

**BEFORE THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY**

**REQUEST FOR INFORMATION CONCERNING**

**PUBLIC ACCESS TO PEER-REVIEWED SCHOLARLY PUBLICATIONS**

**RESULTING FROM FEDERALLY FUNDED RESEARCH**

January 12, 2012

My name is Ali Sternburg and I am a third-year law student at American University Washington College of Law. My views are influenced by my study of intellectual property law and policy and its history, my position on the Executive Board of the *American University Intellectual Property Brief*, an online, Creative Commons-licensed publication, and my role on the Steering Committee of the Right to Research Coalition. I write on my own behalf.

As a law student, I admit, I don't frequently read scientific articles. However, as a lawyer I may represent scientists, doctors, patent holders, entrepreneurs, and many others who do rely on scientific information—information that I would need to help them. As a student (both literally, for the next few months before I graduate this May, and figuratively, for the rest of my life as I continue to seek and share knowledge and information), I am concerned about the priorities of some policymakers who favor the private interests of certain publishers over the interests of the broad American public in research and knowledge; the problem is compounded by the fact that American taxpayers have funded this research. This information should be made publicly accessible, and I applaud the Office of Science and Technology Policy for seeking input from the public on this important issue. My generation—the future leaders of our country—must be properly educated and have the tools to innovate and create jobs, and the skills to be hired by those who have created jobs.

During law school, I have worked on two U.S. Supreme Court *amicus* briefs, in which we cited scientific articles and information. I worked on an *amicus* brief on the merits stage of *Sorrell v. IMS*, 131 S. Ct. 2653 (2011), a case which discussed prescription drugs and health care policy, and I am currently working on an *amicus* brief to grant a writ of *certiorari* in [a case where the cert petition has not yet been filed, so I cannot disclose the case name] which considers DNA molecules and human genes. Obtaining articles for these briefs showed me the challenges and costs of accessing specialized scientific information, in addition to the widely interdisciplinary nature of legal research.

In addition, I plan to work in support of the public interest. This means I am deeply invested in the public benefit that must be balanced with all private rights, especially in fields like intellectual property. This also means that I may not always be able to afford access to expensive paid resources. It is inconceivable for me and other members of the American public to not have access to the research that our tax dollars help fund as an investment for our future.

Also, the timing of this RFI allows me to briefly voice my strong opposition of H.R. 3699, the “Research Works Act,” introduced on December 16, 2011. This bill would prohibit Federal Agencies from conditioning their grant funding to require that all members of the public be guaranteed online access to the products of the research that their tax dollars fund; it essentially is aimed at reversing the highly successful National Institutes of Health (NIH) Public Access Policy.<sup>1</sup> Rather than impede access to these resources, as this bill would, the Government should actively ensure that students and the general public get the full benefit of our collective investment in science, a recognition that this RFI makes clear. The NIH and other Agencies must be allowed to ensure that taxpayers get timely, public access to the results of research funded with taxpayer dollars. The NIH policy should be expanded to other Agencies, rather than being reversed by sponsors of the Research Works Act.

**(1)** Are there steps that agencies can take to grow existing and new markets related to access & analysis of peer-reviewed publications? 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?

**Comment 1:**

Agencies certainly have the ability to enhance the market for access to and analysis of peer-reviewed publications. The most important step is to make the information freely and widely available, which encourages further research and collaboration. Making information available for free and without restrictions does not mean that it cannot be monetized and commercialized in the future; in fact, research has shown just the opposite.<sup>2</sup> The ability to access and reuse articles enables innovation, by individuals and companies, to build products and services, using content funded by the public to serve the public. Providing broad availability and allowing full utility of this information encourages innovation and development in diverse industries – from the biotech sector to pharmaceuticals to renewable energy to even the publishing industry.

This type of access is called Open Access. “Open Access (OA) is the free, immediate, unrestricted availability of high-quality, peer-reviewed scholarship over the Internet – combined with the rights to use this information to its fullest possible extent.”<sup>3</sup> Open Access ensures that more students and more people in general – including particularly those who currently cannot afford access otherwise – not only stay informed of cutting-edge ideas, but also discover new uses and applications for research. Providing faster access allows ideas generated to be incorporated into development cycles more quickly,

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<sup>1</sup> See also Michael B. Eisen, *Research Bought, Then Paid For*, N.Y. TIMES, January 10, 2012, available at <http://www.nytimes.com/2012/01/11/opinion/research-bought-then-paid-for.html>.

