

January 12, 2012

Office of Science and Technology Policy
Executive Office of the President
Washington, D.C. 20502

RE: Request for Information: Public Access to Peer-Reviewed Scholarly Publications
Resulting From Federally Funded Research

Dear Sir/Madam,

The American Association for Cancer Research (AACR) is pleased to respond to the Office of Science and Technology Policy Request for Information regarding “Public Access to Peer-Reviewed Scholarly Publications Resulting From Federally Funded Research.” AACR, a not-for-profit association with more than 32,000 members, is the oldest and largest non-governmental scientific organization in the world dedicated to advancing cancer research. The programs and services of AACR foster the exchange of knowledge among scientists involved in cancer research. AACR publishes 7 peer-reviewed scientific journals and a magazine for the general public; convenes topical scientific think tanks, conferences, workshops, and an annual meeting; offers fellowships and grants; raises public awareness of the progress and cause for hope in cancer research; and advocates for federal research funding.

As a scientific society publisher, AACR is dedicated to widely disseminating the results of research and supporting the scientific enterprise. AACR invests in the journals it publishes and the articles within them through various activities including peer review, copy editing, composition, electronic tagging, online journal hosting, printing, distribution, archiving, promoting the results to various audiences, holding editorial retreats, and applying new online features and functions.

AACR voluntarily makes *all* journal content freely available 12 months after publication through our online journal sites. AACR’s decision to make our content freely available after a 12-month embargo period was based on the particulars of our publications with the desire to sustain them and reinvest in the many activities the Association supports that contribute to the scientific endeavor. We join many other publishers in this regard—working together without government mandates to provide more access to scholarly content than ever before. Federal mandates that compete with the work of private-sector publishers jeopardize the sustainability of a robust peer-review publishing system which the vast majority of scientific researchers consider first-rate.

Publishers have an excellent record of providing long-term stewardship and broad public availability of the peer-reviewed scholarly publications that report on, analyze, and interpret federally funded scientific research. We believe that the best approach to achieving greater public availability to peer-reviewed content and to improve productivity is through public/private collaborations with all stakeholders. We appreciate the opportunity to respond to the Request for Information and provide comments in response to Questions 1, 3, 6, and 8. We look forward to working with the Office of Science and Technology Policy and other stakeholders to further consider public access.

(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?

Economic/Productivity Considerations

We believe that investment made by publishers has contributed to U.S. job creation and economic growth. Fifty thousand Americans are now working in the publishing industry. Access to peer-reviewed articles produced by private-sector publishers of research supported by federal funding should be considered with publishers based on the evidence of benefit while weighing the risk of destabilizing the publishing system upon which researchers and society depend for scientific integrity and, dissemination of information. This assessment should be determined by cooperation and collaboration, not by regulation.

AACR, like many American scientific society publishers, reinvests in the scientific enterprise and fosters its innovation and advancement. Long before the NIH Public Access mandate, AACR determined that its business model and mission would include free access to *all* content on our journal sites after a 12-month embargo, while making some other content immediately available. The creation of the costly PubMed Central database duplicated these efforts and spent federal funds that could have been better used on research itself. A more efficient method would be to leverage the valuable work already done by publishers by developing cooperative linking. Publishers could provide the federal agencies with the metadata and abstracts of federally funded peer-reviewed articles so that it could build an aggregated site linking together all content derived from the research.

Existing and New Markets

Lay Public

One market for federally funded research findings is to provide the general public with access to the information for which their tax dollars have paid. Much of the research that is funded by the NIH is pertinent to health, and people facing health issues are increasingly turning to online searches to find out more about prevention and treatments. Although many publishers make their peer-reviewed articles available to the lay public, the original research papers are often very technical and can be of limited use to much of the population. Many offices within federal agencies work to translate these findings into products that can be used by the average patient. Government examples of this type of compilation include the National Cancer Institute's Physician Data Query Program (PDQ) and the Agency for Healthcare Research and Quality's (AHRQ) Effective Healthcare Program (EHP), both of which prepare patient summaries and decision aids for various conditions and treatments. If the government would like to grow markets for lay consumption of research findings, then the focus should be on programs like PDQ and EHP rather than on simply providing access to original research articles having federal funding. However, the government can link its content to the final article published on the journal site so that it is available for the "expert" patient.

