

January 14, 2010

Office of Science and Technology Policy  
Attn: Open Government Recommendations  
725 17<sup>th</sup> Street, NW  
Washington, DC 20502

Via e-mail to: [publicaccess@ostp.gov](mailto:publicaccess@ostp.gov)

Dear Office of Science and Technology Policy:

The American Association of Anatomists, based in Bethesda, MD, was founded in 1888 for the "advancement of anatomical science." Today, AAA is the professional home for biomedical researchers and educators focusing on anatomical form and function. In addition to being the primary educators of medical students in their first year of medical school, AAA members worldwide work in imaging, cell biology, genetics, molecular development, endocrinology, histology, neuroscience, forensics, microscopy, physical anthropology, and numerous other exciting and developing areas. AAA publishes three journals—[\*The Anatomical Record\*](#), [\*Anatomical Sciences Education\*](#), and [\*Developmental Dynamics\*](#)—plus a quarterly newsletter. Among its other programs and services, we sponsor an Annual Meeting, run an extensive awards program, and maintain a website ([www.anatomy.org](http://www.anatomy.org)) that offers members and others a variety of tools to enhance their teaching, research, and overall professional development.

It is in this context, as the chief custodian of the scientific literature related to the anatomical sciences for more than 100 years, that we respond to this request for public comment. In posing such comprehensive and thoughtful questions, OSTP clearly recognizes that—despite years of discussion and debate—there is still no authoritative source of data on this topic. Indeed, while this request for feedback will generate numerous responses, it is unlikely that you will find much in the way of concrete facts and figures.

We very much appreciate the fact that this Administration values the role of science and understands the need for data. Therefore, we urge you to consider taking the collaborative, evidence-based approach of the [European PEER project](#). The PEER project, a collaboration between publishers, repositories and researchers, is investigating the effects of the “large-scale, systematic depositing of authors’ final peer-reviewed manuscripts on reader access, author visibility, and journal viability, as well as on the broader ecology of European research.” (See Appendix A for additional detail on this study.) A more appropriate model in the U.S. might be for a respected and impartial body such as the National Academy of Science to carry out such an assessment.

At a time of world turbulence, we are happy to point out that there is no crisis in the world of scholarly publishing or in the dissemination of scientific materials. Unlike so many other issues faced by this Administration, there is no emergency to address. Taking the time to ask for a full, impartial, [evidence-based](#) assessment will help ensure that unintended consequences do not lead to a crisis in the future.

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Prior to responding to the questions posed by OSTP, we must acknowledge that we question the first basic argument on which the concept of public access is based, while at the same time heartily endorsing the second basic principle.

The premise we question is that, because government funds scientific research, it is entitled to full access to and control of the manuscripts stemming from this research. As explained below in response to specific questions, we believe that taxpayers fund the research, but they do not fund the publication of this research and therefore should have no expectation of receiving free access to this material.

We do, however, strongly endorse the assertion that the public understanding of science is critical to our national well-being. But, as explained in more detail below, we do not feel that such an understanding is enhanced by public access to scholarly scientific publications.

In responding to this request for information, we have answered questions both from our perspective as a scientific professional society and as a non-profit publisher.

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**QUESTION 1: How do authors, primary and secondary publishers, libraries, universities, and the federal government contribute to the development and dissemination of peer reviewed papers arising from federal funds now, and how might this change under a public access policy?**

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- A. The federal government funds a sizeable portion of the research done in the biomedical sciences. As such, funding agencies receive regular reports from grantees that can be made available as the government deems appropriate, likely at minimal additional cost.
- B. Turning research results paid for by the government into peer-reviewed papers suitable for publication is an expensive and time-consuming process. As the steward of the literature in our discipline, we create, manage, and finance the process by which a submitted manuscript becomes a peer-reviewed paper. This process is vital to the validation and dissemination of scientific information.
- C. It is important to understand that only a portion of manuscripts submitted to a given scientific journal are ever published. In our journals, for example, nearly two-thirds of submitted manuscripts are not deemed acceptable for publication. Nonetheless, nearly all submitted manuscripts must be logged and managed through an extensive and costly peer-review process before they are even ready to be copy edited, proofed, typeset, and published.
- D. Publishers—especially those affiliated with non-profit societies—also take responsibility for archiving their journals and maintaining accessibility in perpetuity. We also ensure the integrity of scientific literature by guarding against plagiarism and irresponsibility in the publication of research results.

