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Dr. Diane DiEuliis
Assistant Director, Life Sciences
White House Office of Science and Technology Policy
725 17th Street, NW
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RE: Public Access Policies for Science and Technology Funding Agencies Across the Federal Government

Dear Dr. DiEuliis:

On behalf of the members of the Professional and Scholarly Publishing Division of the Association of American Publishers (“AAP/PSP”) and the DC Principles Coalition for Free Access to Science (“Coalition”), we are pleased to respond to OSTP’s December 9, 2009 Federal Register Notice requesting comments on “Public Access Policies for Science and Technology Funding Agencies Across the Federal Government.” Collectively, we represent tens of thousands of publishing employees and professional members across the country, and publish millions of peer-reviewed scholarly and scientific journal articles in a multitude of disciplines.

Scholarly and scientific journal publishers strongly support the guiding principles of transparency, participation and collaboration that President Obama and OMB Director Orszag detailed in the January 2009 “Transparency and Open Government Memorandum” and December 2009 “Open Government Directive,” respectively.¹ For over 100 years, these journal publishers have played an integral role in building the unrivalled U.S. scientific research enterprise, a dynamic community that thrives on these core principles. Now, these publishers seek to partner with the Administration to harness the power and potential of technology and innovation to spur long-term economic growth and provide cutting-edge solutions to support domestic priorities, including healthcare reform, clean energy development, and STEM education renewal. A transparent, participatory and collaborative Federal Government will provide the foundation for achieving these important goals.

AAP/PSP and the Coalition provide recommendations below that will facilitate the successful development of a sustainable and effective public access policy consistent with the Administration’s “Open Government” framework.

Specifically, our comments address the following questions outlined by OSTP’s December 9 Federal Register Notice requesting public comment:

1. **The Role of Journal Publishers in the Scientific Research Enterprise in 2010.** How do journal publishers 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?
2. **Key Principles to Ensure a Sustainable and Effective Public Access Policy.** 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?

¹ Memorandum for the Heads of Executive Departments and Agencies on Transparency and Open Government (January 21, 2009), available at http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/; Memorandum for the Heads of Executive Departments and Agencies on Open Government Directive available at <http://www.whitehouse.gov/open/documents/open-government-directive>

SUMMARY OF COMMENTS AND RECOMMENDATIONS

- For over 100 years, journal publishers have served as integral hubs of the scientific research enterprise, facilitating scholarly communication and the dissemination of scientific information, managing the scientific record and coordinating the peer review process. In 2010, their continuing investments in digital platforms with the latest Web 2.0 capabilities have helped to deepen their contributions to the science community and the public— expanding accessibility, improving interoperability and fuelling innovation.
- Journal publishers strongly support the view that the Federal Government should be guided by “principles of transparency, participation and collaboration” as noted in the Transparency and Open Government Memorandum and Open Government Directive. President Obama emphasizes that “[c]ollaboration improves the effectiveness of Government by encouraging partnerships and cooperation within the Federal Government, across levels of government, and between the Government and private institutions.” In creating an open government and a sustainable agency-wide public access policy, it is critically important that these goals should be accomplished without damaging the private institutions on which the Federal Government and its scientific enterprise depends. The NIH Public Access Policy was developed on the flawed premise that an undefined public access benefit to researchers, practitioners, and the general public outweighs any harm that would result to the scientific publishing enterprise. The NIH model, however, does not meet the critical requirements for participation and collaboration that are necessary to develop and maintain the partnerships and cooperation that would ensure a sustainable and effective public access policy.
- A federal agency public access policy that is sustainable in the long-term and maximizes benefits to the science community and the public will:
 - Function as a balanced public-private partnership to enhance access and interoperability
 - Adequately protect fundamental intellectual property rights and respect proprietary contributions of added-value to ensure sustained private investment in innovation
 - Meet the needs of the science community by relying on evidence-based assessments and providing access to taxpayer-funded research results through both public and private channels
- The America COMPETES Act, which established a public access policy for research funded by the National Science Foundation (NSF), provides an acceptable model that can be replicated in a timely manner at other federal agencies. Under this approach, each federal agency that provides funds for the performance of experimental, developmental, or research activities would make (A) final project reports; (B) citations of published research articles resulting from research funded by the agency; and (C) readily accessible summaries of agency-funded research accessible to the public in a timely manner and in electronic form through an agency Web site and possibly through <http://www.data.gov>.
- The America COMPETES Act approach adheres to the President’s pledge in his Transparency and Open Government memorandum to “take appropriate action, consistent with law and policy,” and will better ensure that research dollars are consistently accounted for. Taxpayers will also gain access to the health, science and technical research results they have funded in formats that they can more easily understand. Publishers strongly support extending the NSF model to all federal agencies that fund research and will partner with the Administration to successfully implement such a public access policy.

