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FAIR COPYRIGHT IN RESEARCH WORKS ACT

HEARING

BEFORE THE

SUBCOMMITTEE ON COURTS, THE INTERNET, AND INTELLECTUAL PROPERTY

OF THE

COMMITTEE ON THE JUDICIARY
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

ON

H.R. 6845

SEPTEMBER 11, 2008

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FAIR COPYRIGHT IN RESEARCH WORKS ACT

THURSDAY, SEPTEMBER 11, 2008

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COURTS, THE INTERNET,
AND INTELLECTUAL PROPERTY,
COMMITTEE ON THE JUDICIARY,
Washington, DC.

The Subcommittee met, pursuant to notice, at 1:03 p.m., in room 2141, Rayburn House Office Building, the Honorable Howard Berman (Chairman of the Subcommittee) presiding.

Present: Representatives Conyers, Berman, Watt, Lofgren, Coble, Sensenbrenner, Goodlatte, Chabot, and Issa.

Staff present: Shanna Winters, Subcommittee Chief Counsel; Christal Sheppard, Majority Counsel; Eric Garduno, Majority Counsel; Rosalind Jackson, Majority Professional Staff Member; Sean McLaughlin, Minority Chief of Staff and General Counsel; Blaine Merritt, Minority Counsel; and David Whitney, Minority Counsel.

Mr. BERMAN. The Subcommittee hearing on the Fair Copyright in Research Works Act will come to order.

First, I guess, a couple of just introductory points. One, since we don't have another Subcommittee hearing set between now and September 26, if we don't have a lame duck session, and I certainly hope we don't, but this could be the last hearing that I get to Chair with my dear friend, Howard Coble, who has been a really wonderful partner on so many issues, both when he was Chairman and now during the time I have been Chairman.

And so I will miss doing that. I will still be down the row a few seats, but someone else will have the slightly dubious honor of sitting here.

And I just want you to know how much I appreciate working with you, Howard, over the past couple of years and in the years before that——

Mr. COBLE. Thank you, Mr. Chairman.

Mr. BERMAN [continuing]. When the situation was reversed slightly.

And then I would like to very much thank Chairman Conyers generally and particularly on this issue and focusing the Subcommittee's attention on the impact of the NIH's open access policy on copyright law.

Chairman Conyers introduced H.R. 6845, the "Fair Copyright in Research Works Act," which deals with the extent of copyright protection for scientific journal articles.

The Federal Government, through agencies like the National Institutes of Health and the National Science Foundation, fund billions of dollars in research every year. Much of this funding is provided to researchers in the form of grants.

It is common practice for these researchers to write one or more articles concerning the findings of their research for publication in a scientific journal as a primary way of disseminating research results.

Researchers who receive these grants have historically been free to copyright their manuscripts. This meant that researchers could assign their copyright in the manuscripts, if they so choose, and to whom they choose—or is it to who they choose?

This has fostered a system whereby researchers frequently assign their copyrights to journal publishers, who, in turn, provide a peer review process for the manuscripts prior to publication.

The peer review provided is a lengthy vetting process by experts to ensure the science discussed in the articles is sound. The costs of peer review are largely borne by publishers.

This system has been successful in disseminating the information produced through publicly-funded research. Today, there are thousands of journals being published ranging from the well known New England Journal of Medicine to the more esoteric advanced journals, like Advances in Anatomic Pathology.

These journals are widely available to the public either directly via subscription or through libraries and provide lengthy discussion of the results of federally-funded research.

Critics of this system argue that the public should have free and unfettered access to scientific journal articles that discuss federally-funded research. Libraries, public advocacy groups and some Federal research funding agencies have pushed for implementation of open access policies applicable to federally-funded research projects.

In 2008, a provision in the Consolidated Appropriations Act takes a significant step toward this goal.

The provision gave the NIH authority to include within its research grant contracts the requirement that all grantees submit a copy of their peer reviewed manuscript for publication on the agency's PubMed Central Web site.

Publication of the articles on PubMed Central is to occur no later than a year after initial publication of the journal in which they appear. Articles that appear on PubMed Central will be in PDF format and will be freely available to the public to read, download and print.

Open access advocates argue that as a matter of principal, the public should have free access to journal articles because the public has already paid for the research results.

Furthermore, they argue that the high cost of journal subscriptions effectively limits their availability to the public and that under NIH policy, journal publishers will retain the copyrights in their articles and that the publishers are in no danger of going out of business, because they make the bulk of their sales in the first year of publication.

However, many publishers argue that while some may view the open access policy as simply a contract issue, the NIH mandate, in

fact, undermines the rights of copyright owners by greatly eliminating the right to control the access distribution and copying of their works.

Opponents also argue that this sort of open access policy jeopardizes the financial viability of most journal publishers. Publishers expect that many customers will likely forego continuing their subscriptions and simply wait for the articles to be freely available on PubMed Central.

Ultimately, opponents argue, an open access policy will place both the peer review process and the current robust nature of scientific journal publishing at risk.

The Fair Copyright and Research Works Act will essentially turn back the clock to the policy framework in effect prior to the 2008 Consolidated Appropriations Act. It prohibits Federal agencies from requiring researchers, as a part of a funding agreement, to assign our license back to the agency their copyright in extrinsic works.

The act defines extrinsic works as any work where a third party either contributed funding for the research underlying the work or provided meaningful added value to the work.

Meaningful added value in this context is meant to include providing a peer review process.

I see merits to both sides of the open access debate. On the one hand, it is only natural for taxpayers to expect to receive the fruits of what they have paid for. Also, it is a fair question to ask whether copyright is promoting the progress of science and the useful arts if it results in a system where researchers can't afford access to protected works.

On the other hand, journal publishers clearly provide a significant and valuable service to the scientific community in the form of peer review.

What will happen to scientific publishing and the peer review process in the absence of a strong copyright incentive? It is a difficult question, indeed, and is one which requires substantial and careful review.

Unfortunately, this Committee was never given an opportunity to evaluate the merits of the competing sides in the open access debate before the NIH mandate was made law in the 2008 Consolidated Appropriations Act.

Today's witnesses, however, I am sure, will help catch us up on this issue and will provide guidance on the merits of the NIH mandate and of the bill before us.

And with that, I am pleased to recognize the Ranking Member of the Subcommittee, my friend, Howard Coble, for his statement.

[The bill, H.R. 6845, follows:]

110TH CONGRESS
2D SESSION

H. R. 6845

To amend title 17, United States Code, with respect to works connected to certain funding agreements.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 9, 2008

Mr. CONYERS (for himself, Mr. ISSA, Mr. WEXLER, and Mr. FEENEY) introduced the following bill; which was referred to the Committee on the Judiciary

---

A BILL

To amend title 17, United States Code, with respect to works connected to certain funding agreements.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Fair Copyright in Research Works Act".

SEC. 2. LIMITATIONS ON FEDERAL GOVERNMENT REGARDING EXTRINSIC WORKS.

(a) IN GENERAL.—Section 201 of title 17, United States Code, is amended by adding at the end the following new subsection:

"(f) LIMITATIONS ON THE FEDERAL GOVERNMENT.—

"(1) LIMITATIONS REGARDING FUNDING AGREEMENTS.—No Federal agency may, in connection with a funding agreement—

"(A) impose or cause the imposition of any term or condition that—

"(i) requires the transfer or license to or for a Federal agency of—

"(I) any right provided under paragraph (3), (4) or (5) of section 106 in an extrinsic work; or

"(II) any right provided under paragraph (1) or (2) of section 106 in an extrinsic work, to the extent that, solely for purposes of this subsection, such right involves the availability to the public of that work; or

"(ii) requires the absence or abandonment of any right described in subclause (I) or (II) of clause (i) in an extrinsic work;

"(B) impose or cause the imposition of, as a condition of a funding agreement, the waiver

of, or assent to, any prohibition under subparagraph (A); or

"(C) assert any rights under this title in material developed under any funding agreement that restrain or limit the acquisition or exercise of rights under this title in an extrinsic work.

Any term, condition, or assertion prohibited under subparagraph (A), (B), or (C) shall be given no effect under this title or otherwise.

"(2) CONSTRUCTION.—

"(A) CERTAIN OTHER RIGHTS NOT LIMITED.—Nothing in paragraph (1)(A)(i)(II) shall be construed to limit the rights provided to the copyright owner under paragraphs (1) and (2) of section 106.

"(B) NO NEW COPYRIGHT PROTECTION CREATED.—Nothing in this subsection provides copyright protection to any subject matter that is not protected under section 102.

"(3) DEFINITIONS.—In this subsection:

"(A) EXTRINSIC WORK.—The term 'extrinsic work' means any work, other than a work of the United States Government, that is based

upon, derived from, or related to, a funding agreement and—

"(i) is also funded in substantial part by one or more other entities, other than a Federal agency, that are not a party to the funding agreement or acting on behalf of such a party; or

"(ii) represents, reflects, or results from a meaningful added value or process contributed by one or more other entities, other than a Federal agency, that are not a party to the funding agreement or acting on behalf of such a party.

"(B) FEDERAL AGENCY.—The term 'Federal agency' means any department, agency, or instrumentality of the United States Government.

"(C) FUNDING AGREEMENT.—The term 'funding agreement' means any contract, grant, or other agreement entered into between a Federal agency and any person under which funds are provided by a Federal agency, in whole or in part, for the performance of experimental, developmental, or research activities.".

(b) APPLICABILITY.—The amendment made by subsection (a) applies to any funding agreement that is entered into on or after the date of the enactment of this Act.

(c) REPORT TO CONGRESSIONAL COMMITTEES.—Not later than the date that is 5 years after the date of the enactment of this Act, the Register of Copyrights shall, after consulting with the Comptroller General and with Federal agencies that provide funding under funding agreements and with publishers in the private sector, review and submit to the appropriate congressional committees a report on the Register's views on section 201(f) of title 17, United States Code, as added by subsection (a) of this section, taking into account the development of and access to extrinsic works and materials developed under funding agreements, including the role played by publishers in the private sector and others.

(d) DEFINITIONS.—In this section:

(1) EXTRINSIC WORK; FEDERAL AGENCY; FUNDING AGREEMENT.—The terms "extrinsic work", "Federal agency", and "funding agreement" have the meanings given those terms in section 201(f)(3) of title 17, United States Code, as added by subsection (a) of this section.

1 (2) APPROPRIATE CONGRESSIONAL COMMIT-
2 TEES.—The term ''appropriate congressional com-
3 mittees'' means the Committee on the Judiciary and
4 the Committee on Appropriations of the House of
5 Representatives and the Committee on the Judiciary
6 and the Committee on Appropriations of the Senate.

○

Mr. COBLE. Thank you, Mr. Chairman.

If this, in fact, is to be our "Swan Song" for this session, permit to say how much I have enjoyed being with you.

I attended a reception this week, Mr. Chairman, and a former staffer came up to me and she said, "For the past several years, I have enjoyed the Howard and Howard show."

And I recall when I had the gavel in my hand, Howard Berman was a very genial and able Ranking Member, and it has been my honor, Mr. Chairman, to have served as your Ranking Member, and I, too, have enjoyed the "Howard and Howard" show.

Good luck to you in your other ventures, Howard. You are taking on bigger fish to fry.

Mr. BERMAN. Thank you. And I do want to say that my reference to sort of the "Swan Song" was only in the context of formal hearings. There are dozens of bills I would like to sneak out in the last couple of weeks of session.

Mr. COBLE. I understand that.

Mr. Chairman, thank you for calling today's hearing.

Thank you all for being here.

This is an important topic, as the Chairman just said, that intertwines the interests of taxpayers, intellectual property holders, and health care advocates, and I think it is safe to say that this is not your typical copyright issue.

The National Institutes of Health is one of the largest sponsors of biomedical research in the world. The NIH operating budget for fiscal year 2008 is $29 billion, most of which is distributed through grant agreements to outside researchers.

The agency maintains an online digital archive called PubMed Central, or PMC.

Section 218 of the 2008 Omnibus Appropriations Act mandates that the NIH director require its grantee recipients to submit any peer reviewed manuscripts to PMC and provide NIH a license to make these works publicly accessible within 12 months after the date of publication.

The House appropriators decided to create this mandate since the voluntary compliance rate among grantees during the previous 3 years was only 10 percent.

Prior to enactment of this law, Mr. Chairman, you and I sent a letter protesting the implementation of the NIH policy to the Chairman and Ranking Member of the Appropriations Committee.

Judiciary Chairman Conyers and Ranking Member Smith sent similar letters, and our participation was based on jurisdictional grounds. Since the new policy may affect the exclusive rights of copyright holders, I believe it is important that the Committee of authorizing jurisdiction, that is, Judiciary, conduct a hearing.

I don't mean this in a bad way, but I think none of us wants the appropriators or anyone else, for that matter, doing our work for us.

Private publishers of medical journals argue that they expend, on average, $3,000 to $4,000 to peer review and publish a quality article regarding a relevant health care topic. They emphasize that their only incentive to make such an investment is by acquiring the copyright in the article from the author, the NIH grant recipient.

From the publisher's perspective, the NIH policy effectively reduces their exclusive right in a copyrighted work to 12 months. Further, in the absence of the value added by privately subsidized peer review and publication, publishers assert that less relevant medical information will be disseminated to the public in a timely manner.

They argue that NIH is not in the business of evaluating individual studies and publishing the meritorious ones.

Finally, the publishers maintain the NIH policy violates our international IP treaty obligations. Beyond this point, they believe our failure to repeal this policy will only encourage lax regard for IP globally, a conflicting message, since this Subcommittee has led the fight against overseas piracy and anti-counterfeiting.

In contrast, NIH and its defenders wishing to disseminate medical knowledge more quickly and widely believe that recipients of Federal funding should be required to share their work products with the sponsoring public.

They argue that the mandatory NIH policy only requires the grant recipients to provide the agency with a nonexclusive license. The authors may still transfer some or all of the exclusive rights under copyright law to a journal publisher.

This is not a force transfer, as grantees don't have to accept Federal funds to conduct the research.

Supporters of the NIH policy also maintain that the new mandate is consistent with our IP treaty obligation under TRIPS and the Berne Convention.

In fact, NIH notes that Europe, Canada and Australia have amended their funding contracts and grant agreements to require, as a condition of support, that authors deposit their final manuscripts into publicly accessible online digital repositories.

I am not personally a cosponsor of this bill yet, because I need more time to learn and think about the issue. Ultimately, our Subcommittee must decide whether the perpetuation of the NIH policy will promote or inhibit the development and dissemination of medical knowledge.

Again, Mr. Chairman, this is a difficult, but a good hearing topic, and I look forward to hearing testimony from our witnesses, and yield back.

Mr. BERMAN. Thank you very much.

I am pleased to recognize the Chairman of the Judiciary Committee and the sponsor of the legislation on which this hearing is being conducted, Mr. Conyers.

Mr. CONYERS. Thank you, Mr. Chairman.

We are beginning under some very questionable premises here this afternoon. First of all, these "Swan Songs" and farewell goodbyes are considerably premature, as I recall the history of what usually happens, under the circumstances that we have, between an election day and the swearing in on January 20.

Mr. BERMAN. Change you can believe in?

Mr. CONYERS. Change you can believe in, yes, right.

Mr. ISSA. A candidate of change could also be part of that.

Mr. CONYERS. Everybody is claiming this change thing now, and it has got down to this Committee.

Mr. ISSA. Right. The Chairman of the Subcommittee is claiming change right here.

Mr. CONYERS. I know it. Now, look, my recollection of what happens between a presidential election and the swearing in is that there is an emergency session.

I know hope is eternal and there is nothing wrong with hope, but for goodness sake, folks, I can imagine that either of the candidates that emerge successful. The leaders of the Congress, under the circumstances have not passed. We haven't even passed appropriation bills.

This is a continuing resolution that is in front of us. So, we don't have an emergency. We don't even have an energy bill. We are not going anywhere, Members of the Committee. This is a good thing, from my point of view, but Howard Berman has been such an effective Chairman and has been interested in this subject for many years.

But for my distinguished Ranking Member to say this is a complex subject on which he needs more time: How much time does he think he needs on this?

We have had this thing for months, and months, and months, and he sent a letter, along with you, raising the questions that have led to this hearing.

If I can loan the Ranking Member some staff or even meet with him about this, I am sure we could get him to become an enthusiastic cosponsor of the bill. We will make him even retroactively an original cosponsor.

So, we began this subject examining whose jurisdiction this is in the first place.

I hate to be so crass to raise these kinds of internal congressional questions, but here we have the powerful Committee on Appropriations that determines where every penny of the several trillion dollar budget goes in the United States of America and around the world now reaching into the sacred jurisdiction of the Judiciary Committee. In fact, the most powerful Committee in the Congress, and to take this subject of Intellectual Property and Copyright Law and decide to deal with it summarily, unilaterally, is incorrect.

Now, why is this being done? The fact of the matter is that we have tried to communicate repeatedly with the leader of that Committee. The second most powerful Committee in the Congress, and what do we get? I have got three letters we are putting in the record written by various Members of the Committee.

And what do we get? Nothing, I mean, not even a response, zero. In other words, the Judiciary Committee, you have got so many things to do, we have got more than you, so please don't bother us with letters about these questions about property, the National Institutes of Health and all of these kind of things, we have done it for you.

And so we are forced now to have a hearing that will determine conclusion. We may be considered lucky to have even gotten the bill referred to us. They may have sent the bill to the Appropriations Committee, the way this show is getting off the tracks.

We are here, first of all, to, without being offensive or belligerent, assert our jurisdiction. This is a subject matter for which Howard

Berman and Mr. Coble, Darrell Issa, Mel Watt and other Members have spent years of work on.

We don't come here with fixed attitudes about who is right and who is wrong. This isn't a slam-dunk situation. But it isn't the most complex subject that we have handled, either.

I am happy to be here to begin to look at this for the first time with our Committee.

Now, there are a lot of questions. I am going to put my statement in the record, since the bells have rung for a vote, and look forward to hearing from our four distinguished witnesses.

I thank the Chairman for his time.

[The prepared statement of Mr. Conyers follows:]

PREPARED STATEMENT OF THE HONORABLE JOHN CONYERS, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN, CHAIRMAN, COMMITTEE ON THE JUDICIARY, AND MEMBER, SUBCOMMITTEE ON COURTS, THE INTERNET, AND INTELLECTUAL PROPERTY

Let me begin by thanking my friend, Chairman Berman, for holding this hearing today on H.R. 6845 and for his longstanding commitment to dealing with the issue of copyright protection.

Last year, he and I, along with Ranking Members Smith and Coble, sent letters to the House Committee on Appropriations to halt a proposed change in NIH policy. That policy, which went into effect in April 2008, mandates that NIH funded researchers submit copyrighted materials to the NIH for subsequent unfettered free publication on the internet.

Although NIH policy is called "Public Access," it should really be called "Free Access" because these documents are made available despite the non-government funds, private and non-profit, and other contributions made to published articles.

Most importantly, neither this Committee nor the committee of jurisdiction on the Senate side had any input with respect to this policy, even though it has significant implications for intellectual property rights and the incentives for creative and scientific endeavors that are fostered by these rights.

As a result of our shared concerns that this policy would set a worrisome precedent that could diminish—instead of increase the amount and the quality of scientific, technical, and medical information available to the public—we introduced this legislation.

This bill will help restore the overall IP policy that was in place since the Bayh-Dole Act, Stevenson-Wydler, and the Copyright Statute were enacted. The congressional debates on these laws back then are equally relevant today. We expressly gave our Nation's scientists broad intellectual property rights in government-funded science to incentivize the advancement and dissemination of science and to allow for public private partnerships.

Some claim that this issue inherently involves a matter of contract law and not copyright. I say that when the federal government drafts contracts in ways to specifically restrict the intellectual property rights of authors and copyright owners, it is inherently impacting intellectual property rights.

In light of the fact that the NIH policy undeniably affects the bundle of rights that a person has in their intellectual property, our legislation is needed to stop this policy and prevent other agencies from following suit, while we consider the alternatives and consequences.

In particular, we should explore the negative effects this policy will have on the constitutional directive of advancing science and the useful arts. Publishers have told us that this policy will harm scientific access not increase it.

We should also consider its impact on the peer review process, which could possibly result in greater access, but much lower quality research. Sure, more people will have access, but the research will not have been vetted by knowledgeable individuals. How does that help promote the progress of science?

In fact, smaller non-profit scientific societies may be forced to stop publications all together thus reducing the amount of scientific research available to the public or the cost of the peer review process will be shifted from the publisher onto the taxpayer to offset publishers losses.

While NIH's goal of widely disseminating the results of publicly funded research is laudable, there are multiple alternatives to achieve that goal that do not have the negative consequences of the current policy. The National Science Foundation,

for one, has such a policy that would disseminate research reports instead of the copyrighted material of the publishers.

Accordingly, my bill, would stop the mandatory policy at any government funding agency and require a thorough study by the Register of Copyrights to determine the appropriate approach taking into account the IP implications and the effect on the peer review process.

Mr. BERMAN. I thank you.

Can we go to the witnesses?

Mr. ISSA. Mr. Chairman, if I could, briefly.

Mr. BERMAN. Sure.

Mr. ISSA. First of all, I would like to thank the Chairman and the Ranking Member for allowing me to be an original cosponsor.

Howard, your indecision gave me an opportunity, and I thank you, although, retroactively, you could be the original cosponsor on our side.

I thank the Chairman for holding the hearing today. And very clearly, we are, as the Committee of jurisdiction—and I never say we are the most powerful, but we are the most important Committee.

We are trying to balance the right of the people to have the data that is created by not just the National Institute for Health, but, to be honest, by government at government expense.

We want them to have the data. We want them to have the knowledge. What is very clear is in the promotion of the publications that we want published, we want to maintain the benefit ordinarily accorded to copyrights, and that is really the balancing act that I know we are going to hear about today and that we are going to try to achieve with this legislation is exactly that.

We want to preserve protection under Section 102. We clearly, though, want to make sure that the American people, through these publications, do end up with data and knowledge being made available to people and that those sources from which the data and knowledge came are made available in a timely fashion.

That balancing act is important to the Chairman and everyone on the dais, including Mr. Coble, and I believe this legislation is, like most legislation, not yet perfect, but close.

With that, Mr. Chairman, I look forward to the hearing and thank you again, and yield back.

Mr. BERMAN. Well, I think I will introduce the witnesses.

We are very pleased that all of you took the time to be here today and to share your thoughts with us, and particularly the director of the NIH, who I first had an opportunity to talk to on the issue of the substance of this and what is the appropriate Committee to deal with it.

But as one who will be Chairman of a Committee that is nowhere near either the first or second most powerful Committee, my relationship with the Chairman of either the first or second most powerful Committee made me more diplomatic.

Dr. Elias Zerhouni is Director of the National Institutes of Health, the Nation's leading medical research agency. He oversees the NIH's 27 institutes and centers, with more than 18,000 employees and a budget of $29.5 billion.

Dr. Zerhouni is a world leader in the field of radiology. Prior to joining the NIH, Dr. Zerhouni was a professor of radiology and biomedical engineering.

Dr. Zerhouni earned his medical degree from the University of Algiers and completed his residency at Johns Hopkins. He is the author of 212 publications and holds eight patents.

Speaking of patents—oh, no, no.

Mr. ISSA. Thanks, Howard.

Mr. BERMAN. Ralph Oman, who I have known a long time, teaches copyright law at the George Washington University Law School, serves as a fellow at the law school's creative and innovative economy center.

From 1994 to 2008, he was counsel in the Washington office of Deckert, LLP. Before entering private practice, Mr. Oman was the Register of Copyrights of the United States and, before that, previously served as chief counsel to the Subcommittee on Patents, Copyrights and Trademarks of the U.S. Senate Judiciary Committee, when they had a Subcommittee on Patents, Copyrights and Trademarks.

I think Senator Mathias, at one point, Chaired that Committee.

Mr. Oman received his J.D. from Georgetown University Law Center.

Heather Dalterio Joseph serves as the executive director of the Scholarly Publishing and Academic Resources Coalition, SPARC, a membership organization representing more than 800 university and college libraries whose mission is to expand the dissemination of scholarly research.

Ms. Joseph is also the convener of the Alliance for Taxpayer Access, a coalition of libraries, universities, patient advocacy groups, consumer groups and other organizations that work to ensure the results of publicly-funded research—make sure that they are accessible to the public.

Prior to joining SPARC, Ms. Joseph spent 15 years as a scholarly publisher for both not-for-profit and commercial organizations. She holds both a BA and an MA from the University of Maryland.

Finally, Dr. Martin Frank is executive director of the American Physiological Society, a nonprofit membership organization that publishes a number of scientific journals, including Cell Physiology and the Journal of Applied Physiology.

Prior to joining the APS, Dr. Frank was the executive secretary of the physiology study section at NIH and an assistant professor at George Washington University Medical School.

Earlier in his career, Dr. Frank served as a research associate at the Michigan Cancer Foundation and in the Department of Pharmacology and Toxicology at Michigan State University.

Dr. Frank received his Ph.D. in physiology and biophysics from the University of Illinois at Urbana.

Gentlemen and lady, we await your testimony. Your prepared statements will be included in the record and we will be grateful for you highlighting and summarizing those statements.

Dr. Zerhouni, why don't you start?

TESTIMONY OF ELIAS A. ZERHOUNI, DIRECTOR, NATIONAL INSTITUTES OF HEALTH, BETHESDA, MD

Dr. ZERHOUNI. Thank you, Mr. Chairman.

I would like to thank you, Chairman Berman, Chairman Conyers, Ranking Member Coble, and Members of the Committee, for

giving us this opportunity to present NIH's views on the public access policy.

I have submitted testimony for the record. What I would like to do is also submit for the record prints of slides that I will show you on the screen.

I think it is important to realize that we wouldn't be here unless the world of information technology had not changed. If this was a world of paper publications, I don't think NIH would have developed a policy such as the one we tried to work on.

Why is it that we felt it necessary to move forward in this context?

First and foremost, I am going to show you here a table that we all have in every institute director's office at the NIH. These are the 23 chromosomes of a human being, and we have a table where we post every discovery on every chromosome that is resulting from the completion of the human genome.

I am showing you here my table in 2005. There was one discovery in macular degeneration, a cause of blindness.

I show you, in 2006, we made three discoveries, all important in the sense of giving us insights into heart disease and neurological diseases.

Look at what happened between 2007 and 2008. The first quarter of 2007, I had a report of seven discoveries, more than we had before. Second quarter, third quarter, fourth quarter, first quarter of 2008, second quarter of 2008.

There is a true explosion in scientific discovery. And when you look at this, you have to also see that we have made discoveries that require exploitation. Many genes, as we showed you here in diabetes, were not known to us 10 years ago. Now, 16 are known to us.

If you look at autism, last month alone, we reported on six completely novel genes. We need to exploit this discovery at a rapid pace. But to exploit these very complex discoveries, we need to have access to all of the publications and all the data sources of scientific information.

You can see here, also, the explosive growth of knowledge. These are the databases at the National Library of Medicine, the NCBI, the National Center of Biotechnology Information, have been putting in place since year 2000. Look at the growth.

We have over 2 million users a day coming to NIH to look at our databases. Two million users is much more than just scientists. We don't have that many scientists.

This is used by the public, by teachers, by students, by patients, by their parents. Sixty percent of our patients now go to the doctor with information extracted from these databases.

And if you look at this and you put yourself in my position, I have to promote science and health, here is the picture that I see. We can define the problem. We have multiplied by orders of magnitude the amount of scientific information.

It is very fragmented. It is quite disorganized. And we know now that to make progress, we will need to interconnect all of the discoveries we are making and make sure that the scientists and anybody who needs that information is able to exploit it in the Internet age, because the real value is in the full connectivity, not just the

posting of the passive documents, it is the connectivity of all available electronic sources of scientific information and their efficient exploitation with the new powerful engines of software that are used in the modern search engine technology, and not just in a passive display.

This is what 21st century science and health require, even the current explosion of knowledge, and what NIH needs to keep its competitive edge worldwide.

How have we done this? So if you look at PubMed Central, for example, you would think it is one database. In fact, it is a small portion of the whole family of databases, and I am just showing you a few here.

The human genome, on the top right, and then protein structures, and then molecules that we know are therapeutic molecules, all of this needs to be functionally integrated.

It is enough for a scientist to go to every one of these databases and ask information about what they could do research on or for a patient to come in and have access to one article devoid of its context.

What I think we see is this. Let me just demonstrate for you the world as we see it before public access.

So let's say you are interested in ovarian cancer and you go to Google and, at the top of this, you say, "I want to know about tumor biomarkers for the detection of ovarian cancer."

Ninety-nine percent of Google searches will show you an NIH, NLM, NCBI database as the answer to those queries.

When you go to Google, you will find, for example, in this case, there was an article that was published, and that would link you up to the PubMed Central.

So you go to PubMed Central, you find the article. It also tells you that it was funded by the National Cancer Institute or three grants, and then you want to know about it. And we always link all of our articles to the original sources.

So you click on the link and you go there and here you go. This is the world before public access, $31.50 if you want to read that article.

But that is not where the value is. The value of public access in this age is different.

Let me show you what the new world will be. If you look at today's databases and you looked at the NIH databases, four out of five articles are not available for exploitation, for looking at the content of the article and understanding if they are interrelated to another area of research that you really need to connect to.

But if you look at what we see as the world as to public access, let me show you. Let's say you are interested in ovarian cancer again and you want to find out if there are certain genes that really promote that growth.

Sure enough, you find a paper. That paper is from the proceeding of the National Academy of Sciences, which actually is the access to the paper. And then the next thing you do, you look at it and then you ask yourself a question, because our scientists have developed powerful tools.

What you see here on the lower right corner—left corner here is if you want to know any related article, you just push a button and

it gets there. If you want to know the gene, if you want to know the substance, the protein, and look what happens.

In this case, the paper was there. The scientist looked at it. And guess what? They connected to an article they didn't know about that had to do with prostate cancer, in fact, where the same gene, HOXB13, was also active in prostate cancer.

That is the connectivity where the whole is much greater than the sum of the papers that supported that whole. That is what we want to accomplish.

So when you look, for example, at PubMed search results, you can look at the paper, you can look at the chemical structure, you can look at the countdown and view the chemical protein all at once.

Now, let me just say that this is very powerful. We discovered SARS in 2 weeks.

And if I may, Mr. Chairman, have 1 extra minute. I am sorry to be over time.

But I want to say that there is, in our view, not real evidence of deleterious impact on public access. We have over 400 journals that participate already since 2000 and all of them provide their content within 12 months. No evidence that this has been damaging.

Through Web sites, such as HighWire Press, my friend, Marty Frank, actually publishes their own papers in a public database at 12 months. There is no evidence that this has been harmful.

More importantly, I want you to know that we have been cautious and open and we have followed a long process of 4 years of interactions with publishers and Congress, and, clearly, the policy is working today.

We have a 56 percent compliance rate and we have something that is remarkable. That is that many publishers today are depositing our authors' articles on the authors' behalf, Blackwell Publishing, Nature Publishing, some within 6 months.

Last, but not least, let's remember that we are the least stringent of the policies that have been developed and we fully believe that it is consistent with company law, because we are not taking away the copyrights from the authors to the publisher.

They can reproduce articles. They can derive work. They can actually charge for any derivative works used. We only require a nonexclusive license after 12 months of embargo and this is truly, in my view, a very, very appropriate use of granting authority, when we pay $400,000 per grant.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Zerhouni follows:]

PREPARED STATEMENT OF ELIAS A. ZERHOUNI

Testimony
Before the
Subcommittee on Courts, the Internet, and Intellectual Property
Committee on the Judiciary
United States House of Representatives

The Public Access Policy of the National Institutes of Health

Statement of
Elias A. Zerhouni, M.D.
Director
National Institutes of Health
U.S. Department of Health and Human Services

For Release on Delivery
Expected at 1:00 p.m.
Thursday, September 11, 2008

Mr. Chairman and Members of the Subcommittee, I have been privileged to be the Director of the National Institutes of Health (NIH) for the past six years. To serve at this particular moment is a blessing, for this is truly the golden age of medical research. We know more about human biology than at any point in history. Scientists are accumulating new information at a staggering rate, and I am witness to an unprecedented explosion of knowledge.

There have been times I was informed of more discoveries in three months in such areas of research as genomics than I had in the previous five years combined – and the rapid pace continues today. These advances have illuminated previously hidden areas of the life sciences, including new and significant discoveries regarding the cellular underpinnings of disease. Our new knowledge of genes, proteins, and molecules is leading us to new areas for exploration in biomedical research.

Such progress is largely attributable to revolutionary advances in both high-throughput biology and information technology. New high-throughput technologies are resulting in exponential increases of biological data in amounts previously unattainable. New information technologies are allowing us to store, integrate, analyze and make these data accessible like never before. We are gaining an unprecedented understanding of biology, health, and disease. In this age of the

internet, the ability to share such information from one end of the globe to the other in the blink of an eye is increasing the pace and breadth of medical research. Every single week, scientists and the general public are downloading more information from NIH's databases and web-based archives of publications than exists in the entire Library of Congress. Scientists are not the only beneficiary of publicly accessible information. Students training to become the next generation of medical researchers are accessing NIH's databases. Surveys indicate that more than 60 percent of American patients consult internet medical sites prior to seeing their physicians, and they would benefit from access to the most complete and unbiased information available.

The extraordinary progress of recent years has positioned us to change the dynamics of medical treatment. In the near future, we will no longer be responding only to the acute symptoms of disease. Research advances on the horizon will enable us to identify biomarkers of illness and, in many cases, preempt disease before symptoms appear. The ability to accelerate research through innovations in information technology is leading us along this path to a new era of medicine.

Science has benefited from two revolutions. The first revolution stems from these new technologies that enable data to be generated at unprecedented rates and at dramatically reduced

costs. For example, in just its first few months, NIH's 1,000 Genome Project generated 240 billion bases of genetic information. Those data are being deposited in NIH's National Center of Biotechnology Information (NCBI) and other databases for the benefit of all scientists and the public at large.

Not long ago it was a challenge for a researcher to study the regulation of a single gene in a human cancer cell, while now it is routine for cancer researchers to measure the expression of thousands of genes and make these data available in NIH's public databases to assist discoveries by other scientists around the world.

The second revolution emerged from our ability to manage and integrate these enormous quantities of data being produced and to make them available in ways to speed research that did not exist even ten years ago. We are now capable of taking individual discoveries and integrating them with all other research findings – both publications and data. Scientists can connect the dots between discoveries instantly, an advance analogous to moving from searching for fingerprint matches manually to matching prints in a database of millions in an instant.

When viewing a report in NIH PubMed and PubMed Central databases, at the touch of a button we can link to papers that are determined to be related, as well as to papers that were actually cited. We can also link to related chemical structures, proteins, viruses, and other data, allowing us to make discoveries that advance science and even prevent deaths.

The biotechnology and IT revolutions led NIH to establish NCBI in 1988. Today, NCBI is brimming with molecular and genetic information in more than 40 free and internet-accessible databases. More than 2 million people a day are accessing these databases, seeking information to understand disease and advance research. The majority of these databases are integrated, allowing, for example, a researcher to instantaneously link from a study on a drug compound to a 3-dimensional view of the compound and then to genetic data on a gene thought to be related to the disease being studied. The linkages are copious, and this extensive integration is the great power behind these databases that drives discoveries.

The NCBI databases are critical tools for the discovery of gene function and the identification and cures for many diseases. For example, about three years ago, a child was hospitalized with an undiagnosed illness in Minnesota. The state health laboratory had isolated an unknown virus. After determining the DNA code of the virus, laboratory staff used the internet to access the 55

million DNA sequences at NCBI and immediately found a match. The virus turned out to be the first polio case in the United States since 1999.

Following the Hurricane Katrina disaster in New Orleans, local officials were unable to identify thousands of bodies because of their poor condition. NIH responded with software that analyzed 10,000 DNA samples in two minutes, as compared to the full day of work required by an analyst to examine 14 samples by hand.

The biology and IT revolutions have enabled NIH to launch genome-wide association studies to identify genetic variations that are common with various diseases. Such studies have identified multiple genetic variants common to type 2 diabetes, information that will be vital as we seek to curtail this epidemic. Through a relatively new NCBI database called dbGaP, the data from these NIH genome-wide association studies are being made available to researchers across the world, in order to accelerate the discovery of cures and prevention strategies.

Recently, NIH's data bases were used to identify a virus that had caused the mass death of honeybees in the United States. Scientists scanned the DNA code against all known viruses and pathogens and linked it to a new virus known as the Israeli acute paralytic virus.

With these new life-saving tools, the main limitation on their use is the capacity to store and retrieve the data, given the extent to which data is being submitted. While today we are storing and retrieving only a fraction of the data and findings that could be available, the mandatory public access policy enacted last year will increase the scale of information that will be available from the library. Under the law, scientists who receive taxpayer dollars to conduct research will post their findings in PubMed Central, a public archival database at NIH.

From May 2005 to December 31, 2007, 14,397 research-articles supported by NIH – out of a total 189,000 – were made publicly available through PubMed Central through a voluntary policy. Since the establishment of the mandatory policy, well over half of NIH-funded articles are being submitted to PubMed Central, and the percentage is growing every day. During this early period of policy implementation: 400,000 users are accessing 700,000 articles every day.

Congress applied the mandatory public access policy to manuscripts resulting from NIH-supported research. The policy has two basic premises: 1) the integration and accessibility of biomedical research will speed discoveries, resulting in the prevention of death and disability;

and 2) the public has a right to have full access, without charge, to research findings supported by taxpayer dollars, after a reasonable period of embargo.

The House Committee on Appropriations first expressed concerns about lack of access to NIH-supported research reports and data in July 2003. A year later, that Committee recommended that NIH develop a mandatory public access policy, with reports becoming available six months after publication.

NIH responded with caution. The Agency proposed a voluntary public access policy in September 2004 and published it for public comment. After public debate and comment, NIH started a voluntary policy, with a 12-month embargo period, in May 2005. As part of the Consolidated Appropriations Act for FY 2008, Congress enacted mandatory deposition in PubMed Central of published manuscripts from NIH-supported research. Throughout this process, continuing to this very day, NIH is engaged in public discussions about the mandatory policy, and is being responsive to concerns about implementation.

NIH began a formal process to engage its stakeholders in enhancing the effectiveness of the NIH Public Access Policy implementation. NIH held an open meeting on the Public Access Policy on

March 20, 2008, and conducted a Request for Information (RFI) from March 31 to May 31, 2008. NIH is considering all the comments and suggestions it received from the RFI. Among other issues, the NIH was particularly interested in information about the following:

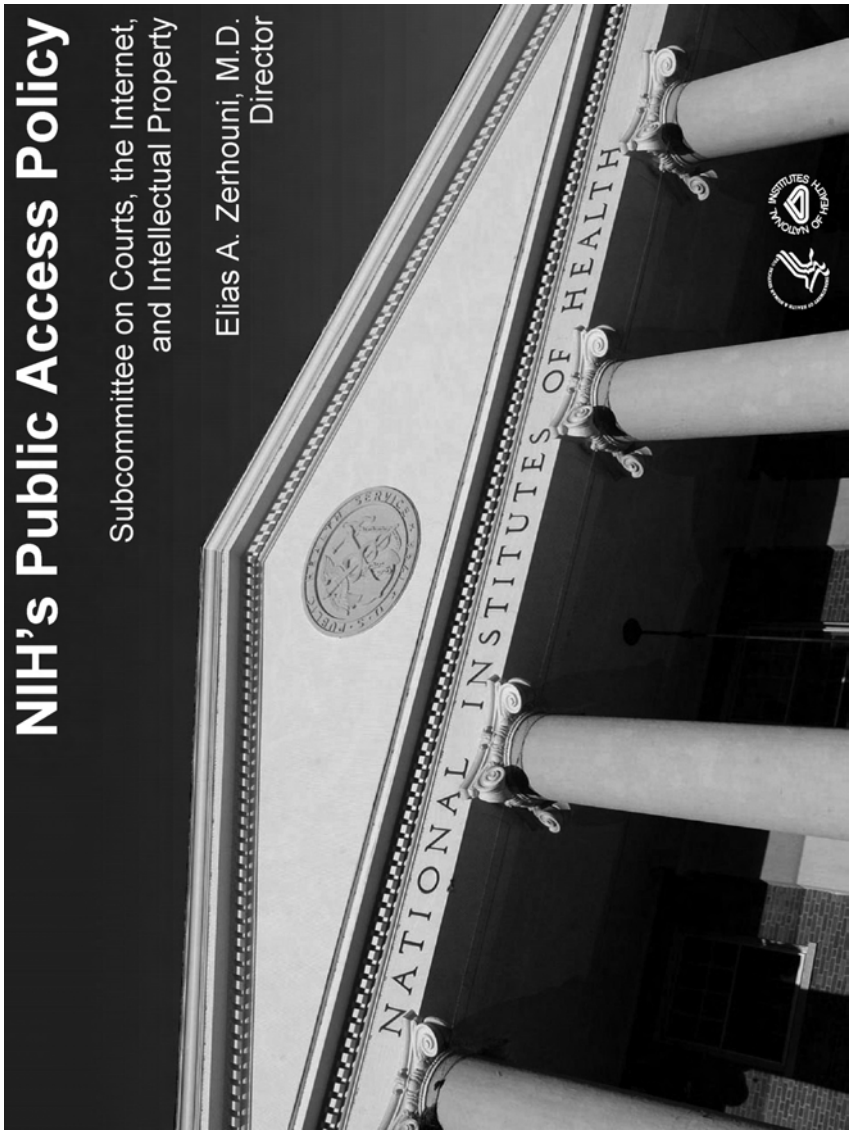
- Do you have recommendations for alternative implementation approaches to those already reflected in the NIH Public Access Policy?
- In light of the change in law that makes NIH's Public Access Policy mandatory, do you have recommendations for monitoring and ensuring compliance with the NIH Public Access Policy?
- In addition to the information already posted at http://publicaccess.nih.gov/communications.htm, what additional information, training or communications related to the NIH Public Access Policy would be helpful to you?