- E. In sum, publishers make ongoing capital investments and incur significant operating expenses in carrying out these value-added activities. These are not paid for by taxpayer dollars. Any mandate that decreases the revenue we derive from journal publication has the potential of limiting our ability to create the peer-reviewed literature in the first place.

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**QUESTION 2: What characteristics of a public access policy would best accommodate the needs and interests of authors, primary and secondary publishers, libraries, universities, the federal government, users of scientific literature, and the public?**

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- A. While the federal government has paid for the raw data of scientific research, it has not paid for the end product of scientific literature that stems from this research. Therefore, it is the position of the AAA Board of Directors that the government should not mandate that outputs of the scientific publishing process, such as accepted author manuscripts and published journal articles, be made freely available.
- B. Nonetheless, we recognize that the current NIH public access mandate is not going away in the foreseeable future. Given this reality, we strongly recommend that any effort on the part of Congress or any federal entity to shorten the current 12-month embargo be firmly opposed by the OSTP and the Administration. This would best accommodate our needs as a publisher under the current policy.
- C. Speculating on what would best accommodate the needs and interests of the general public, we respectfully suggest that providing public access to the published literature of basic science is not the best approach. (Please see our response to Question 9 for further comments.)

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**QUESTION 3: Who are the users of peer-reviewed publications arising from federal research? How do they access and use these papers now, and how might they if these papers were more accessible? Would others use these papers if they were more accessible, and for what purpose?**

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- A. The primary users of peer-reviewed publications are academics—those who teach about the related subject matter—and other researchers in the same or related field of inquiry.
- B. As noted earlier, there is little more than anecdotal evidence regarding the impact of current public access policies. However, there is data to show that 96% of the journals in science, technology, and medicine (STM) are available online ([Scholarly Publishing Practice Third Survey](#), ALPSP).

- C. Moreover, data also shows that, while academics rank information as 5<sup>th</sup> out of 15 factors important to their success, access to this information is ranked 13<sup>th</sup> out of 16 factors as a barrier to success. Most academics access the necessary literature via subscriptions maintained by their institutions. ([Access by UK Small and Medium-sized Enterprises to Professional and Academic Information](#), Mark Ware Consulting Ltd for Publishers Research Consortium – April 2009).
- D. AAA is one of many publishers whose journals are available to researchers and academics in the developing world via such programs as [HINARI](#), [INASP](#), and [AGORA](#).

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**QUESTION 4: How best could Federal agencies enhance public access to the peer-reviewed papers that arise from their research funds? What measures could agencies use to gauge whether there is increased return on federal investment gained by expanded access?**

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- A. This question, as many of the others, accepts as a given the premise that public access to the actual peer-reviewed literature is desired. This is unlikely to be the case. As part of the overall need to obtain additional data, we suggest that one goal be to assess actual public demand as it pertains to various areas of scholarly research. (Please see our response to Question 9 for further comments.)
- B. We appreciate and share the government's concern about finding measures to gauge return on investment. In fact, this has been one of the significant stumbling blocks encountered by publishers in regard to the existing NIH public access mandate. Libraries make their journal purchasing decisions based on usage data. As journal usage moves from paper to electronic, the provision of detailed online usage data becomes more and more important. By replicating our journal content in its own repository, NIH is drawing usage away from our online journals, and then compounding this situation by not providing publishers with the comprehensive usage statistics that would enable us to assess the impact of this policy.

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**QUESTION 5: What features does a public access policy need to have to ensure compliance?**

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- A. Taxpayers fund research but they do not fund the publication of research. Therefore, our strong preference would be that the federal government not mandate deposit of journal manuscripts in a freely available archive, regardless of format, process, or timing. Rather, the federal government should strive to provide public access to the information that it already controls and has a right to distribute—for example, research summary reports.