<sup>2</sup> See, e.g., Mike Masnick, *The Grand Unified Theory On The Economics Of Free*, TECHDIRT, May 3, 2007, available at <http://www.techdirt.com/articles/20070503/012939.shtml>.

<sup>3</sup> The Right to Research Coalition, *The Solution: Open Access*, <http://www.righttoresearch.org/learn/solution/index.shtml>.

speeding the launch of new services and products into the marketplace, stimulating economic growth, and creating new job opportunities across broad sectors of the economy. The complete collection of articles resulting from publicly funded research must be made freely accessible, so that the public can fully use them (e.g., text mine, data mine, compute on them, create derivative works, etc.) without restrictions.

Policies for archiving publications and making them publicly accessible will directly grow the economy and improve the productivity of the scientific enterprise. Open Access to research articles is a critical driver of scientific innovation and productivity. Open Access lets people get to – and read more – information than they previously could. This is enhanced by new tools for incorporating more articles into research faster, including machines as a new category of readers and users, and leads to vast, previously unobtainable and unrealized ideas and connections. Opening access to the widest possible audience encourages contributions and citations by more minds, growing societal and institutional knowledge, and ultimately aiding this country.

Open Access allows research results to be quickly incorporated into the teaching and learning process – improving the quality of education quickly and cost-effectively. Professors can only teach what they have access to, with the most disparate impacts often felt in the regions that need intellectual advancement the most. Providing American students with the most complete, up-to-date education possible boosts U.S. economic competitiveness, especially in innovative, cutting-edge fields. Today's students will build the foundation of tomorrow's economy – Apple and Google were both started by entrepreneurs the age of today's current undergraduate and graduate students. If students don't have full access to critical publicly funded research, we're potentially missing out on innovative breakthroughs that could create jobs and be built into the next Apple and Google. Open Access helps students get projects off the ground and build businesses around their research. Losing access to the relevant literature is a significant barrier for students who might consider dropping out of school to start a business around their research. When students graduate, they lose access to the vast majority of research that is subscription-access only. This impedes students' ability to stay current in their field and hinders their ability to hit the ground running when they put their education to work. This cost is even greater in a weak economy such as the present, where students may spend a significant amount of time in their job search.

The relative costs of Open Access policies are minimal compared to the vast public benefit. The NIH Public Access Policy costs approximately \$4 million per year out of a \$30 billion budget, an investment of less than 1/1,000<sup>th</sup> of 1% that results in access to all NIH-funded research, which is used by more than 500,000 unique users per day through PubMed Central.<sup>4</sup> According to a 2010 study, an expansion of the NIH public access policy to cover all federally funded research with a six-month embargo period would provide a 500% return on investment to the U.S. Government, generating benefits eight

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<sup>4</sup> Letter from Dr. Francis Collins, Director of the NIH, to Representative Joseph Pitts, December 2011, available at [http://publicaccess.nih.gov/Collins\\_reply\\_to\\_Pitts121611.pdf](http://publicaccess.nih.gov/Collins_reply_to_Pitts121611.pdf).

times greater than costs, resulting in a net present value gain worth approximately \$1.5 billion.<sup>5</sup> Open Access is thus an excellent return on investment.

We need full Open Access (free, immediate, unrestricted availability of high-quality, peer-reviewed scholarship online, with the broadest possible information reuse policy), in order to create the environment that will improve students' educations, maximize scientific productivity, accelerate commercial innovation, and reinvigorate the U.S. economy. Restrictions that limit how we can access and use the scientific research we paid for limits the value and the return to American taxpayers. Broad reuse allows researchers to continue to find and add value from this public investment, now, and in the future, without having to duplicate research.

Students should be guaranteed Open Access to cutting-edge research upon which their education depends, and have the ability to advance scientific discovery and stimulate innovation in all scientific disciplines. Immediate, Open Access provides students with the most up-to-date education; anything less limits students'—and likely professors'—knowledge, stifling U.S. innovation and economic competitiveness.