The NIH is in the process of analyzing all submissions collected through this RFI, along with comments collected before and during the March 20 meeting, and will report its analysis by September 30, 2008.

We understand that a bill has been introduced on this matter. The Administration is reviewing this bill and will get back to you with our views on it.

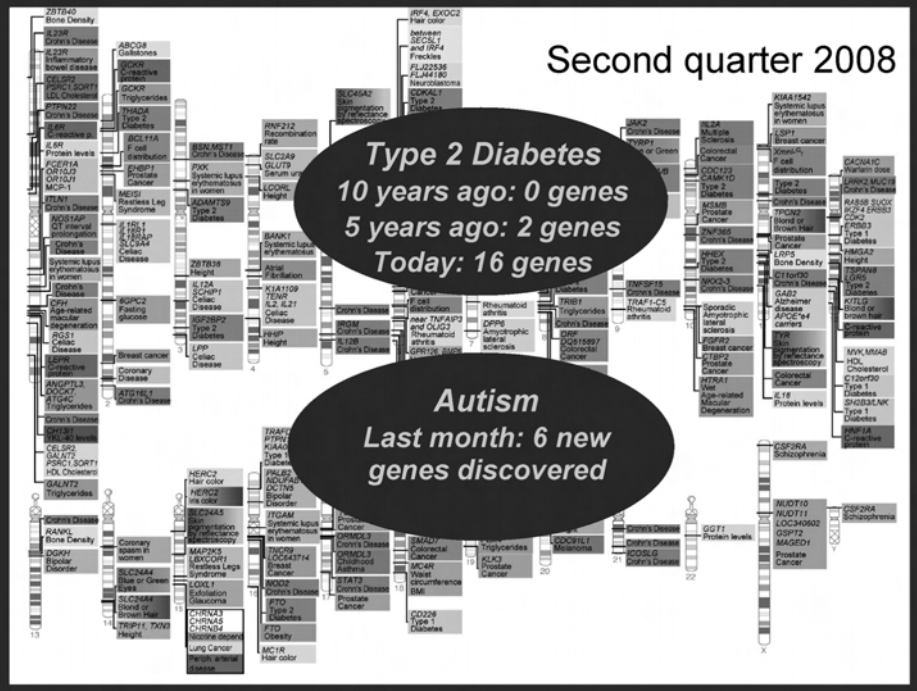
Thank you for the opportunity to present this information to you. I would be happy to answer any questions you may have.

ATTACHMENT


NIH's Public Access Policy
Subcommittee on Courts, the Internet, and Intellectual Property
Elias A. Zerhouni, M.D.
Director
NATIONAL INSTITUTES OF HEALTH

A New Era in Medicine:

Explosion in Scientific Discovery



Manolio, Brooks, Collins, *J Clin Invest* 2008; 118:1590-625.

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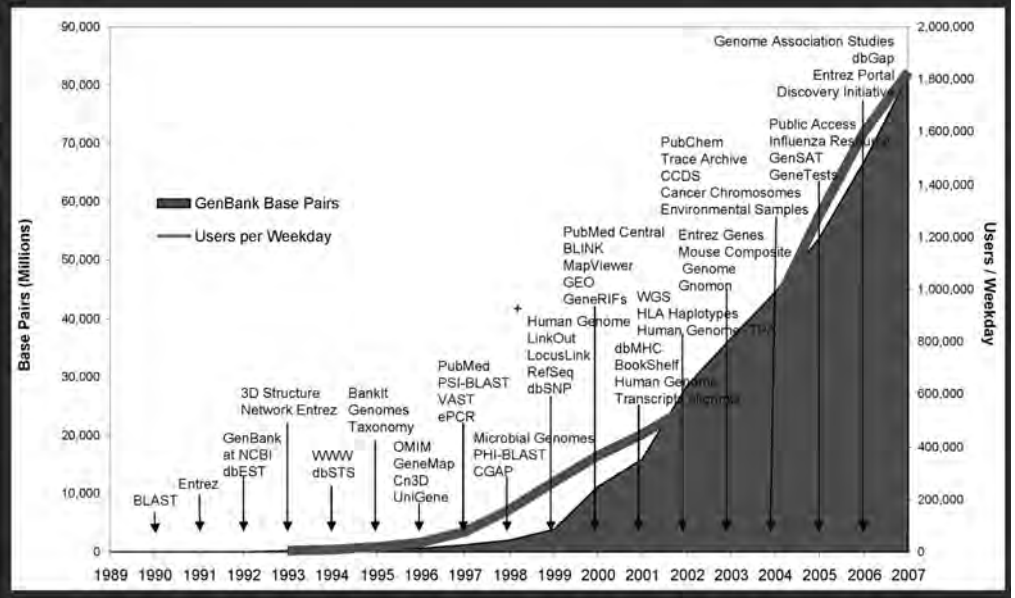

Roadblock to Scientific Discovery

- In the Internet age, the real value is in the full *connectivity* of *all* available electronic sources of scientific Information and their efficient exploitation with the powerful emerging software tools of specialized search engines and not in just posting articles for passive display!
- This is what 21st Century Science and Health require given the current explosion of knowledge and what NIH needs to keep its competitive edge.

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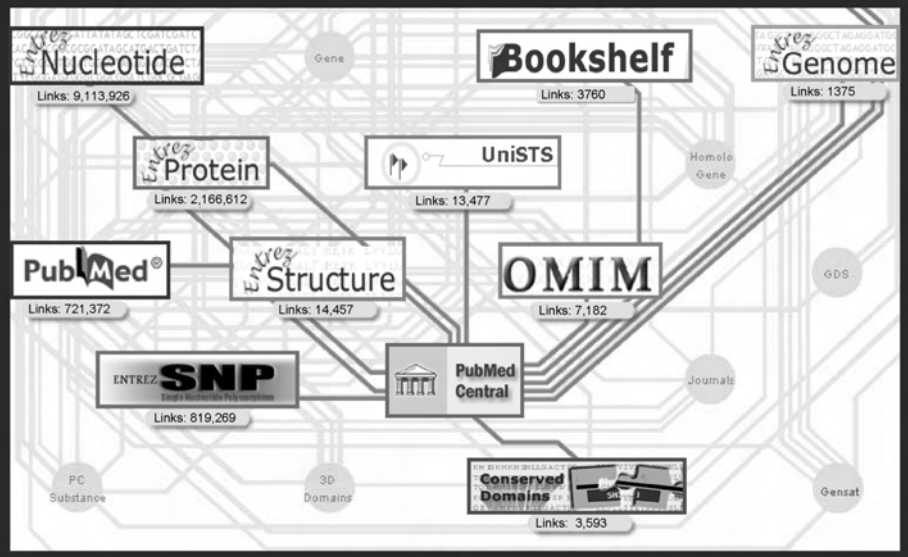

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Note: Performing your original search, *tumor biomarkers for the detection of ovarian carcinoma*, in PubMed will retrieve 757 records.

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1: Gynecol Oncol. 2008 Feb;108(2):402-8. Epub 2007 Dec 3. ELSEVIER FULL TEXT ARTICLE Links

The use of multiple novel tumor biomarkers for the detection of ovarian carcinoma in patients with a pelvic mass.

Moore RG, Brown AK, Miller MC, Skates S, Allard WJ, Verch T, Steinhoff M, Messerlian G, DiSilvestro P, Granai CO, Bast RC Jr.

Women and Infants Hospital, Brown University, Providence, RI 02925, USA. rmoore@wihri.org

OBJECTIVES: The CA125 tumor marker is used to help predict the presence of ovarian cancer in patients with an adnexal mass. Because elevated CA125 levels occur in many benign gynecologic conditions, we set out to identify other novel biomarkers that would increase the sensitivity and specificity of CA125. METHODS: Serum and urine samples were obtained preoperatively from women undergoing surgery for an adnexal mass. The samples were analyzed for levels of CA125, SMRP, HE4, CA72-4, activin, inhibin, osteopontin, epidermal growth factor (EGFR), and ERBB2 (Her2) and were compared to final pathology results. Logistic regression models were estimated for all markers and combinations, with cross-validation analysis performed to obtain the sensitivities at set specificities of 90%, 95%, and 98%. RESULTS: Two hundred and fifty-nine patients with adnexal masses were enrolled. Of these, 233 patients were eligible for analysis with 67 invasive epithelial ovarian cancers and 166 benign ovarian neoplasms. Mean values for all marker levels except Her2 differed significantly between patients with benign masses and cancer. As a single marker, HE4 had the highest sensitivity at 72.9% (specificity 95%). Comparatively, combined CA125 and HE4 yielded the highest sensitivity at 76.4% (specificity 95%), with additional markers adding minimally to the sensitivity of this combination. HE4 was the best single marker for Stage I disease, with no increase in sensitivity when combined with CA125 or any other marker. CONCLUSIONS: As a single tumor marker, HE4 had the highest sensitivity for detecting ovarian cancer, especially Stage I disease. Combined CA125 and HE4 is a more accurate predictor of malignancy than either alone.

PMID: 18061248 [PubMed - indexed for MEDLINE]

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- Utility of a novel serum tumor biomarker HE4 in patients with endometrioid adenocarcinoma of the uterus. [Gynecol Oncol. 2008]
- New tumor markers: CA125 and beyond. [Int J Gynecol Cancer. 2005]
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- Soluble epidermal growth factor receptor (sEGFR) (corrected) and cancer antigen 125 (CA125) as screening a [Cancer Epidemiol Biomarkers Prev. 2005]
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The use of multiple novel tumor biomarkers for the detection of ovarian carcinoma in patients with a pelvic mass

Gynecologic Oncology, Volume 108, Issue 2, February 2008, Pages 402-408
Richard G. Moore, Amy K. Brown, M. Craig Miller, Steven Skates, W. Jeffrey Allard, Thorsten Verch, Margaret Steinhoff, Geralyn Messerlian, Paul DiSilvestro, C.O. Granai and Robert C. Bast Jr. View Abstract

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Curr Opin Obstet Gynecol. 2008 Feb;20(1):9-13. Review.
PMID: 18196999 [PubMed - indexed for MEDLINE]

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PMID: 17362385 [PubMed - indexed for MEDLINE]

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- RESULTS AND DISCUSSION
- MATERIALS AND METHODS

Proc Natl Acad Sci U S A. 2007 October 23; 104(43): 17093–17098.
Published online 2007 October 17. doi: 10.1073/pnas.0707938104.

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Medical Sciences

HOXB13 promotes ovarian cancer progression

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Communicated by Kurt J. Isselbacher, Massachusetts General Hospital, Charlestown, MA, August 22, 2007.

Author contributions: J.M. and Z.W. contributed equally to this work; senior authors D.C.S. and S.O. contributed equally to this work; D.C.S. and S.O. designed research; J.M., Z.W., H.P., B.M., S.D., E.C., and C.-O.L. performed research; J.M., Z.W., S.D., C.-O.L., D.C.S., and S.O. analyzed data; and J.M., Z.W., D.C.S., and S.O. wrote the paper.

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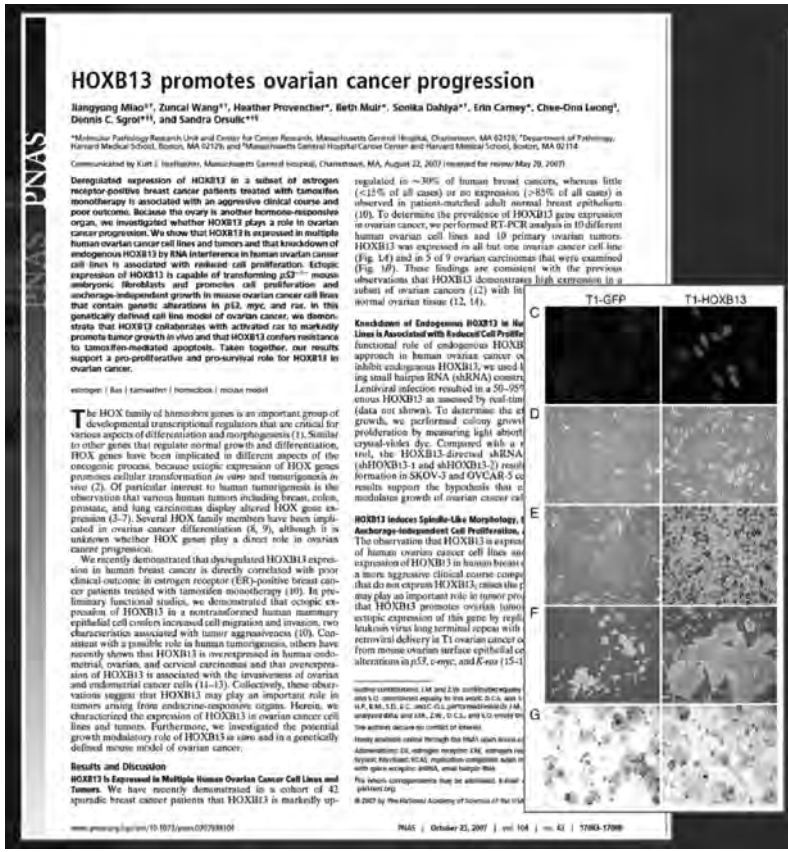
ABSTRACT

Deregulated expression of HOXB13 in a subset of estrogen receptor-positive breast cancer patients treated with tamoxifen monotherapy is associated with an aggressive clinical course and poor outcome. Because the ovary is another hormone-responsive organ, we investigated whether



PNAS

HOXB13 promotes ovarian cancer progression

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Communicated by Kurt J. Isselbacher, Massachusetts General Hospital, Charlestown, MA, August 22, 2007 (received for review May 29, 2007)

Deregulated expression of HOXB13 in a subset of estrogen receptor-positive breast cancer patients treated with tamoxifen monotherapy is associated with an aggressive clinical course and poor outcome. Because the ovary is another hormone-responsive organ, we investigated whether HOXB13 plays a role in ovarian cancer progression. We show that HOXB13 is expressed in multiple human ovarian cancer cell lines and tumors and that knockdown of endogenous HOXB13 by RNA interference in human ovarian cancer cell lines is associated with reduced cell proliferation. Ectopic expression of HOXB13 is capable of transforming $p53^{-/-}$ mouse embryonic fibroblasts and promotes cell proliferation and anchorage-independent growth in mouse ovarian cancer cell lines that contain genetic alterations in p53, myc, and ras. In this genetically defined cell line model of ovarian cancer, we demonstrate that HOXB13 collaborates with activated ras to markedly promote tumor growth in vivo and that HOXB13 confers resistance to tamoxifen-mediated apoptosis. Taken together, our results support a pro-proliferative and pro-survival role for HOXB13 in ovarian cancer.

estrogen | Ras | tamoxifen | homeobox | mouse model

The HOX family of homeobox genes is an important group of developmental transcriptional regulators that are critical for various aspects of differentiation and morphogenesis (1). Similar to other genes that regulate normal growth and differentiation, HOX genes have been implicated in different aspects of the oncogenic process, because ectopic expression of HOX genes promotes cellular transformation *in vitro* and tumorigenesis *in vivo* (2). Of particular interest to human tumorigenesis is the observation that various human tumors including breast, colon, prostate, and lung carcinomas display altered HOX gene expression (3–7). Several HOX family members have been implicated in ovarian cancer differentiation (8, 9), although it is unknown whether HOX genes play a direct role in ovarian cancer progression.

We recently demonstrated that dysregulated HOXB13 expression in human breast cancer is directly correlated with poor clinical outcome in estrogen receptor (ER)-positive breast cancer patients treated with tamoxifen monotherapy (10). In preliminary functional studies, we demonstrated that ectopic expression of HOXB13 in a nontransformed human mammary epithelial cell confers increased cell migration and invasion, two characteristics associated with tumor aggressiveness (10). Consistent with a possible role in human tumorigenesis, others have recently shown that HOXB13 is overexpressed in human endometrial, ovarian, and cervical carcinomas and that overexpression of HOXB13 is associated with the invasiveness of ovarian and endometrial cancer cells (11–13). Collectively, these observations suggest that HOXB13 may play an important role in tumors arising from endocrine-responsive organs. Herein, we characterized the expression of HOXB13 in ovarian cancer cell lines and tumors. Furthermore, we investigated the potential growth modulatory role of HOXB13 *in vitro* and in a genetically defined mouse model of ovarian cancer.

Results and Discussion

HOXB13 Is Expressed in Multiple Human Ovarian Cancer Cell Lines and Tumors. We have recently demonstrated in a cohort of 42 sporadic breast cancer patients that HOXB13 is markedly up-regulated in ~30% of human breast cancers, whereas little (<15% of all cases) or no expression (>85% of all cases) is observed in patient-matched adult normal breast epithelium (10). To determine the prevalence of HOXB13 gene expression in ovarian cancer, we performed RT-PCR analysis in 10 different human ovarian cell lines and 10 primary ovarian tumors. HOXB13 was expressed in all but one ovarian cancer cell line (Fig. 1*d*) and in 5 of 9 ovarian carcinomas that were examined (Fig. 1*f*). These findings are consistent with the previous observations that HOXB13 demonstrates high expression in a subset of ovarian cancers (12) with lit
normal ovarian tissue (12, 14).

**Knockdown of Endogenous HOXB13 in Ov
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functional role of endogenous HOXB
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crystal-violet dye. Compared with a n
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**HOXB13 Induces Spindle-Like Morphology, E
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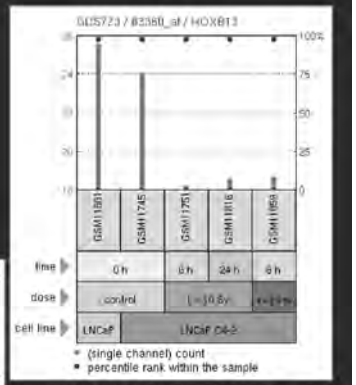
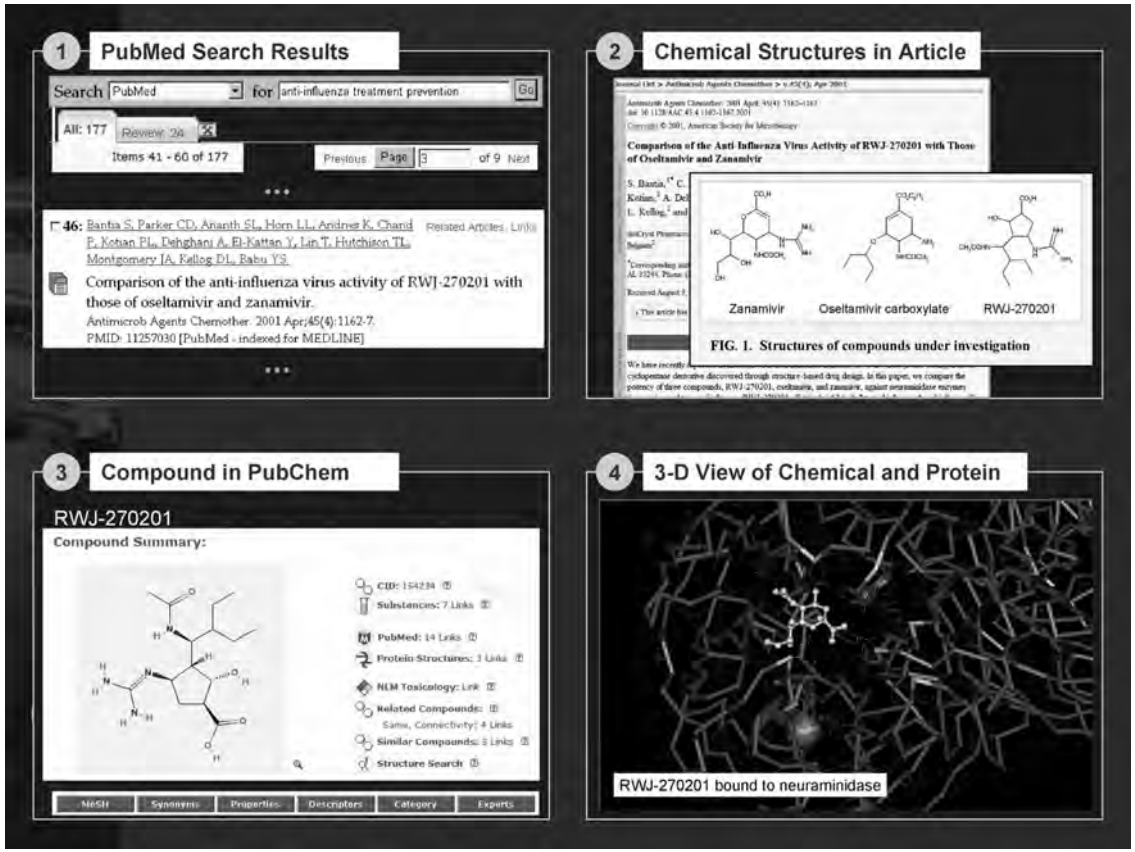
www.pnas.org/cgi/doi/10.1073/pnas.0707599104 PNAS | October 23, 2007 | vol. 104 | no. 42 | 17083–17088



HOXB13 levels decrease in prostate cancer cells after irradiation treatment

PMC automatically provides a link to the Gene Expression database, where you learn how the same gene is controlled in prostate cancer treatment.


1 PubMed Search Results
Search PubMed for anti-influenza treatment prevention Go
All: 177 Review: 24
Items 41 - 60 of 177
Previous Page 3 of 9 Next
46: Bantia S, Parker CD, Ananth SL, Horn LL, Andrews K, Chand P, Kohan PL, Dehghani A, El-Kattan Y, Lin T, Hutchison TL, Montgomery IA, Kellog DL, Babu YS.
Related Articles, Links
Comparison of the anti-influenza virus activity of RWJ-270201 with those of oseltamivir and zanamivir.
Antimicrob Agents Chemother. 2001 Apr;45(4):1162-7.
PMID: 11257030 [PubMed - indexed for MEDLINE]
2 Chemical Structures in Article
Comparison of the Anti-Influenza Virus Activity of RWJ-270201 with Those of Oseltamivir and Zanamivir
Zanamivir
Oseltamivir carboxylate
RWJ-270201
FIG. 1. Structures of compounds under investigation
3 Compound in PubChem
RWJ-270201
Compound Summary:
CID: 154234
Substances: 7 Links
PubMed: 14 Links
Protein Structures: 1 Links
NLM Toxicology: Link
Related Compounds:
Same, Connectivity: 4 Links
Similar Compounds: 8 Links
Structure Search
MeSH
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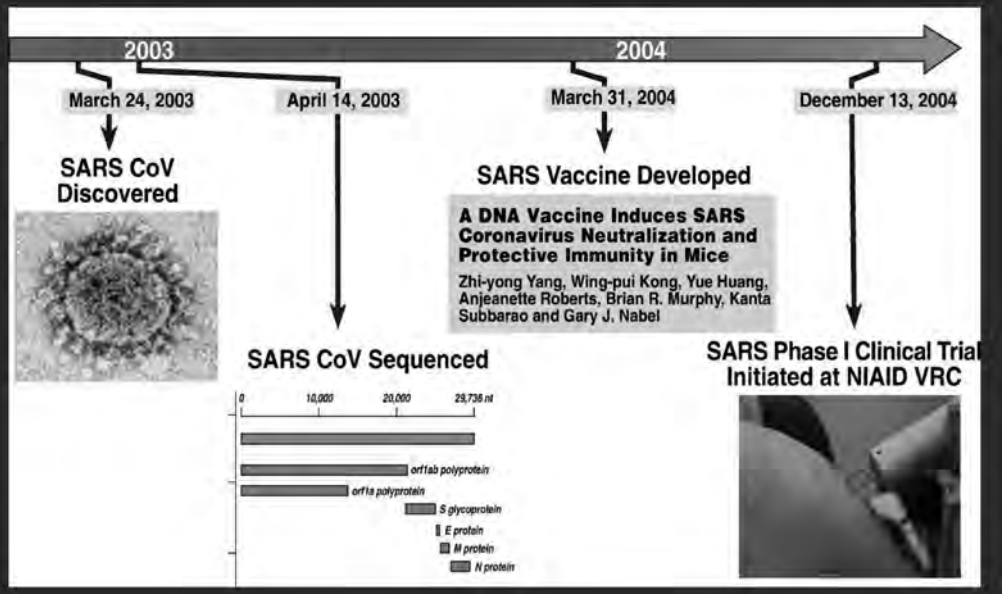
Category
Experts
4 3-D View of Chemical and Protein
RWJ-270201 bound to neuraminidase

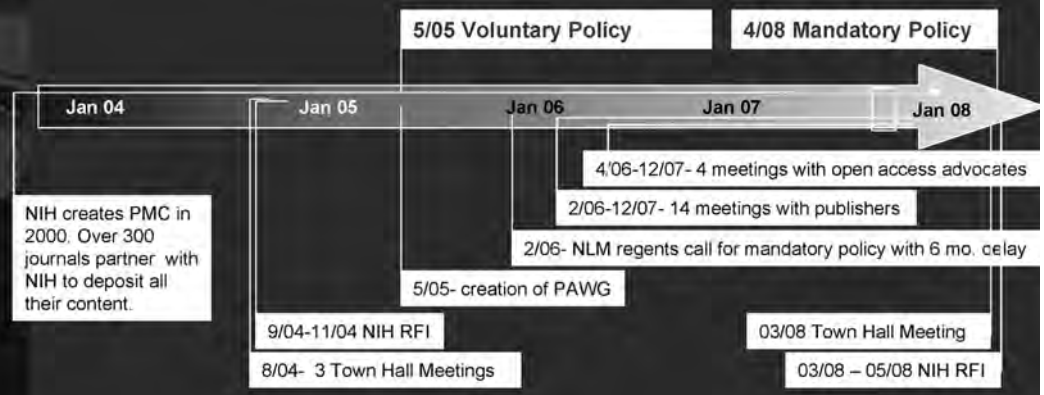
Power of 21st Century Science: SARS Characterization and Vaccine Development



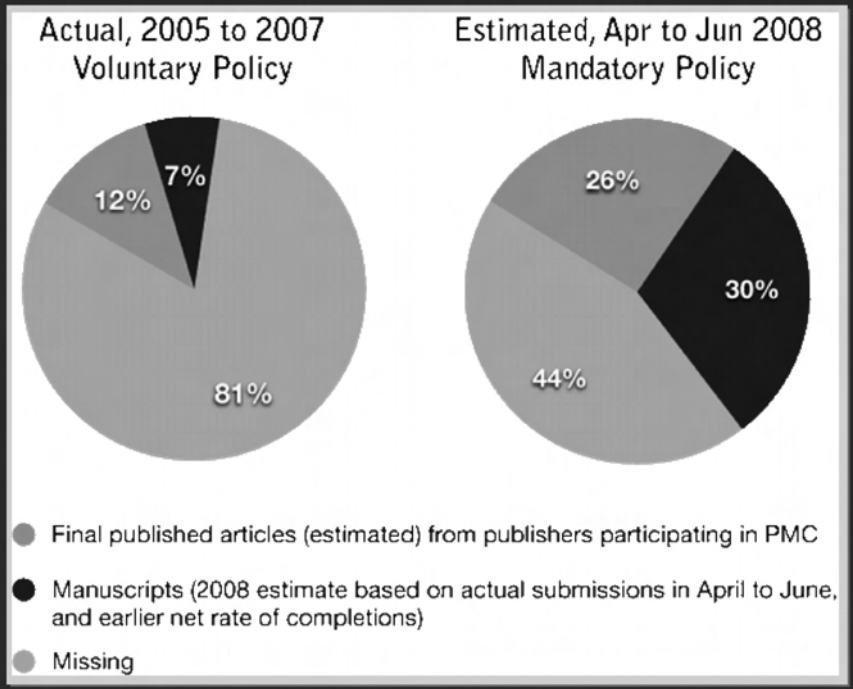
Is There Evidence of a Deleterious Impact of Public Access?

- Since 2000, almost 400 journals have elected to fully participate in PubMed Central and provide *all* their content with embargo period up to 12 months – many reduced their embargo period to less than 12 months
- Through websites such as HighWire press, many publishers make their *full* content electronically available for free after 12 months
- *No negative economic or peer review impact has been demonstrated for these publishers*

Development of NIH Public Access Policy Was Cautious and Open



The New NIH Policy is Working



Many Publishers Now Deposit Manuscripts on NIH-funded Author's Behalf

Some Allow Embargoes of Less Than 12 months

WILEY-BLACKWELL

Visit www.blackwellpublishing.com

nature publishing group

ELSEVIER

American Chemical Society

SOCIETY FOR NEUROSCIENCE

As of September 2008

The NIH Requirement is Less Stringent than Current International Public Access Policies

Funder	Delay Period	Funding
NIH Public Access Requirement (Sec. 218)	up to 12 mo	allowable cost for grants
Howard Hughes Medical Institute	up to 6 mo	dedicated fund
European Research Council	up to 6 mo	allowable cost for grants
UK Medical Research Council	up to 6 mo	allowable cost for grants
Wellcome Trust	up to 6 mo	dedicated fund

- NIH allows grantees to pay publication costs directly to publishers such as page, illustrations, reproduction and posting charges
- Many peer reviewers are NIH-funded scientists

NIH Public Access Policy Only Requires Limited, Non-exclusive Right to Post Electronically After 12 Months:

Transfer of All Other Copyrights to the Publishers is Preserved

Copyrights	Before Public Access	Under Public Access
Reproducing Articles	Author→Publisher	Author→Publisher
Preparing Derivative Works	Author→Publisher	Author→Publisher
Posting NIH-funded Author's Manuscripts to PMC after 12 months	Author→Publisher	***Author Retains Right***
Posting Publisher's Published Articles Arising from NIH funds to PMC	Author→Publisher	Author→Publisher
Posting Published Articles Not Arising from NIH Funds to PMC	Author→Publisher	Author→Publisher
Posting Articles or Manuscripts to Other Archives	Author→Publisher	Author→Publisher
Distributing Copies for Transfer	Author→Publisher	Author→Publisher
Distributing Copies for Sale	Author→Publisher	Author→Publisher

What is at Stake

- About 80,000 journal articles that arise from NIH funds each year, and represent roughly $23 billion of taxpayer investment
- Applying 21st information technology to the NIH investment to promote science and health in the context of a globally wired and networked world of scientific information
- Making NIH more transparent and accountable and better able to make strategic decisions about its portfolio
- Ensuring more rapid scientific progress and the discovery of new treatments

It is my opinion that Public Access to an interconnected world of scientific information databases provides one of our most powerful new tools to accelerate discovery and combat disease. To take this access away now would be a historic mistake.

Mr. BERMAN. Ralph?

TESTIMONY OF THE HONORABLE RALPH OMAN, PAVEL PROFESSIONAL LECTURER IN INTELLECTUAL PROPERTY LAW FELLOW, CREATIVE AND INNOVATIVE ECONOMY CENTER, THE GEORGE WASHINGTON UNIVERSITY LAW SCHOOL, WASHINGTON, DC

Mr. OMAN. Mr. Chairman, Mr. Coble, Chairman Conyers, Members of the Subcommittee, it is great to be back here after a short break of 15 years.

I appear today as the former Register of Copyrights, representing, as I always have, the public interest.

I don't have a dog in this fight, financial or otherwise. I teach copyright law, as you mentioned, at George Washington University Law School. I do not represent any of the parties. But I am like an old fire dog. When the bell rings, I come out running in the defense of the copyright system.

You have my formal written statement and this afternoon I would like to elaborate on one or two basic points.

My written statement gets into the policy issues, which my fellow colleagues at the witness table will get into in greater detail.

My basic concern about the new NIH public access proposal is its dilution of the rights of the copyright owners. In my opinion, it will destroy the commercial market for scientific, technical and medical journals.

If the publishers go out of business because of this new NIH publication policy, we will lose a very valuable professional resource for scientific advance.

With plummeting sales, how could the STM publishers possibly stay in business?

The dramatic evidence of scientific advances that Dr. Zerhouni made reference to, they are breathtaking, but, in my opinion, they are not in any way threatened by greater respect for the rights of the copyright owners.

The NIH policy, in fact, should change in a way that respects the spirit and letter of the copyright law. In that way, we could achieve the basic constitutional purpose of copyright, and that is to promote the progress of science and advance learning and, in that way, reach a broad audience for these extremely important manuscripts that are produced with the funding of the National Institutes of Health.

On a very narrow point, Mr. Chairman, I think that, in many ways, the controversy that we are dealing with today is based on a misreading of Section 218 of the appropriations legislation.

With the expert Subcommittee's guidance here today, I hope that the NIH will reconsider the basic underpinnings of its proposal and draft new regulations that are true to the congressional mandate.

Please let me explain. When drafting legislation, Mr. Chairman, Congress doesn't waste its breath. When it adds a provision, it adds a provision for a reason.

The Appropriations Committee deliberately added the public access language in Section 218 of the bill, then it refined and clarified that language and added a very important limitation.

It added a proviso that required the NIH to implement its public access policy "in a manner consistent with copyright law." The NIH argues that the addition of that language is surplusage, that it doesn't have any meaning, that Congress just as easily could have left it out, because the NIH policy, in the director's opinion, is consistent with copyright law.

I disagree on that assessment, as I note in my written statement.

What Congress was telling the Director to do was different. You, Congress, were telling him to figure out a way to accomplish Congress' public access objectives in a way that respects copyright.

He has many ways to do that. Let me give you one example of how he might do so.

He could require submission of the peer reviewed manuscripts to the National Library of Medicine for security and archiving purposes and for the internal review and use of the NIH experts.

For those copyright owners, and there are some, if not many, who agree to free public access, he could allow the publication of their manuscripts on the PubMed Central Web site after a 12-month period.

For all other articles, those developed with NIH funding, the Director could instruct PubMed Central to provide links, with a brief summary to the publisher's Web site, instead of as apparently they are doing now, where the public could gain immediate access to all of these manuscripts.

That revised policy would fulfill Congress' desire to have all of the government-funded articles publicly available within 12 months, without running roughshod over the rights of the copyright holders.

I repeat, the appropriations legislation does not say free public access within 12 months. It just says public access. I think the director may have misunderstood the congressional mandate.

To me, it seems far more likely that Congress will achieve the desired objective, which is the broadest possible dissemination of peer reviewed article manuscripts, under the current system. With the strong copyright protection that we now have under the copyright laws, the private STM publishers will run the peer-to-peer process. They will select the articles.

They will aggressively market those journals to libraries and other research institutions, both foreign and domestic.

The current system lets the publishers bring their professional judgment and expertise into the process and ensures high quality scholarship.

Paid subscriptions keep the current system perking along, without intrusive government involvement and without an infusion of funds from the government, to support the work that is now done by the publishers.

If the NIH provision is fully implemented, it will almost certainly end this self-policing and self-financing system and get the Federal Government deeply involved in the STM publishing business.

Mr. Conyers' bill, Chairman Conyers' bill will get the NIH back on track and will prevent other Federal agencies from wandering down the same counterproductive path. I urge its early passage.

Thank you, Mr. Chairman, for having me back. I would be pleased to answer any questions.

[The prepared statement of Mr. Oman follows:]

PREPARED STATEMENT OF RALPH OMAN

TESTIMONY OF

RALPH OMAN

PRAVEL PROFESSORIAL LECTURER IN INTELLECTUAL PROPERTY LAW

AND

FELLOW OF THE CREATIVE AND INNOVATIVE ECOMONY CENTER

THE GEORGE WASHINGTON UNIVERSITY LAW SCHOOL

Hearing on

The Fair Copyright in Research Works Act

THE U.S. HOUSE OF REPRESENTATIVES

COMMITTEE ON THE JUDICIARY

SEPTEMBER 11, 2008

Mr. Chairman and members of the Subcommittee. It is a great honor to appear again before this distinguished panel. It has been a few years since my last appearance.

Thank you for the opportunity to testify on this matter of importance to copyright generally, and to the public, to the research community, to the authors of scientific, technical, and medical articles, and to the publishers of STM journals. I would like to focus on the larger policy issues that undergird the American copyright system and discuss the proposal of the National Institutes of Health that requires recipients of NIH research grants to effectively renounce copyright in their peer-reviewed article manuscripts just 12 months after publication. I will also briefly mention the bill introduced by Chairman Conyers that seeks to moderate the impact of the NIH proposal in a way that will encourage the broadest possible dissemination of high quality, peer-reviewed articles without running roughshod over the rights of authors and copyright owners.

This hearing is important on another level. The language in the appropriations bill that has given rise to this controversy was never vetted by the Judiciary Committee—the committee with intellectual property expertise. With your scrutiny today, the Subcommittee puts this narrow dispute in the larger context of the constitutional mandate—to promote the progress of science for the public interest. Other than celebrating the Judiciary Committee's involvement, I will not comment on the wisdom of legislating on appropriations bills. Into that Serbonian Bog I will not wade.

Instead, I simply applaud your decision, Mr. Chairman, to give a full airing of these issues before your expert Subcommittee. They bear directly on the copyright policies of our government and the incentives to authorship and publication under U.S. copyright law. For reasons I will discuss, the NIH proposal seems short-sighted, counterproductive, damaging to U.S. creativity, which this subcommittee fosters and safeguards, and contrary to the NIH's own interests in encouraging broad public dissemination of peer-reviewed learned articles. The Appropriations Committee, to its credit, sensed that the NIH proposal ventured into sensitive territory and added a very important proviso. That proviso directed the NIH to "implement the public access policy in a manner consistent with copyright law." In my opinion, the NIH has fallen short of that dictate in several respects, and, with this committee's expert guidance, they should refine their proposal in ways that are true to both the letter and spirit of the copyright law, and the essential policies behind it.

In this debate, three key questions must be answered. First, what policy will result in the broadest dissemination of high quality, peer-reviewed scholarly articles? Second, is it fair for the U.S. government to appropriate the value-added contributions of the private STM publishers? And, third, is the NIH correct in its assumption that the STM publishers will continue to publish their journals even if they lose 50 percent of their paid subscriptions?

Many of my colleagues in academia recognize that the STM publishers perform many vital functions in bringing these articles into the public forum. For one thing, they make substantial investments in the peer-review process. While they do not as a general rule pay the reviewers, the publishers hire in-house teams to support outside specialists. These teams arrange and coordinate effective distribution, stay close to the academic experts in the discipline personally and professionally, follow the literature, and engage in on-going communications with the authors about the reviewers' comments and the incorporation of those comments into the manuscript.

In addition to the peer-review process, the publishers make judgments about which of the manuscripts to publish, depending on their quality and the level of interest in the research itself. They also edit the manuscripts and make them presentable for publication.

My basic concern about the NIH proposal is that it will, sooner rather than later, destroy the commercial market for these scientific, technical, and medical journals. If this dark prophesy comes to pass, who, I wonder, will handle all of these expensive and sensitive administrative details? Some of my academic colleagues are confident that this change in the mechanics of scientific publishing will have little or no impact on the private sector, and that it will remain as robust as ever, even if the NIH freely publishes all of the NIH peer-reviewed article manuscripts shortly after private publication. Some claim that they have "evidence" that STM publishing will continue to flourish. I have not seen that evidence. To me, it suggests an element of wishful thinking. In my experience, Congress is normally reluctant to hang major legislative change in copyright policy on the thin reed of wishful thinking. With the prospect of free copies available in the near term, who in the face of experience and reality can reasonably expect that subscribers to STM journals, faced with their own budgetary constraints and needs, will not look with real favor on alternative free sources? I can't. It is belied by common sense. Certainly, many university and industry librarians will cancel their subscriptions to these learned journals, with some estimates of a cancellation rate approaching 50 percent. With plummeting sales, how could the STM publishers stay in business? This is a critical point, and one that this committee has a special sensitivity to. It really goes to the heart of the matter, in terms of public policy.

It is a basic premise of copyright that the law is designed to benefit the public, not reward authors or publishers. But, as James Madison wrote in the Federalist Papers, "the public good fully coincides" with the rights of authors and copyright owners. With that admonition, we consider the NIH proposal. It seems clear that Congress would not want the NIH free access policy to cause many or all of the private STM publishers to fade

away. Of course, if fair market competition, or a change in the culture of academic publishing, or costly overhead were eventually to drive the private publishers out of business, so be it. It is one thing that they should suffer demise because of changes in the marketplace, and it is another to be brought down by an ill-considered governmental fiat. The NIH does not intend to perform any of the vetting, selection, and editing functions now performed by the learned societies, by the professional organizations, and by the STM publishers, and I doubt if Congress wants to increase their budget so they can take on these additional responsibilities. So the question occurs: who is going to do it? I do not see replacements for the publishers raising their hands to volunteer. For this reason alone, I question the wisdom of the NIH provision. And there are larger issues as well. Experience teaches that as a general rule Congress prefers to keep the hairy snout of the federal government out of the peer-review and manuscript selection process. We live in an open society, and, with a weather eye on the First Amendment, we try to keep the government at arms length from these delicate publication decisions, so as not to skew the process.

That being said, the NIH provision brings back vivid memories of the debate we had in 1980 with the Small Business and University Patent Procedure Act. In that debate, Senator Russell Long, Chairman of the Senate Finance Committee, following the script written by Admiral Rickover, the father of the nuclear submarine, argued in favor of existing government policy—that patents developed with government research money belong to the taxpayers who subsidize the research. Senator Bayh and Senator Dole reasoned that the taxpayers would get a far greater return on their investment if we instead facilitated private sector ownership and commercialization of the inventions, putting these inventions to work for the people. We are about to celebrate the 30th anniversary of Bayh/Dole, and no one is arguing for its repeal.