- B. That said, given the current mandate in regard to NIH-supported research, we believe that compliance would be best assured if:
1. The public resource (in this case, PubMed Central), were linked directly to publishers' websites, where the final peer-reviewed and edited articles are already posted at no additional expense to taxpayers;
  2. The embargo period be no less than 12 months; and
  3. A simple process enabled publishers to sign off on the linking of each journal on a monthly basis, rather than relying on individual authors to submit their manuscripts.

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**QUESTION 6: What version of the paper should be made public under a public access policy (e.g., the author's peer reviewed manuscript or the final published version)? What are the relative advantages and disadvantages to different versions of a scientific paper?**

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- A. There would be no need to pose this question if public access was provided via a simple link to a journal's existing website, as noted in our response to QUESTION 5 (Response B1).
- B. Even better, the publicly accessible version should be the research project report already required for each research grant and already paid for by the granting agency.
- C. Since this is not the case at present in regard to biomedical research, we—as scientists and publishers—are presented with a classic “lady or the tiger?” dilemma: Do we risk the confusion and scientific compromise of letting the author version remain in the archive or do we risk considerable financial loss by providing free access to our final published product?
- D. As authors and researchers, we recognize that serious errors in manuscripts are frequently corrected *after* the peer review process. We are extremely concerned that using any version other than the true “final” one will cause confusion, at a minimum, and could significantly compromise the scientific record.
- E. We have the same concern when wearing our “publisher hat” Nonetheless, as a publisher, we also recognize the costs we incur in copyediting, proofing, reference checking, formatting of images, and other functions that add real value to manuscripts. We must be able to recoup these real costs in order to carry out these important tasks.
- F. We fear that the current reality in regard to different versions of a scientific paper is even more distressing. Questioning our members about how the existing NIH public access submission process is working, we received the following response from a well respected investigator and author:

“What happens is that they (NIH) take your Word file and Photoshop/Illustrator files and create a PDF. They then send it to you for your approval. I’m sure that most people merely glance at that and click the approval box to complete the task. I doubt that anyone actually proofreads this. Thus, NIH does reformat and require approval of what they reformat, but I doubt that many authors invest much time in this since the author’s goal is to get the paper published. Beyond that, authors have little interest, other than in officially complying.”

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**QUESTION 7: At what point in time should peer-reviewed papers be made public via a public access policy relative to the date a publisher releases the final version? Are there empirical data to support an optimal length of time? Should the delay period be the same or vary for levels of access (e.g., final peer reviewed manuscript or final published article, access under fair use versus alternative license), for federal agencies and scientific disciplines?**

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- A. A “one-size-fits-all” policy is not appropriate across subject disciplines. Just as each journal has a different business model, the so-called “optimal embargo period” will differ from one discipline to another and even within disciplines. As noted earlier, there is little empirical data in this arena. However, we have learned anecdotally that some society journals that began by offering a shorter embargo period found it necessary to roll back their embargos to 12 months to maintain subscription sales and sustain peer review.
- B. Of relevance here is what is known as the “[cited half-life](#),” a calculation that indicates the long-term value of the source items in a journal. As an example, the cited half-life for one AAA journal, *The Anatomical Record*, is >10.0 years, while the cited half-life of another AAA journal, *Developmental Dynamics*, is 4.9 years. In part, these figures relate to the pace at which research in a given area is moving and, thus, to how long a given issue of a journal may retain “commercial” value.
- C. Once again, we note that this question—as others in this request—would be moot if the publicly accessible version were the research project report already required for each research grant and already paid for by the granting agency.
- D. And again, should the current NIH public access mandate remain in place, we strongly oppose any effort to make the embargo period less than 12 months.