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The Critical Role of Journal Publishers in the Scientific Research Enterprise in 2010. How do journal publishers 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?

In its December 9 Federal Register OSTP Notice, the Administration acknowledges the critical role that scientific and scholarly journal publishers play in advancing scientific and medical discoveries. For over 100 years, journal publishers have served as integral hubs of the scientific research enterprise, facilitating scholarly communication and the dissemination of scientific information, managing the scientific record and coordinating the peer review process. In 2010, our members' continuing investments in digital platforms with the latest Web 2.0 capabilities have helped to deepen their contributions to the science, technological, engineering and medical communities — expanding accessibility, improving interoperability and fuelling innovation. What the Administration's OSTP Notice fails to fully recognize, however, is the extent to which journal publishers contribute significant added-value in the process that transforms a researcher's draft manuscript into a polished, peer-reviewed journal article that will serve as the official published record of the described research and its results.

Managing the Scholarly Communication Infrastructure and Maintaining the Scientific Record. Non-profit and commercial journal publishers invest hundreds of millions of dollars every year in the peer review, editing, disseminating, and archiving of scholarly and scientific articles, as well in creating unique journal brands and identities on which researchers and funders alike rely to make critically important personal and professional judgments. Journals typically support a specific discipline and serve as a central point of contact and information exchange for the members of that community, who are frequently spread around the world. The reputations of journals, cultivated by their publishers, are also used as an indicator of the importance of the work published therein to a particular field of research and to the public.

This is the critical infrastructure that has supported scholarly communication and spurred scientific and technological innovation for decades through numerous changes in media and publisher production and delivery mechanisms. As of early 2009, some 2,000 publishers produced over 25,000 peer-reviewed scientific, technical and medical journals, and recent statistics indicate that these journals alone publish more than 1.5 million articles annually. To facilitate this scholarly output, these journal publishers identify appropriate contributors and editors for each journal, ensuring that research results are reported and shared in a way that encourages further research. Upon careful review, a majority of the manuscripts submitted to a given scientific journal are found to be of insufficient quality for publication. In practical terms, this means that the publishers of such journals must finance the collection and review of several times as many manuscripts as they will actually publish to effectively serve as quality guardians for the scientific record.

To manage the processing of some 2 to 3 million manuscripts submitted annually by researchers around the world, journal publishers have established and maintained sophisticated online manuscript submission systems. Journal publishers also prepare the 1.5 million manuscripts that are accepted for publication by copyediting, proofing, formatting, branding, paginating, adding metadata and identifiers, checking and enhancing artwork quality, converting accepted manuscripts, data and artwork to XML, and adding links to ensure interoperability.

Journal publishers continually invest in new journals to support the needs of scholarly communities and to ensure that intellectual communication keeps pace with new and growing areas of science and scholarship. In fact, the number of new journal titles and the number of journal articles published each grows at a rate of about 3% per year, consistent with increases both in the number of researchers and in funding for research and development.

Protecting Scientific Integrity. Perhaps the most vital contribution of these journals is the coordination of the peer review process for research publication. The peer review process is an essential quality-control mechanism that helps to ensure the veracity of the published research reports and to facilitate their communication through enhanced readability. In a 2008 international survey of over 3000 scientists, 85% agreed that peer review greatly helps scientific communication by improving the quality of published papers. In addition, 83% believed that, without peer review, there would be no control over the integrity of science research.²

Journal publishers incur substantial expenses by supporting their editors in conducting peer review. These costs include (1) the highly skilled people required to manage the process, (2) purchasing, maintaining and updating the technology to streamline the process, (3) keeping track of reviewers and articles, (4) locating and maintaining relationships with possible reviewers, (5) sending articles out to appropriate reviewers and following up with them to make sure the reviews are completed, and (6) reviewing the responses and communicating those responses to authors.

² <http://www.publishingresearch.net/documents/PRCsummary4Warefinal.pdf>

These steps are typically managed with the use of specialized software systems that are internally developed, licensed commercially or supported by open source software. In addition to the software system, the necessary hardware must be acquired and maintained. Although software is very useful in organizing and managing the peer review process, the editors must evaluate the reviews and determine how to respond to them. Software cannot substitute for human editorial skill and judgment.

In addition to the peer review process, the journal publisher's determination to accept or reject a researcher's submitted manuscript, based on the publisher's own quality standards and expertise developed through years of building the brand reputation of the journal, is itself an important part of the process for maintaining the integrity of the published record of scientific research. As previously noted, it is commonly understood within the research community that an overwhelming majority of the submitted manuscripts are found to be unacceptable for publication.