The same policy arguments apply in the NIH case. If the NIH succeeds in putting all of the NIH-related peer-reviewed articles on its online database for free within one year of publication, the private publishers will be hard-pressed to survive. To me, it seems far more likely that the U.S. taxpayer will achieve the desired objective—the broadest possible dissemination of the peer-reviewed article manuscripts—under the current system. With the private STM publishers running the peer-review process, selecting the articles, and aggressively marketing their journals to libraries and other research institutions, both foreign and domestic, the current system lets the publishers bring their professional judgment and expertise into the process and ensures high quality scholarship. Paid subscriptions keep the current system perking along, without intrusive government involvement, and without an infusion of funds from the government fisc. If the NIH provision is fully implemented, it will almost certainly end this self-policing and self-financing system and get the federal government deeply into the STM publishing business.

Finally, Mr. Chairman, I would like to mention a few related issues. First, I wonder if any of the manuscript articles that the NIH will publish contain preexisting materials that the NIH researcher did not create and therefore does not own. Here, I am thinking of charts, diagrams, photographs, and illustrations. Will the NIH commandeer the rights of

those creators as well, or will it require the NIH researcher to clear all of those ancillary rights as part of the "contract". Today, of course, the publishers often help the author clear these rights, including electronic distribution rights. Will the NIH undertake this task if the publishers drop out of the picture?

Second, I wonder if the NIH proposal really serves our international interests. Our trade negotiators are constantly fighting for strong intellectual property protection, which is under siege in many countries around the world. I assume that some of the authors (or at least co-authors) are foreign nationals, and would fall under the protection of the Berne Convention. And I assume some of the impacted publisher/copyright owners are foreign as well. As I will note in a moment, the NIH policy will seriously threaten the protection of American authored and published works in foreign countries. This government edict from the NIH, not promulgated "in a manner consistent with copyright law", has a crippling effect on the value of the copyright in these works. Some of my academic colleagues argue that the Berne Convention has no relevance to the NIH policy. They see it as a simple contract matter, and they note that the researchers get very valuable consideration for their assignment of copyright to the NIH under the contract. Granted, the researchers do receive a generous stipend, averaging $400,000, but that fact also makes the whole arrangement suspect. To a serious researcher, an NIH grant is a matter of life and death professionally. To claim that the assignment of the reproduction right is "voluntary"--the product of a free market negotiation--strikes me as disingenuous.

In fact, the government involvement puts the NIH "contract" in a suspect category in the Berne and TRIPs context. It is not a private contract between commercial interests. Let me draw a hypothetical. The U.S. motion picture industry is now permitted to exhibit theatrically only 10 or so films per year in China. Suppose the government of China were to offer the American film producers a deal: "If you sign a contract waiving your reproduction right, we will allow you to exhibit 100 films a year." The producers would crunch the numbers and calculate the bottom line, even while complaining bitterly that the deal is outrageous and clearly a violation of the spirit of copyright and the Berne Convention. Nonetheless, they might conclude that on balance they would make more money with the proffered deal than they now make with limited access to the huge Chinese market. So, in the end, they might sign on the dotted line. Could the United States take that "contract" to the WTO and press a claim under TRIPs that China is not complying with its treaty obligations? I think so. The ensuing mass piracy of American films in China would be a direct result of this unwaivering government action that diminishes copyright, disguised as a "contract". In any case, the NIH free access policy is an unfortunate international precedent for a country like the United States, whose great strength is intellectual property.

The NIH should reconsider the long term consequences of its proposal. The dedicated researchers who benefit from the NIH grants take great professional pride in being published in prestigious learned journals, all of which constitute a valuable and reliable resource for future research. The NIH itself recognizes that "publication in peer-reviewed journals is a major factor in determining the professional standing of scientists;

institutions use publication in peer-reviewed journals in making hiring, promotion, and tenure decisions."

Despite some grumbling about high subscription prices, very few researchers, academics, or librarians are suggesting that the journals have outlived their usefulness. The STM publishers should be given the right to compete fairly in a changing marketplace, in which they will innovate and have the opportunity to flourish on their own merits, as long as their copyrights are protected. Congress should require the NIH to demonstrate convincingly that their free access policy will not jeopardize the existence of the STM publishers and the indispensable role they play in vetting and selecting peer-reviewed articles. Absent that proof, the NIH should rethink their current policy of involuntary assignment. Current law gives the NIH some discretion in implementing their open access policy in a manner consistent with copyright. If the NIH do not amend their policy, Congress should direct them to do so. The Chairman's bill will allow the publishers to continue publishing. It will preserve the STM journals as valuable professional tools for scientific research, thereby promoting the progress of science. By restoring the status quo ante, the Chairman's bill will give the evolving free market a chance to come to grips with the new online technologies without undercutting the incentives that publishers have relied on for two hundred years. I would urge its enactment.

I would be pleased to answer any questions.

Mr. BERMAN. Ms. Joseph?

TESTIMONY OF HEATHER DALTERIO JOSEPH, EXECUTIVE DIRECTOR, SCHOLARLY PUBLISHING AND ACADEMIC RESOURCES COALITION, WASHINGTON, DC

Ms. JOSEPH. Thank you, Mr. Chairman, and especially Chairman Conyers. Thank you for the opportunity to testify today on this proposed legislation.

I am speaking today on behalf of SPARC, the Alliance for Taxpayer Access, and the Association of Research Libraries, and I am here today because these organizations represent the end users who currently benefit from access to the works that would be affected by this legislation.

SPARC and ARL represent libraries, which are the customer base of the journal publishing industry. As you heard earlier, SPARC also coordinates the Alliance for Taxpayer Access, which is a very active coalition of patients' advocacy groups and other organizations who are dedicated to ensuring that the public receives access to the results of research funded using taxpayer dollars.

I am also here, as you heard, because I spent 15 years as a journal publisher. And I am here for a third reason. I am here as a mother and as a member of the public, who has an abiding interest in the results of the research that my tax dollars help to support.

I would like to express my serious reservations about this proposed legislation and particularly the negative impact that it would have on the availability of vital health care information by overturning the crucially important NIH policy.

U.S. taxpayers underwrite tens of billions of dollars research each year and the sharing of this research is an essential component of our collective investment in science. Yet, despite the fact that we have paid for this research, members of the public frequently cannot access these findings, because they simply can't afford to subscribe to all of the journals in which they are published.

This is why the organizations that I represent today have supported efforts such as the NIH. Opponents of the policy have expressed a variety of concerns, but chief among the concerns is the fear that the policy will create a resource that will compete with journals.

The concern is that their primary customer, the library community, will view the availability of an author's manuscript in PubMed Central as an adequate substitute for subscribing to a journal and, as a result, cancel subscriptions.

This fear is unfounded.

First, the current policy is a compromise that contains safeguards against this happening. Authors are required to deposit only the final accepted manuscript, the raw word processing file, not the final copy edited and copyrighted version that will ultimately appear in the journal.

Second, the policy allows an embargo period of up to 1 year before a manuscript becomes available. In the fast-moving world of biomedical research, information after 1 year is old.

Finally, few, if any journals publish only research articles that have resulted from NIH funding. The vast majority of journals pub-

lish articles resulting from other funding sources, along with review articles, commentary and other value-added material.

As a publisher, I have worked for organizations who have voluntarily deposited their content into PubMed Central. One, the American Society for Cell Biology, has made the research articles from its journal available on PubMed Central, with only a 2-month embargo period, since 2001.

The society puts, also, all of that journal's content into the database, not just the fraction supported by the NIH funding. Yet, the revenue generated by that journal has continued to increase since 2001 and the number of articles downloaded from the society's Web site has increased, as well.

And the ASCB is not alone as a publisher experiencing these results. Several hundred other journals have similar policies listed on the PubMed Central Web site. None would do so if their revenue was threatened in any way.

Finally, as a mother and as a member of the general public, the NIH policy addresses a very real need. The information contained in the PubMed Central database is crucial health-related information that can make life and death differences in the lives of the public.

Currently, the database contains more than 27,000 articles on malaria, 50,000 on AIDS, and more than 77,000 on diabetes research. It is a vital resource for individuals looking for health care information.

And I know this personally, because when my 5-year-old son was diagnosed 9 weeks ago with autoimmune insulin-dependent diabetes, I did what is now routine. I got out, I Googled every piece of current information that I could find.

I did this from home, and I did it at 3 o'clock in the morning, the night we got home from the hospital, desperate for information that could reassure me that there was something I could do besides wake my child up twice a night to check his blood sugar for signs of hypoglycemia.

I found a 2008 study of continuous glucose monitors that rated parent and patient satisfaction in the prevention of these nighttime lows. Notably, the study that was available was the author's final manuscript that had been posted 1 month before, available solely because the NIH policy was in place.

The policy strikes a careful balance between increasing access to the literature and respecting the concerns of the publishers by operating within the current copyright structure. The NIH policy in no way conflicts with U.S. copyright law.

The agency receives a nonexclusive license from the researchers they fund, who retain their copyright and are free to enter into publication agreements with journals, subject to the standard Federal purpose license.

The Fair Copyright in Research Works Act would overturn this important and much needed policy by prohibiting agencies from making the results of their research available in the way they choose to the public.

This bill would significantly inhibit our ability to advance scientific discovery. The legislation is not in the best interest of the

taxpayers who fund the research, the scientific community, or the public who relies upon it.

Thank you once again for the opportunity to testify.

[The prepared statement of Ms. Joseph follows:]

PREPARED STATEMENT OF HEATHER DALTERIO JOSEPH

Statement of
Heather Dalterio Joseph

on behalf of the

Scholarly Publishing and Academic Resources Coalition (SPARC)

Alliance for Taxpayer Access

Association of Research Libraries

Before the

Subcommittee on Courts, the Internet, and Intellectual Property

Committee on the Judiciary

Regarding H.R 6845, the Fair Copyright in Research Works Act

September 11, 2008

Chairman Berman, members of the House Judiciary Subcommittee on Courts, the Internet and Intellectual Property, and especially, Chairman Conyers - thank you for the opportunity to testify today on H.R. 6845, the "Fair Copyright in Research Works Act." I serve as the Executive Director of the Scholarly Publishing and Academic Resources Coalition (SPARC) and also as the Coordinator of the Alliance for Taxpayer Access (ATA). I am also speaking today on behalf of the Association of Research Libraries.

I am here today because SPARC, ARL, and ATA represent a large number of the users who currently rely on and directly benefit from access to the works that would be affected by this proposed legislation. I am also here having spent fifteen years as a publisher in both not-for-profit and commercial publishing organizations. And finally, I am here as a mother and as a member of the public, with a deep and abiding interest in the results of the research that my tax dollars help to support.

I would like to express my serious reservations about this legislation, and particularly about the negative impact it would have on the advancement of scientific research and on the availability of vital health care information for millions of Americans by overturning the crucially important National Institutes of Health's Public Access

Policy.

SPARC, a membership organization of more than 225 college and university libraries in the U.S, is dedicated to working collaboratively to expand the dissemination of the results of scholarly research by leveraging the vast new opportunities presented to the academic community in the networked digital environment. ARL represents 123 research libraries in North America. As academic and research libraries, we represent the customer base of the journal publishing industry, providing the majority of the subscription income received by these publishers.

SPARC also serves as the coordinating organization for The Alliance for Taxpayer Access, an alliance of more than 80 libraries, universities, patients advocacy groups, consumer groups, and student organizations who are dedicated to ensuring that a specific subset of scholarly research - specifically the results of research that has been funded using taxpayer dollars - is made freely and rapidly accessible to the public.

U.S. taxpayers underwrite tens of billions of dollars of research each year, and the widespread sharing of the results of this research is an essential component of our government's investment in science. It is only through the **use** of these findings that

funders - and, by extension, taxpayers – obtain value from their investment. Faster and wider sharing of knowledge fuels the advancement of science and accordingly, the return of health, economic, and social benefits back to the public. This is why 33 Nobel Laureates have written in strong support of the NIH Public Access Policy. That letter is included in my written statement.

Yet, despite the fact that the public has paid for this research, colleges, patients, physicians, researchers, and other members of the public frequently cannot access taxpayer-funded research findings because they simply cannot afford to subscribe to all of the journals in which these findings are published.

As the Executive Director of SPARC, I see libraries face this access issue on a daily basis. Even the most well-funded, private university libraries can not afford to subscribe to all of the journals they would like to provide their students. This situation is exacerbated by the continued rapid escalation in price of journal subscriptions, which puts libraries in the position of having to cancel subscriptions. Libraries now routinely find themselves in the position of paying more and more money only to be able to provide their patrons – students, faculty, researchers – with access to less and less.

This is why the organizations that I represent today have enthusiastically supported efforts such as the NIH's which are designed to break this logjam. The NIH Public Access Policy is a simple, effective, and carefully balanced Policy. It requires that all investigators funded by the agency submit an electronic version of their final peer-reviewed manuscripts to PubMed Central (PMC), the online archive of the National Library of Medicine, to be made publicly available within twelve months of publication, and in a manner consistent with copyright law.

The policy is designed to create a broadly accessible, permanent archive of the results of NIH-funded research in order to advance the conduct of science and enhance the agency's accountability to the public. In short, this Policy ensures that the U.S. taxpayers are able to benefit fully from the research that they have underwritten.

During the extensive public comment periods and discussions that have taken place over the past four years, opponents of the policy have expressed a variety of concerns. Chief among them has been the fear that the policy would create a resource that is competitive with journals, and would ultimately damage publisher revenues. The concern is that their primary customer – academic libraries – will view the availability of an author's manuscript in PubMed Central as an adequate substitute for subscribing

to a journal, and will, as result, cancel subscriptions in large numbers. There are several reasons why this fear is unfounded.

First, the current NIH Public Access Policy is a compromise policy that contains safeguards against this happening. Authors who receive NIH funding are required to deposit only their final accepted, peer-reviewed manuscript - the raw, word-processing file – into PubMed Central, rather than the final, copyedited, formatted, enhanced -- and copyrighted -- version that will ultimately appear in the journal. The final articles with these value- added features remain solely the publishers to distribute and sell as they choose.

Second, the NIH Policy allows an embargo period of up to one year before a manuscript becomes publicly available. In the realm of the extremely fast-moving, crucial biomedical research funded by the NIH, information, after one year, is already old. The value in the articles resulting from this research lies largely in their immediacy.

Finally, there are very few, if any, journals that publish only research articles that have resulted from NIH funding. The vast majority of journals publish articles resulting

from other funding sources, along with review articles, editorial material, commentary, and other value added material.

The findings of recent studies have supported the use of these safeguards. In a 2006 report commissioned by a publishing organization, the Association of Learned and Professional Society Publishers (ALSP) surveyed librarians to determine what factors would prompt them to cancel journal subscriptions.[1] The report concluded that "availability of content via delayed open access was not an important factor in journal cancellations." Specifically, they noted that for availability of material in an archive such as PubMed Central to become a factor in subscription cancellation:

1. The embargo has to be very short. 82% of librarians surveyed noted it had to be 3 months or less, and for 92% it had to be 6 months or less;
2. The raw manuscript, or preprint, is not a substitute for the journal only 9% saw access to a preprint as an adequate substitute and
3. Completeness counts – 75% of librarians said the archive would have to contain over 90% of a given journal's content before it became a factor in considering cancellation.

The library community does not view this policy as a chance to save money by cutting subscriptions to biomedical journals – but rather as an important opportunity to

supplement our journal collections by providing access to additional material that we would not otherwise be able to provide to our patrons. And importantly, libraries strongly support NIH's role in preserving this biomedical literature for future generations of users.

As a publisher, I have seen first hand that the experience of organizations who have voluntarily participated in depositing materials into PubMed Central supports this survey. As a direct example: The American Society for Cell Biology (ASCB), where I served as Publishing Director, has made the research articles from its journal , *Molecular Biology of the Cell*, available on PubMed Central just two months after their publication since 2001. Additionally, the society puts all of the journal's content into the database, not just the fraction supported by NIH funding. Despite this, the revenue generated by *Molecular Biology of the Cell* has increased steadily since 2001. Participation in PubMed Central actually resulted in an increase in the number of articles downloaded from the society's website, increasing the visibility of the journal and the papers published there.

The ASCB is not alone in this experience. There are several hundred other journals also voluntarily depositing content into PubMed Central (see list at (http://publicaccess.nih.gov/submit_process_journals.htm). None of these would do so

if it threatened their core business in any way.

Finally, as a mother and member of the general public, the NIH Public Access Policy addresses the public's rising interest in self-education on health matters and need to see the results of their extensive investments. The information we are talking about today is, after all, generated by a public agency tasked with protecting and improving the public health. The information contained in PubMed Central is not esoteric research of interest only to elite scholars. It is crucial, health-related information that can make a life-or-death difference in the lives of the American public. As of today, the NIH database contains more than 27,500 articles on malaria, 50,000 on AIDS, 41,000 on HIV, 5,000 on health disparities, 2,000 on disadvantaged populations and more than 77,000 on diabetes research. This is a vital resource for individuals looking for health care information at any time of the day, from anywhere, any day of the week.

When my five-year-old son was diagnosed just nine weeks ago, with autoimmune, insulin-dependent Type 1 Diabetes, I did what every member of the patients advocacy groups I represent today predicted I would. I got online and looked for every piece of current information I could get my hands on. I did this from home, at 3 in the morning the night we got home from the hospital, desperate for information that could

reassure me that there was something else I could do besides wake my child up twice a night to check his blood sugar for signs of hypoglycemia. I found a 2008 study of continuous glucose monitors, rating parent and patient satisfaction in the prevention of nighttime instances of low blood sugar[2]. Notably, what was available to me was the authors' final manuscript, posted just one month before, available solely because of the NIH public access policy. It was worth the world to me.

Besides serving the interest of the public as just described, the NIH policy also strikes a careful balance between increasing access to the literature and respecting the concerns of publishers, by operating within the current copyright structure. As noted by 45 of law professors who specialize in copyright law, the NIH policy in no way conflicts with U.S. copyright law. The agency receives a non-exclusive license from the researchers they fund, who retain their copyright and are free to enter into traditional publication agreements with journals or to assign these rights to anyone they want, subject to the standard federal purpose license.

Unfortunately, the Fair Copyright in Research Works Act would effectively overturn this important and much needed policy. By prohibiting agencies from making the results of the research they fund public in the manner that they choose, this bill would

significantly inhibit our ability to advance scientific discovery. This legislation is not in the best interest of the taxpayers who fund the research nor the scientific community and the public that that rely upon it.

Thank you once again for providing me with the opportunity to testify.

1. "ALPSP survey of librarians on factors in journal cancellation" Mark Ware Consulting Ltd, http://www.alpsp.org/ngen_public/article.asp?id=200&did=47&aid=157&st=&oaid=-1

2. Weinzimer, Stuart MD, c/o DirecNet Coordinating Center, Jacb Center for Health Research, FreeStyle Navigator™ Continuous Glucose Monitoring System Use in Children with Type 1 Diabetes using glargine-based multiple daily dose regimens: Results of a Pilot Trial," http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2365493,

Mr. BERMAN. Thank you.
Mr. Frank?

TESTIMONY OF MARTIN FRANK, EXECUTIVE DIRECTOR, AMERICAN PHYSIOLOGICAL SOCIETY, BETHESDA, MD

Mr. FRANK. Thank you, Mr. Chairman and Members of the Subcommittee. Thank you for the opportunity to testify today.

As you noted, I am the executive director of the American Physiological Society. I am also the coordinator of the D.C. Principles Coalition, and I have also been a scientist researcher and an extramural employee at the National Institutes of Health.

I have submitted testimony in support of H.R. 6846 and want to highlight some of the issues raised in these comments.

H.R. 6845 will help ensure that the Federal Government does not diminish copyright protections for journal articles in which private sector publishers have made a significant value-added contribution.

By protecting copyright, the act will continue to provide incentives for investment in the peer review process, which helps ensure the quality and integrity of scientific research.

The APS is a not-for-profit society founded in 1887 and our first journal, American Journal of Physiology, dates to 1898.

The D.C. Principles Coalition was founded in 2004 by not-for-profit publishers, who believe in free access to science and who make the full text of their journals freely available within the constraints of their business and publishing requirements.

The coalition is a diverse group comprised of 73 publishers. We publish nearly 400 journals, ranging from top tier medical and research to small niche publication.

Because we are so different, the coalition has always supported its members' desire to make their own decisions on when to make their content freely available. Some opt for free access after 2 years, others after 2 months, because one policy does not fit the needs of all publishers.

Many of the D.C. Principles Coalition members work with HighWire Press, as noted by Dr. Zerhouni, the largest repository of high impact peer reviewed scientific content, including two million free articles.

Coalition members also provide access for scientists in the developing world by participating in WHO initiatives, such as HINARI and Agora.

Patients can get access to our journals via patient request links and through Patients Informed, a publisher initiative designed to provide patient access to research articles and commentaries relevant to their medical conditions.

As scholarly publishers, it is our mission to maintain and enhance the independence, rigor and trust, and the visibility that have established our journals as reliable filters of information emanating from basic and clinical research.

We do so through the peer review process that evaluates the strengths and weakness of submitted manuscripts, selecting those that meet the journal's high standards for publication.

Some say that funding agencies have rights to the articles written by their grantees. While the agencies pay for the research, the publisher bears the cost of peer review and publishing.

Articles should not be taken from those of us who have invested heavily in their creation. By imposing a mandatory policy without oversight by responsible congressional Committees, NIH has diminished a basic principle under copyright, namely, the right to control the distribution of the works we publish.

The NIH could have provided access to its funded research without diminishing copyright protection. It could have followed Congress' direction under the America Competes Act, which authorized NSF to provide access to research reports and summaries, as well as citations to copyrighted articles, rather than the articles themselves.

Alternatively, it could have worked with publishers to provide access through existing links associated with journal article abstracts posted on PubMed.

Under the mandatory policy, NIH has become a publisher. It has created a platform that competes with not-for-profit and commercial publishers alike. It takes the article from the publisher after it has done the heavy lifting of validating the science through the costly and time-consuming peer review process.

NIH's next step is to enhance this content further by linking it to databases and resources not readily available to small publishers.

As PubMed Central becomes an increasingly valuable and singular resource, as envisioned by Ms. Joseph, it becomes more likely that journal subscribers will opt to access articles from NIH's Web site rather than the journals. This will lead to subscription cancellation, as suggested by studies discussed in my written testimony.

We are gravely concerned that the funding base of some journals may be eroded to the point where they can no longer adequately serve their scholarly communities. Some may be forced to increase their author fees, at a time when funding for research is shrinking.

As a result, researchers will be disadvantaged, in one case, by having less freedom to choose where to publish or what community to reach, and, in the other, failing to have adequate resources to fund research designed to develop treatments and cures for disease, as author fees eat away at the research dollars provided by Congress.

Thank you for hearing my testimony. I would be pleased to answer your questions and respond to issues raised by the other panelists.

[The prepared statement of Mr. Frank follows:]

PREPARED STATEMENT OF MARTIN FRANK

Testimony

Martin Frank, Ph.D.

Executive Director, American Physiological Society

Coordinator, DC Principles Coalition

September 11, 2008 at 1:00 pm

Subcommittee on Courts, the Internet, and Intellectual Property

Hearing on the Fair Copyright in Research Works Act

Room 2141, Rayburn House Office Building

Chairman Berman, members of the House Judiciary Subcommittee on Courts, the Internet and Intellectual Property, thank you for the opportunity to testify today on the Fair Copyright in Research Works Act. My name is Martin Frank. I serve as the Executive Director of the American Physiological Society (APS) and as the Coordinator of the Washington DC Principles Coalition for Free Access to Science (DC Principles Coalition).

The American Physiological Society is a not-for-profit society with over 10,000 members. The Society was founded in 1887 and published its first journal, the *American Journal of Physiology* in 1898. At present, APS publishes 14 journals that are available online and in print. APS was at the forefront of the online revolution, taking our first steps towards digital publication of content starting in 1993, even before the advent of the World Wide Web. At present, the Society publishes approximately 4,000 articles annually, making them all freely available after 12 months from our online journal site at HighWire Press. The Society made this decision in 2000 without government intervention because it served our members. It is a decision that we can modify should 12 months prove disadvantageous to the Society's business model. We were able to make the decision because the Society controlled copyright on the articles and we had subscription revenue to support the necessary infrastructure.

The DC Principles Coalition was founded in March 2004 to represent the concerns of not-for-profit publishers, who believe in free access to science and who make the full text of their journals freely available within the constraints of the publisher's business and publishing requirements. Many of the DC Principles Coalition members disseminate their research journals

through private sector initiatives such as HighWire Press. HighWire, a division of the Stanford University Libraries, hosts the world's largest repository of high impact, peer-reviewed scientific content. HighWire currently hosts 1171 journals from more than 140 scholarly publishers. These journals collectively have published 4,831,190 full text articles to date. The majority are indexed by Google, and nearly all the life sciences research abstracts are indexed in PubMed along with live links back to the journal article. This feature extends to all research articles published by these journals, not just those funded by the government. Moreover, nearly 2 million of these articles -- 1,933,209, to be exact -- are freely available today. HighWire publishers produce 71 of the 200 most-frequently-cited journals and offer readers enhancements such as links to databases available from NCBI as well as links to referenced articles from other participating journals.

From the beginning, we have said that scholarly publishers are a diverse group and one size does not fit all. At present, the DC Principles Coalition is comprised of 73 not-for-profit publishers responsible for the publication of nearly 400 journals. The societies themselves have over 700,000 individual members. Together Coalition members publish nearly 100,000 articles annually of which approximately 20% are based on research funded in whole or in part by the National Institutes of Health. However, there are a number of journals, including those of the APS, for which the NIH funded content is 50% or more.

On behalf of the 10,000 members of the APS and the 73 not-for-profit publishers of the DC Principles Coalition, I would like to express my strong support for the Fair Copyright in Research Works Act. By protecting copyright, this bill preserves the current incentives for the continued investment in the peer review process that is essential for the quality and integrity of scientific research. It does so by ensuring that the federal government does not diminish

copyright protections for scientific journal articles in which private sector publishers have made a significant value-added contribution.

The DC Principles Coalition members readily acknowledge the benefits of widely disseminating the results arising from the research published in our journals, whether the research is publicly funded or not. That is why we have all moved to online distribution of our complete journal content. That is also why we make it available freely after an embargo period. We also recognize that there are those in the developing world who have difficulty accessing the scientific literature and for that reason we arrange to distribute our content through such World Health Organization initiatives as HINARI and AGORA. Coalition members also participate in PatientInform, an initiative designed to provide patient access to research articles along with interpretations and commentaries that are relevant to their medical conditions.

Mandatory requirements like those implemented by NIH undermine scholarly publication. Copyright protections have spurred the investments and infrastructure needed to maintain a robust and thorough pre-publication peer review process in the digital age. These are costly endeavors, and if publishers cannot recover their costs, the quality of our journals will suffer to the detriment of our members' science.

As scholarly publishers, it is our mission to maintain and enhance the independence, rigor, trust, and visibility that have established our journals as reliable filters of information emanating from basic and clinical research. This is a key feature of the partnership between scholarly societies and their members. Our common goal is to advance science and patient care by ensuring that research meets the highest standards. The government undermines our

publishing activities when it diminishes one of our most basic rights under copyright – namely, the right to control the distribution of the works we publish.

The Fair Copyright in Research Works Act will help ensure that the federal government does not diminish copyright protections for peer reviewed articles and the valuable publications in which they appear. Publishers add value after the government funded experiments are completed and often times to manuscripts written years after the research grant has ended. In the digital age, publishers are the ones who underwrote the development of special software and provided platforms for the online manuscript submission systems that are at the front-end of the peer review process and the staff to run it. Journal editors, who are supported by the publisher, use their expertise to identify knowledgeable scientists who can to serve as peer reviewers to determine whether the manuscript meets the high standards set for publication in their journal. Reviewers are asked to evaluate the strengths and weaknesses of a manuscript, including its experimental protocol and data interpretation. It serves as part of science and the scientific process itself, helping to advance research and ensure the validity of clinical applications. Consequently, not all manuscripts are accepted for publication, keeping standards high and benefiting the public.

Accepted manuscripts are then moved to the journal staff responsible for coordinating and managing the copyediting and formatting of the manuscript, the redrawing of figures to make them suitable for publication, and its printing and electronic dissemination. The value added by publishers also includes correcting technical errors, ambiguous wording, or ethical questions that are identified during the production process.

Non-profit and commercial publishers invest hundreds of millions of dollars every year in the peer review, editing, disseminating, and archiving of scholarly articles as well as the creation of unique journal identities. This is something that researchers and funding agencies alike rely upon in order to make critically important professional judgments. Peer review, which ensures the quality and integrity of research articles, is at the heart of this process and of scientific communication. Copyright provides the incentive for publishers to continue to invest and innovate in peer review publishing and the development and continuation of journal identities because it is critical to our ability to protect our journal articles and recoup our investments.

The copyright protection that journal publishers receive when they agree to publish a manuscript allows the journal and the Society to continue to do the important work required to further science. The Fair Copyright in Research Works Act will help ensure that copyright protections for research works remain in place, helping to protect the revenue needed to advance science and support our scholarly communities.

Because the NIH mandate in effect reduces copyright protection for publications to only one year, it risks undermining the revenue stream derived principally from subscriptions, that enables publishers to add value to research articles and to enhance readers' ability to discover and use scientists' work. As the number of full-text articles based upon NIH-funded science in PMC increases, concern grows that current journal subscribers will access the text from that website, rather than from the journal's own online site. Over time, this is bound to cause subscription cancellations. If publication costs cannot be recovered through subscriptions, journals will try to recover them through author fees or similar mechanisms that would reduce

funds available for research by amounts much greater than the cost of subscriptions. We are gravely concerned that the funding base of some journals may become eroded to the point where they can no longer adequately serve their communities and will be forced to implement or increase their authors' fees at a time when funding levels are shrinking. In both cases, researchers are disadvantaged – in one case by having less freedom to choose where to publish, or what community to reach, and in the other, failing to have adequate resources to fund research designed to develop treatments and cures for disease.

Since the NIH Public Access Policy applies only to NIH grant holders, some journals will be impacted more than others. Many journals have over 50% of their articles reporting on NIH-funded research. The majority of these journals are published by non-profit publishers. Journals with a higher proportion of articles reporting on NIH funded research are more likely to lose subscriptions when the material is made available for free on the NIH website. If the NIH policy were applied to other federal agencies, the number of articles reporting on federally funded research would increase, thereby raising the threat. Journals that are published less frequently will also suffer greater exposure as fewer issues would be missed in a twelve month period. When faced with the choice of subscribing to a journal or waiting twelve months for free access, some subscribers will cancel their subscriptions and wait or gain access to needed articles through interlibrary loan or pay per view.

The findings of several recent studies lead publishers to believe they could be harmed by the mandatory NIH policy.

- The Publishing Research Consortium (PRC) commissioned an independent study of how decision making factors such as embargo period and article version would affect librarians' cancellation of subscriptions. The survey reported that a significant number of librarians would be likely to cancel subscriptions when some of a journal's peer-reviewed manuscripts are available freely through open access. For example, with a delay of twelve months for free access to 40% of a journal's manuscripts, a large proportion (44%) of those surveyed said they would opt for free content over a paid subscription. [1]
- A study published by the Special Libraries Association found that in the life sciences, only 60% of an article's usage takes place in the first year after publication. That means that 40% of the usage of an article takes place after twelve months. In some fields such as physiology, the "shelf life" of an article is even longer. For APS journals, which are free after 12 months anyway, this means that we are still competing with PubMedCentral for traffic from individuals who have the choice whether to subscribe or not.[2]

A mandatory federal policy requiring these works to be made available for worldwide distribution is in inherent conflict with copyright, which provides publishers with the protection needed to – 1) recover the costs of conducting peer review, editing, publishing, and archiving of scientific articles; 2) create unique journal identities on which researchers and funders rely in making critically important personal and professional judgments; and 3) continue to make the substantial investments in new technologies to speed distribution, broaden access to and archive and protect research results, thereby helping to advance scientific progress.

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[1] *Self-Archiving and Journal Subscriptions: Co-existence or Competition?* at www.publishingresearch.org.uk

[2] Tenopir & King, *Towards Electronic Journals*, Special Libraries Association, 2000, pg 189.

The dissemination of publicly funded research is possible without diminishing copyright protections. The National Science Foundation (NSF) has been directed by Congress, under the America Competes Act, to provide access to government funded research in a way that does not conflict with copyright principles. Under that approach, NSF will provide access to the research reports, summaries of journal articles, and citations to the copyrighted articles. HR ____ will allow the government to continue to disseminate research results, while ensuring that copyright protections in private sector research works are not diminished.

In conclusion, I strongly support the Fair Copyright in Research Works Act. This important legislation will help ensure that the federal government does not diminish copyright protections for scientific journal articles in which private-sector publishers have made a significant value-added contribution. By protecting copyright for research works, HR _____ will continue to provide incentives for private-sector investment in the peer review process which helps ensure the quality and integrity of scientific research.

Thank you once again for providing me with an opportunity to testify and for considering HR ___, the Fair Copyright in Research Works Act. I would be happy to answer your questions at this time.

Mr. BERMAN. Thank you all very much.

I will recognize myself for 5 minutes to begin the questioning.

Dr. Zerhouni, let me start with you. You spoke about the Appropriations Committee's concern about the lack of access to NIH supported research reports and data.

Let's assume that both perspectives here are—both narratives are valid. There needs to be greater public access, but it is important to remember the incentives for publishers to provide peer review and things they do.

Is the National Science Foundation policy, that apparently was mandated by the America Compete Act that Dr. Frank spoke about, is that a realistic and sensible middle ground, the information, the summary of the research is provided to the public through the database and other NIH means, but the journal article remains subject to distribution by the publishers, the copyright owner?

Dr. ZERHOUNI. We do not believe so, and I will tell you why. I think that peer reviewed articles are very important. The peer review process is critical.

You cannot just have a self-reported scientific report of activities under grants to replace the full effort that an author has to make to understand all of the other literature, to write their publication, submit their data.

And therefore, it is very important for us to understand that what is key here is to have a database of the absolute final author's manuscript that is peer reviewed by his peers.

Is that going to damage peer review? Currently, Mr. Chairman, NIH pays for peer review costs. We pay two ways. One, we allow our grantees to pay $3,000 to $4,000 to the publishers for page charges, reproduction charges.

We have never stopped that. We don't intend to stop——

Mr. BERMAN. Say that again. The research grant includes——

Dr. ZERHOUNI. Publication costs. We allow our grantees to pay publishers who request that costs of page charges or reproduction charges or figure charges. We do not prevent our grantees from paying for those costs.

Mr. BERMAN. So when I made the comment in my opening statement that several thousand dollars are only paid by the journals to produce this peer review process, you are telling me that if I looked further, I would find out that the researchers are passing on the money, the grant money you provided them, authorized by the terms of that grant, to the journal.

Dr. ZERHOUNI. We consider publication costs part and parcel of the scientific process. We have always allowed those costs.

They are currently anywhere from——

Mr. BERMAN. Is that happening?

Dr. ZERHOUNI. It is happening to the tune of probably $100 million a year, anywhere between $80 million to $100 million.

Every grant that we give is, on average, $400,000. We allow upwards of $3,000 per year for publication——

Mr. BERMAN. Dr. Frank, is that your understanding of the way it works?

Mr. FRANK. NIH does authorize, in their NIH grant policy statement, that research dollars can be used to pay for publication costs.

The problem is publication costs of $3,000 to $4,000 for an individual investigator whose grant has already dried up and gone away has to come out of the individual's pocket or the university, because many of the papers that are published are published post-research funding.

Secondly, most authors, investigators, have the opportunity to——

Mr. BERMAN. In other words, the researcher may have been allowed to do it, but——

Mr. FRANK. But if he has got no money, he has got no money.

Mr. BERMAN [continuing]. In reality, he budgets like I do and that money has been spent.

Mr. FRANK. That money has been spent.

Secondly, there are only a small portion of journal publishers who charge $3,000 or $4,000 for open access.

For example, Dr. Zerhouni indicated that there are approximately 400 journals that deposit both NIH and non-NIH content into PubMed Central. Of those 400 journals, about two-thirds of them are traditionally referred to as open access publishers, BioMed Central, Public Library of Science, and Dari, all of them who charge authors for publication.

And the question really has to boil down to whether or not we want to charge the author for publication and take dollars out of their research grants, assuming the grant has not expired, or do we want to have the user, the reader, pay for publication, which is the subscription model that the vast majority of publishers use.

Commercial journals, for example, do not charge generally for page charges for publication. They rely on the reader to extract—to recover the costs associated with that publication process.

The other side of it is Ms. Joseph said she represents the library community, and the library community is, of course, and has expressed itself with considerable concern about the cost of publication. And I have no argument with the cost of publication.

They say that the rate of increase has far outpaced inflation. But the expansion of knowledge has also outpaced inflation and if one looks at the total number of pages published and compare that to subscription costs, one often finds that there is a parallel, more science, more subscription costs.

Mr. BERMAN. Okay. My time has expired.

So I am going to recognize the Ranking Member for questions for 5 minutes.

Mr. Coble?

Mr. COBLE. Thank you, Mr. Chairman.

Good to have you all with us, I will say to the witnesses.

Dr. Zerhouni and Ms. Joseph, what about the basic complaint that Mr. Oman, Dr. Frank and members of the publishing community make? That is, if NIH disseminates peer reviewed articles free of charge 12 months after publication, do private publishers have any incentive to initiate the peer review process and, therefore, provide publication services?

And furthermore, if publishers are forced out of this business, will the NIH fill the vacuum?

Dr. ZERHOUNI. I would just like to point out the reality on the ground, Mr. Coble. Currently, as you just heard, many journals currently make available their authors' copy almost immediately.

Many journals make the entire collection that they have available to the public within 12 months. I don't know how that is okay, on the one hand, but if NIH does it, it is not okay.

I don't think you can say, on the one hand, it doesn't damage the economic model and, on the other hand, it is the end of the world. That is our view, that the publication or making available after 12 months over and over has shown that the economic recovery has already occurred.

Mr. COBLE. Ms. Joseph, do you want to be heard?

Ms. JOSEPH. I completely agree and I think that the evidence that we have from the journal publishing community who have made their manuscripts available at 12 months or shorter shows that it is a perfectly viable economic model.

Again, this is biomedical information. This is time-sensitive stuff. A year is old. We, as the library community, cannot cancel library subscriptions in favor of waiting for some subset of this material to be available in a database a year later.

The universities and colleges that we serve demand that we provide access to this. The situation that we are finding ourselves in now, though, is paying more and more money year in and year out to be able to provide our universities with access to less and less information.

Mr. COBLE. Mr. Oman, is there an inherent problem with the Federal Government orchestrating the peer review and manuscript selection process, if it comes to that, and would this responsibility better be left to the private sector?

Mr. OMAN. It has been a longstanding U.S. government policy to encourage the private sector to undertake these responsibilities out of a consideration for the First Amendment, out of a healthy distrust for the hairy snout of government being in these delicate and sensitive publishing decisions.

And I don't think that the National Institutes of Health are prepared to or are capable of providing that type of detached evaluation, those judgments that relate to publishing and the incorporation of peer reviewed articles without a considerable increase in their manpower and at great expense to the taxpayer.

Mr. COBLE. Thank you, sir.

Dr. Frank, it appears that APS has done a stellar job of providing its articles online within 12 months of publication.

Why do you think the voluntary compliance with the NIH policy was so low in comparison, inspiring the present mandatory requirement?

Mr. FRANK. I think the voluntary plan that NIH instituted was belabored with a somewhat cumbersome upload process and mixed signals to the investigator community.

Invariably, mandatory is going to be heard much clearer by an investigator than voluntary. I think, in general, the voluntary community, at least my community, actually didn't think the program was necessary, perhaps because, at least for my journals, we make them available 12 months after publication, whether it is NIH or non-NIH funded.

The critical factor there, however, is that it has been my financial and business decision to make it available after 12 months and should it not succeed, I can always roll it back to 18 months or 24 months.

With the NIH mandate and with the fact that, at least for the American Physiological Society, which has about 50 percent of its articles funded by the National Institutes of Health, they have essentially told me that I cannot roll back my access period, my embargo period, because they have a mandate and those articles must be deposited.

Mr. COBLE. I see my red light.

Mr. Chairman, I yield back.

Mr. BERMAN. The Chairman of the Committee is recognized.

Mr. CONYERS. Thank you very much.

Now, first of all, I agree with you, Attorney Oman, but can we use kinder language about NIH when you refer to the hairy snout of government? Is there some other way, some terminology that would make this kinder and gentler?

Mr. OMAN. Lipstick on a pig? I will consider revising the written testimony.

Mr. CONYERS. Thank you very much.

Mr. WATT. Does a donkey have a snout or is it just elephants?

Mr. CONYERS. I have some questions, you four are particularly articulate and knowledgeable. This is a stunning hearing that we only wish could have taken place before our other Committee, which I now consider to be third ranking only to the Foreign Affairs Committee, which I think now precedes it decided on the issue.

But could we have a discussion amongst you in connection with what you have heard and been impressed with about your other three colleagues?

And I would like to start with Ms. Joseph to let us know what your impressions are or any corrections you might want to suggest.

Ms. JOSEPH. I think one item leaps out at me and that is the notion of peer review and who pays for peer review, how peer review is conducted and actually financed.

I think the impression is given sometimes that—or not the impression is given—the statement is made that publishers make a substantial investment in peer review.

Peer reviewers are volunteers. Peer reviewers are unpaid. Peer reviewers are employees of universities, public universities, colleges, sometimes corporations. Their salaries are paid outside of the publishing arena.

Publishers do make an investment in peer review, but it is in the administrative coordination of sending an e-mail to notify a peer reviewer that the peer review process needs to take place.

Peer review is a very important process, but I think we need to be clear. Who does the work? It is the scientist. It is part of the culture. It is a volunteer endeavor that scientists routinely perform without compensation.

