



IADR/AADR Response to the Office of Science and Technology Policy Request for Information on Public Access to Peer-Reviewed Scholarly Publications Resulting from Federally Funded Research FR Doc. 2011-28623

To:
Office of Science and Technology Policy
Attn: Open Government Recommendations
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via e-mail to: publicaccess@ostp.gov

From:
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January 12, 2012

Dr. John Holdren
Director
Office of Science and Technology Policy
Executive Office of the President
725 17th Street, NW
Room 5228
Washington, DC 20502

Dear Dr. Holdren:

We write on behalf of the International Association for Dental Research (IADR) and its American Division, the American Association for Dental Research (AADR). The IADR, with over 11,000 members worldwide, including 3,700 members in the AADR, is dedicated to advancing research to improve oral health and to facilitating the communication and application of research findings. The IADR and AADR are owners of the *Journal of Dental Research (JDR)*, a specialized scientific journal that uniquely serves the oral health and dental research community. The *JDR* has one of the top Scientific Impact Factors of any peer-reviewed dental journal. The *Journal* has the top Eigenfactor Score, which measures the number and quality of citations. The *Journal* also has the top Article Influence Score, which is a measure of the influence of articles over the first five years after publication. Given the importance of the *JDR* to oral health, we are pleased to provide a response to the November 3, 2011 Office of Science and Technology Policy (OSTP) **“Request for Input (RFI) on Public Access to Peer-Reviewed Scholarly Publications Resulting from Federally Funded Research.”**

The IADR and AADR share the belief – of the broader scientific community – that the results of federally funded research should be widely disseminated. We also reiterate our longstanding support for the process whereby publishers are transferred control of copyright and distribution rights in exchange for funding the post-grant peer review and publication process. This relationship, which results in the best science being disseminated to the scientific community as efficiently as possible, continues to be threatened by policy proposals that fail to recognize the very real costs associated with the production of scholarly publications. Each year, scientific publishers invest hundreds of millions of dollars in staff, technology, capital projects, an editorial selection process, and operational funding of independent peer review on all research articles by experts in specialized fields prior to publication. This dynamic can't continue if public access mandates are expanded among federal research agencies along the lines of the National Institutes of Health (NIH) public access model or if existing embargo periods are shortened.

NIH specifically requires submission of the final manuscript only after the manuscript has passed through the publisher's quality assurance peer review processes and determination of acceptability for publication, even though the journal publisher is not a party to the funding agreement for the research. The NIH public access mandate should not be viewed as a success for science or as a model to be replicated, as the long-term viability of scientific journals has been unnecessarily threatened. As an example, for nearly 90 years, the *JDR* had been edited, proofed, peer reviewed, typeset, designed and distributed by employees at the IADR headquarters. However, due to a confluence of factors, not least of which being a government mandated public access policy and the uncertainty of that public access policy expanding or embargo periods shortening, our Board of Directors decided that working with a private sector publisher was the only option to sustain the publication. If this trend continues, the ultimate result will be the consolidation of scholarly journals in the hands of just a few publishers and

publishing decisions based partly on the source of research support as opposed to solely on the quality of research.

The main source of revenue to cover the expenses of our peer review infrastructure, print publication and online version comes from individual and institutional subscriptions. In a typical year, the *Journal of Dental Research* will have about 30% of its accepted research manuscripts with some NIH funding, although it has been as high as 57%. It follows that if the NIH mandate is expanded to additional federal agencies and/or if the existing NIH embargo period is shortened below 12 months, the impact on the *JDR* and other scientific journals would be catastrophic. For a small professional association, we invested significant resources to launch our *Journal* online in 2002, and digitize all of our volumes back to 1919. The only way for the Associations to recoup this investment – not make a profit – is to retain the copyrighted material and to offer individual and institutional subscriptions. A drop in subscriptions in recent years, subsequent to the inception of the NIH public access mandate, was a major contributing factor to our Associations having to cease in-house copyediting and production of the *JDR*.

