as a resource that has expertise relevant to the issues that will be faced by NASA in its implementation – a resource that other federal agencies and departments have productively used to enhance the efficiency, impact, and cost-effectiveness of their plans.

Specific concerns and suggestions follow, keyed to provisions of the proposed revisions.

1. The current NASA-designated repository and future designations of systems for access (1800.930 (b)(2) and (3))

Publishers believe that public-private partnerships have great potential to enable public access at a lower cost, both financially and administratively, than centralized solutions. We appreciate the Plan's note that distributed solutions for access "warrant further attention," and also appreciate that the revisions highlight the provisional nature of the current choice of PubMed Central (PMC).

We appreciate that NASA considered solutions offered by non-governmental organizations, particularly CHORUS (the Clearinghouse for Open Research of the United States), that could significantly reduce the regulatory burden of the Plan, lower costs for the government and grantees, and support the sustainability of scholarly communication. As early supporters of CHORUS, we believe that NASA should take another look at this solution which is now reporting on approximately 250,000 articles and has partnered with several federal agencies.

The potential regulatory burden of the Plan should not be underestimated. According to the Association of American Universities, it takes "23 steps and several emails for authors to submit manuscripts to PubMed Central" to comply with the National Institutes of Health's Public Access Policy, and others have suggested that the NIH policy's regulatory burden is extremely costly and takes researchers away from research. A major study of the the United Kingdom's public access mandates quantified the burden on UK researchers, finding that the cost to research organizations of implementing mandates put in place by Research Councils UK and the Higher Education Funding Councils in 2013/14 was at least £9.2m (\$13.7m) and an amount of time equivalent to 110 fulltime staff members. The study also found that the compliance burden "falls disproportionately on smaller institutions." NASA should take steps to minimize any unnecessary costs and burdens in its implementation.

Distributed systems like CHORUS may also help with issues of integrating articles with appropriate databases and interoperability. Our members have found that integrating links to articles hosted by other publishers is possible in a single management system, and that services like CrossRef (which underlie some CHORUS services) facilitate such linking. CHORUS directly supports current policies and practices of researchers and publishers in providing access to articles and leverages resources already invested in by publishers. This is a true public-private partnership with all the benefits that the government has seen from other public-private partnerships.

Although the Plan refers to PubMed Central as a public-private partnership, publishers have often felt that the implementation of PMC and the NIH Public Access Plan do not fully take their concerns into account. Some of these concerns include the diversion of traffic from publisher platforms, the difficulty in obtaining usage data on publisher content accessed through the National Library of Medicine (NLM), and the reformatting of published content for delivery through NLM. In addition, some of the tools available to PMC under the NIH Public Access Policy and evaluated by NASA in its selection may not be available for articles reporting on research funded by NASA, which are not covered by current publisher agreements with NLM.

We would welcome the opportunity to work with NASA to address some of these issues, should NASA continue to use PMC as its designated repository. However, we urge NASA to fully consider CHORUS and other possible options for providing access to support the research community in fully enabling public access. In contrast to the burdens reported for compliance with PMC, such solutions could enable automated compliance, reduce unnecessary federal investments, and allow researchers and their institutions to focus on research rather than administrative tasks. Where possible, we recommend that NASA utilize and build on existing, independent, third-party services, including distributed systems like CHORUS and archive solutions like Portico and CLOCKSS.

2. The requirement to submit “Final Peer-Reviewed Manuscripts” to the NASA-designated repository “within one year of peer-review or publication by a journal, whichever is earlier” (1800.930 (b)(2))

While we appreciate that this language refers to submission of manuscripts, we are concerned that the language could be interpreted as providing a one-size-fits-all maximum allowable delay before access is provided for all content. The Plan notes that “Publishers may petition for a longer embargo period,” and the OSTP memo requires that such a petition process be provided. However, the specificity of the requirement in the grant agreement may be prejudicial against future changes. We urge NASA to modify the language to reflect, as the Agency has with respect to the current NASA-designated repository, that the allowable delay may change in response to such provisions. Potential language might be “within an appropriate delay set by NASA, currently within one year of peer-review or publication by a journal.”