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**QUESTION 8: How should peer-reviewed papers arising from federal investment be made publicly available? In what format should the data be submitted in order to make it easy to search, find, and retrieve and to make it easy for others to link to it? Are there existing digital standards for archiving and interoperability to maximize public benefit? How are these anticipated to change?**

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- A. Not only is PubMed Central reformatting manuscripts rather than linking to the original published document (see QUESTION 6, Response F), but PMC is also using its own

system of article identification (PubMed Identifiers), rather than adopting the widely-accepted Digital Object Identifier (DOI) as a means of identifying authoritative material. This extra identifier can only contribute to reader confusion and adds no apparent value. The DOI system is managed by the [International DOI Foundation](#), an open membership consortium including both commercial and non-commercial partners, and has recently been accepted for standardization within ISO. Approximately 40 million DOI names have been assigned worldwide.

- B. Even with the best of intentions, the federal government is not known to be the most innovative or quickest to respond in regard to technological challenges. In nearly all cases, private enterprise will be quicker to develop and adopt innovative information technologies.
- C. Mandating a single approach to public access could actually stifle innovation in what is now a rapidly changing environment, both by decreasing the amount that publishers are able to invest and reducing their incentive to try new approaches.
- D. In such an environment, it makes most sense—and is most cost effective—for the government to take advantage of investments already being made by publishers and, in some cases, to provide additional financial support for efforts already underway (see example in QUESTION 9, Response F, below).

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**QUESTION 9: Access demands not only availability, but also meaningful usability. How can the Federal government make its collections of peer-reviewed papers more useful to the American public? By what metrics (e.g., number of articles or visitors) should the Federal government measure success of its public access collections? What are the best examples of usability in the private sector (both domestic and international)? And, what makes them exceptional? Should those who access papers be given the opportunity to comment or provide feedback?**

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- A. Academic scientific literature, as it currently exists, is intended for and used by academics. As most scholarly publications, AAA’s journals are rather esoteric—of significant value to researchers in particular areas of investigation, but not useful to the American public or, indeed, even to researchers in other areas of science.
- B. If the goal is truly “meaningful usability,” we urge OSTP to look closely at the America COMPETES Act (Pub. L. No. 110-69, Aug. 9, 2007) as it pertains to the reporting of research results by the National Science Foundation (NSF). The Act reads: “*SEC. 7010. REPORTING OF RESEARCH RESULTS. The Director shall ensure that all final project reports and citations of published research documents resulting from research funded, in whole or in part, by the Foundation, are made available to the public in a timely manner and in electronic form through the Foundation’s Web site.*” To fulfill this mandate, NSF announced that it would modify its reporting system and require principal scientific investigators to prepare a brief summary – specifically for the public – on the nature and outcomes of the award that will be posted on the Foundation’s website.

- C. An earlier [Audit of Interest in NSF Providing More Research Results](#), based on a survey of key constituents, noted that, “in terms of the best format to convey the research results, organization executives and NSF program officers expressed an overwhelming interest in NSF posting brief summaries of research results and publication citations on its website... They cited multiple advantages to NSF providing this information, such as helping researchers identify possible collaborators and improving the public’s understanding of scientific research... By providing greater public access to the results of the research it funds, NSF would further the public’s knowledge and understanding of scientific research, assist researchers in building on prior work, and make its operations more transparent and accountable.”
- D. NIH already has research progress reports on all grants. Expanding this information by requiring the addition of a one-paragraph lay summary has more potential to enhance public understanding than does providing public access to all the scientific journals in the world.
- E. Most funding agencies already maintain databases listing the names of award recipients and titles of their proposals; many agencies already receive lay summaries of projects for distribution to the public. Investigators can also be directed to submit lay summaries with their annual progress reports. This approach recognizes and does not undermine the value-added that publishers bring to the formal scholarly communication system.
- F. For the important research funded by the government and carried out by our members to have true “meaningful usability,” scientific discovery must be translated into language understandable by the public. Publishers have already created [PatientInform](#), a free online service that provides patients and their caregivers access to some of the most up-to-date, reliable, and important research available about the diagnosis and treatment of specific diseases. Federal funds would be better spent to support this and similar projects, rather than to create repositories that duplicate information already accessible to scientists and of little practical value to the American public.