We recommend the use of post-grant reporting infrastructure as a means to provide the public access to more easily digested information. The scientific community, for whom most scholarly articles are written, has rarely cited a lack of access to federally funded research findings as a problem. The post-grant reporting mechanism continues to be underutilized, as federally supported scientists could easily produce summary results in laymen's terms for public consumption. The lack of a properly utilized post-grant reporting infrastructure should not lead to the taking of publisher's long held copyright as a surrogate for end-of-grant reports. If publishers' copyrights in journal articles continue to be undermined, simple economics will render public access policies obsolete, as a number of journals will no longer be able to fund the cost of post-grant peer review. This would have a devastating impact on scientific integrity, and would leave U.S. scientists at a competitive disadvantage to their peers in other countries.

We look forward to working with the Administration and the entire scientific community to build a better oral health research reporting system for the public. We believe the private sector has made significant strides in IT infrastructure and making central repositories fully compatible and user-friendly. Government collaboration with industry to leverage existing resources would meet the requirements of the America COMPETES Reauthorization Act of 2010 and President Obama's goals of creating a more open and transparent government, while acknowledging existing and well established copyright protections.

Sincerely,



Christopher H. Fox, DMD, DMSc.
Executive Director



William Giannobile, DDS, MS, DMSc.
Editor-in-Chief

IADR/AADR Response to Questions Posed in FR Doc. 2011-28623

(1.) Are there steps that agencies could take to grow existing and new markets related to the access and analysis of peer-reviewed publications that result from federally funded scientific research? How can policies for archiving publications and making them publically accessible be used to grow the economy and improve the productivity of the scientific enterprise? What are the relative costs and benefits of such policies? What type of access to these publications is required to maximize U.S. economic growth and improve the productivity of the American scientific enterprise?

- Agencies should identify specific needs of particular user groups that are not already being met and collaborate with publishers and other stakeholders to meet those needs most effectively. As owners of the *Journal for Dental Research*, we have not, to date, had a request for an article or volume from a patient or other interested party who simply could not afford it. However, if that were to happen, we would be happy to provide the requested article free to that patient. As a result, we fully consider that access is already “open” to our Journal and question the need for additional government intervention. The U.S. economy and scientific enterprise would be best served by government exercising restraint when pushed to issue new mandates that would lead to the collapse of scientific journals. Instead, the federal government could work with researchers to make final grant reports a more useful and accessible tool for the general public.
- Open access government mandates have significant costs to the U.S. economy and the scientific enterprise.
 - NIH’s PubMed Central data indicates 2/3 of users are from overseas, undermining critical export opportunities for an \$8 billion publishing industry that employs 50,000 Americans.

(2.) What specific steps can be taken to protect the intellectual property interests of publishers, scientists, Federal agencies, and other stakeholders involved with the publication and dissemination of peer-reviewed scholarly publications resulting from federally funded scientific research? Conversely, are there policies that should not be adopted with respect to public access to peer-reviewed scholarly publications so as not to undermine any intellectual property rights of publishers, scientists, Federal agencies, and other stakeholders?

- The federal government should avoid issuing mandates that take intellectual property without providing funding to support the process that leads to the product.
- The general public derives limited direct information from technical scientific journal articles, and would gain a better understanding of the science being conducted at federal research agencies by the production of more user-friendly end-of-grant reports. These reports are already required, but are not being looked at as a satisfactory means of disseminating scientific knowledge across public populations. We fully support working with the government to make these reports user friendly, freely accessible and interoperable with our articles.

(3.) What are the pros and cons of centralized and decentralized approaches to managing public access to peer reviewed scholarly publications that result from federally funded research in terms of interoperability, search, development of analytic tools, and other scientific and commercial opportunities? Are there reasons why a Federal agency (or

agencies) should maintain custody of all published content, and are there ways that the government can ensure long-term stewardship if content is distributed across multiple private sources?

- The stewardship of scholarly articles carries a cost that is already being paid by publishers. The federal government would be better served by utilizing such funding to support research grants. The *Journal of Dental Research*, as an example, has already made a significant investment in infrastructure to create a user-friendly and innovative online platform. Additionally, Internet search engines, abstracting services, and other tools do an excellent job of ensuring the discoverability of research, and the technology continues to improve. Given current federal budget constraints, it makes little sense for the federal government to duplicate these efforts.