Mr. CONYERS. Thank you.

Dr. Martin Frank, what would you add to this conversation?

Mr. FRANK. I agree completely. Peer reviewers do it because it is part of the culture of science, just like peer reviewers work for NIH to review research grants.

The APS budget for publication, it costs us roughly $13 million to publish 14 scientific journals, 4,000 articles per year. That is the cost of my publications program.

Of that, about 20 percent of that cost is associated with the sending of e-mails that Ms. Joseph has alluded to. We had to develop and pay for an online submission and review system. We have to support the editorial offices and associate editors that make the decisions on who those peer reviewers will be and make the decisions on whether to accept those papers, and I have staff within the APS offices who manage the peer review process.

It is free when it comes to getting opinions. As we know, opinions come cheaply.

Mr. CONYERS. Boy, do we know that around here.

Mr. FRANK. The opinions we solicit are those of knowledgeable scientists who can assess the validity of the research that has been submitted for consideration of our journals.

Mr. CONYERS. Dr. Zerhouni, you are not on the larger scale of this discussion and I would—do you have some comments about what your three fellow panelists have said here today?

Dr. ZERHOUNI. Yes. I think it is a very important issue that you are dealing with, Mr. Chairman. I wish, actually, the Committee had been more involved over the 4 years that this discussion has taken place.

This is a fundamental issue and when you really think about what is being said, I think we were misrepresented as the hairy snout or whatever. We don't want to do peer review, because peer review is actually a volunteer activity.

We fund many of the researchers who do peer review through NIH grants.

From my standpoint, I use $300,000 of taxpayers' dollars for every paper that NIH funds, 80,000 papers a year, $24 billion of investment.

I have to make sure that, in the technology world of today, we are not fragmenting the information to make the least use of that. I have to maximize that for the benefit of science and the benefit of health.

It seems to me that we are trying to be very consistent with copyright law. Actually, the fact that we are talking about new legislation means that we are consistent in some ways, since, if we were not, it wouldn't need new legislation.

But frankly, I think what you are dealing with here is not an issue of economic impact. We don't see the economic impact. It is not an issue of peer review.

It is an issue of control of the property. And I think I understand my colleagues' concern about control of the property that is generated through $300,000 per paper contribution of the taxpayer.

That is the crux of the issue. My friend says control, control, control. Who controls? I think we are trying to get a sliver to maximize the return on investment of our investment, because of the new technologies.

Basically, you wouldn't want to make Google illegal so that you can preserve newspapers. That is not what the world is about today. If it wasn't the case, we wouldn't be pushing our——

Mr. CONYERS. And finally, Chairman Berman has allowed me to ask Mr. Oman for his final comment before I yield back my time.

Mr. OMAN. Thank you. Thank you, Mr. Chairman.

I have great confidence in the private sector and the ability of the private STM publishers to respond to the challenges of the digital age.

If they keep in the picture, and they can only do that if they maintain copyright control over their works, they will develop innovative ways of reaching the public at large.

They will find a way of helping Ms. Joseph find an article free of charge at three in the morning.

The technology is nuanced. They can develop special prices for big corporations, for large universities, for foreign governments that want access to information. They can have lower charges or no charge at all for those that can't pay the freight.

But we need this control. We need this, as was mentioned earlier, we need the benefits accorded by copyright to allow the publishers to continue to play their extremely valuable role in the digital era.

Mr. BERMAN. Just before I recognize Mr. Watt.

Dr. Zerhouni, be a little careful here. I assume your reference to Google was not about its owned You Tube and the posting of copyrighted works on YouTube, because you may be misjudging the Committee's feelings about some of those issues.

Dr. ZERHOUNI. I am sorry if I——

Mr. BERMAN. Some of the Committee Members' feelings on that.

Dr. ZERHOUNI. My meaning is about new technology that is revolutionizing the world and the preservation——

Mr. BERMAN. Well, there is a lot of new technology that is revolutionizing—well.

Dr. ZERHOUNI. Fine.

Mr. BERMAN. It is this slippery slope you are down here.

Mr. Watt, you are recognized for 5 minutes.

Mr. WATT. Thank you, Mr. Chairman.

An extraordinarily fascinating hearing once again, with well balanced and well articulated positions on both sides of this issue.

I take it that what we are talking about here, at least at this hearing, is biomedical research, and so I have three questions that I will ask and then I will get out of the way and welcome answers from all of the witnesses.

First of all, how are we doing this in non-biomedical settings, where the government has provided resources for research in defense, technology, this area, that area, the Internet, all of this?

And second, is there a rationale, if we are handling it differently in those areas, for setting a different standard for biomedical?

And third, is there something magic about 12 months? It sounded to me like at least some of this is about whether it gets out there in 12 months or 18 months or 24 months or 36 months.

Is there some way to compromise this along those lines? Those three questions, please.

Dr. Zerhouni?

Dr. ZERHOUNI. Well, obviously, as you know, when the government supports an activity, there is no doubt that there is a government use possibility there. It has always been there.

And the issue between biomedical and non-biomedical really has to do with the public health impact and the timeliness of the information.

Why 12 months? Most people will think 6 months is the right amount of time. When somebody has a child, you don't want to wait for 6 months to know about the new treatment.

So that is the sensitivity. We felt, with the input of the publishers, that because they were already practicing the 12 months in practice, making those papers available, that would parallel our policy to that of the publishers.

So 12 months is not a magic number. It is really a compromise number between what people believe the pace of science is versus what publishers do in practice.

Mr. WATT. Mr. Oman?

Mr. OMAN. I think the basic premise is flawed. You asked about government support of other activities. I suspect there would be a cry of outrage if the projects that are funded by the National Institutes or the National Endowment for the Arts or the National Endowment for the Humanities somehow became vaulted into the public domain after 6 months or a year.

That is not the way government grants normally operate. They don't destroy the copyright of the creator prematurely. They allow the full term of copyright to run.

And in the circumstance of scientific, medical and technical journals, they are available immediately to the public upon publication through the Web sites of the publishers.

I don't know why there is some sort of assumption that they are hidden from view until they are put online for free access by the National Institutes of Health. That is not the case. They are available and they are used.

Mr. WATT. Ms. Joseph?

Ms. JOSEPH. I think there is a difference, a slight difference between biomedical science and other sciences. I would say that I believe, though, they shouldn't be treated differently.

Humanities, yes, that is a different ballgame. Basic science, bench science, research science, which is what this bill that we are discussing today is actually aimed towards, I don't think there is a difference and I do think that if there is a standard being set by the NIH, then other agencies should consider to hit that bar. It is a good bar that has been set.

In terms of the timeframe, the 12-month number, again, wasn't a magic number that just appeared in the NIH policy. It will come as no surprise to anyone after listening today that advocates for public access advocated for no embargo period. We paid for this stuff. We should get it on day one. Why wait 1 day?

Six months was a number that we advocated for, but over a 3-year period, 12 months was the agreed upon number, the compromise position that everyone felt the policy could go forward on and cause no harm in the publishing community.

Mr. WATT. Dr. Frank?

Mr. FRANK. I was involved with those negotiations and, indeed, as Ms. Joseph said, it was 6 months. We were able to convince Dr. Zerhouni that 12 months was a much more reasonable compromise. That is a subscription year.

But I think when we talked about, as Ms. Joseph said, talked about making the American Society for Cell Biology, making its content available after 2 months, if you look at a lot of the journals that have been depositing into PubMed Central and are making their content available for free, many of those are in areas which I, as a scientist, call molecular, biological, genomic research.

If you look at the journals in which those articles are traditionally published, there are two measures of scientific excellence that are associated with them.

The first is called an impact factor. The impact factor talks about the number of citations, which means how often is it used by other scientists.

The other is really a measure of what I will call shelf life, the half life, how long is the article in those journals generally cited by colleagues in the field.

For the journals of the American Physiological Society, at least, and for many other disciplines that are more traditionally oriented, the half life extends out to 7 to 10 years, where the molecular and biological half lives might be 1 or 2 years, maybe 3.

So having a rapid turnover in those fields is much more reasonable than in an ecological study, which has long-lasting staying power. And so I think that is one of the issues.

If I may comment, also, with permission, Mr. Watt, on Mr. Oman's suggestion. He had suggested that NIH create an internal archive and then link out to the journals. Indeed, that is a proposal we brought to Dr. Zerhouni a number of years ago.

And indeed, commercial and not-for-profit publishers met with Dr. Zerhouni and his staff and suggested a creation of an internal archive. After all, one of the institutes, the National Library of Medicine, preserves the——

Mr. WATT. Why would you go to the journal as opposed to the author?

Mr. FRANK. Say again.

Mr. WATT. Why would you go to the journal as opposed to the author?

Mr. FRANK. Well, right now, the journals control 100 percent of the content within the covers of the journal. Right now——

Mr. WATT. You still didn't answer my question. Why would you go to the journal as opposed to the author? The author owns it. The copyright belongs to the author.

Mr. FRANK. The author usually transfers copyright to the publisher so that the article is published.

Mr. WATT. How does that differentiate you from Dr. Zerhouni?

Mr. FRANK. Only in the sense that the content that goes into NIH is a mandated content deposit and we can't do anything about it if it impacts our subscription base.

Mr. WATT. You pay the author for transferring that right?

Mr. FRANK. No. In biomedical research, you do not pay the author for their publication.

Dr. ZERHOUNI. We do pay for the author to the publisher for supporting the publication costs.

Mr. WATT. I thank the gentlemen. I think I have got a flavor here.

Thank you so much.

Mr. BERMAN. That is sort of it is your choice, but if you want it published, you transfer ownership.

Mr. WATT. Is that different from if you want the Federal Government's money, you transfer authority?

Mr. BERMAN. That is a good question. Apparently, not that different.

Ms. Lofgren?

Ms. LOFGREN. Thank you, Mr. Chairman.

Mr. Watt has actually ended with the question I was going to start with. I think this is a very helpful hearing and it is very useful.

But it seems to me, as Dr. Zerhouni has pointed out, that what the NIH is doing doesn't have any conflict with copyright law. I mean, parties can contract around copyright law and do frequently, and that is what the NIH is doing and, in fact, that is what the publishers are doing.

And one of the things that I am interested in is the people who really have not been discussed here today are the actual scientists and the authors, who are the originators of this content, but who don't get any rights because they are basically required to give up their rights in order to have this published, and I think that is very problematic, honestly.

One way around that actually is what has happened here and I really think, Dr. Zerhouni, your PowerPoint was really terrific to show how the technology and the growth of technology has allowed for interconnectivity and for connections to be made in a way that never could be made in the past.

So I really think this isn't, as I have listened to the testimony, about copyright right at all, it is about science policy. And I think one of the things that I would like at least to be connected with is as you move forward, I understand you are talking a look at further issues, even though this is not about a copyright issue, it at least butts up against it.

And I think the IP Subcommittee would like to be kept posted on it. I mean, the Congress has—I am actually on leave from the Science Committee, but I think, in addition to the Science Committee, we would like to know what is going on and I think that would help us be up to date as this proceeds and it would help us all be on the same page as we move forward.

Since I don't get to see you very often, because I am on leave from the Science Committee, may I ask a non-germane question, which is in your PowerPoint, you talk about the six new genes discovered related to autism, which is enormously important to the Nation.

Do you have any concept of how fast progress is going to be made in the autism area and its genetic base as a product of the way you are now developing the publication of the information?

Dr. ZERHOUNI. I think we need, on all fronts, a research plan for autism. It is not only just one source.

Ms. LOFGREN. Right.

Dr. ZERHOUNI. But this is the first time that we have absolute evidence that there are six genes, many of which have to do with neural development, which are involved and this comes from studies at the international level with scientists overseas, scientists here.

I believe personally that the number one step right now is to establish a comprehensive plan for autism research that goes from environmental issues to developmental issues to other issues of definition of what autism really is.

We are making progress, not fast enough to my taste, but I think this discovery and the many others we have made over the past 2 years are truly revolutionary.

Ms. LOFGREN. Now, let me ask whoever knows the answer to this question. NIH is making the grants conditioned on sharing this information for the advance of science.

Do private sector funders do the same thing?

Dr. ZERHOUNI. That is right. The Howard Hughes Medical Institution, as the rule, provides for 6 months. The Wellcome Trust, as a rule, provides also for 6 months.

Other national institutions, the U.K. Research Council, the European Research Council, the Canadian Research Council, the Australian Research Council, have put out rules that require a 6-month delay.

We, again, mindful of the practice here and realizing that many publishers already do free display at 12 months, and so we decided that if they do it and it doesn't damage their economic model or peer review, 12 months should be a good compromise.

So it is definitely practiced in the private sector, as well in the government sector, internationally.

Ms. LOFGREN. Ms. Joseph?

Ms. JOSEPH. I would just like to add something to that. The Autism Speaks Foundation, which provides a lot of funding for autism research, actually approached SPARC for assistance in creating their own public access policy, modeled on the NIH policy.

So, yes, this is definitely catching fire in the private sector.

You also asked the question what do the scientists think. We were able to provide a third letter from 33 Nobel laureate scientists. This is the third time they have written to Congress on the NIH policy and the importance of the NIH policy.

It should be available to you in the hearing packet.

The Nobel prize-winning scientists feel that this is a crucial step forward in science policy and in enabling us to really leverage our collective investment.

Ms. LOFGREN. I don't think I have that letter. I wonder if maybe you could provide us a copy.

Ms. JOSEPH. I would like to provide it for the record.

Ms. LOFGREN. I would be interested in reading it.

My time has expired, Mr. Chairman. Thank you.

Mr. BERMAN. Mr. Goodlatte, the gentleman from Virginia, is recognized.

Mr. GOODLATTE. Thank you, Mr. Chairman. I appreciate your holding this hearing. I do have a few questions.

Dr. Zerhouni, couldn't the NIH have avoided any controversy about taking away the value added by the publishers by simply requiring the manuscripts to be submitted to the NIH at the time they are submitted to the publishers initially?

While the articles would not have the benefit of peer review at the time they are submitted to NIH, couldn't NIH have later denoted that in its database in which the articles were subsequently accepted for publication?

And do you believe that the public would then have access to the scientific information produced as a result of NIH funding, while copyrightable value added by the publishers would still be protected?

Dr. ZERHOUNI. Well, again, I think that we do not want publishers not do peer review. We actually support the role of publishers. We want them to succeed in that role.

For us to take non-peer reviewed articles would be against every cautious, prudent management of science. You cannot take someone's word for it. You have to have independent peer review.

We do this for grants internal to NIH. We encourage our grantees to serve on peer review panels or editors or our own. We fund them to be able to sustain the cost of publication.

It would be very unwise to distribute to a government agency non-peer reviewed material.

More importantly, what is key here is to enable us to interconnect the ultimate product, which is this publication, peer reviewed by peers, to the whole family of databases that make the whole much greater than the sum of the parts.

That is what the essence of this policy is all about, trying to be more than accommodating to not damage peer review or the economic model.

But the issue here is control. You have heard it. It is who controls the property. Is the government at all—does the government have any right whatsoever to have a condition of grant award, which is voluntary? And I am told that this is not voluntary because you are giving so much money, the scientist has no choice.

So it is like saying the more the government gives, the less the government has a right to exploit this for the benefit of its mission. It is like saying, "Well, the more we give to private companies"—with due respect to my colleague, the private sector doesn't always get it right.

The Library of Congress, the Library of Medicine existed with public funds because the private sector did not get that done. And last week, we saw how the private sector had to have government intervention with Fannie Mae and Freddie Mac.

So I think the key issue here is is there a fundamental right that for value provided, that we need to get value back for the benefit of what we are being paid for, and that is advance science and health.

Mr. GOODLATTE. Let me ask, Mr. Oman, what is the exact copyright that the NIH is allegedly taking from the publishers by its policy?

Isn't it really just an expectation of copyrights and any rights that accrue to the publisher from an article that exists at the time

an article is submitted for publication or subject to any previous liens on the work?

In other words, by the time the publisher is deciding whether to accept the researcher's manuscript, isn't it the case that any rights the publisher would have in the manuscript from that point forward would be subject to the private contract the original author made with the government to give up certain rights in exchange for government funding?

Mr. OMAN. In a technical reading of the copyright law, that would be true, Mr. Goodlatte.

I would like to comment on two things. Number one, why the public wouldn't benefit from the immediate publication of the unreviewed paper by the author. I think that would be a very positive step in terms of alerting the research community that these thoughts are abroad and that they should be aware of them as quickly as possible.

Sometimes the peer review process takes 3, 4, 5 months and, if we can credit the comments we have heard today, that is sometimes a very crucial period.

Actually, in the academic community, there is a suggestion that there be post-publication peer review as a way of moving forward. So it can't be that off the wall to suggest, as you have suggested, that perhaps the NIH wants to upload the raw data, the raw materials onto their Web site and then let the peer review process run its course and have the publishers enter the picture and do the evaluations that are so important to the ultimate quality of the journal article.

Mr. GOODLATTE. Dr. Frank, would you like to comment on that?

Mr. FRANK. I personally think it would be disastrous if the non-peer reviewed articles were posted.

Indeed, Dr. Zerhouni's predecessor, Harold Varmus, when he first launched the idea of what has now become PubMed Central, it was called eBioMed and there was another component called eBioMed Lite, which was going to be the non-peer reviewed articles, mirroring what they do in the physics community.

Most of us, at a meeting where he discussed this, stood up extremely concerned about having a non-peer reviewed article sitting out there with an NIH imprimatur, which basically says this is okay, because indeed, anywhere from 50 to 90 percent of all articles that journals receive are rejected.

So you would have to use—well, I won't use the word, but you would have a lot of inappropriate stuff out there.

Mr. GOODLATTE. There would be a lot of public discussion about controversial——

Mr. FRANK. Well, even more controversial discussions about science than we currently have, right?

Mr. GOODLATTE. Right.

Dr. ZERHOUNI. With potential impact on people's lives.

Mr. FRANK. And the most dangerous part is the impact of people using non-peer reviewed stuff that could actually hurt them, and that would be very dangerous.

Mr. GOODLATTE. Thank you.

Thank you, Mr. Chairman.

Mr. BERMAN. Myself, a very short second round.

I guess just with Mr. Goodlatte, Heather Joseph, wearing only the hat of mother and not the other hats, which presumably gave her a level of sophistication, looking at an un-peer reviewed article and either taking solace in an un-peer reviewed manuscript and either taking comfort or direction from that might be going down a trail that would leave her even more distressed and upset, I don't know.

I see what you are saying. I am still somewhat torn on the issue that is before us.

Dr. Zerhouni, I get a little nervous when you go from taxpayer-funded health and biomedical research to notions of taking advantages of technology. I mean, the N in NIH is not Napster.

And maybe two questions, one for you and one for Dr. Frank and Mr. Oman.

To you, I don't—get a little more explicit with me on your—you showed some very interesting slides at the beginning. You made an obviously good and compelling argument about when you just get all the information dumps in little segments, without connectivity, the ability to advance and take advantage of what has been discovered is slowed tremendously and against public interest.

But I didn't quite understand what your policy has to do with the connectivity side of it, and maybe that is the limitations of my own imagination.

Spoon feed me here.

Dr. ZERHOUNI. Okay. So as you know, traditionally, the public—the private sector generates information, publishes it, whether it be federally-funded or not.

The archiving, the keeping over time, the curation and making that available to a larger community has always been funded by the public sector through libraries.

Now, libraries today, because of the new technologies and the fact that we are not dealing with paper, but electronic information, have developed very powerful tools.

So the role of the NIH is to connect this database, which is going to be done through a single standard, where we can really look at the content of the article and then, as I showed you on the slide, connect it through all of the other information.

Mr. BERMAN. But Google can do that.

Dr. ZERHOUNI. No, Google does not do that. Google refers back to us, as I showed you on the slide. No outside entity does that——

Mr. BERMAN. When you are publishing that peer reviewed scholarly publication 1 year or, in many cases, less than 1 year after the date of publication, what are you doing to connect that article to every other article?

Dr. ZERHOUNI. I would like to brief you on the technology that we have developed, and Dr. Lipman is here, who is a member of the National Academy of Sciences, because of the work he had done in understanding that all of the information connectivity really increases the amount of information that you expect from any one paper.

Just reading the paper is not enough. You need to have a concept and if that concept connects, it is really the next step, way beyond the technologies of today, where, if you did a Google search, you would have in mind the ideas within the paper and say, "I want

to know everything there is to know about every aspect of that paper."

If I don't have the publication to start with, my search cannot go anywhere.

Mr. BERMAN. But practically—just pushing here to try and—explain to me, in real terms, all right, these journals are very expensive, but there is value, obviously, to these journals. That is the way this peer review process has been created.

So you are getting experts analyzing research by other experts and commenting and letting know whether this is worthy of drawing conclusions about validity from.

It is expensive, but libraries subscribe, university communities subscribe and all this. Meanwhile, Time Magazine has a medicine section and they get a hold of these articles and they now turn it into articles for laypeople under fair use, which let Heather Joseph, mother, know about some new discoveries.

And medical editors on television news shows and special—I mean, there are ways in which this thing gets disseminated which aren't limited to being the subscribers to the publication.

Why isn't that system working pretty well?

Dr. ZERHOUNI. It is currently available. It is available today. You know that many—two million articles are available freely after 12 months of publication.

But the exploitation of that cannot occur unless you have the ability to truly search in the meaning of what is in those articles and interconnect them to the totality of the scientific information.

Without that tool, all of the downstream exploitation just can't happen.

Mr. BERMAN. Anybody else want to——

Ms. JOSEPH. Heather Joseph, as a mother, wanted that information for a very immediate reason. Heather Joseph, as a mother and as a taxpayer, also wants my doctor to have that information.

I not only want my doctor to have that information, I want every scientist working on diabetes research to have information and be able to make new linkages to do what Dr. Zerhouni described is being in autism.

I want those genes isolated. I want scientists to be able to read the paper, go from a paper and think about things they are not thinking about in diabetes research right now.

I want to enable not just myself to find information at 3 a.m., which is very important, don't get me wrong, but even more important to me is that my son will have every available advantage in terms of researchers in the United States being informed, having access to the information or the research that we are funding, and make these new and novel connections that are needed to make the leaps to move from basic research at the NIH to treatment for this kind of a disease.

Mr. BERMAN. And here is this physiologist who has a nonprofit company, but surely doesn't he want that as much as you want that?

Ms. JOSEPH. I ask him that regularly.

Mr. FRANK. But, Heather, I haven't seen you for 3 months.

I think what NIH is—and I have said this to Dr. Zerhouni in a meeting we had in November of 2006. As a scientist, PubMed Central, what we have seen here today is brilliant.

It links a multitude of databases that exist within the NIH family to the research articles that they support.

The regrettable thing is, as Dr. Zerhouni said, NIH funds about 80,000 articles a year, a cost, as he said, that translates into $24 million.

However, if you look into PubMed, which is a database of abstracts, it lists about five to six million articles a year that are published and catalogued in PubMed.

Mr. BERMAN. Based on the choice of the publishers.

Mr. FRANK. Well, the abstracts, publishers have made a choice to deposit abstracts. The reason why I bring it up is what NIH has created, and you saw all the genes that were developed as a result of linkages to the articles that reside in PubMed Central, does not take into account that there is 90 percent of the research that is not catalogued within PubMed Central and, as such, does not contribute to creating a dynamic and vital database that can enhance science.

I raise that because it is critically important. Dr. Zerhouni, Dr. Lipman, and others at NIH, there are brilliant technology people who can solve a problem that we brought to NIH many years ago, which Mr. Oman has just raised, which is a creation of an internal archive.

The National Library of Medicine, one of the institutes of NIH, preserves the print literature for us. They do a wonderful job. I have said to Dr. Lindberg, the director of NLM, that we all went about this the wrong way.

NLM should have volunteered to preserve the bits and bytes of all our journals, all 5,000 covered in PubMed, all five million to six million articles.

Mr. BERMAN. But how does that help the doctor in Podunk City who wants to know the latest research?

Mr. FRANK. Mr. Berman, what that does is it would create an internal archive. NIH's technology and IT people would do the same thing they are doing now with the PMC articles. They would be able to search all that literature and come up with many of the answers that they do now, but on the entirety of literature.

And the end result, as we suggested to Dr. Zerhouni, if a hit came to an article that was not in PubMed Central or was not available to them, they would link out to the journal and the journal would provide access within the framework of their embargo periods, with a modest fee, or whatever.

Other arrangements could have been set up that we would have given access to the content. We could have given content access. But instead, they have tried to do it by taking the peer reviewed manuscripts from those publishers who publish NIH-funded research.

Mr. BERMAN. My time has sort of triple expired. I think even though this may be the last hearing, I still ought to recognize Mr. Coble.

Mr. COBLE. Thank you, Mr. Chairman.

Thank you all again, witnesses.

I have just one question, Mr. Chairman, and I am going to direct it to Mr. Oman.

Mr. Oman, as an analogy to patents developed with Federal funding relevant to our debate, let me put a two-part question to you.

How has the Bayh-Dole Act performed in the last 2 to 2 1/2 decades, A; and, B, was Congress indulged in a similar debate when Bayh-Dole was written and debated?

Mr. OMAN. I think the lessons that we learned, Mr. Coble, from Bayh-Dole are very relevant here today.

Bayh-Dole was adopted in recognition of the fact that inventions developed with taxpayer money weren't being commercially exploited because they couldn't be turned over to the private sector.

The government had no real vested interest in commercializing these wonderful inventions and the money that was invested wasn't serving the public.

Bayh-Dole allowed those inventions to be commercially exploited, relying on the extraordinary energy and innovation of the private sector to do what had to be done to get them into public commerce.

The same is true on the copyright side. The private sector has that commercial drive. They have the ability to innovate. They can work cooperatively with the government and with the NIH in developing a system that is going to serve all parties.

But to do that, they need that basic copyright protection that allows them to make the investments up front without getting any immediate reward, any immediate compensation for their investment, but over the life of the copyright, would allow them to recoup that investment as normally is done under the copyright laws.

Mr. COBLE. I thank you for that.

I yield back, Mr. Chairman.

Mr. BERMAN. I can be permitted a snide comment and since I am the one giving permission, it is perhaps that feature that, at least in my experience on the legislation involving reform of our patent laws, has made the universities operate like they were pharmaceutical companies.

But in any event, I realize we haven't—there is a lot more to exhaust here.

Is there anything else you guys want to take a minute to say? Because I can tell one of our witnesses does.

Mr. FRANK. Just thank you.

Dr. ZERHOUNI. I just want to go back to the concept of the dark archive. That is what it is, dark, glove box, inaccessible. I don't think that is what——

Mr. BERMAN. But the dark archive is our solution to the Orphan Works problem. Never mind.

Mr. FRANK. I would prefer to call it internal archive that could be used within the NIH family. I don't think it is quite dark.

Mr. BERMAN. Thank you all very much for coming. It has been a very interesting hearing and we appreciate it.

[Whereupon, at 2:54 p.m., the Subcommittee was adjourned.]

APPENDIX

Material Submitted for the Hearing Record

RESPONSE TO QUESTIONS FROM
THE SUBCOMMITTEE ON COURTS, THE INTERNET, AND INTELLECTUAL PROPERTY
HOUSE JUDICIARY COMMITTEE
SUBMITTED TO THE NATIONAL INSTITUTES OF HEALTH
DEPARTMENT OF HEALTH AND HUMAN SERVICES
FOLLOWING THE SEPTEMBER 11, 2008, HEARING ON
H.R. 6845, THE "FAIR COPYRIGHT IN RESEARCH WORKS ACT"

Question 1: *You mentioned that 400,000 users access 700,000 articles a day on PubMed Central. What can you tell us about the users? Where are they from? Are they researchers or your average citizen? Which articles are being accessed? Are they articles from subscription-based journals? If so, which ones are being most accessed? Are they the most recently published articles?*

The National Library of Medicine (NLM) has a privacy policy for PubMed Central (PMC) which precludes the identification of individual users or institutions in its usage data. Users of these services do not identify themselves or their professional roles. However, based on the domain names (.edu, .net, .com, etc.) of the computer systems of incoming users, we know that users are coming to PMC from a wide variety of accounts – academic, commercial, and personal. When this fact is combined with the average of 400,000 users a day, many of whom are different from one day to the next, it is clear that PMC is used regularly by the general public as well as researchers.

The pattern of use in PMC is very broad. Users access a wide range of papers, rather than concentrating on any particular narrow subset. In an average month, the full text of approximately 60 percent of the papers in the collection are retrieved at least one time, and no more than 10 to 15 papers are retrieved more than 500 times each. That translates to about 20 retrievals a day for the most heavily accessed papers, which is minuscule relative to the overall retrieval of 700,000 articles a day.

This pattern is consistent with the mission of PMC to serve a broad spectrum of users, whose needs vary widely. Each user is searching for his or her specific interest across the entire spectrum of biomedical and health topics. We believe that the importance of an article to a specific individual with a pressing health concern or a scientist with a research question cannot be gauged by the frequency of use of the top few articles.

Question 2: *You mentioned in your testimony that under the NIH's voluntary submission open access program that lasted from May 2005 to December 2007, you received about 14,000 of about 189,000 eligible articles. Can you tell me whether the rate at which you received the articles changed during this period? What steps did you take to encourage submissions? Were they effective? Why or why not? Did publishers of subscription-based scientific journals either cooperate or indicate they were willing to cooperate in the program? If so, why did you view it necessary for the NIH to be granted authority to make the program mandatory?*

Congress instructed NIH to require its investigators to submit manuscripts to PubMed Central (PMC) because the voluntary Public Access Policy was not effective in making NIH-funded manuscripts publicly available.

- From May 2005 to December 2007, NIH collected approximately 12% of all NIH-funded published articles via the pre-existing PubMed Central program. These journals, using an arrangement developed in 2000 and independent of the Public Access Policy, deposit all of their content directly into PubMed Central.
- From May 2005 to December 2007, NIH estimates approximately 5900 NIH-funded manuscripts were published each month outside of these PubMed Central journals. During this period, NIH was able to only collect 7% of this target.
    - From May 2005 to October 2006, authors deposited approximately 190[1] manuscripts per month.
    - NIH, in cooperation with publishers, developed a method for publishers to deposit manuscripts in bulk[2]. Only the publisher Reed Elsevier fully participated. With Reed Elsevier's participation in this bulk-deposit method, the per-month deposit rate increased from approximately 190 manuscripts per month (for the period May 2005 to October 2006) to approximately 725 manuscripts per month (for the period November 2006 to December 2007).

The Public Access requirement on authors[3] was announced in January 2008, and took effect April 2008. The Mandatory Policy uses the same dissemination methods, publisher agreements and online manuscript submission system for authors and publishers as the voluntary Policy. Yet the author requirement generated a dramatic increase in submissions by authors and their publishers, nearly tripling submissions from all sources. Currently, NIH collects approximately 56% of all NIH-funded papers: 30 percent as manuscripts and 26 percent as final published articles.

- Manuscript submissions increased immediately. Other prestigious scientific publishers, such as Nature Publishing Group, Wiley-Blackwell and the American Chemical Society, joined Reed Elsevier in bulk deposit. Combined, the number of manuscripts deposited increased over 425%- from roughly 7% of the Public

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[1] These monthly averages stem from the 13,519 papers collected as of January 2008. For more recent submission data, see page 26 of http://publicaccess.nih.gov/analysis_of_comments_nih_public_access_policy.pdf.

[2] NIH sat down with publishers to develop methods to support the Public Access submissions. These discussions lead to two working programs that only a handful of publishers would use during the voluntary Public Access Policy. First, in December 2005, NIH implemented an electronic system whereby publishers could submit manuscripts in bulk to the NIH manuscript submission system on behalf of their authors. Reed Elsevier began to deposit all of its NIH funded manuscripts in November 2006, and was the only publisher to do so. Second, NIH and publishers finalized the PMC-NIH Portfolio agreement in the summer of 2007. These agreements allow publishers to submit NIH funded articles directly to PubMed Central. As of December 2007, only 3 publishers, representing 8 journals, had signed agreements with NIH, and only one journal had begun to submit papers. These PMC-NIH Portfolio agreements had no significant impact on submission rates under the voluntary Public Access Policy.

[3] The Requirement is directed by Division G, section 218 of Public Law 110-161 (Consolidated Appropriations Act, 2008), and announced to NIH investigators via http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html.

Access target during the voluntary period to an estimated 30% NIH funded papers today.

- Since April 2008 when the Policy took effect, almost 100 journals, including those from Oxford University Press and the American Physiological Society, signed agreements with NIH to deposit only their NIH funded final published articles directly to PubMed Central. The percentage of NIH funded papers collected as final published articles more than doubled, from 12% of all NIH-funded papers to an estimated 26% today[4].

***Question 3**: You mentioned that the Appropriations Committee expressed concerns about the lack of public access to NIH supported research reports and data. What sort of data reports would a typical research grant require? Do you make these documents publicly available? Why or why not? Do research grants typically require the writing of a peer-reviewed journal article? If not, is it fair to say that the NIH did not pay for writing of the article?*

From the beginning of interest in an NIH Public Access Policy by the House Appropriations Committee, it appears that the Committee's goal has been to make peer-reviewed journal papers publicly available. For example, House Report 108-638 stated:

> The Committee ...recommends that NIH develop a policy, to apply from FY 2005 forward, **requiring** that a complete electronic copy of any manuscript reporting work supported by NIH...be provided to PMC [PubMed Central] upon acceptance of the manuscript for publication in any scientific journal....NLM [the National Library of Medicine] would commence making these reports...freely and continuously available **six months after publication, or immediately in cases in which some or all of the publication costs are paid with NIH grant funds**. [boldface added]

After public deliberation, NIH adopted a voluntary policy in May 2005 to request papers to be deposited upon acceptance for publication, to be made publicly available within 12 months of publication. This delay period is not related to how much money NIH spends to have a paper published.

Division G, section 218 of Pub. L. 110-161 (Consolidated Appropriations Act, 2008) made this approach, complete with its emphasis on peer reviewed publications, mandatory:

> *The Director of the National Institutes of Health shall require that all investigators funded by the NIH submit or have submitted for them to the National Library of Medicine's PubMed Central an electronic version of their **final, peer-reviewed manuscripts** upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication:* Provided,

[4] Participating journals are listed at http://publicaccess.nih.gov/submit_process_journals.htm.

> *That the NIH shall implement the public access policy in a manner consistent with copyright law.* [boldface added]

When NIH funds investigators via grants, it does not specify that awardees write peer-reviewed papers. Nevertheless, peer-reviewed papers are the accepted means by which scientists communicate results of their research. Peer review is the process that journal publishers use to ensure quality in the dissemination of research, and peer review allows the reader to feel confident in the published results. These papers are also a measure of an awardee's ability to use NIH funds effectively and are weighed heavily in review of subsequent funding applications to NIH. NIH allows grant funds to be used for publication, including:

- Funding the research that generates the findings reported in the paper;
- Funding awardee salary time to write manuscripts;
- Using NIH awards to pay publication fees, including page charges and open access fees.

Therefore, NIH clearly funds peer-reviewed journal articles and the research on which the articles are based.

Congress directed that the results of this investment be posted to PubMed Central, an archive of full-text papers. The Public Access Policy helps science build upon the search methods for publications developed during the last decade into a system to accelerate discovery. For example, through PubMed, an NIH internet database of biomedical abstracts developed in the 1990s, in a matter of seconds one can find an article citation, abstract, and link to a full text version (on a publisher website, often for a fee), from among 17 million others. The search engines Google, Yahoo and others perform this same task on a larger scale for the entire internet. These approaches are excellent if you know what you are looking for.

These search engines rely on key words, frequency of links, and other manipulations of summary data. What sets PubMed Central apart from these other approaches is that once papers are posted to PubMed Central, the ideas and concepts in that paper are electronically linked to related concepts on other NIH databases, such as GenBank and PubChem. Plainly speaking, PubMed Central is a system that will let you find what you need, not just what you are looking for.

For example, when a scientist finds the paper she thinks she needs on PMC, she can easily move to related papers, genes, proteins and other chemical structures which she may not have known were related at the start of her search. The relationships between concepts, theories and biological structures become clearer, and the odds of meaningful discoveries increase. NIH offers a demonstration of this utility at http://www.ncbi.nlm.nih.gov/Education/pmc/.

The Public Access Policy will ensure the posting of NIH funded papers to PubMed Central, and the results of NIH funded research become more integrated and accessible,

making it easier for scientists everywhere to be competitive. It will also ensure a complete collection of papers arising from NIH funds, and allow NIH to monitor, mine, and develop its portfolio of publicly-funded research more effectively. Finally, clinicians, patients, educators, and students can better reap the benefits of papers arising from NIH funding by accessing them on PubMed Central at no charge.

Question 4: *The Frequently Asked Questions (FAQs) concerning open access on the NIH's web site refers to the rights reserved by the NIH to make manuscripts available for free as "a small strand of the worldwide rights." Please describe the normal collection of rights a copyright owner has as they pertain to published works. Would this "small strand" of rights affect any the remaining rights not expressly reserved by the NIH? What economic value do the remaining rights have?*

In the United States, an owner of a work owns the exclusive right to reproduce, distribute copies, display and prepare derivatives of the work and authorize others to do so as well. A copyright owner also enjoys similar protection worldwide in view of the Berne Convention (which the United States signed in 1989). These rights initially belong to the author and are usually transferred to the publisher without compensation as a condition of publication.

The "small strand" of rights that an NIH awardee should reserve under the Public Access Policy is merely the non-exclusive right to have the work reproduced and displayed on the PubMed Central website. The remaining rights conveyed by the awardee to the publisher (through the "publisher's agreement") might be imagined as a "substantial bundle" of exclusive rights that would allow the publisher to sue any party that reproduces, distributes, copies, displays or prepares derivatives of the work without authorization from the publisher. Of course the publisher could not sue PubMed Central because of the "small strand" of rights reserved by the awardee on PubMed Central's behalf. This is the only effect of that strand.

Also, any party who obtained the work the PubMed Central would be able to enjoy "fair use" of the work, to the extent allowed under the Copyright Act at 17 U.S.C. § 107 ("Limitations on exclusive rights: Fair use"). The economic value of the substantial bundle of rights conveyed by the grantee to the publisher is significant, because the publisher can use those exclusive rights to prevent any other commercial or non-commercial use of the work.

Question 5: *Has NIH commissioned any studies to measure the economic impact the mandatory open access policy will have on subscription-based scientific journal publishers? If so, what are the results? If not, how can you be sure the mandatory open access policy will not negatively affect journals?*

We believe that much of the information that would be necessary to accomplish a competent analysis of the economic impact of the policy on publishers is privately held and virtually inaccessible to us. However, the Association of Learned and Professional Society Publishers conducted a survey of librarians in 2006 to determine factors that may lead to librarians to cancel journal subscriptions. Making the full-text of papers freely

available on the internet after some delay period (what they refer to as OA or open access) turned out not to lead librarians to cancel subscriptions. They found "the journal's ... availability via delayed OA were ranked relatively unimportant" among the reasons to cancel a subscription. (Ware. *ALSP survey of librarians on factors in journal cancellation.* The Association of Learned and Professional Society Publishers, 2006, Page 1.)

NIH has found that most scientific publishers actively facilitate the deposit of NIH-funded articles/manuscripts to assist scientists in complying with the Public Access Policy in one of three ways, and we have not been presented with evidence to suggest harm has come to publishers for their assistance. First, hundreds of journals deposit some or all of their final published articles into PubMed Central. Some deposit all of their articles independent of the Policy, and others only deposit NIH-funded articles in support of the NIH Public Access requirement. Over the past eight years, NIH has posted roughly 2 million final published articles on PubMed Central through partnerships with hundreds of journals, including journals published by the American Physiological Society and others (See http://publicaccess.nih.gov/submit_process_journals.htm for a list). NIH has not seen any evidence of financial trouble for these participants.

In addition, NIH to date has posted over 30,000 author manuscripts on PubMed Central that were deposited by publishers and authors, also without evidence of harm. In support of the Public Access Requirement, Reed Elsevier, The American Chemical Society, Wiley-Blackwell, Nature Publishing Group, and hundreds of other journals take active measures to post NIH-funded papers to PubMed Central. Finally, virtually all other journals routinely sign agreements with authors where authors retain the right to post manuscripts directly to PubMed Central, or are granted a license to do so, again, without evidence of harm.

Question 6: *Publishers argue that they may have to close down some percentage of journals because the free access you provide to their articles will reduce demand. This argument is particularly made by small non-profit publishers. If they turn out to be right, would you consider the mandatory submission policy a success even if some journals were to close their doors as a result of the policy? Wouldn't the closure of some journals hurt dissemination of research results? Would their closure be offset somehow?*

NIH's responsibility is to advance science and improve human health. The congressionally-mandated Public Access Policy provides publishers two important protections: first, that there be up to a 12-month delay period that allows publishers to display and print a paper exclusively, before PubMed Central (PMC) can make a version of that paper publically available; and second, the final published paper, as it appears in the journal, need never be posted to PMC. The NIH also permits award recipients to charge any publisher related expenses to their NIH grants.

With these protections in place, and with the evidence of roughly 2 million full text papers posted to PubMed Central by publishers and authors, we have no reason to expect that the Public Access policy will result in the failure of journals. Nevertheless, NIH

continues to engage all its stakeholders, especially scientific publishers, about the impact of the policy, particularly since NIH and the scientific community depend on scientific journals to facilitate high quality peer review.

Question 7: *If the NIH's mandatory open access policy resulted in a breakdown of the peer-review process, is the NIH prepared to fill the gap, either by carrying out the peer-review process yourself, or by providing more funding to researchers so that they can pay high author charges?*

We believe that few understand better than NIH how important peer review is to the advancement of science. The NIH Public Access Policy explicitly supports the current peer-review publishing system by only drawing from peer-reviewed journal papers, rather than creating an alternate method to communicate NIH research results.

