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September 18, 2008

The Honorable Howard Berman
Chairman
Subcommittee on Courts, The Internet, and
Intellectual Property
House Judiciary Committee
B-352 Rayburn House Office Building
Washington, DC 20515

The Honorable Howard Coble
Ranking Member
Subcommittee on Courts, The Internet and
Intellectual Property
House Judiciary Committee
B-336 Rayburn House Office Building
Washington, DC 20515

Dear Congressmen Berman and Coble:

Thank you once again for providing me with an opportunity to testify before the House Judiciary Subcommittee on the Courts, the Internet and Intellectual Property. It was truly an honor to be able to testify on behalf of society publishers, the group that will be damaged most by the current Public Access Policy. During the course of the hearing, several issues were raised that I thought needed clarification and comment. Please accept the attached as supplemental testimony to the hearing. If I can provide additional input on the issues raised during the hearing, I would be pleased to address those issues.

Sincerely yours,

Martin Frank, Ph.D.
Executive Director

Cc: The Honorable John Conyers, Jr.

Additions to Statement

Martin Frank, Ph.D.

Executive Director, American Physiological Society

Coordinator, DC Principles Coalition

September 17, 2008

Subcommittee on Courts, the Internet, and Intellectual Property

HR 6845 - Hearing on the Fair Copyright in Research Works Act

Publishers Provide Interconnectivity of Scientific Information

Publishers Routinely Embed Links From Articles to Databases, Supplemental Data and Other Articles

In his testimony, Dr. Zerhouni suggested that only NCBI/PubMed Central could create a dynamic discovery environment by linking articles to the many databases that exist within NCBI. In reality, many journal publishers already imbed in published articles database accession numbers (for nucleic acid, genome mapping, and protein expression databases) to facilitate reader discovery and further linking from within a research article into a variety of such database resources. Links are also provided to privately held databases as well as to those databases maintained by the NIH. Publishers use "forward citation linking" to enable the reader to trace how articles are cited by other scientists, and often even the general media. Publishers developed the widely used Digital Object Identifiers (DOI) and CrossRef to standardize article reference linking across primary journal databases and link information elements within an article to a range of data repositories (see next section for more detail on DOI and CrossRef). The general media can use hyperlinks to direct lay readers to more specialized sources. Publishers also leverage web linking and systems of specialized nomenclature (e.g. Chemical Abstracts Service (CAS) Registry Numbers) to enable chemical structures and reactions to be discovered from within their primary journal content (e.g. American Chemical Society (ACS) and its CAS registry and project PROSPECT from the Royal Society of Chemistry). NIH itself continues to compete with the private sector in this instance, by linking PubMed Central article records to NIH's own PubChem database, a data source that seeks to replicate much of the functionality and content of ACS' own Chemical Abstracts Service and SciFinder discovery tools. Through the licensed use of their copyrighted works, publishers permit the linking of their content to other integrated databases of information such as Thomson Reuters' (ISI) Web of Science; Reed Elsevier's Scopus, and ACS' Chemical Abstracts Service.

Publishers use linking technology to enable public access via initiatives such as PatientINFORM, where interpretive materials written for the public by communications specialists (e.g. at American Diabetes Association, American Cancer Society, American Heart Association) link such explanatory content for the lay reader to the original research articles. These articles are made available for free from publishers' web sites, via cooperative working relationships with publishers as rights holders. That sort of arrangement could accomplish the legitimate public access goals of the NIH, but the agency has spurned such cooperative activities. Publishers have also cooperated with NIH and its various databases via NLM's own "Linkout" technology, to integrate the literature with government-operated databases. This can be done across web platforms, and does not require a central repository of the sort NIH seeks to mandate with PubMed Central.

The many society publishers who use HighWire Press as their online delivery platform have availed themselves of this linking technology. (Indeed, publishers have proposed that such "Linkout" technology could have enabled the NIH to accomplish its goals for public access more expeditiously than the cumbersome procedures associated with a central manuscript repository). Since 1995, HighWire Press has been inserting links into online articles. These links point to databases, to other web sites, and to other articles. Some of the links point to NIH databases, so

the NIH repository is not the exclusive locus of links to NIH databases. (NIH/NCBI staff have been helpful in doing their part of the technology to allow publishers to link to their databases.) Journal publishers and NIH are both suppliers and users of content linking services.