Fueling innovation with new technology. Since the mid 1990s the journal publishing industry has been a key player in the dramatic digital revolution in the sciences, investing heavily to drive the shift of published research from print-only to "E-only." According to a 2008 survey by the Association of Learned and Professional Society Publishers, 96% of science, technical and medical journals are available online.³ That number continues to grow.

The results of the end-to-end digitization of publishing systems are robust digital platforms with the latest Web 2.0 capabilities that can support the Federal Government's effort to link policymakers, researchers and the public. Rapid innovation in the journal publishing industry has dramatically improved functionality and efficiency for doctors and researchers, who can now perform complex searches of journals, immediately retrieve and print full text articles, link instantly to other cited articles, export text to other databases and programs, and receive e-mail alerts when new journal issues are released. Voluntary cross-publisher initiatives such as CrossRef, developed with non-government funds, have broadened the impact of these benefits for researchers.

The result of these productivity benefits has been documented in the field of science. The portion of their time scientific researchers spent analyzing (vs. gathering) information increased dramatically from 2001-2005. Compared to the print-only era, scientists now read 25% more articles per year from almost twice as many journals, and they do so using a smaller portion of their time.⁴ This dynamic yields major benefits in research and funding effectiveness.

To make it easier to locate and use research information, journal publishers continue to make substantial investments in:

- Creating, supporting and maintaining robust hardware and software infrastructures to distribute and archive science research literature, and updating those tools as the needs and expectations of authors and users of journal literature change over time.
- Verifying references and creating, managing and maintaining online links, providing coding for digital dissemination, integrating machine-readable tags, supporting reference linking and indexing, and otherwise enriching the content, design and functionality of online publications.
- Encouraging and supporting the development of interoperable, industry-standard tools for citation and other purposes, such as "persistent identifiers" (that is, the articles' unique identifiers for researchers to ensure that they are using and citing the authoritative version of the article).
- Creating visibility of research results through arrangements with third-party vendors that push relevant research information to the appropriate research communities through a combination of traditional tools and emerging technologies, such as abstracting and indexing services, citation databases, table-of-contents alerting services, podcasts, RSS feeds, press communications and sponsorship of scientific and technical conferences, seminars and symposia.

Risks Facing the Public Science Enterprise Under a Mandatory Public Access Policy. As OSTP, the publishing industry and the research community explore new ways of providing greater public access to the results of government-funded scientific research, an approach that appropriately balances competing interests should be pursued. The NIH public access model, established before President Obama took office, is not the solution to the need for a collaborative effort among information providers, users and government. Rather, that model provides a cautionary tale about the risks of government mandates requiring access to manuscripts of peer-reviewed science journal articles.

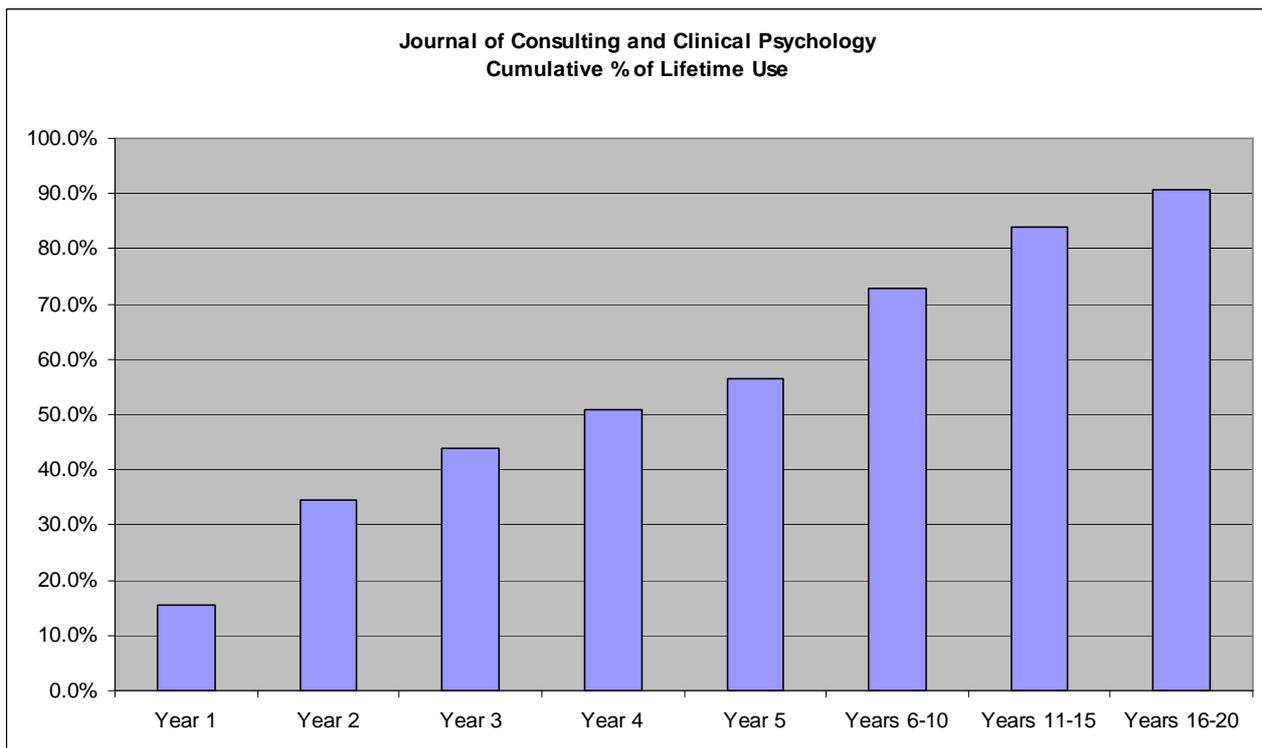
³ Scholarly Publishing Practice Third Survey, ALPSP