One way in which AACR and many other publishers have demonstrated our commitment to addressing patient and caregiver desire for research articles is by making them freely available upon request. Another example of a cooperative publisher initiative is patientINFORM (<http://www.patientinform.org/>)—a program that brings information from voluntary health organizations

together with scholarly articles for patients and caregivers. There is also a new initiative driven by the Association of American Publishers/ Professional/Scholarly Publishing Division; International Association of Scientific, Technical & Medical Publishers; and the Copyright Clearance Center. AACR is engaged in this pilot program, which aims to make it easier for patients and caregivers to obtain access to AACR articles as soon as they discover the material online. Finally, AACR continues to make any article immediately available to any patient or caregiver who requests it.

Research Community

Efficient research relies on the most complete and up-to-date understanding of a given research field, and journal articles are the gateway to that current understanding. While the information contained in a federally funded article is of importance, the advent of indexing and interoperability has given researchers easy access to information that is separated by one or two degrees from the article being accessed. This is done through active links in the bibliography to cited papers, and by the ability to see and access other articles that have cited the article since the time of its first publication, a feature that AACR makes available to readers. Dynamically updating a list of other articles that have referred to the article in question is a way for researchers to continually keep up to date on the state of the science. The value-added feature found on many publishers' sites points readers to the most recent and relevant articles, not those limited to a specific funding body. Rather than trying to create an accessible repository of documents that already exists on publishers' sites, the government should publish the metadata and abstracts of federally funded work and link users back to journal sites where the network of connected research is more fully presented.

New markets are available to the government, when the focus of the question moves beyond peer-reviewed publications. The many contributions of federally funded research that never gets published in journal articles are untapped. As the *British Medical Journal* stated, "...fewer than half of trials funded by NIH are published in a peer-reviewed biomedical journal indexed by Medline within 30 months of trial completion. Moreover, after a median of 51 months after trial completion, a third of trials remained unpublished." (BMJ 2012; 344 doi: 10.1136/bmj.d7292.) In addition, journals rarely publish research with negative findings, but access to this information can surely benefit the research community.

Agencies could grow new and related markets that originate from federally funded research by providing access to the final grant research report and the data that underpin that research. The final research reports of some agencies are already publicly available. Broadening these requirements and presenting report outcomes in a timely, consistent, and useful format with interactivity among agency sites would be of great value. For research that eventually gets published in peer-reviewed journals, linking to and from the research reports, data, and the final article on the publisher's site would assist scientists in analyzing and interpreting information. It would increase productivity, eliminate duplication of work and products, and free up resources that the government is currently spending on duplicating efforts of publishers, (e.g., PubMed Central). Publishers have already been working in partnership with groups such as CrossRef to develop standards for data and metadata to make research more readily searchable and discoverable. Collaboration on these and other efforts would benefit the scientific enterprise.

(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?

Although one might presume that a centralized approach would be the most efficient way to manage access to publications with federal funding, it is limiting in many ways. A centralized site created and managed by the government, such as PubMed Central, is costly, replicates the work that publishers have already done, and limits users access to content and a variety of functionality. A distributed, decentralized approach feeds innovation that is sparked by competition among publishers and other companies. The decentralized approach that includes information of all types, not just those derived from government-funded research, is of greater value to the user. Publishers and other companies have already successfully been promoting interoperability, advancing search, and developing analytic tools. Both not-for-profit and commercial publishers working in a competitive environment have moved quickly and decisively to introduce new technologies that meet researchers' demands for faster and more user-friendly delivery of scholarly information. Some examples of new technologies are mentioned below.