(4) Are there models or new ideas for public-private partnerships that take advantage of existing publisher archives and encourage innovation in accessibility and interoperability, while ensuring long-term stewardship of the results of federally funded research?

- If the government improves final grant reports, publishers could link to them.

(5) What steps can be taken by Federal agencies, publishers, and/or scholarly and professional societies to encourage interoperable search, discovery, and analysis capacity across disciplines and archives? What are the minimum core metadata for scholarly publications that must be made available to the public to allow such capabilities? How should Federal agencies make certain that such minimum core metadata associated with peer-reviewed publications resulting from federally funded scientific research are publicly available to ensure that these publications can be easily found and linked to Federal science funding?

- To our knowledge, searching for scholarly publications has not been a barrier to open access. Search engines like Google and Bing are performing well. Our direct experiences with clinicians and clinical researchers working at the patient level are unaware of problems patients cite with regard to access of scientific information. If it exists it likely appears to be a very small minority of individuals. These individuals often times reach the investigators directly who provide a complimentary copy of an article should they seek the in-depth technical information found in a research publication.

(6.) How can Federal agencies that fund science maximize the benefit of public access policies to U.S. taxpayers, and their investment in the peer-reviewed literature, while minimizing burden and costs for stakeholders, including awardee institutions, scientists, publishers, Federal agencies, and libraries?

- The government and the private sector should work together to better disseminate the results federally funded research to the public. Taxpayers could be provided digestible final reports of the research findings, which could also drive public traffic to research agencies in order to increase public interest and support for the science being conducted. We believe that the final progress reports that are required by federal agencies could be made more robust, being written for a public audience and housed on an interoperable and user-friendly IT infrastructure. This model would be similar to the one established under the America COMPETES Act, which required researchers funded through the National Science Foundation to provide a final report that described their research findings, which is then deposited in a central and public repository.

This model can be adopted in a consistent manner with the President's Open Government initiatives, and will respect the long standing copyright protections that have financed the post-grant peer review process. Perhaps most of all, it is a model that makes a clear distinction that the articles contained in peer reviewed scholarly journals are not drafted for a public audience. They are written by researchers seeking validation amongst their colleagues. This model validates and filters the best science into one repository for scientists, helping scientists to more efficiently review breakthroughs and innovations in their own field.

Simply "taking" publishers' accepted manuscripts as a surrogate for the lack of robust public research reports will likely lead to a reduction in the number of scholarly journals, and leave editors with the undesirable economic incentive to maintain a sustainable low level of federally funded open access articles in their journals. Such a policy creates an environment that ultimately harms the U.S. researcher's ability to compete on the global stage, as our researchers are published and cited less than counterparts in other countries.

(7.) Besides scholarly journal articles, should other types of peer-reviewed publications resulting from federally funded research, such as book chapters and conference proceedings, be covered by these public access policies?

- We do not believe that additional types of peer-reviewed publications resulting from federally funded research should be covered under public access policies. New regulations of this type would further impede the ability scientific associations and publishers to generate revenue sufficient to cover the costs of production.

(8.) What is the appropriate embargo period after publication before the public is granted free access to the full content of peer reviewed scholarly publications resulting from federally funded research? Please describe the empirical basis for the recommended embargo period. Analyses that weigh public and private benefits and account for external market factors, such as competition, price changes, library budgets, and other factors, will be particularly useful. Are there evidence-based arguments that can be made that the delay period should be different for specific disciplines or types of publications?

- We do not believe that one can identify an "appropriate" embargo period, as the useful life of research varies significantly among the various disciplines. As an example, the Association of American Publishers has expressed that across their 37 journals there is a long half-life and lifetime usage of about 4.5 and 19.5 years, respectively. In mathematics, journal articles published in 2009 were as likely to cite articles published before 1998 as after them, and only 10% of the citations were from the previous three years –according to a February 2011 report of the Mathematical Sciences Research Institute. Any embargo period is a dramatic shortening of the period of copyright protection afforded all publishers, and likely to significantly impact publishers' ability to add value and innovate.
- With respect to the NIH public access mandate, we ask that OSTP reject efforts to shorten the embargo period below 12 months. Implementation of the existing policy came at a significant cost to publishers, and a move to a 6 month embargo period – as suggested by some – would likely bring an end to many biomedical research publications.