⁴ Outsell's Buyer Market Database, Dr. Carol Tenopir (2008)

While it is possible to adjust voluntary, collaborative activities over time, i.e. after evidence of their results and consequences has been gathered, mandates are inflexible and present serious policy challenges when they result in damage to private partners that cannot be undone without burdensome policy adjustments. The NIH mandatory public access policy has only been in place for a relatively short time (i.e. since May 2008); as a result, there has not been any comprehensive study of its impact on members of the general public (who are its assumed beneficiaries) or on journal publishers (whose work, reputation and expertise it exploits). Mandatory public access policies, like the one implemented by NIH, present high risks that journals will be adversely impacted and their long term economic sustainability threatened. Some subscribers to such journals are likely to cancel subscriptions and simply wait for free access to them. Mandatory policies would threaten the survival of many scientific societies and other journal publishers that rely on subscription fees to finance their operations. Although some indications of harm are emerging, we recognize that the impact of the NIH policy is still inconclusive. However, once a tipping point is reached that prevents journals from continuing, it will be too late to change such policies and reverse the damage.

As a government-imposed mandate, the NIH model will face particular difficulties in adjusting to the rapid pace of change in journal publishing. This will become clear if its “one-size-fits-all” policies are imposed across subject disciplines. A recently released study of journal publishing in the humanities and social sciences concludes that, given the comparatively long life of articles in those fields, the imposition of embargo periods that are being adopted for biomedical journals could threaten the sustainability of humanities and social science journals.⁵

This is corroborated by research conducted by the American Psychological Association, which found that only 15% of the eventual “lifetime” usage of its journal articles – in the form of downloads – occurs within the first year after publication. The graphic below demonstrates that articles published in the APA’s 37 journals have a long half-life and lifetime usage of about 4.5 and 19.5 years, respectively. Because life-time utilization of APA journal articles occurs over a long period of time (much longer than the first 12 months), the rigid NIH public access policy will likely have a significant, negative impact on APA journals and all other journals with similar usage patterns.



More broadly, studies are being conducted to understand how alternative models for providing free access to journal content would affect paid journal subscriptions. Subscriptions account for approximately 90% of revenue for many journal publishers. That revenue underwrites the critically important publishing functions discussed earlier. For non-profit societies, subscription revenues provide the means for symposia and member education, internships, research and other critical activities that advance science. In 2006, the Publishing Research Consortium (PRC) commissioned a study of how decision-making factors such as price, embargo period, article version and reliability of access would affect librarians’ subscription or cancellation behavior. The survey suggests

⁵ “The Future of Scholarly Journals Publishing Among Social Science and Humanities Associations,” Report on a study funded by a Planning Grant from the Andrew W. Mellon Foundation (February 2009), available at: <http://www.nhalliance.org/bm~doc/hssreport.pdf>

that a significant number of librarians are likely to cancel subscriptions even when just some of a journal's peer-reviewed manuscripts are available freely through open access.⁶

With a twelve-month access delay, assuming only 40% of a journal's content would be available for free, a large proportion (44%) of librarians in the study said they would opt for free content to portions of the journal over a paid subscription. When more than 40% of a journal's manuscripts are available freely on open access, the librarians' expressed an even greater preference for the free option over journal subscriptions. These findings raise serious doubts about whether librarians would continue to subscribe to journals if some or all of the content was freely available on institutional archives. The study counters the proposition that scientific publishers—and the scientific endeavor itself—will not be harmed by an indiscriminate move towards unrestricted open access that does not take into account such unintended consequences. In fact, the results indicate just the opposite, showing that embargoes will not prevent harm.