In fact, NIH already subsidizes peer review activity for private publishers. The American taxpayers, via NIH awards, support virtually all aspects of peer-review publication, including:

- Funding the research that generates the findings reported in the paper;
- Funding NIH employee and awardees salary time to write manuscripts;
- Using NIH awards to pay publication fees, including page charges and open access fees.

Under the Public Access Policy, publishers will continue to charge anything they wish for publication costs, and will continue to obtain manuscripts reporting NIH-funded research and written with NIH salary support, without compensation to the author or NIH. The public must still wait up to 12 months before these papers are available on PubMed Central.

Question 8: *The NIH published its implementation plan for a mandatory open access policy on January 11, 2008, and implementation of the plan began in April 2008. But from March 31 to May 31, 2008, the NIH conducted a Request on Information, requesting the public to comment on alternative implementation approaches. Why did you not conduct a Request for Information prior to developing your implementation plan or prior to implementing your plan? Do you intend to make changes as a result of the submissions you received to your Request for Information. You mentioned that you are working on a report analyzing the submissions, but can you provide us now with a preliminary discussion of any feasible alternative implementation approaches?*

Due to longstanding congressional interest and heavy public investment in papers based on NIH research, NIH felt that it was prudent to implement the law expeditiously. The Open Meeting and Request for Information provided a valuable method to obtain feedback on implementation and resulted in a number of improvements to communications and procedures. (See pages 25-26 of the report for a list of improvements at:
http://publicaccess.nih.gov/analysis_of_comments_nih_public_access_policy.pdf).

One concern that NIH has heard constantly over several years is the difficulty that patients, clinicians, and other members of the public have in accessing the published results of NIH-funded research. Furthermore, the practice of coordinating and integrating research results has fallen years behind our technical abilities and is outdated. NIH felt the responsible thing to do was to implement the congressionally-mandated change in the Public Access Policy quickly while, of course, taking into account comments we received in the course of the implementation.

***Question 9**: What role will the differences between subscription-based journals, such as the frequency of publication or the subject matter covered, play in whether the one-year embargo period will affect journal subscriptions? Why is the mandatory policy directed to one-year? What would be the impact of having a greater embargo period for journals that are published infrequently or cover very specialized subject matter?*

Under the voluntary Public Access Policy, a delay of up to 12 months was developed as a compromise between NIH, open access advocates (mostly comprised of scientists, patients, and librarians) and publishers. The up-to-12-month delay period in the revised NIH Public Access policy is required by statute in Division G, section 218 of Pub. L. 110-161. Other major biomedical research funders with public access policies, such as the Howard Hughes Medical Institute, the Wellcome Trust, and the United Kingdom's Medical Research Councils, provide for only 6-month delay periods. NIH is unaware of studies demonstrating negative repercussions for journals, even with content posted under these six-month Public Access Policies.

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aap

October 24, 2008

The Honorable John Conyers
Chairman
House Committee on the Judiciary
2426 Rayburn house Office Building
Washington, DC 20515

By Email and Fax 202/225-0072

Dear Mr. Chairman:

On behalf of the members of the Association of American Publishers (AAP), I want to thank you for introducing the "Fair Copyright in Research Works Act" (H.R.6845) and for working with the leadership of the House Judiciary Subcommittee on Courts, the Internet and Intellectual Property to hold the September 11 hearing on issues this legislation raises in connection with the mandatory "Public Access Policy" of the National Institutes of Health (NIH).

As you know, 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 <u>after</u> it has passed through the publisher's "quality assurance" processes of peer-review <u>and</u> determination of acceptability for publication, even though the journal publisher is <u>not</u> 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.

We look forward to supporting you in the re-introduction of the "Fair Copyright in Research Works Act" early in the next Congress and then working for its enactment to redress the unfairness of the NIH policy. In anticipation of those activities, we thought it appropriate for you to have our response to a widely publicized September 8, 2008 letter that you received from a group of law school professors who took issue with statements

made by Jon Baumgarten, a former General Counsel of the U.S. Copyright Office and widely-respected copyright law expert who is now a partner in the law firm of Proskauer Rose LLP, in a May 30, 2008 advisory letter responding to my request for his views on the relationship between the mandatory NIH Public Access Policy and U.S. copyright law, copyright laws of other countries, and relevant international treaties, including the Berne Convention and the TRIPS Agreement.

For your convenience, I have attached a copy of Mr. Baumgarten's letter (called the "Proskauer Letter" by the Law Professors), which I subsequently submitted to the NIH for its public inquiry on the NIH Public Access Policy last Spring. Presented below are the five main points of the Law Professors' letter criticizing Mr. Baumgarten's views, followed by our response to the specific criticism. We are confident that, after reviewing this material, you will agree that, even if the mandatory NIH policy may not clearly violate the letter of copyright law, it certainly raises enough serious concerns regarding its compliance with the spirit and public policies underlying copyright law to warrant redress through legislation like the "Fair Copyright in Research Works Act."

First, the Law Professors reject Mr. Baumgarten's view that the NIH Policy may constitute an involuntary transfer of copyright in violation of Section 201(e) of the Copyright Act, claiming instead that the policy is essentially "voluntary" because "the investigator has no obligation to provide the article to PMC or a copyright license to NIH" unless the investigator "elects to receive NIH funding" and "accepts the terms of the grant agreement, which include the requirement to deposit the article with PMC so that the article can be made publicly accessible within one year after publication."

Response: Claiming that the copyright license provided to NIH cannot be involuntary because the investigator may simply choose to forego NIH funding and the attendant condition of deposit of the manuscript for eventual online public access is both naïve regarding the realities of medical research funding in the United States and disingenuous with respect to the evolution of the NIH Policy.

For those pursuing careers in medical research, it is hardly a choice to ignore the NIH which, according to its website, is the primary Federal agency for conducting and supporting medical research, annually investing over $28 billion in medical research, with over 83% of its funding "awarded through almost 50,000 competitive grants to more than 325,000 researchers at over 3,000 universities, medical schools, and other research institutions in every state and around the world." Given the sway and influence of the NIH that undoubtedly comes with its provision of such funding to virtually every institution in the United States that is involved in medical research, it is simply untenable to assert, as a practical matter, that an investigator in this field "elects" to receive or forego NIH funding.

Moreover, at this stage of the evolution of the NIH policy, it is ludicrous to attempt to characterize it as "voluntary" for the investigator in any meaningful sense. The very purpose for which NIH sought enactment of Division G, Title II, Section 218 of the Consolidated Appropriations Act of 2008 (P.L.110-161) was to put all affected parties on

notice that what had originally been a "voluntary" manuscript submission policy was now, by direction of Congress, transformed into a "mandatory" policy. By its own terms, the NIH policy is clearly coercive, putting investigators on notice that lack of compliance with its manuscript submission requirement will place the possibility of future grants to the same investigator at risk. Where the NIH previously took pains to assert that its initial Public Access Policy "upholds the principles of copyright" because "submission of the final manuscript is voluntary rather than mandatory," it no longer attempts to make this argument.

Second, the Law Professors argue that the NIH policy "does not take any intellectual property away from the publisher" or "change the scope of the publisher's copyright after the publisher has acquired it" because "the copyright is already subject to the non-exclusive license granted by the investigator to NIH" when the investigator transfers copyright to the publisher as a condition of publication.

Response: While these contentions may literally be true in terms of the timing of the investigator's grant of the non-exclusive license to the NIH and the investigator's subsequent transfer of copyright to the journal publisher, they miss the basic point that, just twelve months after publication of the final article in the journal, the NIH's exercise of the former undoubtedly eviscerates the publisher's ability to exercise the rights acquired through the latter. Although it may be argued, for example, that the NIH only acquires a *non-exclusive* license to distribute the investigator's final, peer-reviewed manuscript, what possible practical value is expected to be left in the publisher's right to authorize *other* non-exclusive licenses for distribution of the final published article or to directly exercise the right of distribution itself with respect to that version when the NIH will be distributing a competing version of the journal article online, without charge, to the entire world? As Mr. Baumgarten maintains, the NIH policy and its associated license do not merely encumber the copyright acquired by the publisher; they denude it. Such an impact cannot, as a practical matter, be dismissed as *de minimis* or unworthy of consideration.

Third, the Law Professors argue that, because the NIH policy "requires deposit of the author's final manuscript after peer review, not the final published version of the article," this aspect of the Policy "renders moot any debate about whether the publisher obtains a copyright interest in the article through the process of copy editing or layout."

Response: This contention is purely a red herring, as we are not aware of anyone in the publishing community who has claimed that the journal publisher "obtains a copyright interest in the article through the process of copy editing or layout." However, journal publishers have had to repeatedly point out that, by NIH's insistence on submission of only the investigator's "final, peer-reviewed manuscript upon acceptance for publication," the NIH policy expropriates some of the most important "added value" contributions that journal publishers make to ensure the integrity of the public record of medical research. The NIH specifically sought this version of the manuscript even when its submission policy was voluntary, and the NIH later urged that Congress, in enacting a submission mandate, should require submission of this same version. Undoubtedly, the

reason for seeking this version is the widespread recognition that the peer review process (*i.e.*, a quality assurance vetting mechanism that is organized, funded and administered by the publisher) and the acceptance of the manuscript for journal publication (*i.e.*, a subjective determination by the publisher of the work's satisfaction of applicable publishing standards) are acknowledged warranties of quality assurance that cannot be provided by the NIH itself. Indeed, while all stakeholders in the debate over the NIH policy agree that manuscripts which do not pass muster through peer review should not be posted online for distribution through PubMedCentral, they also generally agree that it would be inappropriate for NIH to conduct peer review of manuscripts that are authored by researchers who are not NIH employees and that are intended for publication in science journals.

Moreover, 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.

Fourth, the Law Professors reject Mr. Baumgarten's suggestion that the NIH policy might violate U.S. obligations under Article 9 of the Berne Convention or Article 13 of the TRIPS agreement, saying that argument "lacks any basis in law" because "the NIH Policy governs the terms of contracts, not exceptions to copyright law," and thus "in no way implicates Article 13 of TRIPS or Article 9 of the Berne Convention, which address permissible copyright exceptions."

Response: This argument has no merit because it implies that the NIH policy is a mere "contract" comparable to those routinely conducted among private parties, including those between authors and private sector publishers. It is obvious, however, that the NIH policy, in effect, is government action functionally equivalent to the kinds of legislative exceptions and limitations to copyright that are clearly subject to the provisions of these treaties. Indeed, the NIH itself rarely misses an opportunity to assert that its Policy is required by legislation.

Moreover, the treaties are not silent on the point that government-funded works, as opposed to certain government works, are entitled to the full protections of the treaties. To the contrary, as Mr. Baumgarten notes, while Article 2(4) of the Berne Convention gives member countries leeway in dealing with "official texts of a legislative,

administrative, and legal nature," neither that provision nor any other provision of the Berne Convention or TRIPS Agreement permits special exceptions or limitations for works related to government funding that are produced by private authors or entities (with the possible exception, irrelevant to this discussion, of privately developed, government funded texts of codes and regulations that are later adopted into positive law.)

Unlike individually negotiated contracts, the NIH Policy is a government-imposed restriction that is uniformly applicable to every instance of the creation of a specific category of work: articles about NIH-funded research that are written by researchers who are not NIH employees and whose final manuscripts have been peer reviewed and accepted for publication by science journals. Insofar as it truncates the term of copyright protection and impairs the distribution right with respect to such works, it is an exception or limitation on copyright that must be tested against the standards of the well-known "three-step test" for such restrictions that is embodied in Article 9 of the Berne Convention and Article 13 of the TRIPS Agreement, as explained by Mr. Baumgarten. The U.S. Government frequently criticizes similar indirect actions by other countries that attempt to avoid these treaty obligations, and recognizes that they are detrimental to U.S. trade and economic interests, as well as to the interests of U.S. copyright owners.

Finally, in support of the NIH policy, the Law Professors argue that "Congress frequently imposes conditions on recipients" of funding "for a wide range of activities," and that "[w]hile one might question the wisdom of a particular condition, Congress without doubt has the authority to impose them."

Response: We recognize that Congress frequently imposes conditions on recipients of Federal funding, and we acknowledge that, with a few limitations, Congress generally has the authority to impose such conditions. However, in opposing the NIH policy and supporting the proposed "Fair Copyright in Research Works Act," we do indeed "question the wisdom" of the conditions that the NIH policy imposes on recipients of NIH research funding, for the reasons stated above. We are not aware of any other instance in which Congress has obliged the request of a Federal agency by enacting a funding-related mandate that undermines the foundation of a sector of the publishing industry which has contributed substantially to scientific process, progress and communication in the United States and throughout the world.

Undoubtedly, the undesirable consequences of this statutory mandate can be partially attributed to the fact that it was enacted as a rider on an appropriations bill, without the benefit of hearings or studies, through a legislative process that prevented Congressional committees of relevant substantive jurisdiction from having any meaningful opportunity to consider its merits. Ironically, just months before enactment of the NIH policy mandate, Congress addressed the same issue of ensuring timely and meaningful public access to the results of government-funded research in a much more fair and reasonable manner in the National Science Foundation Authorization Act, which became law as Title VII of the America COMPETES Act (P.L.110-69). In that instance, Congress directed the NSF to make all "final project reports and citations of published research

documents" resulting from such research available to the public in a timely manner and in electronic form through the NSF's Web site. This mandate on public access policy to the only Federal agency that funds basic scientific research across all disciplines and at all academic institutions in the United States was considered and approved by the House Science Committee and, subsequently, by the full House after hearings on NSF reauthorization. House and Senate conferees on the America COMPETES Act then approved the policy mandate, clarifying in the Conference Report that it requires NSF "to provide the public a readily accessible summary of the outcomes of NSF-sponsored projects," along with "citations to journal publications" in which funded researchers have published articles regarding such research. [See Section 7010 of H.R.2272 as enacted; H.Rpt. 110-289 (Conference Report).] It is noteworthy that this mandate raised none of the controversies attendant to the NIH policy.

Once again, Mr. Chairman, we thank you for bringing the issues raised by the mandatory NIH Public Access Policy before the House committee with legislative jurisdiction over copyright law, and we thank you for introducing the proposed "Fair Copyright in Research Works Act" to serve as a focal point for considering possible changes in law to address those issues.

We look forward to working on these matters with you and other members of the House Judiciary Committee in the 111th Congress, and will be happy to respond to any arguments that may be presented to the Committee in support of the mandatory NIH Public Access Policy and in opposition to the proposed legislation.

If you or any member of your staff has any questions about this letter or related matters, please do not hesitate to contact me at 202/220-4544 or adler@publishers.org.

Sincerely,

Allan Adler
Vice President for Legal & Government Affairs

Attachment

cc: Members of the House Judiciary Subcommittee on Courts, Intellectual Property, and the Internet

The American Physiological Society

9650 Rockville Pike, Bethesda, Maryland 20814-3991 (USA)

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December 1, 2008

Congressman Howard Berman
Chairman, Subcommittee on Courts, the
Internet, and Intellectual Property
B-352 Rayburn House Office Building
Washington, DC 20515

Attention: Rosalind Jackson

Dear Congressman Berman:

Once again, thank you for the opportunity to testify before the Subcommittee on HR 6845, the "Fair Copyright in Research Works Act." As requested, I have reviewed the verbatim transcript and made the necessary corrections in the document. In addition, I have attached my responses to the six questions included in your letter of November 12th.

If you have any additional questions or need further clarification, please contact me at 301-634-7118 or at mfrank@the-aps.org.

Sincerely yours,

Martin Frank, Ph.D.
Executive Director

Attachment

APS Response to Congressman Berman's November 12, 2008 Request

Question 1 *You testified that the NIH mandatory open access policy may have negative consequences for the peer-review process. Can you provide a detailed description of the peer-review process and the role publishers play in it? Can you breakdown the average costs that a publisher incurs in providing peer-review for each published article? During the hearing Dr. Zerhouni seemed to imply that NIH pays for peer review. Can you distinguish between money that NIH allows authors to spend on page charges and the cost of peer-review?*

Answer – Peer review is a critical part of the scholarly publication process, contributing one of the most important functions—quality control—which ensures the integrity and excellence of published articles reporting on scientific research. Publishers organize and manage the peer review system, and establish, in partnership with the scientific community, codes of ethical practice for peer review. While peer review is taken on by some academics *pro bono*, editors are often paid, and the management of this process requires significant financial resources, which are provided by publishers. Publishers underwrite the development of special software and provide platforms for the online manuscript submission systems that are at the front-end of the peer review process, and they fund the staff to run and maintain them. Publishers invest in editorial office management systems which facilitate online peer review. In those cases where editorial administration takes place within the university system, the costs are usually charged back to the publisher. Many publishers pay journal editors, who devote significant amounts of time to ensuring journal quality. Prior to sending a manuscript to peer reviewers, the journal editor weeds out the ones that are inferior, irrelevant and out-of-scope articles. The editor then selects peer reviewers who can evaluate the strengths and weaknesses of a manuscript, including its experimental protocol and data interpretation. For clinical journals, the editor also arranges for statistical reviews to ensure that clinical trial data are interpreted correctly. The editor then assesses and aggregates the peer reviewers' recommendations.

Once the manuscript is reviewed, the editor provides the reviewers' comments to the author to facilitate revision if needed. These changes might be editorial or substantive, the latter requiring additional experiments or studies. Some manuscripts are rejected after peer review. For the APS journals, only about 50% of submitted manuscripts are accepted for publication. For *Science* and *Nature*, only 5-10% of the manuscripts are accepted. This serves to keep standards high and benefits the public and the research community.

The peer review costs incurred by publishers for these activities include a) editor fees, b) electronic-submission platform development and maintenance, c) administration and e) editorial. In addition, publishers cover the system costs of launching, building, developing, evolving, and promoting journals. While peer review ensures the quality and scientific integrity of articles, it is the journal "brand name" that places those articles in context for readers. Peer review is a short-hand term that represents what the publisher contributes, adding value through quality control, publishing, distribution and archiving of scientific discovery and knowledge.

The total publication cost for a journal article averages $3000 - $5000. Publisher costs for peer review have been estimated at about $230 to $920 per manuscript published.[1] For the APS, approximately 20% of the $3000 it costs to publish an article represents the cost of peer review. As rejection rates increase, so do the costs per published article. Some journals reject as many as 95% of submitted manuscripts. Cost per article rises substantially for high-quality, prestige journals because the published articles bear the costs of processing all the manuscripts

NIH allows grantees to use a portion of their research grants to pay for some publication charges, such as page charges and color figure fees. Such charges do not pay for peer review and any implication otherwise is mistaken. Therefore, it is misleading to assert that NIH pays for peer review. As explained in my testimony, costs paid in the form of page charges cover only part of the total cost of publication. The remainder must be recovered through subscription sales to academic institutions in the U.S. and abroad, pharmaceutical companies, hospitals, etc. For the APS, about $1,000 or one-third of the $3,000 cost to publish an article is recovered through author fees for publication-related charges. Page and color charges are applied to cover direct costs of production and manufacturing. They do not cover the costs of peer review nor the infrastructure that supports the online peer review of manuscripts. For APS, these fees help to reduce subscription prices, but many publishers do not charge such fees, depending entirely on subscription fees.

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), NIH does not pay so either the researcher or the institution must find a way to come up with funds to pay the author fees.

Lastly, it is unclear how Dr. Zerhouni arrived at a figure of $80-100 million figure. As recently as 2005, NIH noted in its *Policy on Enhancing Public Access to Archived Publications Resulting from NIH Research* that NIH was making payments of $30 million a year for publication charges. Only open access journals -- which currently charge authors or funding agencies up to $3,000 per article -- seek to recover the full cost of publication. Few publishers have moved to this author pays publication model because it would place the full cost burden on researchers and diminish resources available for the research needed to develop treatments and cures for disease. In addition, there are questions about the sustainability of the author-pays publishing model. It was estimated that in 2007 only about 21,000 articles were published in open access journals across all scientific, technical and medical disciplines. Of that number, it is unlikely that any more than a couple of thousand were based on NIH-funded research and thus would have been covered under NIH's public access policy. Even if NIH paid the $3,000 for each of the approximately 2,000 articles, the total would have come to only $6 million. That does not come close to explaining the difference between the $30 million in 2005 and $80-100 million two and a half years later.

[1] Donovan, B. 1998. The truth about peer review. Learned Publishing, 11: 179–84.

Question 2 *– Improving patient access to the most current scientific research is an important goal of the NIH's mandatory open access policy. What measures, if any, are publishers currently undertaking to provide patients access critical medical research that might affect their treatment?*

Answer – NIH is not the only organization providing public access to the scientific literature. 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 online and print journals. 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 lasts from 2 months to 2 years.

A number of journals also participate in PatientINFORM, a public health literacy project of the American Cancer Society, American Heart Association, and American Diabetes Association. Publishers provide patients and caregivers with free online access to up-to-date research and interpretive commentary about specific diseases at www.patientinform.org. Publishers also provide immediate free access links from these patient-friendly interpretations to the final published articles. Many publishers also allow members of the public free access to specific articles if they certify they need the information because of their own or a family member's medical condition. In addition, many publishers have a communications department that writes press releases and lay language summaries designed to educate the public about critical research findings. Similarly, the public information offices of universities work cooperatively with publishers to disseminate information of research findings of interest to patients. These are ongoing efforts that predate PubMed Central.

Finally, publishers have been working to give free access to content to those in developing countries. HINARI (http://www.who.int/hinari/en/), is short for "Health InterNetwork Access to Research Initiative." This 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/), short for "Access to Global Research on Agriculture" is a partnership with the Food and Agricultural Organization that provides researchers, policy-makers, educators, and students in developing countries with access vital research that will ultimately help increase crop yields and food security. OARE (http://www.oaresciences.org/en/) or "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.

Question 3 *– During the hearing, Dr. Zerhouni stressed that there was great value in the NIH's efforts to interconnect the multitude of NIH databases with peer-reviewed articles published on PubMed Central. Do publishers provide similar linkages and interconnectivity in the products they offer? If so, would you consider the NIH a competitor in providing such information? Are there any established standards in the manner in which linkages are provided? If so, to what degree has the NIH adopted these standards?*

Answer – 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 embed database accession numbers in published articles for nucleic acid, genome mapping, and protein expression databases to facilitate reader discovery and also provide further linking from the text of the article to a variety of such database resources. Links may be provided to privately-held databases as well as those maintained by the NIH. Publishers further use "forward citation linking" so that reader can trace how articles have been cited by other scientists and even the popular 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, as described more fully below.

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 Elseviers' Scopus, and ACS' Chemical Abstracts Service. Publishers devised their own systems of web linking and specialized nomenclature (e.g., Chemical Abstracts Service (CAS) Registry Numbers) so that information about chemical structures and reactions was available 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 is directly competing 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.

As previously noted, publishers use linking technology to enable public access via initiatives such as PatientINFORM, where interpretive materials written by communications specialists at American Diabetes Association, American Cancer Society, and American Heart Association are linked to the original research articles, which are made freely available from publishers' web sites via cooperative agreements with publishers as rights holders. Although similar arrangements could accomplish the legitimate public access goals of the NIH, 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 also avail themselves of linking opportunities. Indeed, society publishers proposed on several occasions that NIH could use its "Linkout" technology to accomplish its public access goals 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. Thus, journal publishers and NIH are both suppliers and users of content linking services.

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

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 CrossRef, and has mandated that investigators utilize the PMCID when submitting NIH applications and progress reports. NIH contributes funds to the publication of only about 80,000 articles each year, but because it controls the allocation of $29 billion in research funds, biomedical researchers are under pressure to obtain a PMCID for their work. By creating its own standard, NIH is competing with existing industry standards. This duplication is wasteful and undermines the efforts of the publishing industry to create a universal system of persistent digital links. Moreover, the PMCID also creates competition for the publisher's website because it directs users to the final submitted manuscript on the PubMed Central website, whereas the DOI directs users to the final published article that resides on the publisher's web site.

Question 4 *– You mentioned in your testimony that APS makes available online all of its articles 12 months after publication? How is this any different than the NIH making those same articles available on its PubMed Central website? What would happen to you journals if researchers chose to read your articles on PubMed Central instead of on your website?*

Answer – As stated in my oral testimony, the APS publishes approximately 4,000 articles annually, making them all freely available after 12 months from our online journal site at HighWire Press. The Society made this decision in 2000 without government intervention because it served scientists and the public. It was a decision that we could modify had 12 months proven to be disadvantageous to the Society's business model. We were able to make the decision because the Society controlled copyright on the articles and we had subscription revenue to support the necessary infrastructure. We also were able to monitor downloads on our web site to determine whether to adjust the timeframe. The difference is that the NIH policy requires public access after 12 months, and NIH has not supplied adequate information about user access to APS journals on PubMed Central. As a result, we do not know if adjustments are needed, and we would not be allowed to make them if they were needed.

Publishers are now concerned that some subscribers might decide to drop their subscriptions because content is available at PubMed Central. Loss of subscriptions would undermine our scholarly publications. As stated in question 1, the peer review process creates the journal brand, something that is lost under NIH's mandatory submission program. The layout and page design for the articles appearing on PMC are not those of the APS journals, but of PubMed Central. This re-branding of our content on PMC jeopardizes the copyright protections that have spurred the investments and infrastructure that are needed to maintain a robust and thorough pre-publication peer review process in the digital age. These are costly endeavors, and if publishers cannot recover their costs, the quality of our journals will suffer to the detriment of our members' science.

Because the NIH mandate in effect reduces copyright protection for publications to only one year, it risks undermining the revenue stream -- derived principally from subscriptions -- that enables publishers to add value to research articles and to enhance readers' ability to discover and use scientists' work. As the number of full-text articles based upon NIH-funded science in PMC increases, concern grows that current journal subscribers will access the text from that website, rather than from the journal's own online site. Based upon surveys about librarians' decision making process, it is clear that the more content that is available from centralized repositories, the greater the risk that subscriptions will be cancelled. If publication costs cannot be recovered through subscriptions, journals will have no choice but to try to recover them through author fees or similar mechanisms. Such measures would reduce funding available for research by amounts much greater than the cost of subscriptions themselves. We are gravely concerned that the funding base of some journals may become eroded to the point where they can no longer adequately serve their communities and will be forced to implement or increase their authors' fees at a time when funding levels are shrinking. In both cases, researchers are disadvantaged – in one case by having less freedom to choose where to publish, or what community to reach, and in the other, failing to have adequate resources to fund research designed to develop treatments and cures for disease.

Question 5 *– The NIH contends that its policy is less aggressive than other countries in terms of the embargo period; that is, the NIH employs a one-year period while other countries with similar policy employ a six-month period. What effect, if any, has this shorter embargo period had on scientific journal publishing generally? Are there any scientific journals that have a large percentage of their articles originate from sources subject to shorter embargo periods? If so, what effect, if any, has the shorter embargo period had on those journals?*

Answer – 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*."[2] Australia's public access policy "*encourages researchers to consider the benefits of depositing their data and any publications*," rather than requiring deposit, making this policy voluntary.[3] The Agence Nationale de la Recherche in France also *requests* rather than *mandates* that authors submit their articles for public access.[4]

The majority of UK agency policies are flexible on the timeframe for public access deposits and require that copyright policies be respected. In addition, these policies are not all 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.[5]

In addition, these foreign government agencies facilitate publisher compensation by allowing authors to include public access charges in their grants or to charge public access costs back to the agency. For example, the UK Medical Research Council (MRC) facilitates use of agency funds for public access costs.[6]

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[2] See CIHR "Policy on Access to Research Outputs," section 5.1.1 available at: http://www.cihr-irsc.gc.ca/e/34846.html.

[3] 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

[4] 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?ingInfoId=159

[5] See "Research outputs - the ESRC's guidance" available at: http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Support/access/

[6] See "Further Guidance and Frequently Asked Questions on Open Access Publishing," section 10.1. Available at: http://www.mrc.ac.uk/PolicyGuidance/EthicsAndGoverniance/OpenAccessPublishingandArchiving%20/FAQonOpenAccess/index.htm#P106_13538.

Proponents of the NIH public access policy have argued 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 to make 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.

Question 6 *– You cite studies that suggest subscribers to scientific journals would cancel their subscriptions if they could access the journal articles for free 12 months after publication. Are there any studies that discuss what subscribers would do if journal articles were freely available 24 or 36 months after publication? If not, do you think you would see much of an impact on subscriptions if the embargo period was 24 or 36 months?*

Answer –The more content available for free twelve months after publication, the more likely it becomes that libraries will choose to wait for the content to become freely available instead of subscribing to the journal. This was one of the findings from an independent study commissioned by the Publishing Research Consortium (PRC) to determine how decision making factors such as price, embargo period and article version would affect librarians' cancellation of subscriptions. The study was conducted by Scholarly Information Strategies in July 2006 through a survey of over 400 librarians internationally. The study reported that a significant number of librarians say that they are likely to cancel subscriptions when some of a journal's peer-reviewed manuscripts are available freely through open access. The PRC study looked at different embargo periods and assessed librarians' preference for free content with these various delays. It found that with a 12 month embargo period when only 40% of the content available for free, a large proportion (44%) of librarians said they would prefer the free content over a paid subscription to the entire journal. Even with a 24 month embargo period, 37% of librarians still preferred 40% of the free content over a paid subscription to the entire journal.[7] I should also note that this study was conducted before the current economic crisis, which is expected to have many ramifications in higher education, including the likelihood of cutbacks to library budgets.

Since the NIH Public Access Policy applies to NIH grant holders, some journals will suffer more serious impacts than others. Journals that are published weekly or bi-weekly and contain a small proportion of research based upon any NIH funding would experience only minimal effects. However, in some journals, more than 50% of the articles report research with some NIH

[7] *Self Archiving and Journal Subscriptions: Co-Existence or Competition? An International Survey of Librarians' Preferences*, 2007. Pg. 20. Available at: http://www.publishingresearch.net/documents/Self-archiving_summary2.pdf

funding. Notably, the majority of such journals are published by non-profit publishers. Journals with a higher proportion of NIH funded research are more vulnerable to subscription losses when the material is made available for free on the NIH website. Journals that are published less frequently will also suffer greater exposure as fewer issues would be missed during the embargo period. In addition, if the NIH public access policy were applied to other federal agencies, the proportion of articles posted on government websites would increase, thereby raising the threat to subscriptions not only for biomedical journals, but also for journals in other disciplines.

Since every niche of science is different, no one embargo period will suit all journals. Some journals may be able to survive with only minimal subscription cancellations if content were made freely available at 24 or 36 months. Others that cover fields where research retains its currency longer, might not. For example, the American Psychological Association has noted that only 15% of the "lifetime readership" of an article in psychology occurs in the first year, leaving 85% of the lifetime usage in periods more than one year after publication. These articles have much longer "tails" than those in the bio-medical field. This represents another case where one size does not fit all.

As open access advocates have said, libraries would prefer to have free access to journal articles rather than paying the publishers who have invested in these journals. Dr. Harold Varmus, a founder of the Public Library of Science and long time advocate of public access, noted in an April 11, 2008 interview on NPR *Talk of the Nation*, that "one of the motivations for doing this [NIH public access policy] is the increasing cost of subscription-based journals in biomedical sciences."[8] There are very good reasons for these costs increases, including the fact that research funding itself has increased substantially in the past decade, yielding substantially more research articles and therefore more journal pages each year. However, the notion that open access will have an impact on subscription costs clearly shows that there is an expectation that such free access will replace paid subscriptions.

It is imprudent for the federal government to set mandates for the free access of journal articles without clear evidence of their impact. Further study of this issue is important. In fact, this kind of study is happening in Europe. The Publishing & Ecology of European Research (PEER) project, launched in September 2008 and expected to run until August 2011, will develop an "observatory" of 300 journals from a wide range of types and subjects. It will allow deposit of peer reviewed manuscripts that have been accepted for publication into European repositories where they would be made freely accessible after embargo periods of varying lengths appropriate to the discipline and the economics of each journal. Supporting research studies will address issues such as: (1) How large-scale archiving will affect journal viability; (2) Whether it increases access; and (3) Models to illustrate how traditional publishing systems may coexist with such embargoes. With little information to go on about customer cancellations, we encourage this kind of study in the U.S.[9]

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[8] Interview with Dr. Harold Varmus, NPR Talk of the Nation, April 11, 2008. Available at: http://www.npr.org/templates/story/story.php?storyId=89562597.

[9] See, *New Collaboration Project of Publishers, Repositories, and Researchers Launched—PEER*, Weekly News Digest, October 20, 2008. Available at: http://newsbreaks.infotoday.com/wndReader.asp?ArticleId=51180.

RESPONSES OF RALPH OMAN TO THE WRITTEN QUESTIONS OF THE SUBCOMMITTEE MEMBERS

1. Your experience as the former Register of Copyrights gives you a particularly strong appreciation for the legislative process. Do you think there was a sufficient connection between the policy change on open access and substantive copyright law to warrant referral of the measure to the Judiciary Committee? Do you think legislation impacting the open access policy should be vetted by the Judiciary Committee? Does H.R. 6845 correct any problems you see with the NIH open access mandate as it effects copyright law?

Oman's Response to Question One: Not only do I think that the legislative change should have been vetted through the Judiciary Committee, I think it should have originated in the Judiciary Committee. The NIH open access policy has very important implications for substantive copyright law, and the expert committee should draft and refine the legislation dealing with it. H.R. 6845 would help restore the balance between the interests of the authors and the publishers, and the public's need to have reliable and timely access to articles that deal with breakthrough developments in scientific and medical research.

2. You mentioned in your testimony that you don't see any practical replacements for subscription-based commercial and nonprofit scientific journal publishers; but what about open access journal publishers? As I understand, their business model depends on charging high author fees to recoup a substantial portion of their expenses. Aren't they a possible alternative to subscription based publishers?

Oman's Response to Question Two: If we were to give the authors the choice between the original system—with private publishers subsidizing review and publication costs from their paid subscriptions—and a new system that required the authors to pay a high fee to subsidize the publication, I suspect that the authors would favor the current system. We should ask them—the interested party that the Chairman noted was absent from the witness table—what system they would prefer, given all of the options. I doubt that the NIH explained in any detail that the consequence of mandated open access could very well mean that the journal publishers would discontinue publication. I think the authors would certainly have a different opinion and might be very reluctant to sign away their rights to the NIH if they had been told in candor of the possible consequences. As an observer of human nature, I would also be suspicious of any journal that published the articles of an author who paid them to publish it. It gives new meaning to the notion of Vanity Press, with possibly deadly consequences. Today, the private publishers exercise their judgment and rely on peer-review networks to make certain that only articles worthy of the public's scrutiny are published in their journals. Finally, I believe it is unwise and unfair for the government to make policies, such as the NIH open access

policy, that favor one business model over another (in this case, favoring the open access model that publishes only about 5% of STM journal articles), has been around for a short time and that has not proven its sustainability. H.R. 6845 on the other hand does not mandate, preclude, or favor any conventional, open access, or other business model that publishers may choose voluntarily to employ.

3. Your written statement makes parallels between the NIH's open access mandate and the Bayh-Dole Act. Under the Bayh-Dole Act, universities are permitted to own patents in inventions made by their federally funded researchers. In discussing the Bayh-Dole Act, are you suggesting that it be emulated in the context of copyrights in articles pertaining to federal research? If so, would the parallel be to end the long standing policy of allowing researchers to own the copyrights in their articles and instead give universities ownership of these copyrights? What implications would this have on the open access debate?

Oman's Response to Question Three: Actually, the point I was making relates only indirectly to the problem of the NIH Open Access Policy. Bayh-Dole recognizes that in many areas of human activity, the private sector is better at doing things than is the government. Commercial exploitation of inventions is an example of something an entrepreneur does better than a bureaucrat. Hence, the success of Bayh-Dole. In the same way, private publishers are better at making the hard choices on which articles to publish and which not to publish. The publishers have no reluctance to tell an author that his or her article is not up to snuff. A staff professional at the NIH who has been working with a grantee for years might have personal difficulty in making that hard call. In addition, publishers are driven by competition to excellence in providing the essential services of managing peer review, editing, publishing, dissemination and archiving. For these and other reasons and to ensure the continued integrity of the process, it is essential that we keep the private publishers fully involved in the vetting and publication process, and revise the NIH open access policy to safeguard the incentives to private sector publication. Only the Judiciary Committee can make those judgments in the public interest. Responsible, expert, and thoughtful publication policies are better handled by the private sector, and are the best way to facilitate the open debate that we all want. It would not necessarily serve the public interest to require academic researchers to assign their copyright to their university employer. The university, perhaps thinking of publicity or prestige, may have the wrong reasons for seeking to publish the articles of its own employees in its own journal, despite the preferences of its researchers and the quality of the article. If it owned the copyright, it could do as it liked with the article, even change its conclusions. In my experience, arms-length dealings in these important matters are very important, which we have under the original, pre-NIH, peer-reviewed publication template. As a general rule, under the teacher exception, prestigious universities do not claim ownership of the scholarly work of their professors.

4. The Frequently Asked Questions (FAQs) concerning open access on the NIH's web site refers to the rights reserved by the NIH to make manuscripts available for free as "a small strand of the worldwide rights." Please describe the normal

range of rights a copyright owner has. Would you agree with the NIH's assessment that their open access policy implicates just a small strand of these' rights?

Oman's Response to Question Four: In many cases, especially in the field of non-profit publishing, the author's Right of First Publication is the most important right. The author's assignment of a limited right to NIH under the new legislative amendment is not "a small strand of the worldwide rights." It actually is the only right worth talking about. It is disingenuous for the NIH to suggest that the author can still exploit the motion picture rights or the right to create an opera or a television series based on his or her scholarly article. In fact, this assignment to NIH effectively exhausts the economic value of the copyright in 99 percent of the cases.

5. You point out that the legislation authorizing the NIH open access policy specifies that it should be implemented in a way consistent with copyright law. You suggest that it wasn't. Can you describe for me a different way it could have been implemented that is consistent with copyright law and that would have provided the public with comparable access to journal articles?

Oman's Response to Question Five: The assignments from the author are "negotiated" deceptively, and the authors are presented with a take-it-or-leave-it contract that they are forced to sign without truly understanding the consequences. They are contracts of adhesion, and they run counter to the underlying spirit of copyright, which seeks to protect the weak and exploited from the powerful. The work-for-hire provisions of the copyright law, as well as the termination provisions, all seek justice for the authors and their publishers. Section 201(e) of the Copyright Act prohibits "involuntary transfers" of copyright to the government. If this is a "voluntary" transfer, with the barrel of the NIH pistol pressed against the author's temple, I do not understand the meaning of voluntary. It is a shame that the NIH, as it dispenses its $28 billion annually, can't let a few crumbs fall off the table to pay the copyright royalties any normal organization would have to pay. The open access amendment reflects the extraordinary power of the NIH, and it violates the author-friendly underpinnings of the copyright law, and the copyright clause of the U.S. Constitution. Over the long haul, the NIH-mandated open access policy will not "promote the Progress of Science."

6. You make the point in your testimony that assignment of the reproduction right under the NIH open access policy is far from a "voluntary" product of a free market negotiation. Couldn't the same be said of the assignment of copyright that authors are often required to make to journal publishers as a condition of having journals publish their articles?

Oman's Response to Question Six: There are other journals. If one of them makes an onerous demand, the author can take his or her article to another publisher. There is only one NIH If you say "no" to its imperious demand for a "teensy-weensy" assignment of the reproduction right, you lose your money and your career is ruined. So the negotiation is not "voluntary" as that term is normally understood. It is also true that most of the

authors have not given informed consent, since the NIH fails to point out the likely consequences of its open access policy on the continued viability of private sector STM publishing.

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December 1, 2008

The Honorable Representative Howard Berman
Chairman, Subcommittee on Courts, the Internet
and Intellectual Property
U.S. House of Representatives
Committee on the Judiciary
2221 Rayburn House Office Building
Washington DC 20515

Dear Representative Berman,

Thank you once again for the opportunity to testify before the Subcommittee on Courts, the Internet and Intellectual Property during the September 11, 2008 hearing on H.R. 6845, the "Fair Copyright in Research Works Act." Thank you, as well, for the chance to provide the following additional information on the important issue of ensuring that the public has rapid, free access to the results of the biomedical research that their tax dollars fund through the National Institutes of Health (NIH).

I particularly appreciate the opportunity to provide reference materials and supporting data to the subcommittee. Attached you will find detailed responses to each of your questions, along with supportive documentation, links to industry analyses, and reports as appropriate.

I would welcome the chance to speak with you or any Subcommittee member at any time should you wish to explore this issue further, or if I might provide any additional information for you.

Respectfully submitted,

Heather Joseph

Heather Dalterio Joseph
Executive Director, SPARC

Question 1. You suggested in your testimony that the NIH mandatory policy will have a negligible impact on publishers. Is this true for all publishers and subject matter? Are there studies or evidence that verifies this claim?

Both predictive studies and ongoing journal publishing industry practices indicate that the NIH policy has not had, nor will it have, a negative impact on journals that publish the results of the biomedical research funded by the agency. In fact, there is more evidence to suggest that the impact on journal publisher is likely to be positive.

Libraries will not cancel journal subscriptions
The chief concern expressed by some journal publishers is that the free availability of manuscripts in an online database (such as the NIH's PubMed Central) within 12 months of their appearance in a journal will lead their primary customers – academic libraries – to consider access to author manuscripts an adequate substitute for the journal and cancel paid subscriptions, causing publishers to lose revenue.

However, predictive studies, such as the 2006 report commissioned by a prominent publishing trade association (the Association of Learned and Professional Society Publishers), have examined factors that prompt libraries to cancel journal subscriptions and found this concern to be unfounded.[1] Their report confirmed that two factors, the cost of a journal subscription and demand for the title on campus, were far and away the leading factors contributing to the library's decision to keep or cancel a subscription. (The issue of cost is particularly crucial, and I provide more details in my answer to Question #3). In terms of access to an author's manuscript in a digital archive such as PubMed Central, the publisher's study concluded, "availability of content via delayed open access was not an important factor in journal cancellations."