The Digital Object Identifier (DOI) is a unique identifier for each piece of content in a scholarly publication. The DOI, which has now been assigned to more than 50 million items, is a standard in the publishing industry with nearly 1,000 publisher participants. Work has been ongoing to standardize metadata for such identifiers for individuals, author contributions, and funding information. Federal agencies should work with publishers and other stakeholders who have expertise in developing and promulgating metadata to ensure standardization across disciplines and share best practices.

Publishers have collaborated with librarians and database providers to establish COUNTER (Counting Online Usage of NeTworked Electronic Resources), which has produced an international set of standards and protocols governing the recording and exchange of online usage data. These standards enable publishers to better understand the usage patterns of their digital content and for librarians to track the usage of their digital collections. A variety of Internet search engines, abstracting services, and other tools do an excellent job of ensuring the discoverability of research, and innovations and advancements of these and other tools continue to be developed.

A centralized registry of unique identifiers, Open Research and Contributor ID (ORCID), has been created to address the author name ambiguity problem in scholarly publishing. These identifiers can be linked to the researcher's output to enhance the scientific discovery process and to improve the efficiency of research funding and collaboration within the research community.

At a time of shrinking federal resources, use of funds to replicate work that is already being done by private-sector publishers is unwarranted. If the federal government is concerned that the long-term stewardship for peer-reviewed articles to which they fund the research is at risk, the Library of Congress and/or other agencies should be charged with creating an archive that can be used for access to these articles if they became unavailable.

(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?

Federal agencies invest in the research but it is the publishers who invest in the scholarly articles. As a result of the value-added activities AACR provides to its journal articles, no research article is published as it was originally submitted. These unique contributions strengthen the research literature and improve its accessibility—without direct taxpayer support. AACR invests in the submissions its journals receive through the work of our scientific editorial boards and staff who consider the submissions, identify peer reviewers, evaluate the peer reviewers' comments, and analyze requested changes or rebuttals regarding revised manuscripts. Work of this type is done on many more manuscripts than those that eventually get accepted and go through other added-value work such as copy editing, composition, electronic tagging, online journal hosting, printing, distribution, and promoting the results

to various audiences. Federal agencies and publishers should make voluntary agreements to make the peer-reviewed articles available on the publisher site within 12 months after publication, or whatever time is appropriate for the publisher to sustain its business. The publisher should provide the federal agency the metadata and abstract for it to link to the final article. This will avoid unnecessary duplication of products or unpaid access to content to which publishers have invested and hold copyright.

(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?

There is no uniform optimal embargo period across all fields or for all types of publications appearing at various frequencies. Content in different disciplines has diverse patterns of usage, citation, and life spans. A 12-month embargo, but not shorter, is acceptable to AACR, with the articles held on the AACR journal site. We have considered what is needed to sustain our publishing program and to reinvest in the many activities the Association supports that contribute to the scientific endeavor. The NIH Public Access mandate requires NIH-funded, peer-reviewed accepted manuscripts to be deposited in PubMed Central and made freely available 12 months after publication. The final versions of these articles, along with related content, such as letters, commentaries, and retractions or corrections, are available on the sites of the individual AACR journals. In the time following the NIH Public Access mandate, AACR has seen a loss of some usage to articles on our websites. AACR makes editorial and business decisions based on usage information, and we cannot get sufficient usage information from PubMed Central to inform these decisions. Because libraries and other institutions base journal purchasing decisions on usage, housing journal articles on PubMed Central not only duplicates our efforts but also interferes with them.

AACR stands behind its voluntary decision to make all content freely available on our site 12 months after publication. An embargo of an earlier release would threaten our ability to sustain our publishing program and contribute to the Association's many activities that advance cancer research and the scientific endeavor.

Sincerely,

Diane Scott-Lichter
Publisher