The results of the PRC study are worthy of serious consideration, given the importance of subscriptions to sustaining journal publishing and its essential role in ensuring the integrity, dissemination and preservation of the world's scientific, technical and medical information, as acknowledged in the Federal Register Notice. The U.S. science publishing market represents some \$7-8 billion in revenue, of which journals comprise about \$3 billion. Over 1000 U.S.-based science journal publishers (including both commercial publishers and many society publishers) employ over 30,000 staff and indirectly support an additional 20,000 workers. North American-based science journal publishers account for 45% of all peer-reviewed research papers published annually for researchers worldwide.⁷

T. Scott Plutchak, Director of the Lister Hill Library of the Health Sciences at the University of Alabama at Birmingham accurately characterizes the fundamental flaws of the NIH model⁸:

Explicit in the NIH policy is that peer review has substantial value – so much so, that NIH does not want any manuscripts deposited that have not gone through a rigorous peer review process and gotten the stamp of approval from a recognized peer review authority – i.e., a publisher. In developing the policy, NIH could have come up with their own vetting mechanism, but instead they quite sensibly chose to rely on the experts in managing peer review.

In "the old days" (when everybody understood what the rules were), publishers gained control of copyright in exchange for managing the peer review process. They were then entitled to use that control to develop revenue streams that would compensate them for the value that they were adding to the system. Copyright gave them control of the distribution of the work to which they had added value. Under the terms of the NIH policy publishers are expected to give up that control...

It is argued that this is not an unfair "taking" since the publisher has the right to refuse to grant the license that allows the author to deposit with Pubmed Central. This is, no doubt, technically and legalistically true. But since when is a choice between complying with a policy and going out of business a real choice? "Dear publisher – we respectfully ask that, for the benefit of the common good, you give up control of the most significant element of value that you add to the scholarly communication process. We don't actually have any way of compensating you for that, so you are perfectly free to refuse to do so - in which case, you will, of course, be put out of business since you will no longer receive the manuscripts that are your bread and butter... Good luck."

President Obama's Transparency and Open Government Memorandum emphasizes that "[c]ollaboration improves the effectiveness of Government by encouraging partnerships and cooperation within the Federal Government, across levels of government, and between the Government and private institutions." In creating a sustainable agency-wide public access policy for the results of government-funded science research, it is critically important that it be accomplished without damaging the private institutions on which the Government depends, both for the information itself as well as a substantial tax and employment base. The NIH Public Access Policy was developed on the flawed premise that an undefined public access benefit to researchers outweighs any harm that would result to the scientific publishing enterprise. Before any consideration is given to extending it to the entire federal research arena, its long term impact on all stakeholders must be more fully understood.

⁶ Publishing Research Consortium Report "Self-Archiving and Journal Subscriptions: Co-existence or Competition" (July 2006). Accessible at http://www.publishingresearch.org.uk/documents/Self-archiving_report.pdf.

⁷ Scholarly Publishing Practice Third Survey, ALPSP

⁸ "Quantifying the Value of Peer Review," available at: <http://tscott.typepad.com/tsp/2009/06/quantifying-the-value-of-peer-review.html>

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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?

These recommendations seek to balance the need for and potential of increased access to journal publishing with the need to preserve the essential functions of the journal publishing enterprise. A sustainable federal public access policy that maximizes benefits to the science community and the public should:

Function as a balanced public-private partnership to enhance access and interoperability. Any federal public access policy should be developed in full and open consultation with all vested stakeholders to define clear measurable goals and objectives, and to take into account key differences in publishing dynamics across subject disciplines. In his Transparency and Open Government memorandum, President Obama notes that “[c]ollaboration harnesses innovative tools, methods, and systems to promote cooperation across all levels of Government and with the private sector.” AAP/PSP and the Coalition strongly encourage this collaboration with industry and recommend that the Federal Government leverage the private sector’s rapidly evolving expertise, technologies, products and services in order to efficiently and effectively improve the quality and scope of services available to the public.

ADMINISTRATION NEXT STEPS

1. Form OSTP public access advisory committee composed of publishers, universities and other research entities. Utilize public-private partnerships in implementation of any public access policies

Federal agencies are not always aware of existing technologies and solutions in the marketplace, resulting in unnecessary spending and a misallocation of taxpayer dollars—particularly when the Government duplicates and competes with products and services provided by the private sector. For example, the NIH did not proactively seek collaboration with journal publishers as it developed its procedures and policies for the deposit of NIH-funded researchers’ manuscripts into its central repository. Consequently, NIH created an unnecessary separate archive and tagging system at considerable expense and with minimal interoperability with existing data repositories.