The report also documents the circumstances that could lead to library subscription cancellations, as related to the availability of material in an archive such as PubMed Central:

> 1. First, an extremely short embargo period. 82% of librarians surveyed noted an embargo period would need to be 3 months or less before they would consider it a factor in cancellation decisions.
>
> 2. Second, the final publisher's version would need to be available. Librarians reported that the raw manuscript, or preprint, is not a substitute for the journal; only 9% saw access to an author's final manuscript, as an adequate substitute for the final manuscript.
>
> 3. Third, comprehensiveness counts; 75% of librarians indicated the archive would have to contain over 90% of a given journal's content before it became a factor in possible cancellation.

The NIH policy is specifically crafted to ensure that journal publishers' interests are protected in all of these regards: it allows for a year-long embargo period; requires only the author's final manuscript (not the final journal article) be deposited into PubMed Central; and recognizes that

nearly all journals publish much more than just research articles resulting from NIH funding (such as research funded by other sources, editorial content, reviews, and other reader value). The policy was designed and implemented to more equitably balance the benefits to all stakeholder groups, while providing the impetus to spur innovation, stimulate discovery, and accelerate progress toward finding cures and treatments for diseases.

Hundreds of biomedical research publishers currently make articles publicly available after 12 or fewer months

Perhaps even more telling than predictive studies is the fact that active practices within the biomedical journal publishing community indicate that the requirements of the NIH Public Access Policy are not a threat to their well-being.

Specifically, if the free availability of an author's final manuscript after one year truly would cause libraries to cancel subscriptions to biomedical journals and result in financial losses, then journal publishers surely would not voluntarily implement such a practice. Yet, there are hundreds of biomedical journals who do just that; they voluntarily make content freely available within 12 months of publication – and, in many cases, within even shorter periods of time.[2] Strikingly, many of these journals also go beyond what the NIH Public Access Policy requires, and make the final published article (not the author's manuscript) freely available after an embargo period.

There are several indices that give evidence to this particular trend. The SHERPA/ROMEO Project, for example, indicates that 66% of the journal publishers it surveys allow authors to post their manuscript in freely accessible repositories such as PubMed Central under varying terms.[3] The Open Access Directory has also begun a compilation of journal publishers' practices as related to compliance with the NIH Public Access Policy [4].

Journal publishers now routinely allow free access after an embargo period across a wide variety of disciplines. The journals that do so range from some of the largest, most well known (*Science*, *Nature*, and the *Journal of the American Medical Association*) to mid-sized journals covering more specialized topics (such as the *Journal of Ophthalmology*, the *Journal of Cell Biology*, and the *Journal of Psychiatry*). This practice has also been adopted by even more narrowly specialized niche journals, such as *Eukaryotic Cell* and *Glycobiology*.

Many of the journals that have voluntarily put 12-month embargo periods into place have not experienced any negative financial effects on their publications. To the contrary, many have seen positive effects in terms of increased visibility and usage, as well as impact. Some publishers, such as the American Society for Microbiology (publisher of 9 research journals) and the American Diabetes Association, have actually **shortened** their embargo periods (to 4 months and 3 months, respectively) because of the increased visibility and use made possible by faster and broader access.

These positive outcomes are just part of the widely anticipated economic, social, and health-related benefits of the NIH Public Access Policy. The policy was designed to take advantage of new advances in communications technology – specifically, the Internet to create new

opportunities for taxpayers and the agency to collectively leverage our $29 billion annual investment in biomedical research conducted by the NIH. By providing enhanced access to and greater use of this research, the policy is designed to increase the efficiency of the U.S. investment in research and development by making it easier to build upon earlier findings. It expands the use and application of research results to a much wider range of users, well beyond just the core research institutions that have traditionally had access to the subscription-based literature.

Many governments seek the benefits of public access to research
Many other governments are vigorously exploring the potentially significant economic and social benefits that can be realized by ensuring better access to the results of publicly funded research. Opportunities for new business development, faster R&D growth, enhancement of national research assessment programs, and ensuring competitiveness in the global research community are all cited as factors driving the movement toward new policies.

In a 2005 *Report on Scientific Publishing*, The International Organization for Economic Cooperation and Development noted:

> "Governments would boost innovation and get a better return on their investment in publicly funded research by making research findings more widely available… And by doing so, they would maximize social returns on public investments."[5]

Additional details and economic analysis are available via a range of sources. See, for example, the recent report "*Research Communication Costs in Australia: Emerging Opportunities and Benefits*," for the Australian Department of Education, Science and Training,[6] and the European Commission's February 2007 communication on *Scientific Information in the Digital Age: Access, Dissemination and Preservation (IP/07/190)*.[7]

On occasion of the European Union's *7th Research Framework Programme (FP7)*, a new project designed to guarantee public access to results of research funded under the European Research Council, The EU Commissioner for Science and Research, Janez Potonik, noted:

> "Easy and free access to the latest knowledge in strategic areas is crucial for EU research competitiveness. This open access pilot is an important step towards achieving the 'fifth freedom', the free movement of knowledge amongst Member States, researchers, industry and the public at large. Beyond, it is a fair return to the public of research that is funded by EU money."[8]

As a result of the extensive research, debate and experimentation to date in formulating public access polices, more than two dozen funder-mandated polices are now in place around the world.[9] They have been implemented by both public and private funders, with public funders far outnumbering private funders at this time. The Canadian Breast Cancer Research Alliance, Canadian Institutes for Health Research, European Research Council, Cancer Research UK, Chief Scientist Office of the Scottish Executive Health Department, Department of Health (UK), and Fund to Promote Scientific Research (Austria), Howard Hughes Medical Institute, Joint

Information Systems Committee (UK), the Wellcome Trust, and the National Cancer Institute of Canada are among those who have already implemented strong public access policies.

As part of the new EU program mentioned above, the idea of variable embargo periods for journals in different disciplines is being explored.[10] However, the EU is considering **shorter** embargo periods than the NIH policy current allows – not longer. Only embargo periods of 6 to12 months are being considered. Notably, the NIH is the **only** medical research funder with an open-access mandate, public or private, in any country, requiring an embargo longer than six months out of deference to publisher preferences.

2. *Has SPARC worked with traditional subscription-based publishers to achieve public access objectives in a way that is also consistent with their business model? Does SPARC consider efforts undertaken by publishers, such as publication of articles on HighWire Press, a comparable alternative to the NIH open access policy?*

SPARC has an extensive history of working with subscription access publishers – and specifically, with small, not-for-profit publishers – since our organization was founded eleven years ago. SPARC focuses on collaborating with other stakeholders to stimulate the emergence of new scholarly communication models that expand dissemination of scholarly research and leverage the networked digital environment to advance the conduct of scholarship.

SPARC's programs are designed to stimulate the development of increased publishing capacity in the not-for-profit sector and encourage new players to enter the market; demonstrate that new journals can successfully compete for authors and quickly establish quality; and to create a more open system of scholarly communication, which explicitly recognizes that dissemination is an essential, inseparable component of the research process.[11]

SPARC has had active partnerships with larger not-for-profit publishers (for example, the Optical Society of America, the Public Library of Science, and the American Chemical Society), but our particular area of emphasis has been on smaller, non-profit publishers. Our goal has been to work with such organizations to help them become better educated about opportunities to use networked technology to enhance the publishing process, and to more fully understand the full economic and social implications of doing so.

For example, since 2000, SPARC has worked with more than 100 small non-profit publishers – mainly scholarly society publishers – to help them move from print publishing to online publishing. The organizations that SPARC partnered with to form BioOne were those that were so small they lacked the financial resources to make the transition to online publishing on their own, and were faced with the choice of either staying in print and risk becoming irrelevant, or selling or leasing their journal to a commercial entity.[12]

With the goal of preserving their independence, and continuing to promote affordable access to these small but crucial publications, SPARC raised significant capital (nearly three quarters of a million dollars) from the academic library community to underwrite the transition costs for these

societies to move to an online format, and also to establish a stable, affordable, ongoing online presence for their journal publications.

In doing so, SPARC worked closely with the publishers to understand the financial realities under which they operate. In 2004, SPARC commissioned an economic impact study to examine the BioOne publishers' business models (including revenues and expenditures, profit, loss, and circulation information). This information was used to prepare a study that compares the operations of these publishers against industry standards to assess their business practices and examine the effect of recent trends on publishers' revenue streams and costs.[13]

The study has served as important data point against which the potential impact of policies such as the NIH Public Access Policy, are measured by SPARC. To further underscore its commitment to helping to support the not-for profit publishing community, SPARC has also published a number of business planning guides specifically designed for these publishers as they consider options for expanding the reach and utility of the articles they publish, and have distributed these for free to the community since 2001.[14]

Vendor services not an adequate substitute for NIH Public Access Policy
Like BioOne, HighWire Press provides an online platform through which journals can distribute their articles. There are, however, important distinctions between the two, and **neither** is an adequate substitute for the NIH Public Access Policy.

HighWire is an important, high-quality publishing platform that has provided a number of journals with a mechanism for electronic distribution since the mid-1990's.[15] It is, however, a fee-for-service provider, and the cost for a journal publisher to move – and maintain – their articles on HighWire's platform is significant, ongoing, and permanent. Most of the journals that SPARC works with via BioOne, for example, could not afford a presence on HighWire. Additionally, HighWire has had a practice of only working with journals it considers significant enough to merit exposure on its platform. While a perfectly legitimate business strategy, this means that there are thousands of journals that simply are not eligible for inclusion on the HighWire platform.

More importantly, with respect to the NIH Public Access Policy, while many of the journals currently using the HighWire platform have a 12-month or shorter embargo period, there is no requirement, for them to do so and therefore no guarantee that access will continue to be provided permanently. Because it is a fee-for-service provided, journals can – and do – opt to move their content, and they are free to change their access polices at any time. The NIH Policy is designed to create a complete, permanent archive of the results of the research funded by the agency. Current availability on HighWire does not ensure that this goal will be met – now or, especially, in the future.

The availability of articles via platforms such as HighWire press also does not guarantee interoperability with other publicly funded databases that can increase utility of the articles, and serve the ultimate purpose of NIH public access policy – to maximize the taxpayer investment in scientific research by enabling research and discovery. Availability on HighWire Press also does

not provide the NIH with the ability to manage its research portfolio more efficiently, which is another explicitly stated goal of the NIH public access policy.

3. You mentioned in your testimony that there has been a rapid escalation of the price of journal subscriptions. Please provide more details concerning this rise in journal pries. For instance, how much did average subscription prices rise in the last 5 years? What do you think is behind the price increases?

The long-term trend of increases in journal subscription prices is a very real – and growing – problem. Comprehensive reporting on journal subscription pricing trends for the past five years can be found in the 2008 *Library Journal's* annual *Periodical Pricing Survey*.[16] While percentage price increases differ from discipline to discipline, the average increase in journal subscription prices to academic libraries over the past 5 years has averaged between 7% and 11% – each year. During the period from 2004-2008, academic libraries saw an increase of 55% to subscription prices to journals in biology, 34% to journal subscription prices in chemistry and 49% in health sciences. ***Note: Full paper available – attached as Appendix 1- see Table 8, pages 8&9)***

This trend has not been limited to the past five years. Over the past two decades, the journal subscription pricing trend has mirrored the scenario from 2004-2008 – and, in many cases, been worse.[17] To compound the problem, academic library budgets have not been increased to keep pace with journal subscription price increases. In fact, the general trend has been towards flat budgets.[18] The result of the combination of these two trends has been yearly cuts to journal subscriptions by academic libraries.

As a representative example, the University of Washington at Pullman noted this in its recent *Libraries Journal Cancellation Project 2009*:

> "Once again we have completed the difficult but necessary task of trimming our journal subscriptions in anticipation of a steep increase in costs. The task grows more difficult each year since we are now losing access to core periodicals in some disciplines. During this time, the library materials budget has been flat; we have not received increases to cover inflation in books or journals. Journal inflation, including access to abstracting and indexing services, is running between 5% and 10% annually. We now have this year's budget figures, and again there is no money to keep offering the access we currently have. We are going to have to cancel somewhere around $600,000 of journals, approximately 15% of our remaining subscriptions."[19]

This trend shows no sign of abating. According to *Library Journal*, prices of subscription-based journals increased nine to ten percent in 2008, exacerbated by an extremely weak dollar. Given the continuing slide of the dollar, increases in 2009 are expected to approach ten percent overall.[20]

Studies show that price and demand are the largest factors driving library journal subscription cancellations.[21] These continued price increases are the primary threat to journal publishers'

revenue. As the study noted, and as library statements and actions support, access to author's manuscripts via a database such as PubMed Central is **not** a factor in current library cancelation activity.

2009 data already shows that the extremely weak and volatile U.S. economy will result in cuts to many library budgets. As a direct result, many journals will be cut – not because of the NIH policy, but because libraries simple can't afford to pay for them.

As the University of Georgia Senior Vice President for Academic Affairs and Provost noted on September 18, 2008 in a letter to faculty, staff and students:

> "Because of the downturn in the state's economy, the UGA University Libraries, like all campus units, are facing a projected 6% budget reduction. This reduction in the Libraries' budget, coupled with the rising cost of scholarly journals, likely will result in the Libraries' discontinuing some journal subscriptions… ***In recent years, the price of journals has increased more than 7% per year, making the acquisitions of scholarly journals one of the most daunting challenges that research universities face.*** ."[22]

And the follow-up letter to faculty from the University of Georgia librarian underscores both the depth of the problem, and well as the accuracy of the results publisher's survey data on factors used to determine journal cancellations:

> "As the Provost advises in his memo above, the University Libraries are planning for a reduction in expenditures for journal subscriptions because of the current budget situation. Librarians have been working for several weeks preparing a list of subscriptions that might be canceled totaling $1,660,000. ***They have looked at actual use, how often a journal is cited by UGA authors, cost per use, overall cost and how each title supports research and teaching at the University.*** This list represents a reduction of up to 21% of expenditures for subscriptions."[23]

These scenarios are, unfortunately, illustrative of what is happening on campuses across the U.S., and the situation will likely worsen as more libraries feel the effect of the weak economy in 2010. The NIH Public Access Policy provides an important resource to these, and scores of other, institutions who otherwise would not have full access to this crucial biomedical research.

A driving force behind this decades-long trend of significant annual price increases has been an increase in the number of journal titles published by a handful of large, multi-national commercial publishers, as they increasingly absorb titles traditionally published by independent, not-for-profit entities. These large commercial players (such as Reed Elsevier, Springer, Taylor and Francis) routinely operate with profit margins on their Science, Technology and Medical (STM) journal portfolios of between **30% and 40%** annually.[24]

This trend has proliferated, in part, because the scholarly journal market is unique in several key respects. Perhaps most notably, it is unique in that it was not **intended** to be a commercial market. Unlike authors of books or music, authors of scholarly articles do not publish their work

in exchange for financial compensation. The authors of the articles – the creators of the work – are unpaid. Authors publish their work so that it can be seen – and used – by the broadest possible constituency.

Scholarly authors must publish their work in a journal to receive increased visibility – both so that others can build on it, and so that their individual careers can be advanced. The "publish or perish" culture is still the dominant culture in the Academy. Scholars who want to advance their careers through promotion and tenure, or by receiving grants, **must** publish in scholarly journals. Thus, the supply of free content available to journal publishers is a rich, seemingly bottomless, resource.

While journal publishers have argued that they add significant value to the work created by the authors to justify this current trend of perpetual exclusive distribution and the costs to the Academy associated with it, some industry analysts disagree. For instance, Exane BNP Paribas publishing analysts have gone on record as saying:

> " In our view, the economic model of journal publishing is based on selling access to an aggregate of non-proprietary academic content. While we understand that publishers own the exclusive publishing rights of scientists work, we do not share the view that they own the intellectual property of their work." [25]

The trend of increasing subscription prices and increasing cancellations has led market analysts to examine the current journal publishing market in depth, and to note that tensions between the profit maximization models of many publishers is in direct conflict with the desire of scientists and scholars to maximize the dissemination of their research. This trend has lead to a decrease in the reach of research – a situation that does not serve the individual author's interest, the interest of the research community or the interest of the public. Industry analysts at First Boston /Credit Suisse noted in their *Sector Review: Scientific, Technical and Medical Publishing Report:*

> "[W]e would expect governments (and taxpayers) to examine the fact that they are essentially funding the same purchase three times: governments and taxpayers fund most academic research, pay the salaries of the academics who undertake the peer review process and fund the libraries that buy the output, without receiving a penny in exchange from the publishers for producing and reviewing the content.... ***We do not see this as sustainable in the long term...***"[26]

The NIH Public Access Policy is part of a critical, comprehensive approach to ensure that access to the results of publicly funded research can be made equitably and sustainably available to all who would benefit from accessing and using it.

(4) You discussed in your written testimony your experiences as Publishing Director of the journal Molecular Biology of the Cell. You mention that the full content of the journal is published on PubMed Central two months after publication and that as a result, revenue generated by subscriptions has increased. Can you tell me how the journal makes it revenue? Have paid subscriptions to the journal increased? Why do you think people go to the journal's

website to download articles that they can get from PubMed Central? While early publication on PMC may work for MBC, why would it work for other journals?

The journal *Molecular Biology of the Cell* (*MBC*), published by the American Society for Cell Biology (ASCB) is fairly typical of the journals that publish articles resulting from NIH-funded research. It is an 11,000-member society, publishing a monthly journal that runs to approximately 5,000 pages per year. The revenue sources for the journal are fairly typical of those of similar publications. Last year, the ASCB published a full examination of the economics of its journal program. In this report, the ASCB indicated the major revenue sources for *MBC* include:

- Subscriptions to the online journal (29%)
- Subscriptions to print journal (4%)
- Charges to authors for publication (page charges) (26%)
- Charges to authors for color figure production (35%)
- Revenue from reprints (mainly from authors) and other income (6%)[27]

MBC, like many other journals, receives a significant amount of revenue from charges to authors. As Dr. Zerhouni noted in his testimony of September 11, 2008, the NIH currently provides funds to its grantees to support these charges, even though there is no corresponding increase in accessibility to the article in exchange for these payments.

The ASCB's decision to make the *MBC* available via PubMedCentral two months after publication was a data-driven decision based on then current usage trends. After examining the usage statistics for the journal, the ASCB saw a clear trend: usage peaked in the first two months after an issue of the journal was released, and then rapidly dropped off. This suggested that the community of users valued the immediacy of the information in the journal, and would continue to pay to access it as soon as it was released. That decision was made in 1999, and libraries have continued to subscribe to the journal, bearing out the usage data and underscoring the value inherent in fast access to biomedical information.

MBC's experience is not unique. A growing number of journals are making their biomedical journal articles widely and freely available shortly after publication because they are seeing benefits to their organizations – and their journals – in doing so. (See response to Question 1). As journal content becomes more widely available, its visibility, utility, and impact increases. Journals have subsequently found that they attract a higher quality and volume of papers. It is a scenario that has resulted in a win for the advancement of science, the community, and the journal publisher.

Researchers who access articles on PubMed Central still often go back to the original journal article on the publisher's Web site. For articles that appear in PubMed Central as the author's final manuscript, a driving factor for this behavior is the reader's desire to see the final, complete article. This is the authoritative version they will ultimately use for citations. For journals such as *MBC* – which actually post the final authoritative article (and not just the author's final manuscript) in PubMed Central, the rationale behind the continued traffic to the publisher's site

is likely a bit more complex. It does suggest that many readers value the **context** in which a journal article appears – the other papers in a given issue of a journal – as significant. It also suggests that there is a level of brand recognition that journals continue to enjoy even when multiple avenues for access to content are presented to users.

(5) Articles that appear on PubMed Central are often not the final copyedited and formatted articles that appear in journals. In fact, many articles on PubMed Central have a disclaimer notice stating that they take no responsibilities for errors or omissions in the PubMed Central version. Does it concern you that articles you find on PubMed Central may not include information that is only in the version published by the journal? Is it possible that information missing from the PubMed Central version of articles could have serious negative implications for researchers and health care professionals who might rely on the PubMed Central articles?

The practice of making the un-copyedited, unformatted final author's manuscript available prior to publication in a journal is actually a widely accepted practice in the biomedical journal publishing community. The practice of making the authors' final manuscripts available via the journal's own Web site is sometimes referred to by publishers as a "Publish Ahead of Print" or a "Papers in Press" program. Such programs have been in use by biomedical journal publishers for years, and many tout it as benefit to their members and to the wider scientific community.

For example, The American Physiological Society (represented at the September 11, 2008 hearing by Dr. Martin Frank), routinely makes their un-copyedited articles available as a benefit to subscribers, and explicitly note on their Website the benefits that they see to making this version of the article available more rapidly, saying:

> "APS Articles in Press are accepted, peer-reviewed research papers published online in manuscript form ***before they are copyedited and published*** in the printed issue of the APS journal to which they were submitted. Articles in Press are published online in the PDF format automatically within a few days of acceptance, thus giving the authors and readers an instant, subscription-based access to the newest research and dramatically reducing time to publication." [28]

This sentiment is echoed by another FASEB Society, The American Society for Biochemistry and Molecular Biology (ASBMB) who note:

> "JBC Papers in Press is an ***exciting innovation in publishing***. In partnership with HighWire Press, our co-publishers of JBC Online, we have developed the capability to publish JBC papers in manuscript form on the day they are accepted for publication." [JBC is published by the FASEB society ASBMB][29]

Many publishers who routinely post the un-copyedited version of an author's manuscript put the same disclaimer on their own journal Web sites as they are now asking NIH to do in PubMed Central. In most cases, the disclaimer language reflects the small typographical or grammatical nature of the discrepancies that are likely to appear in between the author's final manuscript and

the final published version. Language such as this from the *Journal of Biological Chemistry* is representative of standard disclaimer language:

> "JBC Papers in Press are papers in manuscript form which have been accepted and published in the JBC Online but which have not been copy edited and not yet appeared in a printed issue of the Journal. Copyediting may lead to small differences between the Papers in Press version and the final version. There may also be differences in the quality of the graphics. The publication date appears below each title followed by the article's unique Digital Object Identifier (DOI)."[30]

There are also many cases, even practitioner-oriented journals such as *Diabetes Care*, where no disclaimer at all is posted. The language simply reads:

> "To make new research readily available to our subscribers, *Diabetes Care* prepublishes all accepted manuscripts as soon as possible after acceptance. These papers have undergone full peer review, but they have yet to undergo copyediting, typesetting, and proofreading. The final versions of these papers will appear in a future print and online issue of *Diabetes Care*."[31]

If there was a danger posed to the public, to researchers or to health care professionals by this practice, which has been established by and touted as beneficial by biomedical journal publishers themselves, surely the publishers would not employ such a practice.

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Periodicals Price Survey 2008: Embracing Openness

Global initiatives and startling successes hint at the profound implications of open access on journal publishing

By Lee C. Van Orsdel & Kathleen Born -- Library Journal, 4/15/2008

They have argued about it for years. It's been touted as the liberator of information that wants to be free, the arbiter of shared intellectual property rights, and an engine that can drive discovery, invention, cures, and economies. It has also been vilified as an assault on capitalism, a catalyst for the collapse of responsible publishing and the rise of junk science, and a naïve invention of some pointy-headed idealists who have no idea how the real world works. "It," of course, is open access (OA).

Evidence for open access as an emergent, global state of mind is everywhere. The ***New York Times*** went "open" last September, and the ***Wall Street Journal*** is slated to follow. Increasingly, scholarly communities are breaking with tradition and calling for the open sharing of research, software, and data. In amongst these global initiatives is the campaign to provide open access to the results of research that is funded with public dollars. That campaign has produced a series of startling successes in recent months, with potentially profound implications for the journal publishing industry.

First came a long-awaited mandate, signed into law on December 26, requiring the **National Institutes of Health** (NIH) to provide open access to grantees' peer-reviewed research articles within 12 months of publication. As blogs hummed with speculation about how libraries would be affected and whether publishers would take it to court, another shoe dropped. **The European Research Council** announced the first European Union (EU)–wide mandate on January 10, calling for grant recipients to put research articles and supporting data on the web within six months of publication. As that news was being absorbed, 791 universities in 46 European countries voted unanimously to endorse OA mandates for faculty at their institutions and to support other mandates for access to publicly funded research.

The OA tsunami crested on February 12. In a move few anticipated, **Harvard's Faculty of Arts and Sciences** voted unanimously to give the university permission to post their scholarly articles in an institutional repository. The policy requires faculty to retain the right to archive their peer-reviewed manuscripts when signing publisher agreements (though faculty can get a waiver by asking for it in writing). About two-thirds of publishers already grant such permission. The one-third that don't currently allow self-archiving will find themselves in a tough spot—conform to the mandate or lose the work of Harvard authors. Harvard's is the first university mandate in the United States and the first anywhere to be initiated by faculty rather than administrators. Therein lies its importance. Through its mandate, Harvard faculty voted for more control over their work and for the right to use and share it widely as a social good.

Alternatives on trial

On other fronts, the pace of publisher experimentation with open access and other alternative publication models picked up a bit in 2007, with **CERN's SCOAP3** project attracting the most attention. A few journals with interactive, Web 2.0 features were launched by large commercial publishers. The number of hybrid OA journals grew, and their overall efficacy as a transitional model seemed more certain. We also saw experimentation on a smaller scale, with publishers looking for better/simpler journal pricing models and ways to trim the cost of sales. Like their library customers, publishers continued to grapple with the costly practice of running dual systems for print and online. Rumors of mergers persisted—**Elsevier** and **Kluwer Health**, **Springer** and **Informa/Taylor & Francis**, Springer and **CSA/Proquest**—and were persistently denied by company spokespersons. There was little relief to be had from the high cost of journals, with **Oxford University Press** offering the rare exception when it used income from author fees to reduce subscription costs in its hybrid journals for the second year in a row, just as it promised.

This year's Periodicals Price Survey will look at these and other issues shaping today's journals marketplace. Three **Institute for Scientific Information** (ISI) databases—Arts and Humanities Citation Index, Social Sciences Citation Index, and Science Citation

Index—provide the titles used in the study. In addition, we include data on titles in **EBSCO Publishing**'s Academic Search Premier. The data are limited to prepriced titles (as opposed to standing-order or bill-later titles) that can be ordered through a vendor and are current as of February 8, 2008.

A really big mandate

The NIH mandate made news both because of its size and because NIH sponsors the best-known OA database of high-end medical research in the world, the **National Library of Medicine's PubMed Central**. NIH dispenses $29 billion a year in grants, resulting in some 80,000 journal articles that are coveted by STM journals for their prestige and impact. Those STM publishers that reportedly sank millions into lobbying against the mandate have been quite vocal in their criticism of it.

Before NIH even posted its operational guidelines, statements from the**American Chemical Society** (ACS), Professional/Scholarly Publishing division of the **Association of American Publishers** (AAP/PSP), and **International Association of Scientific, Technical, and Medical Publishers** condemned the measure, claiming among other things that it takes away the intellectual property rights of publishers without compensation and threatens the practice of peer review.

The facts, please

Guidelines published by the NIH describe a different reality. Adherence to copyright law is required. A grant recipient receives public monies to conduct research in a health-related subject. In exchange, the recipient agrees to post in PubMed Central the author's final copy of the peer-reviewed manuscript that has been accepted for publication. The deposit happens immediately so metadata can be created to aid discovery by other researchers. The text of the article, however, is embargoed for up to 12 months in respect to the publisher's investment. The policy says nothing about publishers or their business models. In fact, publishers are not involved in NIH grants until the very end of a long process of research and writing and then only by choice. It is hard to see how publishers can contest the measure on legal grounds. At most they may delay its implementation by request for judicial review. Based on the recent run of anti-OA PR campaigns that backfired, it is sure to be an interesting process.

When Harvard speaks...

The terms of the Harvard decree are similar to those of the NIH's, but publisher response is more muted—perhaps because it was created by the very scholars whose manuscripts fuel the current publishing system. For years, scholars like these have unhesitatingly signed agreements that transfer virtually all copyrights to their publishers. Publishers benefited financially from the ownership of these rights, which they guarded on behalf of both the authors and themselves. The new edict threatens the traditional order of things, but in so prestigious a setting and with such lofty idealism that it is hard for publishers to criticize. If other universities follow suit, the Harvard mandate may well end up as a for-profit publisher's biggest nightmare—the hole in the dike through which a deluge may pour.

A fiasco called PRISM

Active resistance to legislative mandates for access to publicly funded research is a priority for some society and commercial STM publishers, and lobbying efforts are directed not just to scholars but also to governing bodies in the United States and Europe. Sometimes their efforts backfire. **PRISM**, the Partnership for Research Integrity in Science and Medicine, was launched by the AAP/PSP. Its intent was to discredit a legislative proposal that would make all research funded by large federal agencies open access, like the NIH mandate but far larger. The PRISM web site was rolled out in August 2007.

Following the advice of a hard-line PR consultant, rhetoric on the site equated peer-review with traditional publishing, traditional publishing with the protection of scientific integrity, and open access with junk science. Reaction from researchers around the world was swift and blistering. The directors of **MIT and Columbia University** presses resigned from the AAP/PSP executive council in protest. Two weeks later, the worst of the hype on the web site was toned down, but calls for a disclaimer that not all members of AAP agreed with PRISM's position continued to be ignored. Ultimately, nine publishers, including **Nature, Penn State, Oxford**, Cambridge, University of Chicago, Rockefeller University Press, and Cold Spring Harbor Laboratory Press, disavowed PRISM. By the end of September, the AAP and PSP had removed all links to the site from their webpages. The PRISM site remains. There's a place to endorse the coalition's principles but no evidence that any publisher has done so.

Pricing the possibilities

When you push past the hype, most publishers don't object to open access as a concept so much as they object to it as a business model. Flipping to an OA business model means giving up subscription revenue and finding sustainable streams of

revenue from authors, subsidies, or advertising. Roger Clarke's study on the operational costs of refereed journal publishing models ("**The Cost Profiles of Alternative Approaches to Journal Publishing**," *First Monday*, 12/3/07) confirmed that the cost of publishing an open access e-journal is inherently less than the cost of publishing a subscription-based e-journal.

Commercial publishers have a hard time realizing the economies because they are locked into expensive practices that offset them, including higher quality branding and marketing, more aggressive customer management, and costly content protection systems. Taking those added costs into account, it takes a commercial publisher about $3400 to produce an article for an e-journal, while a nonprofit publisher could produce the equivalent article for about $730. The study suggests that it is easier for the nonprofit association to flip its business model to OA than it is for the large commercial publisher.

The numbers seem to support these findings. This is the first year any of the large STM publishers have offered a full OA journal —among others, Elsevier launched *OncologySTAT* and Springer, *Neuroethics*. By contrast, a large number of nonprofit society publishers already have established OA journals. A **study by Peter Suber and Caroline Sutton** reported in SPARC's *Open Access Newsletter* (11/2/07) found that 427 societies publish 496 fully OA peer-reviewed journals. Nineteen societies publish another 74 hybrid OA journals.

The most notable experiment in flipping both commercial and society publications to an OA business model is **CERN's SCOAP3** project, in which all of the partners that support publishing in particle physics, including libraries, are being asked to redirect subscription monies into a common fund that will pay publishers for open access to particle physics research. The end goal is to make the literature of the discipline fully open to any researcher. As of mid-March, 50 percent of the needed funds had been pledged by libraries in 13 countries. The number of U.S. library participants was expected to grow quickly following a February meeting at University of California–Berkeley that was attended by some of the premier academic libraries in North America.

Making ends meet

While it may be relatively easy for small nonprofits to flip to OA, the complexity no doubt increases as the societies and the publications become larger and have greater potential to bring in revenue. **The American Anthropological Association** (AAA) is a case in point. Open access advocates in AAA have pushed for years to make its publications OA. The association's journals have been heavily subsidized by member dues and library subscriptions, however, making the prospect of changing business models unattractive to AAA leadership. Then last fall, without consulting the members, the executive board moved the society's 22 journals from the University of California Press to Wiley-Blackwell. The board hoped the change would bring the publishing program into the black and return a profit to the association. Some members felt AAA was turning its back on OA and despaired that higher prices would follow. Sure enough, in 2008 the cost of two flagship journals, ***American Anthropologist*** and ***American Ethnologist***, increased 86 percent and 145 percent, respectively. On the other hand, price increases for the other 19 journals were moderate.

To its credit, AAA is now facilitating ongoing debate about what happens when the contract with Wiley-Blackwell ends in five years. In the February issue of *Anthropology News*, scholars exchanged views about the role of open access in the work of the association. Should the journal publishing program be seen as a commodity to be sold for a return, or is there a social value to the work of anthropology scholars that becomes more visible with OA? Is OA a priority or a value-add in the broader mission of AAA? This discussion is worth watching—it may be a bellwether for other societies caught in a similar conflict. Publishers may also be watching, as publishing agreements with societies are one of a dwindling number of methods by which publishers can acquire new content to sell.

Trying to quit

The open access movement suggests dramatic changes are coming to the journals marketplace, but if you ask the typical librarian, it still looks pretty much like a serials crisis. A few publishers price outrageously and get great chunks of the library's budget, leaving little money for smaller publishers and new publications. But every now and then, a big subscriber decides it just won't take it anymore, and the library world holds its breath. It happened last October when the **Max Planck Society** (MPS), a leading European research institute, announced that it was cancelling all 1200 or so of Springer's journals, saying that Springer's prices were more than twice what it considered to be justifiable. The standoff lasted until February, when Springer announced that an agreement had been reached.

Under the two-year contract, MPS regained access to all of Springer's journals, and Springer agreed to waive all author charges for Max Planck researchers who want to publish in one of Springer's Open Choice (hybrid) publications. Springer sees this deal as a way to gain further experience with an OA business model but also expects the agreement to increase submissions from the

thousands of prestigious researchers affiliated with MPS. Rumors are that Max Planck was also pleased with the deal. For better or worse, that's the way these standoffs usually turn out.

The next big deal?

The largest publishers negotiate pricing for much of their content, and they are finding the resource-intensive process to be a drain on profitability. Some commercial publishers are talking about getting out of the negotiating business and are considering selling their journals as a single database with fixed pricing. No titles in, no titles out—unless the publisher chooses. Publishers are also monitoring the use of their content and are looking for ways to tie usage to price. It's easy to see the utility of these ideas from a publisher's perspective but difficult to see how they would play in the market given the high value librarians place on selecting their own content and the levels of dissatisfaction with already high prices.

Slow sales, stagnant market

According to **Outsell**, a market intelligence service, the top ten STM publishers pulled in 53 percent of the revenue in the $16.1 billion periodicals market in 2006. In the same time period, five of the six journal publishers in the top ten—Elsevier, Springer, ACS, Wiley, and Blackwell—showed growth only in the single digits, ranging from 0.5 percent to 7.6 percent. The slow growth reflects a fairly stagnant and saturated market.

Elsevier is the dominant player in the STM world with market share about three times that of its nearest competitor. Unhappy with profit growth (7.2 percent in 2006), Elsevier is making changes. Last year, the company initiated an ambitious plan to cut $2 million in costs for each of the next five years. Then in February 2008, Reed Elsevier CEO Crispin Davis announced the company will sell **Reed Business Information**, which publishes trade journals like *Library Journal* and *Publishers Weekly*, and purchase **ChoicePoint**, a large personal data company. Davis said these moves are part of a company strategy to get out of traditional advertising-based publishing, with its slowing sales growth, and into online information services with higher margins. You have to wonder to what degree Elsevier intends to extract itself from scholarly publishing and whether other for-profit publishers would follow Elsevier's lead.

What to expect in 2009

The marked changes brought on by the advance of open access has so far had little effect on the price of subscribed journals, the notable exception being some 3300 peer-reviewed journals listed in the ***Directory of Open Access Journals*** (*DOAJ*), all of which are free. Prices of subscription-based journals increased nine to ten percent in 2008, driven by an extremely weak dollar. Non-U.S. titles in the humanities and social sciences increased even more (11 percent), because publishers in these disciplines tend to price in native currencies, driving U.S. prices up when those currencies are converted to dollars. The sciences, on the other hand, are dominated by large European publishers that price in U.S. dollars, reducing the volatility of prices and keeping price increases in foreign scientific journals under nine percent. Given the continuing slide of the dollar, expect increases in 2009 to approach ten percent overall.

Discipline	Average Price Per Title
Chemistry	$3,490
Physics	3,103
Engineering	1,919
Biology	1,810
Technology	1,776
Astronomy	1,671
Food Science	1,554
Geology	1,521
Botany	$1,491
Math & Computer Science	1,411
Health Sciences	1,330

Zoology	1,311
General Science	1,213
Geography	1,086
Agriculture	1,034

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

Subject	Average No. of Titles 2004–2008	Average Cost Per Title 2004	Average Cost Per Title 2005	% of Change '04–'05	Average Cost Per Title 2006	% of Change '05–'06	Average Cost Per Title 2007	% of Change '06–'07	Average Cost Per Title 2008	% of Change '07–'08	% of Change '04–'08
Agriculture	186	$773	$833	8	$889	7	$964	9	$1,034	7	34
Anthropology	52	385	415	8	432	4	474	10	530	12	38
Art & Architecture	72	176	188	7	210	12	222	6	243	9	38
Astronomy	25	1,269	1,340	6	1,488	11	1,551	4	1,671	8	32
Biology	251	1,292	1,406	9	1,536	9	1,674	9	1,810	8	40
Botany	65	1,059	1,165	10	1,256	8	1,364	9	1,491	9	41
Business & Economics	374	677	733	8	781	6	830	6	897	8	32
Chemistry	236	2,582	2,748	6	2,965	8	3,187	7	3,490	9	35
Education	110	379	419	11	460	10	509	11	545	7	44
Engineering	336	1,452	1,561	7	1,652	6	1,767	7	1,919	9	32
Food Science	17	1,133	1,239	9	1,337	8	1,409	5	1,554	10	37
General Science	73	910	975	7	1,040	7	1,142	10	1,213	6	33
General Works	72	121	132	10	137	4	147	7	158	8	31
Geography	71	812	855	5	909	6	989	9	1,086	10	34
Geology	94	1,147	1,245	9	1,312	5	1,413	8	1,521	8	33
Health Sciences	1,606	932	1,010	8	1,105	9	1,207	9	1,330	10	43
History	236	171	184	8	197	7	215	9	238	11	39
Language & Literature	313	159	173	9	185	7	200	8	221	10	39
Law	77	198	206	4	231	12	257	11	275	7	39
Library & Information Science	53	360	403	12	424	5	453	7	487	8	35
Math & Computer Science	219	1,109	1,181	7	1,235	4	1,323	7	1,411	7	27
Military & Naval Science	9	454	512	13	598	17	623	4	634	2	40

Music	49	101	125	24	129	4	141	9	161	14	60
Philosophy & Religion	87	210	452	115	483	7	529	9	584	10	178
Physics	244	2,380	2,526	6	2,687	6	2,918	9	3,103	6	30
Political Science	73	366	400	9	440	10	486	10	541	11	48
Psychology	166	437	467	7	509	9	551	8	598	9	37
Recreation	21	200	227	14	247	9	277	12	322	16	61
Sociology	334	411	450	10	487	8	533	9	586	10	42
Technology	187	1,330	1,432	8	1,535	7	1,640	7	1,776	8	34
Zoology	127	958	1,032	8	1,115	8	1,206	8	1,311	9	37

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

Country	No. of ISI Titles	Avg. Price Per Title
Russia	53	$3,248
Ireland	38	2,712
Netherlands	544	2,709
Austria	25	2,037
Singapore	19	1,617
Germany	422	1,519
England	1,739	1,465
Switzerland	88	1,421
New Zealand	24	1,152
China	16	901
United States	2,474	828
Japan	71	388
Spain	17	$376
France	110	356
Czech Republic	14	346
Israel	11	332
Norway	11	311
Canada	103	303
Italy	46	276
Scotland	11	272
India	10	224
South Africa	11	206
Australia	32	194

AVERAGE COST OF AN ISI TITLE: $1,238
SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

Continent/Country	Average No. of Titles 2004–2008	Average Cost Per Title 2004	Average Cost Per Title 2005	% of Change '04–'05	Average Cost Per Title 2006	% of Change '05–'06	Average Cost Per Title 2007	% of Change '06–'07	Average Cost Per Title 2008	% of Change '07–'08	% of Chang '04–'0
North America											
United States	2,445	$595	$641	8	$702	9	$767	9	$828	8	39
Canada	102	212	229	8	245	7	270	10	303	12	43
Other	10	108	116	7	104	-10	108	4	107	-1	(1)
Average for all North America	**2,556**	**578**	**623**	**8**	**682**	**9**	**745**	**9**	**805**	**8**	**39**
Europe											
France *	98	245	249	2	243	-2	264	9	356	35	45
Germany *	399	1,165	1,259	8	1,272	1	1,399	10	1,519	9	30
Ireland *	38	2,112	2,247	6	2,381	6	2,545	7	2,712	7	28
Italy *	47	178	201	13	199	-1	219	10	278	27	56
The Netherlands *	536	2,075	2,206	6	2,353	7	2,503	6	2,709	8	31
Switzerland	87	938	1,031	10	1,187	15	1,270	7	1,421	12	51
United Kingdom	1,733	1,041	1,127	8	1,217	8	1,327	9	1,454	10	40
Other	161	1,322	1,250	-5	1,356	9	1,460	8	1,590	9	20
Average for all Europe	**3,099**	**1,228**	**1,306**	**6**	**1,394**	**7**	**1,506**	**8**	**1,643**	**9**	**34**
Asia											
Japan	71	321	340	6	368	8	370	0	388	5	21
Other	81	741	789	6	853	8	903	6	945	5	27
Average for all Asia	**152**	**538**	**580**	**8**	**627**	**8**	**659**	**5**	**695**	**5**	**29**
Australia and New Zealand	55	425	460	8	495	8	553	12	605	9	42
South America	20	98	104	6	105	1	105	0	112	7	14
Africa	10	114	119	4	137	15	154	12	206	34	81

*Included in European Monetary Union

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

	Average No. of Titles 2004–2008	Average Cost Per Title 2004	Average Cost Per Title 2005	% of Change '04–'05	Average Cost Per Title 2006	% of Change '05–'06	Average Cost Per Title 2007	% of Change '06–'07	Average Cost Per Title 2008	% of Change '07–'08	% of Change '04–'08
ARTS AND HUMANITIES CITATION INDEX											
U.S.	415	$101	$107	5.9	$113	5.6	$121	7.1	$131	8.3	29.7
NON–U.S.	630	206	220	6.8	232	5.5	253	9.1	282	11.5	36.9
SOCIAL SCIENCES CITATION INDEX											

U.S.	938	325	351	8.0	380	8.3	418	10.0	448	7.2	37.8
NON–U.S.	1030	592	646	9.1	695	7.6	752	8.2	834	10.9	40.9
SCIENCE CITATION INDEX											
U.S.	1,397	905	976	7.8	1,069	9.5	1,171	9.5	1,267	8.2	40.0
NON–U.S.	2,221	1,569	1,679	7.0	1,799	7.1	1,940	7.8	2,107	8.6	34.3

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

	No. of Titles	% of List	2008 Cost	% of Cost	Projected % of Increase	Projected 2009 Cost	% of Cost	Projected Overall % Increase
ARTS AND HUMANITIES CITATION INDEX								
U.S.	398	43.2	$52,115	26.1	8.0	$56,284	25.7	9.5%
NON–U.S.	524	56.8	147,552	73.9	10.0	162,307	74.3	
SOCIAL SCIENCES CITATION INDEX								
U.S.	870	46.8	390,053	32.2	8.0	421,257	31.8	9.4
NON–U.S.	987	53.2	823,012	67.8	10.0	905,313	68.2	
SCIENCE CITATION INDEX								
U.S.	1,312	37.9	1,662,549	26.8	8.5	1,803,866	26.8	8.5
NON–U.S.	2,154	62.1	4,538,387	73.2	8.5	4,924,150	73.2	

PROJECTED OVERALL INCREASE FOR ALL ISI TITLES: 8.7%
SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

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Lee C. Van Orsdel is Dean of University Libraries, Grand Valley State University, Allendale, MI, and Kathleen Born is Director, Academic Division, EBSCO Information Services, Birmingham, AL.