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

**Comment 2:**

Article I, Section 8, Clause 8 of the U.S. Constitution says “Congress shall have the power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors, the exclusive Right to their respective Writings and Discoveries.” Over time, copyright has expanded in scope, subject matter, and duration, generally at the interest of owners of existing content who are threatened by technology. Copyright in new works currently lasts for the life of the author plus 70 years. The public should not have to wait until copyright terms expire to have access to knowledge, especially given the rapid pace of development.

The fair use doctrine (17 U.S.C. §107) and other exceptions and limitations to copyright are available, but they rarely extend to copying entire works, even when it is for educational purposes. The fair use doctrine can be invoked as a defense to violating one of the copyright holder's exclusive rights under 17 U.S.C. §106—reproduction, distribution, making a derivative work, public performance, and public display. The right to make a derivative work extends to uses that build upon the work, transforming its context and adding value, such as making it searchable, machine-readable by new devices, translating it, downloading and analyzing data, or making other adaptations. This can be justified under fair use, but not always, especially when there is economic

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<sup>5</sup> Houghton, et al., *Economic and Social Returns on Investment in Open Archiving Publicly Funded Research Outputs*, July 2010, p. 7-8, available at <http://www.arl.org/sparc/bm~doc/vufirpaa.pdf>.

gain involved. The risks involved may stifle innovation and research, which harms everyone. Therefore, permissible actions with information should be broader than fair use. For instance, open licenses developed by Creative Commons permit users to do more with works than is allowed under copyright. In addition, information should not be locked down with Digital Rights Management and Technological Protection Measures that don't even allow for potential fair uses. Full use rights (e.g., distribution, reuse, text mining, data mining, computation, creation of derivative works, etc.) must be an integral part of a government-wide public access policy.

The publication I work on, the *American University Intellectual Property Brief*, publishes articles online under a CC-BY license, and we permit authors to retain their intellectual property rights and publish in other journals if they wish. To illustrate, below is an excerpt of an email from our Senior Articles Editor:

We currently publish the IP Brief under the Creative Commons Attribution 3.0 United States License. Anything that we jointly produce and publish will be able to be dispensed in print or online by anyone else as long as there is an attribution to you and to the American University Intellectual Property Brief. As far as you and the IP Brief go, you will always be free to publish your unedited work (the version you submitted to us). If you choose to update your article at some point in the future and you keep edits that we will work on over the semester, the [CC-BY license] will apply. But you could take that new article anywhere and publish it with anyone you would like. I hope that works for you. If you have concerns, we can always work out something else. We would be happy to do that.

**(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?

**Comment 3:**

If the publications are decentralized among different sources, whether private or public, the Federal Government should have an accessible, mirrored repository that includes all articles and other content. This may be accomplished through an archive, which is put online and accessible to be used by all; all necessary rights must be given to the Federal Government for this purpose. Such an online resource should consider open-source programs and licenses, interoperability, accessibility for the disabled, translations, searchability, and other technological concerns, so that this an archival resource that will continue to be useful in the future.

**(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?

**Comment 6:**

A successful policy will be easily implemented and consistent. The NIH policy can serve as a model, in which researchers consent at the time of grant acceptance to make their work freely accessible in PubMed Central. In addition, Agencies can require articles resulting from their funding to be made available under an open license, such as the Creative Commons CC-BY license.

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

**Comment 7:**

Ideally all peer-reviewed publications resulting from federally funded research should be made available to the taxpayers who funded them, which in turn allows them to be read by more people than just the few attendees privy to the meeting. Why keep it locked away? After all, don't researchers share research in order for it to be read and improved-upon by their peers? Another point to note is that this public access policy for other types of publications should be separate from the general public access policy for journal articles, due to inherent differences.

(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.

**Comment 8:**

The ideal embargo period is to not have an embargo at all. Students should have Open Access to the latest developments and research for their own educational benefit, for the benefit of their future employers, and ultimately for the benefit of this country. The U.S. Government should not sacrifice the education of its citizens in order to please the publishing industry and their lobbyists and the congressional campaigns they fund. An academic semester is generally 3 to 4 months long, and so the length of the embargo period (e.g., the difference between 0 months and 6 months and 12 months) can have a significant impact on what is taught and learned. Finally, there has been no evidence presented by any publisher that the NIH public access policy harms its business, which provides strong empirical proof that public access does not harm subscription-based publishers. This essentially means it does not harm anyone, while helping everyone.