As noted in the Scholarly Publishing Roundtable Report, OSTP should collaborate closely with publishers, universities and other research entities to “achieve the full potential of publicly accessible, interoperable databases. OSTP should establish a public access advisory committee to provide a mechanism for periodic assessment of the rapidly changing scholarly publishing landscape.”⁹

Adequately protect fundamental intellectual property rights, respect value-adding publisher contributions, and uphold long-established principles of government information policy to ensure sustained investment in innovation. In April 2009, President Obama committed to “create conditions for increasing public investment and to take measures that promote investment in the private sector, particularly in science, technology, engineering, innovation, research and development, and to encourage the strengthening of linkages between universities, science institutions.” President Obama further noted that strong protection and enforcement of intellectual property rights would help achieve these objectives and contribute to the promotion of technological innovation and the transfer and dissemination of technology.

Given the Administration’s strong support for intellectual property rights in this context and others, it is disturbing to note that the OSTP’s Federal Register Notice fails to mention or solicit public comment on the adverse impact that mandatory public access policies for science and technology funding federal agencies could have on the exploitation of copyright rights that science journal publishers acquire from government-funded researchers who submit manuscripts describing the nature and results of their research for publication in such journals.

ADMINISTRATION NEXT STEPS

2. Consult closely with IP stakeholders in Administration and Congress to shape federal public access policy

But moving toward federally-mandated agency public access policies based on the NIH model would directly contravene President Obama’s stated mission and would violate fundamental copyright principles that form the basis of the U.S. intellectual property framework. For over a century, copyright protection has provided the incentive for journal publishers to invest in the peer review of research prior to publication and in the infrastructure necessary to publish and distribute science journal articles about the latest government-funded research. While the technology for disseminating works has changed, the need for investment incentives has not. Publishers still depend on copyright to protect these works that aid in the advancement and integrity of science and contribute to

⁹ “Scholarly Publishing Roundtable Report and Recommendations,” p. 8 (January 2010).

substantial gains in biomedical research and other knowledge. Their journal articles are goods that benefit society generally, and are certainly integral to the President's innovation and economic goals. Incentives for their production must be maintained. The long-run consequence of depriving the private sector of continuing incentives for investment will be government-run science publishing. Such an outcome would undermine the President's policy of letting the private sector lead in technological innovation. It could also risk the danger of the Government's politicization of science, where published accounts of science research conducted on global warming, stem cell research, evolution, or other matters that generate political controversy over related public policy-making might be subject to efforts of suppression or manipulation that will call into question the integrity of the scientific record.¹⁰

The NIH Public Access Policy requires any investigator whose research has been funded by NIH to submit their final, peer-reviewed manuscript to NIH immediately upon acceptance for publication as an article in a science journal, so that NIH can make the manuscript freely available online – in direct competition with distribution of the publisher's own final published version – no later than 12 months after its publication. NIH specifically requires submission of the final manuscript only after it has passed through the publisher's "quality assurance" processes of peer review and determination of acceptability for publication, even though the journal publisher is not a party to the funding agreement for the research.

Such an arrangement is fundamentally unfair to the journal publisher because it allows NIH, without providing just compensation, to deliberately take the value of the publisher's "quality assurance" processes and also undermines the publisher's right to distribute the final published article. The performance of these publishing services constitutes valuable consideration that the journal publisher provides to the manuscript author in explicit expectation of the author's transfer of copyright in the manuscript to the publisher following acceptance for publication. Journal publishers rely on copyright transfers to ensure that they have all of the rights that are essential to support their investments in the publishing enterprise. These investments are dependent upon the expectation of full copyright protection of the work in order to safeguard interests of the author as well as those of the publisher in the integrity and original expression of the manuscript work as it evolves into the final published article. Authors benefit from their transfers of copyright to journal publishers because the transfers provide the publishers with the incentives to invest in the manuscripts and transform them into high-quality peer-reviewed articles that are published under journal names that signify the quality of their contents based upon brand reputations developed and recognized through decades of publishing investment and experience. Publication in such journals is critical to a researcher's recognition and advancement within a given research discipline, and provides researchers with important credentials for seeking positions within the academic community.

Some may argue that public access policies based on the one at NIH do not take any intellectual property away from journal publishers or change the scope of the publisher's copyright after the publisher has acquired it because the copyright is, under such policies, already subject to the funding agency's requirements for public access when the author transfers copyright to the publisher as a condition of publication. While this may literally be true, it misses the point that, with the expiration of the embargo period that runs from the publication of the final article in the journal, the agency's public access requirements eviscerate the publisher's practical ability to exercise the rights of copyright acquired from the author. After the expiration of the embargo period, the publisher's right to control the distribution of the article will have to compete with the agency's making available of an earlier, peer-reviewed final manuscript version of the article free to the online world.