Periodical Prices for University and College Libraries

Table 8 gives price history by discipline for the journals found in EBSCO Publishing's Academic Search Premier. Price projections for 2009 are found in Table 7.

Academic Search Premier	No. of Titles	% of List	2007 Cost	% of Cost	Projected % of Increase	Projected 2008 Cost	% of Cost	Projected Overall % Increase
U.S.	1,365	40.4	$ 485	31.2	8.0	$524	30.6	10.1%
NON–U.S.	2,015	59.6	1,068	68.8	11.0	1,185	69.4	

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

Subject	Average No. of Titles 2004–2008	Average Cost Per Title 2004	Average Cost Per Title 2005	% of Change '04–'05	Average Cost Per Title 2006	% of Change '05–'06	Average Cost Per Title 2007	% of Change '06–'07	Average Cost Per Title 2008	% of Change '07–'08	% of Change '04–'08
Agriculture	71	$652	$708	8	$768	9	$840	9	$906	8	39

Anthropology	29	275	310	13	348	12	389	12	425	9	55
Art & Architecture	40	201	220	9	248	13	275	11	295	8	47
Astronomy	17	1,479	1,572	6	1,689	7	1,844	9	1,751	-5	18
Biology	97	1,043	1,199	15	1,316	10	1,482	13	1,614	9	55
Botany	23	1,018	1,157	14	1,324	14	1,443	9	1,583	10	56
Business & Economics	108	268	291	8	318	9	343	8	381	11	42
Chemistry	73	2,200	2,329	6	2,489	7	2,718	9	2,946	8	34
Education	213	312	348	12	383	10	423	11	453	7	45
Engineering	184	856	941	10	1,001	6	1,092	9	1,197	10	40
Food Science	19	412	449	9	502	12	560	12	606	8	47
General Science	50	582	622	7	669	8	725	8	774	7	33
General Works	73	92	97	5	106	10	115	8	122	6	33
Geography	46	388	435	12	474	9	528	11	620	18	60
Geology	25	706	783	11	782	0	852	9	901	6	28
Health Sciences	743	664	737	11	818	11	901	10	990	10	49
History	231	176	195	11	215	10	235	9	262	11	49
Language & Literature	124	144	161	12	179	11	193	8	207	7	44
Law	87	291	312	7	337	8	364	8	400	10	37
Library & Information Science	57	145	157	8	160	2	174	9	194	11	33
Math & Computer Science	134	949	1,045	10	1,127	8	1,211	7	1,328	10	40
Military & Naval Science	20	227	254	12	255	0	284	11	299	5	32
Music	23	144	170	18	189	11	201	6	215	7	49
Philosophy & Religion	129	187	268	43	307	15	342	11	372	9	99
Physics	103	2,107	2,304	9	2,477	8	2,831	14	2,952	4	40
Political Science	78	293	323	11	365	13	403	10	436	8	49
Psychology	86	408	456	12	511	12	551	8	587	7	44
Recreation	15	145	159	9	176	12	190	6	214	13	47
Sociology	225	287	315	10	367	16	403	10	442	10	54
Technology	76	856	953	11	1,035	9	1,133	9	1,253	11	46

Zoology	45	729	786	8	841	7	881	5	964	9	32

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

Periodical Prices for High School and Small Public Libraries

Overall price increases for titles in EBSCO Publishing's Magazine Article Summaries Ultra are expected to be in the range of 4–6%. Table 9 provides historical price data for titles in the index.

Magazine Article Summaries Ultra	Average No. of Titles 2004–2008	Average Cost Per Title 2004	Average Cost Per Title 2005	% of Change '04–'05	Average Cost Per Title 2006	% of Change '05–'06	Average Cost Per Title 2007	% of Change '06–'07	Average Cost Per Title 2008	% of Change '07–'08	% of Change '04–'08
U.S.	270	$67	$71	6	$75	6	$78	4	$87	12	30
NON–U.S.	43	146	153	5	177	16	190	7	226	19	55

SOURCE: *LJ* PERIODICALS PRICE SURVEY 2008

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STATEMENT BEFORE THE

JUDICIARY SUBCOMMITTEE ON
COURTS, THE INTERNET, AND INTELLECTUAL PROPERTY

"H.R. ____, THE 'FAIR COPYRIGHT IN RESEARCH WORKS ACT"

SEPTEMBER 11, 2008

Thank you, Mr. Chairman, for your leadership in convening today's very important hearing on the "Fair Copyright in Research Work Act". I would also like to thank the ranking member, the Honorable Louie Gohmert, and welcome our panelists. I look forward to their testimony.

The advancement of science is an important public goal which the government of the United States supports by funding research. Critical to this goal is the public availability of the results of government funded research. One of the most effective ways that this knowledge has been disseminated is through publication of articles in peer-reviewed scientific journal. However, this mechanism is often criticized because of the high

cost of most journals. In response to the perceived economic barrier to government funded scientific knowledge, a policy shift was instituted in the 2008 Consolidated Appropriations Act. Specifically, the language of the Act states that the National Institute of Health (NIH) shall require, as a condition of their research grants, that any peer-reviewed journal articles based on supported research be submitted to its PubMed Central for publication no later than 12 months after the article is published. While this provision on its face may be construed to be a contracting matter, it provide NIH a license to the copyrights of articles irrespective of financial and other types of contributions made by third parties to the underlying research and the final article.

As such, this requirement implicates copyrights not owned by the NIH and the policy could have significant negative implications for their owners, namely scientific journal publishers. The intent of this policy is to increase public access to scientific information, but some critics have asserted that it has the potential of irreparably damaging the quality and quantity of scientific journals by damaging the income scientific journals receive, and thereby reduce the economic incentive for journals to exist. Chairman Conyers has recently introduced the bill that we are considering today. This bill will prohibit the NIH and any other federal agency from requiring the

transfer of rights to publish a peer-reviewed journal article. In so doing, this bill will restore the pre-2008 Consolidate Appropriations Act policy of how government funding agencies treat copyrighted journal articles. This hearing will focus on the bill, and on the question of how best to encourage public dissemination of federally funded research results without negatively impacting the rights of authors or copyright owners, or the overall goal of advancing science through public funds.

This hearing promises to be very insightful and welcome today's witness. Mr. Chairman, I yield the balance of my time.

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September 25, 2008

The Honorable John Conyers, Jr.
Chairman
Committee on the Judiciary
U.S. House of Representatives
2138 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Conyers:

Enclosed is our statement for the record for the public access and copyright hearing that your Committee held on September 11, 2008. If your staff have any questions, they should contact Sue Quantius of the Appropriations staff (226-7181).

We appreciate your agreeing to include our complete statement in the hearing record.

Sincerely,

David Obey
Chairman
Committee on Appropriations

James Walsh
Ranking Member
Subcommittee on Labor, Health and Human Services, and Education and Related Agencies
Committee on Appropriations

Ralph Regula
Former Chairman
Subcommittee on Labor, Health and Human Services, and Related Agencies Appropriations
Committee on Appropriations

STATEMENT FOR THE RECORD
HOUSE JUDICIARY COMMITTEE
SEPTEMBER 11, 2008
HEARING ON PUBLIC ACCESS AND COPYRIGHT

David Obey, Chairman
James Walsh, Ranking Member
Ralph Regula, Former Chairman
Labor-HHS-Education Appropriations Subcommittee
Committee on Appropriations

We followed with interest the September 11, 2008 Judiciary Committee hearing that was held to lay the groundwork to overturn the National Institutes of Health (NIH) mandatory public access policy we put into place last year. The Appropriations Committee ('Committee') has long had a strong interest and involvement in public access, beginning in 2003, when former Subcommittee Chairman Regula asked NIH to report on the development of a public access policy. The next year, the Committee recommended that NIH develop a public access initiative, which it did in 2005 on a voluntary basis. After a very low compliance rate (four percent) made it clear to us and to NIH that the voluntary policy was a failure, in June 2006, the House Committee directed NIH to make the policy mandatory. After the Congress failed to complete action on that bill, the Committee repeated the public access language in both the House and final versions of the FY 2008 Labor-HHS-Education appropriations bill. These actions were certainly not taken in the dark of night and were supported on a bipartisan basis. There is a long trail of hearings and written record to document our Committee's interest.

The Committee included this provision to make the results of NIH-funded research available to the people who have paid for it – the American taxpayers. Patients have been frustrated that they couldn't see articles reporting on NIH-funded research unless they paid expensive journal subscriptions (some journals cost more than $20,000 a year) or lived in cities with major university research libraries.

Scientists have seen the human genome project (where grantees immediately posted all sequences on-line) demonstrate how much faster a project can move forward with free international access to NIH-funded findings. They recognize the need to broaden this approach to all NIH-funded research. For example, emerging computational research techniques enabled by the public access policy allow researchers to "mine" information in PubMed Central and in other government funded databases and identify patterns that otherwise elude observation. The expanded sharing of medical advances and scientific findings made possible by the Internet will magnify and speed the return of benefits to taxpayers.

In addition, NIH believes public access and its link to other NIH data bases will help its administrators analyze and better manage its large research portfolio.

In the future, as science becomes more international and complex, this archive will become an important way for American scientists to remain innovative and competitive. Worldwide, other countries have already established public access policies. In the United Kingdom (UK), the Wellcome Trust, Medical Research Council and other major funding agencies (accounting for virtually all of UK biomedical funding) already have mandatory policies with a maximum six-month delay on public release. Canada has a mandatory policy for research conducted in its country. Other major funders like Howard Hughes Medical Institute are making deposition of articles they fund mandatory. If the U.S. doesn't take steps to make NIH-funded research broadly available, these other data bases may not reciprocate with us.

Opponents of the policy have attacked it from various angles. First, we heard the argument that scientific publishers will lose so much money that they may go out of business, with thousands of lost jobs in their wake. Then, some publishers argued that public access threatens the peer review process for the articles they publish. Now, a new complaint has surfaced -- that public access jeopardizes the publishers' copyright. These concerns can readily be put to rest.

Publishers have said that public access would cut their revenues so much that their journals would be imperiled. But the actual experience of many successful research journals demonstrates otherwise. Over 400 journals have voluntarily entrusted their copyrighted materials to NIH's PubMed Central for years. For example, the American Society of Cell Biology makes the content of its scientific journal freely available to all after only two months. According to this scientific society, its leading journal is not only financially sound, but it is profitable. These journals obviously don't think a 12-month delay will hurt their bottom line if they're voluntarily releasing manuscripts to NIH.

Publishers also have asserted that the public access policy would harm peer review because they might not be able to pay for it any longer. Nonetheless, mandatory public access would have no effect on peer review of the author's work because it does not affect the financing of peer review. Publishers are not the major funders of peer review. NIH authorizes its grants to be used to support peer review, to the tune of more than $100 million a year. If a publisher accepts an article for publication, it will continue to receive the same fees to support the journal's peer review.

Publishers argue that public access creates copyright infringement. But as 45 distinguished copyright law professors agree in a statement to the Judiciary Committee, a mandatory policy "does not create an involuntary transfer, a compulsory license, or a taking of the publishers' or investigators' copyright". A mandatory policy only requires the author to retain or "carve out" enough rights to permit display of the work on PubMed Central twelve months after the publication goes on sale to the public. Many scientific publishers require the investigator to transfer the copyright in the article as a condition to agreeing to publish it. The copyright the investigator transfers to the publisher at this point is already subject to the agreement to share the final manuscript with NIH, an agreement reached between NIH and the investigator long before the publisher enters the picture.

With regard to the Judiciary Committee's jurisdictional concerns, we believe that these claims are incorrect. When the Judiciary Committee petitioned the Rules Committee last year that the NIH public access policy infringed on its primary jurisdiction, the Judiciary Committee's request that the provision not be protected from a point of order based on House Rule 21 (legislation on an appropriations bill) was denied. Notwithstanding that denial, every Member of the House, including Judiciary Committee members, had ample opportunity to review the mandatory public access policy when the Labor-HHS-Education appropriation came to the floor, and yet no one objected to the provision or offered a motion to strike it, which was permitted by the rule for the bill.

Contrary to comments reported in *Congress Daily* suggesting that the Committee ran "roughshod" over the Judiciary Committee's jurisdiction, the Committee specifically tailored the mandatory public access provision to be respectful of the Judiciary Committee's jurisdiction. Our language explicitly requires NIH to implement a policy consistent with copyright law. Today, more than forty eminent university copyright law professors concur that NIH has implemented this provision in a manner entirely consistent with existing law, and compliance with the policy has risen dramatically.

Most importantly, with regard to the Committee's decision to protect tax payers' interests and the interests of those suffering from diseases, we believe that what's important is not jurisdictional fights over legislative dunghills. What's important is that we be on the side of the public's right to know about medical issues that affect their lives as soon as possible. If the Judiciary Committee wants to put jurisdictional issues ahead of the public's interest, that's its right, but we are not in that camp.

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MAURICE D. HINCHEY
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JOINT ECONOMIC COMMITTEE

September 8, 2008

The Honorable John Conyers
Chairman
House Judiciary Committee
2138 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Conyers:

I am writing to share my views on the National Institute of Health's (NIH) Public Access Policy (the NIH Policy) and its impact on copyright law, which I understand may be examined in a hearing you're holding on Thursday, September 11, 2008. I support the NIH Policy and believe it strikes the right balance between the rights of copyright holders and public access to information.

As you know, any recipient of federal research funding from NIH is required under the NIH Policy to submit to the agency an electronic copy of the final peer-reviewed study that the agency funded. NIH makes all federally funded studies available to the public within 12 months of submission.

This requirement ensures a basic level of transparency in the use of federal funds for scientific research. At the same time, it furthers higher education by allowing students at all levels easy access to important studies which may provide the basis for other studies and new scientific breakthroughs. The NIH Policy also benefits universities and research institutions such as Cornell University, located in my district, by preserving their research in a state-of-the-art digital repository.

As it relates to copyright law, the NIH Policy carefully balances the rights of researchers to control use of their work with the right of the public to see the results of taxpayer funded research. NIH funded researchers are entitled to copyright protections and may enter into publishing agreements to distribute their work. At the same time, the public is guaranteed access through the NIH database.

I understand that the NIH Policy may be a topic of discussion during Thursday's hearing and that you may draft legislation to make changes in copyright law which could impact federally funded researchers. As you consider new copyright policies, I hope that you will take into account the effectiveness of the NIH Policy.

Thank you for considering my views.

Sincerely,

Maurice Hinchey

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The Honorable Maurice D. Hinchey
2431 Rayburn House Office Building
United States House of Representatives
Washington, DC 20515

Dear Representative Hinchey:

It has come to our attention that the House Committee on the Judiciary, Subcommittee on Courts, the Internet and Intellectual Property will be conducting a hearing on the NIH Public Access Policy on September 11, 2008. I am writing to you (with a copy to Chairman John Conyers) to express the strong support of the Cornell University Library for the existing Policy. It is proving to be of great benefit to the faculty, students, and staff of Cornell University and, by extension, to all the residents of your district.

As you know, the Policy requires that, in exchange for receiving federal research dollars, grantees deposit the final electronic manuscript of their peer-reviewed research results into PubMed Central, NIH's digital archive, to be made publicly available within 12 months, thus ensuring broad public access to the results of federally-funded research. At the direction of Congress, the NIH Public Access Policy was recently revised from a voluntary to a mandatory policy, with a concomitant major increase in deposit.

The benefits of the Policy have been wide-spread. For faculty authors, deposit in PubMed Central (PMC) will maximize the visibility of their NIH-funded research, thus benefiting the authors and the journals in which they publish.

From the perspective of the Library, the Policy addresses one of our major concerns: the long-term preservation of research results published in electronic form. A decade's worth of research by Cornell Library staff has demonstrated the fragility of most electronic publishing schemes and the difficulty faced by libraries in meeting their traditional role as preservation repositories for published literature. Deposit in PubMed Central ensures that the research results will be preserved in a state-of-the-art digital repository.

For the general public, free access after twelve months ensures that researchers and students around the world can eventually read and build on the work, regardless of their (or their library's) ability to subscribe to the journal in which the research is published. Public access to publicly funded research contributes directly to the mission of higher education.

The NIH Public Access Policy has also played an important role in the University's copyright education initiatives. It highlights an important truth about copyright: namely, that copyright consists of a bundle of rights that the copyright owner (the author) can assign or keep as he or she sees fit.

Cornell University is an equal opportunity, affirmative action educator and employer.

The faculty at Cornell understands that the Policy requires them, prior to any transfer of copyright to a publisher, to grant to the NIH a non-exclusive license to use the author's copyrighted work. They also understand that publishers are under no obligation to publish work that has been partially licensed prior to any copyright transfer to the publisher. To our knowledge, however, no publisher has refused to publish an article because of the existence of a prior non-exclusive license to NIH. Indeed, hundreds of publishers are actively collaborating with NIH on the implementation of the system.

The need to preserve the rights needed to comply with the NIH Policy when negotiating copyright transfers with publishers has led some faculty to consider what other rights in their work they may wish to preserve. The NIH Policy has helped make them more-informed copyright owners.

The Cornell University Library hopes that the upcoming hearing on the NIH Public Access Policy will provide an opportunity to understand better the importance and strategic value of the Policy. It increases the visibility of the contributions of our faculty, advances science, improves access by the public to federally-funded research, provides for effective archiving strategies for these resources, and is completely consistent with copyright law. Given the proven success of the revised NIH Public Access Policy, we could not support any change to the current Policy that would undermine its proven effectiveness.

Sincerely,

Anne R. Kenney

Anne R. Kenney
Carl A. Kroch University Librarian

Cc: The Honorable John Conyers, Jr.

September 8, 2008

The Honorable John Conyers, Jr.
Chairman
Committee on the Judiciary
U.S. House of Representatives
2138 Rayburn House Office Building
Washington, D.C., 20515

Re: NIH Public Access Policy

Dear Chairman Conyers:

The undersigned professors at law schools throughout the United States teach copyright law or engage in scholarly research about copyright law. We write to respond to serious misstatements relating to copyright law contained in a recent submission to the National Institutes of Health with respect to the relationship between the NIH Final Policy on Public Access and certain aspects of U.S. and international copyright law. The letter (hereafter "the Proskauer Letter") was written by Jon A. Baumgarten of Proskauer Rose LLP, dated May 30, 2008, to Allan Adler, Vice President for Legal & Government Affairs, American Association of Publishers in response to Mr. Adler's request and with the understanding that the letter would be part of a public submission to NIH by the AAP.

As you know, the NIH Policy requires grantees to ensure that all investigators funded by NIH submit an electronic version of their final peer-reviewed manuscripts to the National Library of Medicine's PubMed Central (PMC), which then makes the manuscript publicly available within twelve months of the official date of publication. The NIH adopted this policy as required by a provision included in the Labor, Health and Human Services, Education, and Related Agencies FY 2008 Appropriations Bill.

The Proskauer Letter alleges that the NIH Policy may constitute an involuntary transfer of copyright in violation of Section 201(e) of the Copyright Act. Contrary to the Proskauer Letter's assertions, the Policy does not create an involuntary transfer, a compulsory license, or a taking of the publishers' or investigators' copyright. Rather, under the Policy, NIH conditions its grant of funding on the grantee's agreement to ensure that investigators provide PMC with a copy of articles reporting NIH-funded research along with a non-exclusive copyright license to make the article publicly available within one year after the article's publication in a journal.

In other words, if the investigator chooses not to receive NIH funding, the investigator has no obligation to provide the article to PMC or a copyright license to NIH. But if the investigator elects to receive NIH funding, he or she accepts the terms of the grant agreement, which include the requirement to deposit the article with PMC so that the article can be made publicly accessible within one year after publication. Because the investigator has this basic choice, the policy does not constitute an involuntary transfer.

Furthermore, because the author makes this choice long before the publisher enters into the picture, the policy does not take any intellectual property away from the publisher. When the investigator transfers copyright to the publisher, as most publishers require as a condition of publication, the copyright is already subject to the non-exclusive license granted by the investigator to NIH. Thus, the policy does not change the scope of the publisher's copyright after the publisher has acquired it.

Additionally, it is important to note that the Policy requires deposit of the author's final manuscript after peer review, not the final published version of the article. This aspect of the Policy renders moot any debate about whether the publisher obtains a copyright interest in the article through the process of copy editing or layout. The publisher performs its copy editing *after* the investigator submits

the manuscript to PMC. While the publisher plays a role in coordinating peer review, this process does not result in any copyrightable expression attributable to the publisher. Any edits or additional text written in response to peer reviewers' comments is written by the investigator, not the publisher.

Building on the erroneous premise that the Policy is an involuntary transfer of copyright or a compulsory license, the Proskauer Letter then suggests that the NIH Policy might violate U.S. obligations under the Article 9 of the Berne Convention or Article 13 of the TRIPS agreement. This argument lacks any basis in law. As discussed above, the NIH Policy governs the terms of contracts, not exceptions to copyright law. As such, the Policy in no way implicates Article 13 of TRIPS or Article 9 of the Berne Convention, which address permissible copyright exceptions. These treaty provisions are completely silent on the issue of the terms a licensee can require of a copyright owner in exchange for valuable consideration.

The federal government provides funding to state and local government agencies and private entities for a wide range of activities, including homeland security, law enforcement, agriculture, transportation, education, and research. Congress frequently imposes conditions on recipients of this federal funding. While one might question the wisdom of a particular condition, Congress without doubt has the authority to impose them. Similarly, Congress has the authority to require NIH grantees to deposit their manuscripts with PMC and to grant a license to make these publicly accessible over the Internet within a year of publication. Such a requirement conflicts neither with the Copyright Act nor with international treaty obligations.

Respectfully,

Keith Aoki, Professor of Law
University of Oregon Law School
Eugene, OR 97403

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University of South Carolina School of Law
Columbia, SC 29208

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University of Chicago Law School
Chicago, IL 60637

Andrew Chin, Associate Professor of Law
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Chapel Hill, NC 27599

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Mary Hutchings

PO Box 272• North Truro, MA 02652• Phone: 5082333545
E-Mail: maryhutchings@me.com

September 5, 2008

Rep. Howard L. Berman,
Chair of the Subcommittee on Courts, the Internet, and Intellectual Property of the House Judiciary Committee

RE: NIH Public Access Policy
Cc: Rep. John Conyers, Chair, House Judiciary Committee

Dear Representative Berman,

It has come to my attention that hearings are pending regarding public access to the results of research supported by public funds. I am writing to tell you a bit about myself and my family, and the reason why maintaining an open access policy is so very important to many people like us. I am an elementary school teacher in Truro Massachusetts, a small town on the outer part of Cape Cod, far from any metropolitan area. I am married and have two children ages 22 and 26. In the early 90's my husband was diagnosed with cerebellar ataxia, a progressive destruction of cerebellar function. Currently my husband uses a wheel chair and relies on personal attendants to accomplish the simplest tasks of daily living. Cerebellar ataxia is usually an inherited disorder, but it can originate sporadically as well. It is suspected the cause may have been due to agent orange or some other toxin he was exposed to during his tour of duty with the army in Viet Nam in the early 70's. He and I married and brought two children into the world before his symptoms surfaced. We have been fortunate that the Veterans Administration compensates him as a 100% service connected disabled veteran. Unfortunately, the condition was passed on to my daughter who has now developed symptoms. As you can imagine, this neurological impairment is devastating, costly, and terribly stressful for everyone involved. Access to information is one of the key remedies to our pervasive anxiety. Any actions that might threaten public access would further erode our sense of well being. I write today to appeal to you to do everything you can to preserve and enhance public access to publicly funded research results.

Currently it appears that promising new therapies for cerebellar ataxia may be on the horizon. With the technology that's available and ubiquitous today, it should not be necessary to have to struggle so hard to get reports of the latest research. Using web search engines I can identify individuals doing research in this area but I cannot get to their formally described results. Such barriers are incomprehensible in this day and age."

As a family coping with the many stresses of this illness to also have to pay $20-$50/paper to get the information is another hurdle to overcome. On the other hand, open access to current information may help reduce stress, and provide hope. Keeping informed of the latest progress in science and what is being worked on is most important to me and to those affected by this disease. Therefore I am writing to let you know how much it would mean to my family and me to be able to have open access to research that has been supported by public funding.

Thank you for your work on behalf of the common good. Yours Truly,

Mary Hutchings

09/04/2008 19:18 FAX 5084874289 CANON 002/002

Alliance for Taxpayer Access
www.taxpayeraccess.org

September 10, 2008

To the Honorable Representative Berman
Subcommittee on Courts, the Internet, and Intellectual Property
Committee on Judiciary, U.S. House of Representatives
2138 Rayburn House Office Building
Washington, DC 20515

Dear Representative Berman:

As you prepare for the September 11, 2008 Judiciary Subcommittee on Courts, the Internet, and Intellectual Property hearing regarding the National Institutes of Health (NIH) Public Access Policy, I would like to draw your attention to the continued, firm support for public access of more than 80 patient, consumer, research, and publisher organizations that represent the Alliance for Taxpayer Access.

The NIH Public Access Policy ensures that critical biomedical research is made readily accessible to those who need it. As citizens whose tax dollars underwrite this research, we have a right to expect that crucial details of the most recent medical advancements are made available not only to us, but also to doctors and caregivers whose responsibilities are the health and long life of all Americans. Access to up-to-date, health-related information plays a crucial role in ensuring that patients are as educated as possible about their individual situations. The NIH policy has life and death significance for all Americans.

As you may know, the mandatory NIH policy went into effect in April 2008 and requires researchers to submit electronic copies of their final peer-reviewed journal manuscripts resulting from NIH-funded research into PubMed Central (PMC), so that they may be made public within 12 months of submission. In the five months since the policy was made mandatory, almost 60% of peer-reviewed journal manuscripts and articles have been submitted – in comparison to 10% under the voluntary policy. Finally, taxpayers will have access to the research they've funded.

At the hearing, some will claim the NIH policy adversely affects U.S. copyright law. It does not. The policy creates neither a statutory exception nor limitation to an investigator's copyright. It merely requires the agency to condition its grant of funding on the investigator's agreement to provide a copy of his article for the purpose of making the article publicly available. It is a simple contract term; if an investigator chooses to receive NIH funding, he must accept certain reasonable conditions, including deposit of the article with PubMed Central so that the article can be made publicly accessible. This condition serves the interests of the public, which funded the research, and of NIH, which depends on awareness of and application of its research findings to drive medical advances to improve public health.

For more detail, please consult the enclosed materials prior to the hearing. If you have any questions or concerns, please don't hesitate to contact Heather Joseph through (202) 296-2296 ext 157. We look forward to working with you to ensure the taxpayer's investment in research is maximized to the fullest extent.

Sincerely,

Heather Joseph
Executive Director, SPARC (the Scholarly Publishing and Academic Resources Coalition)
on behalf of the Alliance for Taxpayer Access

c/o SPARC | 21 Dupont Circle NW, Suite 800 | Washington, DC 20036
JM/NIH/SPARC-Jennifer-HD:Users:jennifer:NIH Policy:packets 08-0909:cover08-0910.doc.doc

OSA®
Optical Society of America

September 10, 2008

The Honorable John Conyers, Jr.
U.S. House of Representatives
Committee on the Judiciary
2426 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Conyers:

I am writing to support *The Fair Copyright in Research Works Act*. Non-profit publishers such as the Optical Society (OSA) ensure quality in scientific publications, inspire confidence in American research, and help contribute to our 21st century economy. This bill is needed to guarantee copyright protection to scientific publishers who create value by managing the selection, peer-review, publishing, distribution, creation and preservation of the scientific record.

The well-established system of scientific publishing (based on copyright protection) is central to the process by which scientific research is communicated, disseminated, and ultimately accepted by the scientific community. Peer review is a careful system of checks and balances that encourages authors to meet the accepted standards of their discipline and prevents the dissemination of unwarranted claims, unacceptable interpretations, and personal views. Peer review specifically ensures that weaknesses will be identified and that the content of a scientific paper is both novel and well-supported.

Scientific publishers manage peer review. They also produce, disseminate and archive final journal articles. Copyright protection is what affords us the commercial rights to our own publications. This protects our investment and allows us to continue to manage peer review and helps maintain the integrity of scientific discourse.

Whether an article is read online or in print, high-quality page composition, copy editing, and the listing and linking of bibliographic and reference data must be managed. Maintaining and protecting a fully digital archive for an academic journal requires substantial resources.

Scientific publishing also contributes to a productive U. S. economy because publishing is a significant enterprise that creates jobs. OSA spends millions of dollars annually on editing, producing, printing, shipping, and online hosting. Scores of scientific editors, thousands of reviewers, and 35 staff at OSA headquarters ensure that our seven flagship journals publish an issue every three days, on average. Most of the required resources for this substantial undertaking are provided by subscriptions from institutional or regional library systems. The ongoing emergence of new journals, publishers and publishing models indicates scientific publishing is a healthy and competitive marketplace.

The Fair Copyright in Research Works Act extends copyright protection to publishers who create value by disseminating new research and ensuring the permanent scientific record. These activities have been eroded by weakened copyright protection due to recent government mandates. The act guarantees that scientific publishers will continue to enjoy the same rights as the music industry, film companies or literary publishing houses.

OSA is one of many professional scientific societies working to advance research and development in the physical sciences. OSA's membership totals nearly 15,000 individuals from more than 80 countries, and includes optics and photonics scientists, engineers, educators, technicians and business leaders.

Thank you for your work on this important legislation, OSA strongly supports passage of this bill. Please let us know if we can be of any assistance.

Sincerely,

Elizabeth A. Rogan
Executive Director
Optical Society of America
2010 Massachusetts Ave. NW
Washington, DC 20036 USA
Ph. 202.416.1944

September 5, 2008

Subcommittee on Courts, the Internet, and Intellectual Property
Committee on Judiciary
U.S. House of Representatives
2138 Rayburn House Office Building
Washington, DC 20515

To the Honorable Representative Berman,

On behalf of nine national and regional library, publishing, and advocacy organizations, we are writing to express our long-standing and strong support for the National Institutes of Health (NIH) Public Access Policy. The U.S. government funds research with the expectation that new ideas and discoveries from the research will propel science, stimulate the economy, and improve the lives and welfare of Americans. Public support for science is enhanced when the public directly sees the benefits from our nation's investment in scientific research.

Scientific research is advanced by broad dissemination of knowledge, and the subsequent building upon the work of others. To this end, the NIH Public Access Policy ensures that the results of our nation's $29 billion annual investment in research reach the broadest possible audience. The Policy requires that, in exchange for receiving federal research dollars, grantees deposit the final electronic manuscript of their peer-reviewed research results into PubMed Central, NIH's digital archive, to be made publicly available within 12 months.

The Policy achieves several notable goals: First, it ensures broad public access to the results of NIH's publicly funded research, allowing scientists and researchers throughout the country – indeed the world – to collaborate and engage in cutting-edge research. Such availability acts as a "leveler," expanding the potential user base, allowing for greater sharing of information and the spurring of medical advances and innovations.

Second, the Policy ensures that the U.S. government has a long-term permanent archive of the research results that we have collectively funded. This archive of critical biomedical research ensures that scientists and others can build on the work of others now and for future generations.

Finally, it provides welcome accountability and transparency to the government, and assists the NIH in better managing our investments in its research portfolio. This will, over time, translate into better health care both here and abroad by accelerating the pace of research.

At the direction of Congress, the NIH Public Access Policy was recently revised to require that NIH grantees deposit their manuscripts in lieu of doing so voluntarily. Congress' leadership on

.../2

this Policy has been validated. Since the Policy became mandatory in early April, the deposit rate has increased from 10% to almost 60%. This change ensures that the more than 80,000 articles resulting from NIH funding each year will, for the first time, be available to any researcher, physician, faculty member, student or member of the public who wants access.

Some in Washington have expressed concerns about the rights of authors under the NIH Public Access Policy. As library organizations we fully respect copyright law and the protection it affords content creators, content owners, and content users. NIH-funded research is copyrightable and copyright belongs to the author. The NIH Policy requires only the grant of a non-exclusive license to NIH, fully consistent with federal policies such as Circular A-110 and Circular A-102. This policy leaves the author free to transfer some or all of the exclusive rights under copyright to a journal publisher or to assign these anywhere they so choose. Attached please find an issue brief detailing how the NIH Public Access Policy does not affect copyright law.

We understand that the Subcommittee on Courts, the Internet and Intellectual Property will be conducting a hearing on the NIH Public Access Policy, and we hope this will provide an opportunity to better understand the importance and strategic value of the Policy as it advances science, improves access by the public to federally funded research, provides for effective archiving strategies for these resources, and ensures accountability of our federal investment. Given the proven success of the revised NIH Public Access Policy, we will oppose any change to the current Policy that would undermine its proven effectiveness. We look forward to working with you to ensure that the NIH Public Policy continues to serve science, the research community and the public.

Sincerely,

American Association of Law Libraries
www.aallnet.org
Contact: Mary Alice Baish (202-662-9200)

American Library Association
www.ala.org
Contact: Corey Williams Green (202-628-8410)

Association of College and Research Libraries
www.acrl.org
Contact: Kara Malenfant (312-280-2510)

Association of Research Libraries
www.arl.org
Contact: Prudence Adler (202-296-2296)

Greater Western Library Alliance
www.gwla.org
Contact: Joni Blake (816-926-8765)

Public Knowledge
www.publicknowledge.org
Contact: Gigi Sohn (202-518-0020)

Public Library of Science
www.plos.org
Contact: Donna Okubo (415-624-1213)

SPARC (Scholarly Publishing & Academic Resources Coalition)
www.arl.org/sparc
Contact: Heather Joseph (202-296-2296)

Special Libraries Association
www.sla.org
Contact: Doug Newcomb (703-647-4923)

Attachment (1)

Sep-10-08 02:13pm From-SIIA 202-289-7097 T-156 P.02/02 F-871

Software & Information Industry Association
1090 Vermont Ave NW Sixth Floor
Washington, DC 20005-4095

September 10, 2008

The Honorable John Conyers Jr.
Judiciary Subcommittee on Courts, the Internet
and Intellectual Property
U.S. House of Representatives
Washington, DC 20515

RE: SIIA Urges Support for H.R. 6845, the Fair Copyright in Research Act

Dear Representative Conyers Jr.:

On behalf of the Software & Information Industry Association (SIIA), I am writing in support of H.R. 6845, *The Fair Copyright in Research Works Act*, legislation to help ensure that the federal government does not diminish copyright protections for peer reviewed articles.

As the principal trade association of the software and digital content industry, the more than 500 members of SIIA develop and market software and electronic content for business, education, consumers and the Internet. Among our members publishers that invest millions of dollars annually to peer review, edit, disseminate and archive scholarly articles, as well as to create information technology products and services that facilitate the search and retrieval of this literature. Copyright protection is essential, as it allows private sector publishers to recoup their investments and continue to invest in research publishing.

SIIA strongly supports broad access to the results of publicly funded research as currently being implemented by the National Science Foundation, where access is provided to government-funded research in a way that does not diminish copyright. However, a recent mandate at the National Institutes of Health (NIH) would force publishers to surrender many of their copyrighted scientific journal articles for free public access just twelve months after publication. This mandate substantially undermines the copyright protection for these works and creates a disincentive for publishers and value-added information providers alike. While the Federal Government agencies provide critical funding for much scientific research, they do not fund the publishing or creation of value-added, peer-reviewed journal articles on which non-profit and commercial publishers expend substantial resources.

SIIA supports the *Fair Copyright in Research Works Act* because it would prevent the government from imposing mandates that diminish copyright protection for private-sector, value-added research articles. I urge you to cosponsor and support this legislation to preserve the incentives for continued private sector investment in peer review, publishing and dissemination of value-added information technology products and services.

Sincerely yours,

Ken Wasch

Ken Wasch
President

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Fax: +1.202.289.7097

www.siia.net

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8 September, 2008

VIA FACSIMILE 202-225-0072, 202-225-8628

The Honorable John Conyers, Jr.
Chairman
Committee on Judiciary
U.S. House of Representatives
2426 Rayburn House Office Building
Washington, DC 20515

The Honorable Lamar S. Smith
Ranking Minority Member
Committee on Judiciary
U.S. House of Representatives
2409 Rayburn House Office Building
Washington,, DC 20515

Dear Mr. Chairman and Mr. Ranking Minority Member:

The House of Representatives is back in session. It is my understanding that the hoped-for adjournment date is either the last Friday or Saturday in September or the 3rd of October, the following week.

I know that there are a lot of important issues pending and I sincerely hope that the federal judges' raise is among such issues. Clearly, House bill, H.R.3753 has passed the House Judiciary Committee and has been sent to the Floor. In the Senate, there is a comparable bill, S.614, which has the same details with respect to pay, but contains the Feingold provision. Such provision, I think, should be eliminated as I think it is greatly in the interest of the United States that Federal judges travel to places in the Middle East, for example, and talk about the American Constitution as Mrs. Justice O'Connor, Mrs. Justice Ginsburg and others did in Europe when Europe did not have all the same protections for human liberties as we did. I think if you will check the record you will also find that Mr. Justice Thurgood Marshall, before and after he became a Justice, often traveled to places in Africa to help bring about change. It also seems clear that even if the provision isn't eliminated, there can be language which can be drawn quickly which will result in an acceptable compromise.

Obviously, at age 88, I don't ever expect to be appointed to the Supreme Court of the United States or any federal judgeship and the hope of arguing other cases before the Supreme Court is almost zero. I do believe, however (indeed, know), that the Federal judiciary has made a lot of changes in my life and I come to work upset every day when I realize that many of the third year Associates in my law firm and others make more money than the Chief Justice of the United States, and, of course, every other member of the Federal Judiciary.

I urge you to use all of your talents to get the bill enacted into law before the Congress adjourns. It is my understanding that the President of the United States will sign such bill.

I would love to come up to discuss this with each of you.

"Take care...."

Sincerely,

William T. Coleman, Jr.
Senior Partner and The Senior Counselor
of O'MELVENY & MYERS LLP

WTC, Jr.:ses

DC1:756268.1

American Association of Physicists in Medicine

Office of the President
Gerald A. White Jr., M.S.
Penrose Cancer Center
2222 N. Nevada Ave.
Colorado Springs, CO 80907
Phone: 719-776-2513 Fax: 719-632-8176
E-mail: gerald.white@mindspring.com

September 10, 2008

The Honorable Howard L Berman
U.S. House of Representatives
Committee on the Judiciary
Subcommittee on Courts, the Internet and Intellectual Property
Washington, DC 20515

The Honorable Howard Coble
U.S. House of Representatives
Committee on the Judiciary
Subcommittee on Courts, the Internet and Intellectual Property
Washington, DC 20515

Dear Chairman Berman and Ranking Member Coble:

On behalf of the American Association of Physicists in Medicine (AAPM), I am writing to urge your support for *The Fair Copyright in Research Works Act*.

AAPM's mission is to advance the practice of physics in medicine and biology by encouraging innovative research and development, disseminating scientific and technical information, fostering the education and professional development of medical physicists, and promoting the highest quality medical services for patients. Medical physicists contribute to the effectiveness of radiological imaging procedures by assuring radiation safety and helping to develop improved imaging techniques (e.g., mammography CT, MR, ultrasound). They contribute to development of therapeutic techniques (e.g., prostate implants, stereotactic radiosurgery), collaborate with radiation oncologists to design treatment plans, and monitor equipment and procedures to insure that cancer patients receive the prescribed dose of radiation to the correct location. Medical physicists are responsible for ensuring that imaging and treatment facilities meet the rules and regulations of the U.S. Nuclear Regulatory Commission (NRC) and various State regulatory agencies. AAPM represents over 6,700 medical physicists.