Additional Comments for Consideration

Importance and Uncompensated Costs of Peer Review Process

NIH has acknowledged the value that is created through the post-grant peer review process by encouraging researchers to seek publication in a scholarly journal.¹ NIH could have chosen to manage this process on their own at any point in time by providing the additional costs and infrastructure for post-grant peer review. However, the publishing process has been a well-functioning and long-standing partnership between research agencies and publishers; agencies fund the application peer review that decides which grants are funded, as well as the research itself. Then, the scientific community relies on publishers to manage the post-grant peer review process to evaluate the merit and authenticity of the conclusions of the research. However, unlike the federal funding provided during the pre-grant peer review process, post-grant peer review is not funded by the agencies at all. There is no federal funding that goes into the publication process. As such, we oppose new government mandates requiring that scholarly publications be made available online without compensation for the work that goes into the product.

Although the days of mailing unedited manuscripts around the world for review are gone, there still exists information technology (IT) infrastructure that is necessary to send manuscripts to reviewers in numerous countries, while being able to capture and evaluate all of their comments. This is an exceptionally intensive and collaborative task, one that incurs real costs both in terms of IT, but also in human capital and labor.

Threats to U.S. Scientific Enterprise

If a journal wishes to maintain their in-house journal operations, the inevitable result of a public access policy will be for editors to simply accept fewer federally funded articles. Journals that publish a majority of federally funded articles will likely see a steeper acceleration in the number of members and institutions dropping subscriptions, as compared to those that are predominately made up of articles not subject to strict public access policies – such as those from the international community or those that are privately funded (as noted above, the *JDR* normally has only about 30% wholly or partially-funded NIH articles). These federally funded articles will represent a liability to any journal, and a publisher or editor will have to manage the number of these articles to ensure sustainability of the subscriber base.

In essence, privately funded articles, which are not subject to an open or public access policy, will have to subsidize the decreased readership from federally funded articles. A ratio of privately funded research versus less federally funded research will have to be maintained so that a journal can maintain readership. In short, a public access policy any more stringent than the current design greatly incentivizes publishers and editors to accept far more non-federally funded articles over those subjected to a public access policy of 12 months or less in order to maintain subscriptions.

With an expanded open access policy, there will be a number of small non-profit scholarly journals that have too high a ratio of articles about federally funded research, resulting in decreased subscriptions that will create an operating loss for the journal. As more and more of these journals outsource their negative-return operations, there will be less of an appetite from large publishers to take on these journals and publications, as the non-open access heavy journals are left to subsidize the heavily open

¹ In the NIH Grants Policy Statement, the NIH “encourages grantees to arrange for publication of NIH-supported original research in primary scientific journals.” However, in the Grants Policy Statement, the NIH also informs the grantee that the NIH has irrevocable authority to take the article from the publisher and reproduce the results as it sees fit. This policy is not only delineated without regard to copyright law, but it also encourages grantees to seek peer review of their work so that publishers can assume all of the costs of peer review and publication, while the NIH can wait for the finished product and then claim ownership of it.

access journals. Eventually, there will be no more outsourcing partners for these journals looking to outsource operations, and they will eventually have to cease operation.

This is an inevitable side effect that will result from a public access model that is less than 12 months. Editors, with an intimate knowledge of a journal's financial viability and status, will tacitly favor non-public access articles in order to maintain an economically viable journal. Researchers will no doubt discover the new economic dynamic surrounding peer review of manuscripts, and those that have been denied publication of strong scientific articles will indignantly wonder if their submission was denied because the journal had already met its "quota" of public access articles. This is an unwanted economic dynamic to introduce to an otherwise fully scientific and meritorious peer review process.

Already U.S. scientists are behind other countries in terms of science funding as a percentage of GDP, both from private and public sources. A strict public access or open access policy, in many instances, would force many publishers to further fuel this competitive disadvantage by lowering the citation rate and publication of U.S. scientists, key factors used to raise the profile of scientist and country at the global level.