In effect, the application of government public access mandates like the NIH Public Access Policy is indistinguishable from the imposition of an extraordinary and unprecedented exception to the most fundamental of rights under copyright—namely, the exclusive right to distribute the copyrighted work. The Government's funding of the research should not provide the basis for the funding agency to claim fundamental rights in every written account of the results of that research, and particularly in those written accounts that reflect substantial value added by publishers as they become the recognized published record of the research and its results.

Government agencies might attempt to trump copyright through blanket requirements in grant contracts that would essentially force authors and journal publishers to compromise their copyrights—without compensation for the publishers' investments. This type of government action might lead agencies to claim that taking and distribution of the copyrighted articles is consistent with copyright law. But it is not consistent with copyright principles. Such principles are meant to prevent harm to the potential market for copyrighted works—harm which would be highly likely if near-final earlier versions of the copyrighted works were distributed worldwide, for free, in competition with the rightsholders' final published version.

An unintended consequence of the NIH Public Access Policy as it affects publishers' and authors' rights appears to be an increase in the rise of piracy of U.S. scientific and scholarly journal articles globally. For example, over the

¹⁰ "Political Interference with Climate Change Science Under the Bush Administration," Report by the House Committee on Oversight and Government Reform, available at <http://www.lpl.arizona.edu/resources/globalwarming/documents/political-interference.pdf>

past several years, Chinese companies have been acquiring electronic copies of copyrighted U.S. scientific journal articles from government and university libraries and reselling them through online websites to legitimate producers' primary customers. U.S. publishers and scientific societies are facing annual losses of \$80-100 million as a result of this expanding theft and have been working closely with the Office of the U.S. Trade Representative and U.S. Department of Commerce to address this egregious problem.¹¹ However, in recent months, we have found evidence that suggests Chinese pirate companies may also be mining full text articles from NIH websites and reselling these articles to their subscribers.¹² Unfortunately, these Chinese entities are now relying on a U.S. government website to facilitate the theft of U.S. intellectual property.

The underlying policy consequence is that making peer-reviewed journal articles freely available via NIH websites appears to be contributing directly to piracy of copyrighted U.S. biomedical journals and journal articles. For many journal publishers, more than 50% of their revenue comes from overseas subscriptions. Expanding the NIH model to other agencies will directly undermine government and industry efforts to protect U.S. intellectual property rights abroad, undercutting the Administration's "National Innovation Strategy," which notes that "[i]ntellectual property is to the digital age what physical goods were to the industrial age" and that the U.S. government "must ensure that intellectual property is protected in foreign markets."

Meet the needs of the public and stakeholders in the research community by providing access to taxpayer-funded research results. Publishers agree that taxpayers should have access to taxpayer funded *research*, and that the government should ensure access to such *research*. It must be noted, however, that while taxpayers fund research, they do not fund the publication of research results in peer-reviewed science journals. Accordingly, accessibility to the results of taxpayer-funded research, which the Government can provide through a variety of means, does not equate to accessibility to research articles published in peer-reviewed science journals.

Government, through its funding agencies, supports the research enterprise that generates outputs such as experimental data, technical reports, grant reports, and conference papers. Consequently, government has an important interest in ensuring that research data and technical reports are accessible to the public whose taxes funded their production. .

A policy supporting broader access to *research* would meet a clear need: the 2006 Audit of Interest Study by the NSF Office of Inspector General determined that project reports and publication citations were the preferred form of research results that the public would like to access. In addition, scholarly research articles are not usually very comprehensible, even to researchers or practitioners in the field and certainly not to the public at large. In terms of the needs of the research community, according to a recent survey, access to journal articles is only 14th on researchers' lists of concerns, behind lack of funding (1st) and too much bureaucracy (5th).¹³ Any further development of federal public access policy in this area should be based on thorough assessment of the needs of all stakeholders. For example, the Administration could consider a pilot program similar to the EU's PEER (Publishing and the Ecology of European Research) initiative. PEER represents a three-year collaboration (2008 to 2011) between publishers, repositories and researchers that will investigate 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. Empirical results from this program will inform the EU's future policymaking on public access issues.

ADMINISTRATION NEXT STEPS

3. Consider additional audits/assessments of public and science community access objectives to ensure evidence-based approaches
4. Review proposal for timely agency-wide implementation of NSF Public Access Policy as codified in the America Competes Act

At least one highly-successful and long-standing example of public-private partnerships to drive public access to – and public benefits from – the results of federally-funded research has demonstrated that such endeavors need not put the Federal Government in the position of expropriating any intellectual property rights of its private sector partners or, in the case of science journal publishing, "partners" who do not receive funding or have any contractual relationship with the Government. Indeed, under the Bayh-Dole Act, P.L.96-517, and the related Stevenson-Wydler Technology Innovation Act, P.L.96-480, the Federal Government has, for over thirty years, successfully utilized patent rights for inventions developed within the framework of cooperative research agreements between federal agencies, universities and private industry as incentives for universities and private