## **SUMMARY & CONCLUSION**

Scientific journal publishers have an important role to play in the preservation and dissemination of research literature. As NIH is the steward of medical research for the nation, publishers such as AAA are the stewards of research for our respective disciplines. We believe that the “public access” process, as presently implemented by NIH, threatens our ability to fulfill this mission over the long term. While it may take several years for widespread harm to result, we caution the Administration, in creating an open government, not to damage the private institutions on which the government depends.

Should the Administration decide to implement broader public access policies, we urge that OSTP view implementation of the NIH Public Access Policy as a case study in how not to proceed. The transparency that the Administration seeks can only be achieved if stakeholders have real, rather than token, input in designing the process and if decisions are based on evidence rather than anecdote.

There are many journal business models. The bottom line is that publishing peer-reviewed research is expensive and someone has to pay for it; it is wrong for the government to pay only for the research, yet still lay claim to the final publication. Having each funding agency open its database of funded projects, including research project reports and lay summaries, not only better serves the public interest, but also is the right thing to do.

Thank you very much for the opportunity to share our views on this important issue. Our members are available for further input on this topic, if needed.

Sincerely,

A handwritten signature in black ink that reads "Kathryn Jones". The signature is written in a cursive, flowing style.

Kathryn J. Jones, Ph.D.  
President, American Association of Anatomists  
Professor, Loyola University Chicago Stritch School of Medicine

P.S. The *Report and Recommendations from the Scholarly Publishing Roundtable* was released just after this letter had been vetted through our approval process. Since there was insufficient time for our members to read this report and assess its recommendations prior to the OSTP deadline, our letter does not respond to the Roundtable document. However, on first reading, we note that it appears to accept the current NIH/PubMed Central mandate as a given. If that is the case, it is unlikely to change our basic position or suggested approaches.

## APPENDIX A

News Release -- 14 October 2008

# PEER

## **Publishing and the Ecology of European Research Pioneering collaboration between publishers, repositories and the research community launched**

PEER (Publishing and the Ecology of European Research), supported by the European Union, will investigate the effects of the large-scale, systematic depositing of authors' final peer-reviewed manuscripts (so called Green Open Access or stage-two research output) on reader access, author visibility, and journal viability, as well as on the broader ecology of European research. The project is a collaboration between publishers, repositories and researchers and will last from 2008 to 2011.

Peer-reviewed journals play a key role in scholarly communication and are essential for scientific progress and European competitiveness. The publishing and research communities share the view that increased access to the results of EU-funded research is necessary to maximise their use and impact. However, they hold different views on whether mandated deposit in open access repositories will achieve greater use and impact. There are also differences of opinion as to the most appropriate embargo periods. No consensus has been reached on a way forward so far.

The lack of consensus on these key issues stems from a lack of clear evidence of what impact the broad and systematic archiving of research outputs in open access repositories might be, but this is about to change.

The aim of PEER is to build a substantial body of evidence, by developing an "observatory" to monitor the effects of systematic archiving over time. Participating publishers will collectively contribute 300 journals to the project and supporting research studies will address issues such as:

- How large-scale archiving will affect journal viability
- Whether it increases access
- How it will affect the broader ecology of European research
- Which factors influence the readiness to deposit in institutional and disciplinary repositories and what the associated costs might be
- Models to illustrate how traditional publishing systems can coexist with self-archiving.

The International Association of Scientific, Technical and Medical Publishers (STM), the European Science Foundation, Göttingen State and University Library, the Max Planck Society and INRIA will collaborate on PEER, supported by the SURF Foundation and University of Bielefeld, which will contribute the expertise of the EU-funded DRIVER project.

Michael Mabe, CEO of STM and Chair of the PEER Executive said "STM is delighted to take a leading role in PEER. Not only will PEER lead to a greater understanding of journal and repository use in the digital age, but it will also do much to foster trust and mutual understanding between the stakeholders in academic research and scholarly publishing."

For further information on PEER, please contact Michael Mabe, STM, Prama House, 267 Banbury Road, Oxford OX2 7HT, UK (tel: +44 1865 339324/fax: +44 1865 339325/e-mail [mabe@stm-assoc.org](mailto:mabe@stm-assoc.org))

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