In the clinical realm, the Cochrane Collaboration is an example of a cooperative international endeavor that maintains a database of evidence-based medical analyses and consensus statements that help clinicians separate "fact from fiction" in terms of statistically relevant clinical advances, with links from such analyses made possible to the underlying cited literature, via the DOI and CrossRef. Medical publishers have also cooperated with web-based information services such as WebMD to provide linking arrangements that enable both physicians and patients or their caregivers to navigate across authoritative information resources that contain trustworthy medical information.

There Are Well Established Standards in Medical Publishing to Provide Easy Linkages among Articles

Dr. Zerhouni expressed a desire to have NIH create a single standard for making connections between journal articles, databases, etc. Unfortunately, NIH has decided to work at cross purposes to efforts of publishers who conceived, promulgated, and implemented the wide use of Digital Object Identifiers (DOI) and CrossRef to standardize article reference linking across primary journal databases. The same Digital Object Identifier technology can link information elements within an article to a range of data repositories. The enabling technology is there to facilitate this. NIH has been encouraged to utilize the publisher-developed DOI in order to link back to the publisher's version of record. Instead, NIH has created its own standard (PMCID), separate from that developed by CrossRef and has mandated that investigators utilize the articles PMCID when submitting NIH applications and progress reports. By creating its own standard, NIH finds itself in competition with existing standards that are operated and funded by the industry. It will cause confusion and duplication in the industry, and presumably raise costs in both the government and private sector. Because NIH controls the allocation of the \$29 billion that investigators need for their research programs, it is highly likely that these individuals will adopt the PMCID as opposed to the DOI even though the former only applies to 80,000 articles annually. As a result, the PMCID will likely be adopted by the investigator/author community, directing users to the journal article on PMC, not the final published article resident on the publisher's web site and identified by a DOI. This will undermine publisher's investments and efforts to create a uniform standard, a standard that NIH refuses to embrace.

Promoting Patient Access to Published Information

NIH is not the only organization providing public access to the scientific literature. The publishers have done this very effectively since online access became possible in the mid- 1990s. Indeed, the public has greater access today than ever before. Most university libraries allow walk-in access to publishers' content online and in print. In addition, many publishers, especially the not-for-profit society publishers, provide free access to the content of their journal after an embargo period that might be anywhere from 2 years to 2 months. While under the

embargo period, all publishers, both commercial and not-for-profit, provide access to articles via a pay per view mechanism with the costs varying based on the journal.

In addition, PatientINFORM is a public health literacy project of the American Cancer Society, American Heart Association, American Diabetes Association and publishers that provides patients and caregivers with interpreted, up-to-date research about specific diseases, free and online at www.patientinform.org. Publishers provide the public with free links from these patient-friendly interpretations to the final published articles about this latest research immediately, without embargo. In addition, many publishers allow patients to download the articles they need for free if they certify that they need it for their own or a family member's medical condition. Publishers also work with their communications departments to issue press releases and lay summaries designed to educate the public on aspects of critical research articles. Similarly, the public information offices of universities work cooperatively with publishers to disseminate information of research findings of interest to patients. These efforts have been ongoing and predate the efforts of PubMed Central.

Finally, publishers have been working in developing countries to give free access to content through various programs. For example, HINARI (<http://www.who.int/hinari/en/>), Health InterNetwork Access to Research Initiative, is a partnership with the World Health Organization to ensure that relevant health information and the technologies to deliver it are widely available and can be used by health personnel, including professionals, policy makers, researchers and scientists. AGORA (<http://www.agricultureresources.info/>), Access to Global Research on Agriculture a partnership with the Food and Agricultural Organization, provides researchers, policy-makers, educators, and students in developing countries vital research that will ultimately help increase crop yields and food security. And finally, OARE (<http://www.oaresciences.org/en/>), Online Access to Research in the Environment, is a partnership with the United Nations Environment Program to expand the capacity of developing world organizations to improve the quality and effectiveness of environmental research, education and training in low-income countries. These services, supplied by publishers, provide over 100 developing countries with low cost or free access to over 4,500 peer-reviewed journals.

Setting the Record Straight on Public Access Policies in Other Countries

Some have suggested that the NIH public access policy requiring that manuscripts of scientific articles be made available for free access on the Internet is more conservative than similar policies in other countries. This is not the case. While public access policies in Canada, Australia and France have a 6-month embargo period, they are conditional policies that *do not require* authors to deposit their manuscripts.