¹¹ 2009 U.S.-China Joint Commission on Commerce and Trade (JCCT) Factsheet. Available at <http://www.ustr.gov/about-us/press-office/factsheets/2009/october/us-china-joint-commission-commerce-and-trade>

¹² <http://www.kjmed.com.cn/kjmed/Products/pubmed.html>

¹³ Access by UK small and medium-sized enterprises to professional and academic information Mark Ware Consulting Ltd for Publishers Research Consortium (April 2009)

industry to participate in the further research and development necessary to bring federally-funded innovations to practical application in the marketplace. Apparently, Congress recognized that there is nothing improper or unseemly about permitting universities and other private sector entities to benefit from exploiting intellectual property rights in the products of federally-funded research; in fact, Congress' decision to grant patent rights in inventions resulting from federally-funded research to academia and the businesses that develop and commercialize them has created jobs and businesses and generally benefited the public. In the case of science journal publishing and federally-funded research, publishers are asking much less of the Federal Government, since publishers do not seek to acquire any intellectual property rights in the research that is described in the articles they publish, but only to be able to exploit the intellectual property rights that they acquire from the federally-funded researcher with respect to the specific written account of the research that the researcher independently brings to the publisher for publication in the publisher's peer-reviewed journal.

Government should not impose mandates that pertain to outputs of the journal publishing process, including accepted author manuscripts as well as published journal articles. Such policies are not justifiable or warranted, do not meet a clear need and could cause significant harm. Any policy to mandate access to the outputs of the publishing process could destabilize the dynamic and well-functioning journal publishing system upon which researchers and society at large depend, and thereby cause serious unintended consequences. A mandatory public access policy will not reduce the costs of scientific publishing, but it could shift the burden of those costs away from subscribers and users of science journal articles and onto the authors and the funding agencies.

A Sustainable Federal Public Access Policy. AAP/PSP and the Coalition strongly agree that the Government should take steps to increase public access to the results of publicly-funded research. Specifically, we support a statutory directive for agencies to ensure such public access consistent with the model enacted by Congress in 2007 in the America COMPETES Act, which established a public access policy for research funded by the National Science Foundation (NSF). We support extending this model to all federal agencies that fund science research.

Under an America COMPETES Act model, each federal agency that provides funds for the performance of experimental, developmental, or research activities should provide, in addition to providing a database of summaries of funded projects, the following information to the public, in a timely manner and in electronic form through an agency Web site:

- (A) final project reports;
- (B) citations of published research documents resulting from research funded by the agency;
- (C) readily accessible summaries of the outcomes of agency-funded research projects.

This approach would adhere to the President's pledge in his Transparency and Open Government memorandum to "take appropriate action, consistent with law and policy, to disclose information rapidly in forms that the public can readily find and use." Expanding the NSF public access provisions across federal agencies will help establish a government-wide transparency framework that will ensure that research dollars are consistently accounted for. Taxpayers will also gain access to the health, science and technical research results they have funded in formats that they can more easily understand. Finally, adopting a comprehensive public access policy according to the NSF model will enhance government collaboration with the private sector by maintaining copyright protection for private-sector works that explain such research results, consistent with other priorities of the President for encouraging cooperation with the private sector, innovation and protecting intellectual property rights.¹

Publishers are ready to develop this model into a collaborative public-private partnership by considering provision of journal abstracts and developing links from publication citations in project reports to the peer reviewed published journal article hosted on the publisher's website.

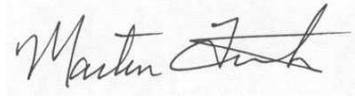
Conclusion

The implementation of a comprehensive public access policy that extends the NSF-model, as enacted in the America COMPETES Act, to other funding agencies will firmly support the transparency, participation and collaboration pillars of an effective and open government. Such an approach will allow the Federal Government to broadly disseminate research results, while ensuring that copyright protections in private-sector research works are not weakened and that a healthy private publishing sector continues to complement the research enterprise by providing the services that are essential to the advancement of science and knowledge. In contrast, the NIH model, created prior to President Obama's Administration, fails to properly balance stakeholders' interests and needs. The NIH model has created a means for facilitating international piracy, in a global market upon which U.S. journal publishers rely to support their investment and innovation in publishing. U.S. publishers have invested hundreds of millions of dollars in developing web-based digital tools to improve scholarly research archiving, retrieval, navigation, cross-reference and use of science research information. Intellectual property rights are critical to ensuring that publishers have an incentive to invest in scholarly publishing innovation. They are also essential to ensuring the President meets his goals of a more transparent and participatory collaboration

between the private sector and the Federal Government in leveraging federal investments in research for the benefit of society as a whole.



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