We have previously noted our concern about the use of a one-size-fits-all approach to embargoes, and continue to be concerned about prejudicial language in the Plan that requires “strong evidence for the benefits” of longer embargo periods. Our concern and evidence were articulated by ourselves and several publishers at the open session held by NASA and other agencies at the National Academies in 2013. We encourage NASA to develop an evidence-based policy that recognizes the differences among practices in various fields and sets embargoes appropriately, rather than simply using the default set by PMC. We also encourage NASA to clarify how petitions will be considered and the evidentiary standard for considering changes to the embargo.

Suggestive evidence on the need for longer embargoes in some disciplines comes from a study undertaken by Dr. Phil Davis that looked at usage patterns in more than 2800 journals across 10 disciplines.<sup>1</sup> Dr. Davis found that the majority of journals took more than 3 years to experience half of the lifetime downloads for the articles published in a volume, but that this “half-life” varied considerably by discipline. This is important information, because usage is a key criterion for library subscription decisions.<sup>2</sup> Surveys<sup>3</sup> and informal conversation further indicate that short embargoes could reduce the incentive to subscribe.

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<sup>1</sup> Phil Davis, “Journal Usage Half-Life.” [www.publishers.org/usagestudy](http://www.publishers.org/usagestudy).

<sup>2</sup> For a survey of the research on cancellations related to usage data, see J. Williamson, P. Fernandez, and L. Dixon, “Factors in Science Journal Cancellation Projects: The Roles of Faculty Consultations and Data,” *Issues in Science and Technology Librarianship* 78, Fall 2014. <http://www.istl.org/14-fall/refereed4.html>.

<sup>3</sup> See, e.g., <http://blog.alpsp.org/2009/10/alpsp-survey-of-librarians-report.html>

These results are consistent with the experiences of some of our members and with what is known about the use of articles by researchers. The American Psychological Association (APA) found that less than 16 percent of the usage of APA psychology journals occurs in the first year, and the American Mathematical Society (AMS) found that only 10 percent of the citations in the mathematics literature were to articles published in the previous three years combined. In addition, as reported by NSF-supported researchers at Indiana University, some papers in some fields can “remain dormant for years and then suddenly explode with great impact upon the scientific community.”<sup>4</sup> This indicates that usage varies significantly between and among journals.

The importance of such evidence to the sustainability of journals and maintenance of subscriptions is supported by experience. To cite a few examples:

- The Genetics Society of America piloted a 3-month embargo for *GENETICS* and had “a high rate of subscription cancellations”;<sup>5</sup>
- The *American Journal of Pathology* tried a 6-month embargo, and “subscription renewals declined precipitously”;<sup>6</sup> and
- The *Journal of Clinical Investigation* found a too-short embargo unsustainable. After a 10-year experiment that saw the journal lose 40 percent of its institutional subscriptions, it had to reinstitute the subscription model to survive.<sup>7</sup>

Although each of these examples involves an embargo shorter than 12 months, each of them also involves a journal that publishes in the health sciences, which is the fastest-moving field and has the highest level of federal support. We would expect that journals in other fields would have similar issues with uniformly imposed 12-month embargoes.

Throughout the world, funders have implemented policies that recognize inherent differences among the practices of different disciplines, and we urge NASA to do the same. As one example, in the United Kingdom, policymakers have instituted, as a starting point, a 24-month embargo for articles in social science and humanities journals and 12 months for other disciplines. We recommend that NASA use the Davis study and other evidence to set differentiated embargoes by discipline, as suggested in the OSTP memo.

The wrong policy carries the risk of undermining the quality and sustainability of scholarly communication and thereby reducing the availability to NASA-funded researchers of established, high-quality journals in which to publish. We hope that NASA will use balanced standards for evidence about both the positive and negative impacts of established embargoes, as well as considering the impact of economic harm to publishers on the quality and integrity of the scholarly record.

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<sup>4</sup> NSF News from the Field, “Like Sleeping Beauty, Some Research Lies Dormant for Decades, IU Study Finds,” May 25, 2015.

[http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=135258&WT.mc\\_id=USNSF\\_195&WT.mc\\_ev=click](http://www.nsf.gov/news/news_summ.jsp?cntn_id=135258&WT.mc_id=USNSF_195&WT.mc_ev=click).

<sup>5</sup> [http://www.whitehouse.gov/sites/default/files/microsites/ostp/scholarly-pubs-\(%23293\)%20gsa.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/scholarly-pubs-(%23293)%20gsa.pdf).