The Canadian Institute of Health Research policy specifically states publications must be made freely accessible “*where allowable and in accordance with publisher policies.*”¹ Australia's public access policy “*encourages researchers to consider the benefits of depositing their data*

¹ See CIHR “Policy on Access to Research Outputs,” section 5.1.1 available at: <http://www.cihr-irsc.gc.ca/e/34846.html>.

and any publications,” rather than requiring deposit, making this policy voluntary.² The Agence Nationale de la Recherche in France also requests rather than mandates that authors submit their articles for public access.³

The majority of UK agency policies are flexible on the timeframe for public access deposits and require that copyright policies be respected—and not all of them are mandates. For instance, the Economic and Social Research Council (ESRC), a UK government agency, has a policy that publishers’ copyright, licensing and embargo policies must be respected.⁴

In addition, these foreign government agencies facilitate publisher compensation by allowing authors to include public access charges in their grants or charge back to the agency for public access. For example, the UK Medical Research Council (MRC) facilitates use of agency funds for public access.⁵

Proponents of the NIH public access policy also argue that the NIH policy is more conservative than the policies adopted by private funding bodies that require authors to deposit their articles within six months of publication. It is important to note, however, that these private funding bodies such as Wellcome Trust, Howard Hughes Medical Institute, British Heart Foundation, and Arthritis Research Campaign provide either the authors or publishers funding of between \$1,000 and \$5,000 per article to help offset the cost of peer review and other publishing costs and make the articles free for public access. The NIH has made no such arrangements with publishers. It allows the grantee to use a portion of their grant funds to defray the publisher fees, but leaves the author paying from his or her own pocket when the grant period is over or when grant funds are used up for research.

While these other countries have policies on public access to private sector articles reporting on government-funded research, the NIH’s policy is certainly not more conservative than these other policies—to the contrary. In contrast with the NIH policy, the policies of these other countries allow for flexibility and respect for copyright and publishers’ policies.

Who Pays for Peer Review?

In response to a question from Chairman Berman, Dr. Zerhouni stated that “NIH pays for peer-review costs.” This statement is misleading.

As stated in my testimony, the costs paid in the form of page charges only partially cover the total cost of publication. Many society publishers use a combination of author fees and

² See “Discovery Projects; Funding Rules for funding commencing in 2008,” section 1.4.5, page 13. Available at: http://www.arc.gov.au/pdf/DP08_FundingRules.pdf

³ L’ANR incite les chercheurs à intégrer leurs publications dans le système d’archives ouvertes available at: <http://www.agence-nationale-recherche.fr/actualite/13?lngInfold=159>

⁴ See “Research outputs - the ESRC’s guidance” available at: <http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Support/access/>

⁵ See “Further Guidance and Frequently Asked Questions on Open Access Publishing,” section 10.1. Available at: http://www.mrc.ac.uk/PolicyGuidance/EthicsAndGovernance/OpenAccessPublishingandArchiving%20FAQonOpenAccess/index.htm#P106_13538.

subscriptions to cover the total cost of publication, which typically lies in the range of \$3,000 to \$5,000 per article, and peer review represents about 20% of the total publication cost of an article. In the case of the APS, about \$1,000 of the \$3,000 cost to publish an article is recovered through author fees for specific publication-related charges. Society Members receive free electronic subscriptions so the remainder of the cost must be recovered through subscription sales to academic institutions in the U.S. and abroad, pharmaceutical companies, hospitals, etc.

Authors' fees help control subscription prices, but publishers still bears the cost of peer review. This generally involves staff salaries and expenses associated with peer review activities by Editors, software development, IT systems maintenance, plus central office staff to coordinate the process. While funding agencies such as the NIH allow researchers to use a portion of their grant funds to defray the publisher fees, if the researcher fails to set this money aside, or if the grant is completed when the researcher submits the article for publication (as often happens), this money must come from the researcher's or the institution's pocket.

NIH does allow publication costs to be paid from research grants, but only open access journals, which currently charge up to \$3,000 per manuscript seek to recover the full cost of peer review in this way. Society publishers have been reluctant to move to author pays publication because charging the full cost of publication would place the full cost burden on researchers and diminish resources available for the research needed to develop treatments and cures for disease.