<sup>6</sup> [http://www.whitehouse.gov/sites/default/files/microsites/ostp/scholarly-pubs-\(%23259\)%20ASIP%20response.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/scholarly-pubs-(%23259)%20ASIP%20response.pdf).

<sup>7</sup> Reported in <http://scholarlykitchen.sspnet.org/2009/02/26/end-of-free-access>.

3. Requiring manuscripts to include “all graphics and supplemental material associated with the article” (1800.930 (a)(2))

Publishers are committed to ensuring that articles are as useful as possible, including by improving the presentation of data in graphical means and by linking articles to a variety of supplemental material that enhances the understanding of the research and discoveries reported on in the article text. These enhancements require significant investments that may be recouped through the use of the article on the publisher’s platform, through subscriptions, reprints, or other mechanisms. Graphics, in particular, may represent intellectual property developed by publishers in consultation with authors, but may not be the creation of the author themselves. Such materials may also include intellectual property for which the publisher and/or author have obtained third-party permission to use in the article, but for which it may be difficult to obtain further permissions. Broad demands for such material as part of a grant agreement may diminish the scholarly record by removing incentives for the use and creation of such materials that enhance the understanding of the article.

At the same time, we understand NASA’s interest in these materials, particularly when they are essential to understanding the Final Peer-Reviewed Manuscript of the article. We therefore recommend that NASA limit its definition of the Final Peer-Reviewed Manuscript to the text and author-created graphics, and note that supplemental materials – or links to the same – may be included where helpful to understanding the text. This would strike the proper balance between providing access and protecting intellectual property, while reducing the administrative burden for researchers and the Agency.

4. Restrictions on publisher agreements (1800.930 (b)(2))

Publishers recognize the Agency’s valid desire to ensure that any agreements they sign with publishers enable the Awardee to comply with the Agency’s requirements. However, we are concerned that the specifics of the requirement may be overly broad and burdensome for Awardees and publishers alike.

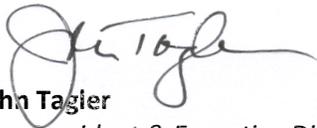
The Plan, as consistent with the OSTP memo, notes that it “will ensure that the public can read, download, and analyze in digital form” articles that report on federally funded research. The Plan also notes that use “will depend on user license or Terms of Service provisions,” particularly in the “creation of derivative products and/or commercial purposes.” This is consistent with the OSTP memo requirement that plans comply with copyright law and “prevent the unauthorized mass redistribution of scholarly publications.” These provisions provide an ability for the government to achieve its goals of expanding the understanding of research funded by federal agencies, while avoiding undue impact on scholarly publishers, which, as the memo notes, “provide valuable services, including the coordination of peer review, that are essential for ensuring the high quality and integrity of many scholarly publications.” Copyright, and the ability to provide access and additional services enabled by an exclusive license, not only enable publishers to protect authors and preserve the integrity of the scholarly record, but also ensure the continued ability of publishers to provide services to the academic community. We therefore recommend that NASA add language in 1800.930 (b)(2) that recognizes that the rights provided to NASA to permit users to download materials can be limited by commercial use and other appropriate restrictions chosen by the author and copyright holder.

We also recommend that NASA eliminate the requirements for “XML and plain text formats.” Technology is constantly changing, and while XML is an important standard today such standards change in response to community needs. In addition, the XML requirement is based on a flawed premise. While we understand that it is important to NASA to provide access for third-party services such as web crawlers, such access does not require coding in XML. Web crawlers can currently index content in other formats, and it is likely that other formats will be the web-standard in the future as technology changes. We encourage NASA to modify this language to be technology-neutral.

While the four topics above address specific provisions of the revisions, we welcome ongoing conversations about all aspects of the implementation of the Plan going forward. We hope that the comments that we have made here contribute to that process. The high-quality peer reviewed articles that our members produce represent significant investments by publishing organizations to improve, disseminate, interpret, and steward the record of research, and the ability to continue making those investments and ensuring the quality and integrity of the scholarly record depends on the sustainability of the publishing enterprise.

Thank you for the opportunity to comment on these revisions to Awardee requirements that will implement the Plan. We look forward to future opportunities to provide input and collaborate to ensure access to high-quality peer-reviewed scholarly communication.

Sincerely,



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