AAPM strongly believes that *The Fair Copyright in Research Works Act* will help ensure the integrity of the scientific record, protect peer review, and preserve research dollars for research purposes and not for publishing costs. AAPM's publications include a scientific journal (Medical Physics), technical reports, and symposium proceedings. *The Fair Copyright in Research Works Act* upholds the established legal means whereby the United States protects intellectual property.

Scientists use academic journals to disseminate research, to learn about other scientists' research and to share perspectives about research. Publishers of journals, in collaboration with academic institutions, have been at the forefront of innovations that have improved and continue to improve access to research information. As a result, more research is available to more people than at any time in history.

The legislation seeks to ensure fairness in copyright protection for research works. For nearly a century, copyright protection has provided the incentive for publishers to invest in the peer-review of research prior to publication and in the infrastructure necessary to publish and distribute scientific journal articles about the latest government-funded research. Publishers have depended on copyright law to protect these works, which has aided in the advancement and integrity of science and contributed to substantial gains in medical research and other knowledge.

I urge you to support of *The Fair Copyright in Research Works Act*, this legislation is good for science, good for the U.S. economy, and it makes good legal sense. I would welcome the opportunity to speak with you further about this bill or to answer any questions you may have. I appreciate your attention to this matter. Please contact Lynne Fairobent, AAPM's Manager of Legislative and Regulatory Affairs at 301-209-3364 or via email at lynne@aapm.org if we can of assistance.

Sincerely,

Gerald A. White, Jr., FAAPM

American Association of Physicists in Medicine

Office of the President
Gerald A. White Jr., M.S.
Penrose Cancer Center
2222 N. Neveda Ave.
Colorado Springs , CO 80907
Phone: 719-776-2513 Fax: 719-632-8176
E-mail: gerald.white@mindspring.com

September 10, 2008

The Honorable John Conyers, Jr.
U.S. House of Representatives
Committee on the Judiciary
Washington, DC 20515

The Honorable Lamar S. Smith
U.S. House of Representatives
Committee on the Judiciary
Washington, DC 20515

Dear Chairman Conyers and Ranking Member Smith:

On behalf of the American Association of Physicists in Medicine (AAPM), I am writing to urge your support for *The Fair Copyright in Research Works Act*.

AAPM's mission is to advance the practice of physics in medicine and biology by encouraging innovative research and development, disseminating scientific and technical information, fostering the education and professional development of medical physicists, and promoting the highest quality medical services for patients. Medical physicists contribute to the effectiveness of radiological imaging procedures by assuring radiation safety and helping to develop improved imaging techniques (e.g., mammography CT, MR, ultrasound). They contribute to development of therapeutic techniques (e.g., prostate implants, stereotactic radiosurgery), collaborate with radiation oncologists to design treatment plans, and monitor equipment and procedures to insure that cancer patients receive the prescribed dose of radiation to the correct location. Medical physicists are responsible for ensuring that imaging and treatment facilities meet the rules and regulations of the U.S. Nuclear Regulatory Commission (NRC) and various State regulatory agencies. AAPM represents over 6,700 medical physicists.

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I urge you to support of *The Fair Copyright in Research Works Act*, this legislation is good for science, good for the U.S. economy, and it makes good legal sense. I would welcome the opportunity to speak with you further about this bill or to answer any questions you may have. I appreciate your attention to this matter. Please contact Lynne Fairobent, AAPM's Manager of Legislative and Regulatory Affairs at 301-209-3364 or via email at lynne@aapm.org if we can of assistance.

Sincerely,

Gerald A. White, Jr., FAAPM

AMERICAN PHYSICAL SOCIETY
1 Research Road• Ridge, NY 11961-2701 • http://publish.aps.org

Gene D. Sprouse
Editor-in-Chief

Telephone:(631) 591-4019
Fax: (631) 591-4275
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September 10, 2008

The Honorable John Conyers
Chairman
U.S. House Judiciary Committee
Washington, DC 20515

The Honorable Robert Wexler
U.S. House Judiciary Committee
Washington, DC 20515

Dear Chairman Conyers and Rep. Wexler:

I am writing to support *The Fair Copyright in Research Works Act*. Non-profit publishers such as The American Physical Society(APS) ensure quality in scientific publications, inspire confidence in American research, and help contribute to our 21st century economy. This bill is needed to guarantee copyright protection to scientific publishers who create value by managing the selection, peer-review, publishing, distribution, creation and preservation of the scientific record.

The well-established system of scientific publishing (based on copyright protection) is central to the process by which scientific research is communicated, disseminated, and ultimately accepted by the scientific community. Peer review is a careful system of checks and balances that encourages authors to meet the accepted standards of their discipline and prevents the dissemination of unwarranted claims, unacceptable interpretations, and personal views. Peer review specifically ensures that weaknesses will be identified and that the content of a scientific paper is both novel and substantial.

Scientific publishers manage peer review. They also produce, disseminate and archive final journal articles. Copyright protection is what affords us the commercial rights to our own publications. This protects our investment and allows us to continue to manage peer review and helps maintain the integrity of scientific discourse.

Whether an article is read online or in print, high-quality page composition, copy-editing, and the listing and linking of bibliographic and reference data must be managed. Furthermore, maintaining and protecting a fully digital archive for an academic journal requires substantial resources.

The Fair Copyright in Research Works Act extends copyright protection to publishers who create value by managing the selection, peer-review, publishing, distribution, creation and preservation of the scientific record. These efforts are necessary to disseminate significant research findings. Copyright protection for publishers has been eroded due to recent government mandates. The act guarantees that scientific publishers will continue to enjoy the same rights as the music industry, film companies or literary publishing houses.

Scientific publishing also contributes to a productive U. S. economy because publishing is a significant enterprise that creates jobs. The American Physical Society spends more than $40 million annually on editing, producing, printing, shipping, and online hosting and employs some 150 staff. Most of the required resources are provided by subscriptions from institutional or

regional library systems. The ongoing emergence of new journals, publishers and publishing models indicates scientific publishing is a healthy and competitive marketplace.

The American Physical Society is the world's largest professional body of physicists, representing over 46,000 physicists in academia and industry in the US and internationally. It has offices in Ridge, NY and College Park, MD.

Thank you for your work on this important legislation, I strongly support passage of this bill. Please let us know if I can be of any assistance.

Sincerely,

Gene D. Sprouse

Distinguished Professor of Physics
Stony Brook University(on leave), and
Editor-in-Chief
American Physical Society

aap

Martin Frank, Ph.D.
Executive Director, American
Physiological Society
9650 Rockville Pike
Bethesda, MD 20814-3991
Tel: (301) 634-7118
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Email: mfrank@the-aps.org
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Fax: (202) 3473690
Email: adler@publishers.org
www.pspcentral.org

September 10, 2008

The Honorable John Conyers
2426 Rayburn House Office Building
Washington, DC 20515

The Honorable Darrell Issa
211 Cannon House Office Building
Washington, DC 20515

The Honorable Robert Wexler
2241 Rayburn House Office Building
Washington, DC 20515

The Honorable Tom Feeney
323 Cannon House Office Building
Washington, DC 20515

Dear Chairman Conyers, Rep. Issa, Rep. Wexler, and Rep. Feeney:

On behalf of the publisher members of the Professional and Scholarly Publishing division of the Association of American Publishers, the DC Principles Coalition, and other leading publishers, we are writing to express our strong support for your sponsorship of H.R. 6845, *The Fair Copyright in Research Works Act*. This important legislation will help ensure that the federal government does not diminish copyright protections for peer reviewed articles and the unique publications in which they appear. Both are the result of significant value-added contributions from private-sector publishers.

Non-profit and commercial publishers invest hundreds of millions of dollars every year in the peer review, editing, disseminating, and archiving of scholarly articles, as well in creating unique journal identities on which researchers and funders alike rely to make critically important personal and professional judgments. Peer review, which ensures the quality and integrity of research articles, is at the heart of this process and scientific communication. Copyright provides the essential incentives for publishers to continue to invest and innovate in peer review publishing and the development and continuation of unique journal identities. It is critical to our ability to recoup our investments.

A recent congressional mandate at the National Institutes of Health (NIH) forces publishers to surrender their copyrighted scientific journal articles for free public access twelve months after publication and sets a dangerous precedent. This mandate in effect reduces copyright protection for this important class of works to only one year. *The Fair Copyright in Research Works Act* rightly prevents the government from imposing mandates that diminish copyright protection for private-sector, value-added research articles.

We firmly support broad access to the results of publicly funded research as currently being implemented by the National Science Foundation where access is provided to government-funded research in a way that does not diminish copyright. *The Fair Copyright in Research Works Act* will allow the government to 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.

Again, we thank you for your support and leadership on this important issue. We look forward to working with you and the other members of the Judiciary Committee to secure the passage of *The Fair Copyright in Research Works Act.*

Sincerely,

Acoustical Society of America
American Academy of Pediatrics
American Association for Cancer Research
American Association for Dental Research
American Association of Anatomists
American Association of Immunologists
American Association of Physicists in Medicine
American Association of Physics Teachers
American Astronomical Society
American Chemical Society
American College of Clinical Pharmacology
American Dairy Science Association
American Dental Association
American Institute of Physics
American Physiological Society
American Psychological Association
American Radiological Association of North America
American Registry of Professional Animal Scientists
American Society for Investigative Pathology
American Society for Nutrition
American Society of Agronomy
American Society of Animal Science
American Society of Human Genetics
Association for Research in Vision and Ophthalmology
AVS: Science & Technology of Materials, Interfaces, and Processing
Crop Science Society of America
Elsevier
Human Factors and Ergonomics Society
International Association for Dental Research
John Wiley and Sons
Lynne Reinner Publishers, Inc.
Optical Society of America

Poultry Science Association
Protein Science
Society for Experimental Biology and Medicine
Society for the Study of Reproduction
Soil Science Society of America
Springer Science+Business Media LLC
The Endocrine Society
The McGraw-Hill Companies
The Protein Society
The Society of Toxicology
Wolters Kluwer Health

cc: Members of the House Judiciary Subcommittee on Courts, the Internet, and Intellectual Property

AAPT
PHYSICS EDUCATION

American Association of Physics

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Executive Officer
Warren W. Hein

September 8, 2008

Representative John Conyers, Jr.
House Judiciary Committee on Courts, the Internet and Intellectual Property
Fax 202-225-0072

RE: The Fair Copyright in Research Works Act

Dear Representative Conyers:

I am writing to support *The Fair Copyright in Research Works Act*. Non-profit publishers such as the American Association of Physics Teachers ensure quality in scientific publications, inspire confidence in American research, and help contribute to our 21st century economy. This bill is needed to guarantee copyright protection to scientific publishers who create value by managing the selection, peer-review, publishing, distribution, creation and preservation of the scientific record.

The well-established system of scientific publishing (based on copyright protection) is central to the process by which scientific research is communicated, disseminated, and ultimately accepted by the scientific community. Peer review is a careful system of checks and balances that encourages authors to meet the accepted standards of their discipline and prevents the dissemination of unwarranted claims, unacceptable interpretations, and personal views. Peer review specifically ensures that weaknesses will be identified and that the content of a scientific paper is both novel and substantial.

Scientific publishers manage peer review. They also produce, disseminate and archive final journal articles. Copyright protection is what affords us the commercial rights to our own publications. This protects our investment and allows us to continue to manage peer review and helps maintain the integrity of scientific discourse.

Whether an article is read online or in print, high-quality page composition, copy editing, and the listing and linking of bibliographic and reference data must be managed. Furthermore, maintaining and protecting a fully digital archive for an academic journal requires substantial resources.

The Fair Copyright in Research Works Act extends copyright protection to publishers who create value by managing the selection, peer-review, publishing, distribution, creation and preservation of the scientific record. These efforts are necessary to disseminate significant research findings. Copyright protection for publishers has been eroded due to recent government mandates. The act guarantees that scientific publishers will continue to enjoy the same rights as the music industry, film companies or literary publishing houses.

The American Association of Physics Teachers has approximately 10,500 members who teach physics at the pre-college, college and university, and graduate

One Physics Ellipse | College Park, MD 20740-3845 | phone: 301.209.3311 | fax: 301.209.0845 | web: www.aapt.org

level. We publish two journals, *The American Journal of Physics* and *the Physics Teacher* that are used by our members to improve the classes and the courses they teach. In addition, thousands of physics faculty and physics teachers who are not members have access to these journals through their institutional libraries and consortia agreements. AAPT would not be able to continue publishing these resources if it no longer received revenue from the libraries due to unlimited public access. In addition, the material published in our journals is not time sensitive. That is, it is as valuable a resource for physics educators 12, 18, or 24 months from the date of publication as the day it was published. Making our journals open access after one year would be almost as damaging as having them open access from the date of publication.

Thank you for your work on this important legislation, the American Association of Physics Teachers strongly supports passage of this bill. Please let us know if we can be of any assistance.

Sincerely,

Warren W. Hein
Executive Officer

American Chemical Society

OFFICE OF THE PRESIDENT
Bruce E. Bursten,
President-Elect, 2007
President, 2008
Immediate Past President, 2009

1155 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
Phone 202-872-4461
Fax 202-872-6338

September 10, 2008

The Honorable John Conyers
Chairman
U.S. House Judiciary Committee
Washington, DC 20515

The Honorable Darrell Issa
U.S. House Judiciary Committee
Washington, DC 20515

The Honorable Robert Wexler
U.S. House Judiciary Committee
Washington, DC 20515

The Honorable Tom Feeney
U.S. House Judiciary Committee
Washington, DC 20515

Dear Chairman Conyers and Representatives Wexler, Issa, and Feeney:

On behalf of the American Chemical Society, I am writing to thank you for sponsoring the *Fair Copyright in Research Works Act,* H.R. 6845. This legislation will help ensure the health and stability of the American scientific infrastructure needed to guarantee continued U.S. leadership in science and technology.

The ACS is the world's largest scientific society with more than 160,000 members. We care deeply about the advancement of scholars and scholarship and pursue these goals through advocacy, publishing, national meetings, conferences, information resources, and professional development efforts. We have been doing this since publishing our first journal in 1879, *The Journal of the American Chemical Society*.

Our 37 peer-reviewed scientific journals are distributed globally in print and electronic media and showcase the world's finest research in chemistry and related sciences. Articles that appear in our journals are widely regarded and have received recognition of excellence. The visibility that content in ACS journals receives not only helps scholars achieve new scientific breakthroughs, but also leads to practical applications that directly benefit human health and welfare and the world's economy.

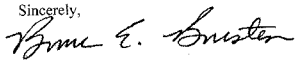
Collectively our peer-reviewed journals form an informal, but widely recognized, hierarchy used by funding bodies and the academic community to assess research quality, impact, and priority—key factors used to allocate funding resources, evaluate levels of personal achievement, and determine professional advancement.

We believe that it is in the public interest to foster this beneficial publishing activity and toward that end we invest heavily in staff and technology resources required to be successful in this endeavor. Copyright creates the opportunity for us to do this by sustaining our publishing enterprise. For these reasons, I believe passage of the *Fair Copyright in Research Works Act* will help protect the American

scientific infrastructure needed to ensure continued U.S. leadership in science and technology while at the same time promoting public access to federally-funded research.

Again, I thank you for your support and leadership on this important issue. We look forward to working with you and the other members of the Judiciary Committee to secure the passage of the *Fair Copyright in Research Works Act.*

Sincerely,



Bruce E. Bursten, Ph.D.
President

C: The Honorable Lamar Smith, Ranking Member, House Judiciary Committee
The Honorable Howard Berman, Chair, House Judiciary Subcommittee on Courts, the Internet, and Intellectual Property
The Honorable Howard Coble, Ranking Member, House Judiciary Subcommittee on Courts, the Internet, and Intellectual Property

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An Open Letter to the U.S. Congress Signed by 31 Nobel Prize Winners

September 9th, 2008

Dear Members of Congress:

As scientists and Nobel Laureates we are writing today to support the NIH Public Access Policy that was instituted earlier this year as a Congressional mandate. This is one of the most important public access initiatives ever undertaken. Finally, scientists, physicians, health care workers, libraries, students, researchers and thousands of academic institutions and companies will have access to the published work of scientists who have been supported by NIH.

For scientists working at the cutting edge of knowledge, it is essential that they have unhindered access to the world's scientific literature. Increasingly, scientists and researchers at all but the most well-financed universities, are finding it difficult to pay the escalating costs of subscriptions to the journals that provide their life blood. A major result of the NIH public access initiative is that increasing amounts of scientific knowledge are being made freely available to those who need to use it and through the internet the dissemination of that knowledge is now facile.

The clientele for this knowledge are not just an esoteric group of university scientists and researchers who are pushing forward the frontiers of knowledge. Increasingly, high school students preparing for their science fairs need access to this material so that they too can feel the thrill of research. Teachers preparing courses also need access to the most up-to-date science to augment the inevitably out-of-date textbooks. Most importantly, the lay public wants to know about research findings that may be pertinent to their own health diagnoses and treatment modalities.

The scientific literature is our communal heritage. It has been assembled by the painstaking work of hundreds of thousands of research scientists and the results are essential to the pursuit of science. The research breakthroughs that can lead to new treatments for disease, to better diagnostics or to innovative industrial applications depend completely on access, not just to specialized literature, but rather to the complete published literature. A small finding in one field combined with a second finding in some completely unrelated field often triggers that "Eureka" moment that leads to a groundbreaking scientific advance. Public access makes this possible.

The current move by the publishers is wrong. The NIH came through with an enlightened policy that serves the best interest of science, the scientists who practice it, the students who read about it and the taxpayers who pay for it. The legislators who mandated this policy should be applauded and any attempts to weaken or reverse this policy should be halted.

Name	Category of Nobel Prize Awarded	Year
David Baltimore	Physiology or Medicine	1975
Paul Berg	Chemistry	1980
Michael Bishop	Physiology or Medicine	1989
Gunter Blobel	Physiology or Medicine	1999
Paul Boyer	Chemistry	1997
Sydney Brenner	Physiology or Medicine	2002
Mario Cappechi	Physiology or Medicine	2007
Thomas Cech	Chemistry	1989
Stanley Cohen	Physiology or Medicine	1986
Robert Curl	Chemistry	1996
Johann Deisenhofer	Chemistry	1988
Edmond Fischer	Physiology or Medicine	1992
Paul Greengard	Physiology or Medicine	2000
Roger Guillemin	Physiology or Medicine	1977
Leland Hartwell	Physiology or Medicine	2001
Dudley Herschbach	Chemistry	1986
Roald Hoffman	Chemistry	1981
H. Robert Horvitz	Physiology or Medicine	2002
Roger Kornberg	Chemistry	2006
Harold Kroto	Chemistry	1996
Roderick MacKinnon	Chemistry	2003
Craig Mello	Physiology or Medicine	2006
Kary Mullis	Chemistry	1993
Marshall Nirenberg	Physiology or Medicine	1968
Paul Nurse	Physiology or Medicine	2001
Stanley Prusiner	Physiology or Medicine	1997
Richard Roberts	Physiology or Medicine	1993
Susumu Tonegawa	Physiology or Medicine	1987
Hamilton Smith	Physiology or Medicine	1978
Harold Varmus	Physiology or Medicine	1989
James Watson	Physiology or Medicine	1962

Press Contact:
Sir Richard Roberts
(Nobel Prize in Physiology or Medicine,1993)
Tel: (978) 380-7405
Fax: (978) 380-7406
Email: roberts@neb.com

September 19, 2008
University Libraries
University of North Carolina at Greensboro
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dmguion@uncg.edu
(336) 334-5781

Rep. Howard Coble
House Committee on the Judiciary
via FAX

Dear Rep. Coble:

With great wisdom and public spirit, Congress passed an act in December 2007 that among other things mandates that the National Institutes of Health require its grant recipients to post copies of their research to NIH's digital repository. The idea is that the taxpayers, having already paid for the research, ought to have free access to it. That is a wonderful policy for taxpayers, for anyone (other researchers, physicians and other healthcare professionals, individuals with a serious medical condition and their families) who needs to have access to the information, and for authors who want to retain rights to use their own work in the future. Everybody benefits from it except a few greedy publishers.

The Constitution empowers Congress "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." Under current copyright law, once a scientist publishes work in a journal, the publisher can highjack the copyright. The Constitution grants to authors exclusive rights of their writings, but current copyright law allows some publishers to make authors pay them hefty fees to reuse their own work in subsequent publications!

Now those same publishers are trying to undo the good legislation passed in December by introducing HR6845, with the truly Orwellian name "Fair Copyright in Research Works Act." Fair to whom? Certainly not the authors, the public, or the tax payers.

We have lately seen what unbridled greed has done to the housing market and subsequently the whole economy. The effects of the Unfair Copyright in Research Works Act will not get as much press if allowed to become law, but they will be every bit as harmful.

On behalf of the University Libraries at UNCG and libraries everywhere that are attempting to establish institutional repositories to make faculty research available to the public, on behalf of authors who want to make their research made widely known and freely accessible, on behalf of tax payers who have already paid for the research once and should not be required to hunt for it

in proprietary databases and pay again to read it, I urge you to see that HR6845 never sees the light of day. The NIH policy must be allowed to continue, and other taxpayer-supported agencies ought to institute similar policies. Universities must be able to establish their own digital repositories. That will insure that the public will have access to research that has been funded with public money.

Sincerely,

David Guion

North Carolina State University is a land-grant university and a constituent institution of The University of North Carolina

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Raleigh, North Carolina 27695

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September 10, 2008

The Honorable Howard Coble
2468 Rayburn House Office Building
Washington, DC 20515-3306

Dear Congressman Coble:

As Provost of North Carolina State University (NC State) and on behalf our thousands of faculty, staff, students, and researchers, and the citizens of North Carolina, I strongly urge your support of the current language in National Institutes of Health (NIH) Public Access Policy. This policy requires NIH grantees to "deposit the final electronic manuscript of their peer-reviewed research results into PubMed Central, NIH's digital archive, to be made publicly available within twelve months." Since this policy became effective in April 2008, the deposit rate into PubMed Central has increased from 10% to 60% without affecting the copyright status of any of the articles submitted.

NC State faculty win substantial grants of funding to conduct NIH research each year. These research grants fund not only the critical research itself, but also the resulting articles through which the results are communicated to other researchers and the public at large, including small businesses, physicians and clinicians, students, educators and the American public. Such public access to research drives taxpayer benefits such as accelerated scientific advancement, enhanced national competitiveness, and improved public health.

Widespread dissemination of research results is an essential, inseparable component of our nation's investment in science and a right of the American taxpayer. It is only through use that we obtain value from this investment. The open sharing of advances and scientific findings through public access, such as PubMed Central, is a critically important condition of receipt of NIH research funds and does not alter the copyright status of the work. Whether the author or his/her institution is the copyright holder of the research article under institutional policy, copyright ownership remains unaffected by the NIH Public Access Policy. The NIH is merely given a non-exclusive license to make the article publicly accessible and permanently archived to the benefit of current and future generations of researchers, physicians, faculty members, students or any member of the public needing the information.

There are those in Washington who have promulgated concern that this remarkably successful and extremely beneficial NIH Public Access Policy is in conflict with current copyright law. We do not see a conflict and we believe that the law is good public and science policy.

We urge you to express support of the current policy discussed during the September 11, 2008 hearing held on this issue by the Subcommittee on Courts, the Internet and Intellectual Property.

Sincerely,

Larry A. Nielsen
Provost and Executive Vice Chancellor

LAN/dfb

SUSAN C. McVEY
DIRECTOR

BRAD HENRY
GOVERNOR

STATE OF OKLAHOMA
OKLAHOMA DEPARTMENT OF LIBRARIES

To The Honorable John Conyers, Chairman, House Judiciary Committee,

We understand that the National Institute of Health's *Public Access Policy* may soon come under attack by those opposed to it.

As one of the librarians invited to participate in the national conference call made by Dr. Elias Zerhouni, Director of the NIH, on February 3, 2005 that unveiled the *Public Access Policy* to our nation, I have followed the movement of the policy as it became an ineffective "recommended-only" regulation during its first years of existence, when the number of publically-funded medical research articles actually showing up in PubMed Central was low, to this past year when it became a required "must-do" regulation for researchers receiving public funding, after which the number of free-access articles in PubMed Central has been growing exponentially month by month. Now the public can see just what their taxes have paid for, and they should be pleased.

If the medical publishers claim that the policy violates copyright law, they are simply wrong. It shouldn't take much legal research for their staffs to verify this.

The citizens of our nation have paid for much of the cost of doing medical research. They deserve to access the articles about that research. As the regulation currently stands, publishers can delay submitting articles to PubMed Central for up to twelve months. During this time they can sell access to them, thereby remaining solvent as profitable businesses. After this period let the people of our nation have access to this research that their hard-earned tax dollars have helped to pay for.

Keep NIH's "Public Access Policy" in effect as it stands.

Thank you,

Steve Beleu

Steve Beleu, Regional Depository Librarian for Federal Government Information

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smichala@email.unc.edu

SARAH C. MICHALAK
University Librarian and Associate Provost for University Libraries

September 8, 2008

Hon. Mel Watt
Fax: 202-225-1512

Hon. Howard Coble
Fax: 202-225-8611

Dear Representatives Watt and Coble,

We write to express strong support for the National Institutes of Health Public Access Policy, to be examined in hearing September 11 by the Subcommittee on the Courts, the Internet and Intellectual Property.

The NIH Public Access Policy requires scientists who receive federal grants to deposit their final peer-reviewed manuscript into NIH's digital archive, where it is made publicly available within twelve months. Since the policy became mandatory in April, the deposit rate has increased from 10% under the previous voluntary system to nearly 60%.

The Public Access Policy is a tremendous achievement that advances science and has direct benefit for all citizens. North Carolina is fortunate to be the home to several leading research institutions; those of the University of North Carolina system have the particular mandate to serve all North Carolinians. It is access to recent and archived research that allows the scientists at our university to share their own research findings and to build on the work of colleagues from around the world. And it is this same access that informs our citizenry, allowing taxpayers to benefit directly from the investment they have made. We see the value of the Public Access Policy every day in our library, as we support the research needs of working scientists and inquiries from our patrons.

Some have recently raised concerns about conflict between the NIH Public Access Policy and the rights of authors. This is not the case. Copyright in the final manuscript resides, as it always has, with the author, who remains free to negotiate publication with journals or to assign the copyright as he or she chooses.

We hope the Subcommittee's hearing will make clear just how successful and beneficial the NIH Public Access Policy has already proven itself to be. On behalf of the libraries at UNC-Chapel Hill, we fully support the policy as it stands and encourage you to resist any attempt to overturn or weaken it. If we can provide additional information about the policy or its impact, we would be more than happy to speak with you or members of your staff.

Sincerely,

Sarah C. Michalak
University Librarian and
Associate Provost for University Libraries

Carol Jenkins
Director of the Health Sciences Library

cc: Hon. John Conyers, Jr. (Fax: 202-225-5126)

UNIVERSITY OF CALIFORNIA, LOS ANGELES

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September 8, 2008

The Honorable Howard L. Berman
Committee on the Judiciary
United States House of Representatives
2221 Rayburn Building
Washington, DC 20515
VIA FAX 202/225-3196

Dear Representative Berman:

We understand that Representatives John Conyers and Lamar Smith have asked that the Committee on the Judiciary, Subcommittee on the Courts, the Internet, and Intellectual Property hold a hearing to address the copyright policy implications of the National Institutes for Health's (NIH) public access policy. As the administrators who are supporting compliance with the policy by UCLA researchers, we wanted to provide you with our perspective.

In case you're not familiar with the policy, following is a brief description. The policy requires that as of April 7, 2008, researchers who receive NIH grants must submit copies of any research papers resulting from their funded research to PubMed Central (PMC) when those papers are accepted for publication in a journal. PMC, the NIH's free digital archive of biomedical and life sciences journal literature, will then make the papers freely available to the public no later than twelve months after publication.

As one of the nation's leading public research universities, UCLA takes very seriously its responsibility to serve the people of Southern California, the U.S., and the world through its mission of education, research, and service. Integral to that mission is the dissemination of scholarly information and funded research as broadly and freely as possible, which is essential to furthering scientific discoveries, creating innovative solutions to pressing problems, and improving the lives and well-being of individuals and of society. We believe that the NIH public access policy supports those goals.

In addition to this philosophical argument, there are practical reasons to support the NIH public access policy. Because NIH grants are funded by federal tax dollars, taxpayers should have free and timely access to the research results. Furthermore, UCLA uses state tax monies to support the cost of most of the academic journals to which it subscribes, so taxpayers in California are already paying for access. To further restrict that access is unjustifiable. Additionally, most NIH grants are for medical and health-related research; providing the broadest possible public access to the results of this research benefits individual sufferers directly, speeds further discoveries and cures, and, hopefully, translates into lower healthcare costs for everyone.

A concern has been expressed that the policy will negatively impact the peer-review process, a process that is essential to validating the content of scholarly articles. This is contrary to our understanding; the policy does not require journal publishers to make any changes to their current peer-review processes. Papers are to be submitted to PMC after peer review has been completed and the author has made any changes as a result, but before journal editors have copy-edited, laid out, and illustrated the article in its final published form.

As California generally leads the U.S. in NIH grants and UCLA is among the top ten institutions in the country in NIH funding received by our faculty, we feel a particular responsibility to communicate our perspective on this issue. Thank you for taking the time to consider our concerns.

Sincerely,

Roberto Peccei
UCLA Vice Chancellor for Research

Kathryn Atchison
UCLA Vice Provost of Intellectual Property and Industry Relations; Associate Vice Chancellor for Research

Gary E. Strong
UCLA University Librarian

cc: Representative Adam Schiff
Representative Darrell Issa
Representative Elton Gallegly
Representative Maxine Waters
Representative Linda Sánchez
Representative Zoe Lofgren
Kim S. Kovacs, Executive Director, UCLA Federal Relations

THE UNIVERSITY OF
CHICAGO

OFFICE OF THE VICE-PRESIDENT FOR RESEARCH
AND FOR NATIONAL LABORATORIES
5801 SOUTH ELLIS AVENUE, SUITE 601
CHICAGO, ILLINOIS 60637

DONALD H. LEVY
The Albert A. Michelson Distinguished Service Professor of Chemistry
Vice-President for Research and for National Laboratories

September 8, 2008

John Conyers Jr.
Congressman 14th District
2426 Rayburn Building
Washington DC 20515
Facsimile (202) 2250072

Dear Representative Conyers:

I am writing to urge your support in passing into law *The Fair Copyright in Research Works Act.* I have been an active research scientist at the University of Chicago for 40 years and am a member of the National Academy of Sciences. A prompt and efficient means of disseminating scientific results has been essential to my work, and United States scientific publishers have been leaders in providing this service to the international scientific community. The nation should take pride in the leadership position held by US journals and the international recognition that US journals are more often than not the leading journals in their respective fields.

Of particular importance are journals published by US scholarly societies such as the American Physical Society, the American Chemical Society, and the American Institute of Physics. These non-profit societies have provided an enormous service to the international scientific community by producing outstanding journals that have in many cases dominated the market and provided effective competition to commercial publishers whose interests are often, but not always, aligned to the needs of the scientific community. Until last year I spent 25 years as either Associate Editor or Editor of the Journal of Chemical Physics, probably the most important journal in my field (published by the American Institute of Physics), because of my belief in the value of this and similar journals.

Journal subscriptions are a major, often the only significant source of revenue for the scholarly organizations that publish them. There are real costs associated with delivering a useful product to the scientific community, and society publishers are always fighting the economics of scholarly journal publication. Since a part of their mandate is service to the scientific and educational community, they are constrained from simply raising prices to what the market will bear. Government requirements that force publishers to give away that which they now can sell exacerbates the problem and might well make it impossible for non-profit publishers to exist. This would come at an enormous cost to the

TELEPHONE: 773-702-1383 • E-MAIL: d-levy@uchicago.edu

scientific community and would be counter-productive to the goal of the widest dissemination of the scientific literature. Copyright protection of a publisher's intellectual property is essential for their survival, and *The Fair Copyright in Research Works Act* would be an important and effective step in this direction. I therefore urge your support.

After 40 years as a faculty member in the Department of Chemistry at the University of Chicago, and 25 years as editor of the Journal of Chemical Physics, I am now Vice-President of Research and National Laboratories at the University of Chicago, and this letter is on my office letterhead. Although there is widespread support for my views among my colleagues, as far as I know the University has adopted no corporate position. Therefore the views in this letter are mine as an individual, not the views of the University.

Sincerely,

Donald H. Levy

Kalamazoo College

Department of Physics
1200 Academy Street
Kalamazoo, MI 49006

September 8, 2008

Representative John Conyers, Jr.
House Judiciary Subcommittee on
Courts, the Internet, and Intellectual Property

Dear Representative Conyers:

I am writing as a Michigan resident and as a member of the Physics Faculty at Kalamazoo College and the Editor of the American Journal of Physics (AJP) to urge you to support *The Fair Copyright in Research Works Act.*

As a scientist engaged in teaching and research, I am committed to ensuring that the results of research are disseminated for the public benefit. AJP is the premier educationally oriented physics journal in the world, which probably reaches more professors and other scientists than any other physics journal. I also recently completed six years as a Divisional Associate Editor of Physical Review Letters, by far the most prestigious physics research journal in the world. I am also on the Publications Policy Committee of the American Insitute of Physics(AIP), which provides advice to the publications operations of AIP. Thus, I am intimately familair with the peer review process of scientific journals from the perspective of an editor, an advisor, a reviewer and a user of scientific journal articles. There is no question that my greatest wish is that all scientific information be freely available to all, but I know that that is impossible at the present moment because of the necessary costs of producing such material. Thus, I feel strongly that *The Fair Copyright in Research Works Act* will help ensure the integrity of the scientific record, protect peer review, and preserve research dollars for research and not be siphoned off for publishing costs.

Government funding agencies should not be able to diminish the copyright protection of articles written by scientists who are funded by those agencies. Such agencies have consistently supported and respected academic independence, providing significant funds to allow us to do research and express our ideas in the American tradition of individual freedom of expression and independence of mind.

Scientists use academic journals to disseminate their own research, to learn about other

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scientists research, to educate students interested in science and to share perspectives about research. Publishers of journals, in collaboration with academic institutions, have been at the forefront of innovations that have improved and continue to improve access to research information. As a result, more research is available to more people than at any time in history. Government mandates that require peer-reviewed journal articles to be freely disseminated worldwide could undermine the revenue base on which scientific journals depend.

I understand and support broadening the accessibility of research findings. But accessibility is more than simply posting documents on the Webits about achieving a greater understanding of the meaning and outcomes of research. This is only possible with the help of editors, reviewers and other publishing professionals who work to improve the quality of our journals. This work requires funding. Until an adequate model of such funding is found to enable free access, we must protect the ability of our research and educational community to produce these materials. A critical mission of societies and institutions of higher learning is to educate and communicate. I believe that *The Fair Copyright in Research Works Act* will protect the very societies who are the agents for public education.

I urge you to support *The Fair Copyright in Research Works Act*, and I would welcome the opportunity to speak with you further about this bill or to answer any questions you may have. I appreciate your attention to this matter.

Sincerely yours,

Jan Tobochnik

Jan Tobochnik

Professor of Physics and Computer Science

Editor, American Journal of Physics

JANT@KZOO.EDU

SEP-08-08 04:17 PM KARDINAL PAPERS 2693377101 P.02

Office of the University Librarian
Vanderbilt University
419 21st Avenue South
Nashville, TN 37203-2427

3 September 2008

Rep. Steve Cohen:
U.S. House of Representatives
Washington, D.C.

Dear Rep. Cohen:

I understand that the House Committee on the Judiciary, Subcommittee on Courts, the Internet and Intellectual Property will be conducting a hearing on the NIH Public Access Policy in the very near future. I am writing to express my strong support for the NIH Public Access Policy.

This Policy ensures that the results of our nation's $29 billion annual investment in research reach the broadest possible audience. Public support for science is enhanced when the public directly sees the benefits from our nation's investment in scientific research. The Policy requires that, in exchange for receiving federal research dollars, grantees deposit the final electronic manuscript of their peer-reviewed research results into PubMed Central, NIH's digital archive, to be made publicly available within 12 months.

The effect of this policy is to promote broad public access to the results of NIH's publicly funded research, allowing scientists and researchers throughout the country – indeed the world – to collaborate and engage in cutting-edge research. It, along with the NIH archive of critical biomedical research ensures that scientists and others can build on the work of others now and for future generations. Under Congress' leadership, since the Policy became mandatory in early April, rather than voluntary as before, the deposit rate has increased from 10% to almost 60%.

Some have expressed concerns about the rights of authors under the NIH Public Access Policy. However, NIH-funded research is copyrightable and copyright belongs to the author. The NIH Policy requires only the grant of a non-exclusive license to NIH, fully consistent with federal policies including copyright law.

Thank you for your consideration.

Sincerely,

Flo Wilson
Interim University Librarian
Vanderbilt University Library

cc: Rep. John Conyers, Jr.

SEP-03-2008 08:02AM FROM-WSU LIBRARIES DEANS OFFICE 313-577-6525 T-371 P.002/002 F-823

WAYNE STATE UNIVERSITY
LIBRARY SYSTEM

• OFFICE OF THE DEAN
UNIVERSITY LIBRARIES
LIBRARY & INFORMATION SCIENCE PROGRAM
LIBRARY COMPUTING & MEDIA SERVICES
UCE 1000

September 3, 2008

The Honorable John Conyers
House of Representatives
United States Congress

Dear Representative Conyers:

I am writing to express my strong support for the NIH Public Access Policy. The Policy ensures that the results of our nation's $29 billion annual investment in research reach the broadest possible audience. It also ensures that the U.S. Government has a long-term permanent archive of the research results that we have collectively funded. This archive of critical biomedical research ensures that scientists and others can build on the work of others now and for future generations. The archive is very valuable to the scientists at Wayne State University and at other research universities throughout the country.

The policy requires that in exchange for receiving federal research dollars, grantees deposit the final electronic manuscript of their peer-reviewed research results into PubMed Central, NIH's digital archive, to be made publicly available within 12 months. Since making this mandatory in early April, the deposit rate has increased from 10% to almost 60%. This change ensures that the more than 80,000 articles resulting from NIH funding each year will, for the first time, be available to any researcher, physician, faculty member, student or member of the public who wants them.

Some have expressed concerns about copyright and the rights of authors under the NIH Public Access policy. NIH funded research is copyrightable and copyright belongs to the author. The NIH policy requires only the grant of a non-exclusive license to NIH, fully consistent with federal policies including copyright law. I understand that the Subcommittee on Courts, the Internet and Intellectual Property will be conducting a hearing on the NIH Public Access Policy, and I hope that this will provide an opportunity to better understand the importance and strategic value of the policy as it advances science, improves access by the public to federally funded research, provides for effective archiving strategies for those resources, and ensures accountability of our federal investment. I urge you to support continuation of the current policy so that the NIH public policy continues to serve science, the research community and the public.

Sincerely yours,

Sandra Yee
Dean, University Library System

3100 DAVID ADAMANY UNDERGRADUATE LIBRARY ◊ DETROIT, MI 48202-3962

September 8, 2008

The Honorable John Conyers, Jr.
2426 Rayburn House Office Building
Washington, DC 20515

Dear Congressman Conyers:

Thank you for your leadership on health care issues and your continued interest in the public access policy of the National Institutes of Health (NIH).

As the Subcommittee on Courts, the Internet and Intellectual Property begins to reexamine the issues of equity surrounding public access, we urge you to support the current NIH policy and actively work to defend its viability.

In January, Congress revised the NIH public access policy, by mandating that all NIH-funded researchers deposit their final, peer-reviewed manuscripts in the National Library of Medicine's (NLM) PubMed Central. Prior to that time, the policy was voluntary. Since the policy was implemented in April, there has been a surge in deposits of this publicly funded health information into PMC. The deposit rate has jumped from less than 10% to 60%, significantly increasing the number of articles resulting from NIH-funded investigation that will become available within the mandatory timeframe to the researchers, physicians, students, and the public who rely on them for critical information. Continuation of this mandatory process will expedite current medical research, improve the quality of medical care, and allow patients to access important studies that are funded with their tax dollars.

As librarians, we support protection of intellectual property through copyright, including the exclusive rights that copyright holders enjoy related to the distribution and use of published materials. However, NIH-funded research represents a unique situation where, in exchange for public funds, investigators are expected to make their information publicly available. This open availability is important to librarians and science because it allows other investigators to build on cutting-edge discoveries more quickly, promotes the free flow of ideas amongst researchers without barriers, adds transparency and further accountability to a previously ambiguous area of federal spending, and speeds up the process of translation of federally funded scientific discovery to better clinical care we can all benefit from. The current NIH policy has shown great promise in accomplishing these tasks, and is doing so in a manner that is completely consistent with copyright law.

The April implementation of the updated NIH public access policy occurred at the direction of Congress after careful deliberation and study. As you are aware, the current policy reflects a compromise between the previous voluntary policy and a six month mandatory deposit requirement; a requirement which has become a standard in Europe and for other areas, such as research funded by private institutions including the Howard Hughes Medical Institute in the U.S. and the Wellcome Trust in the United Kingdom. Given the initial scrutiny that went into developing a new, mandatory NIH public access policy and considering the benefits that the new policy has created thus far, we urge you to support maintaining the present standard. Thank you for your time.

Sincerely,

Mary L. Ryan

Mary Ryan, AHIP, FMLA
President
Medical Library Association

Linda Watson

Linda Watson, AHIP, FMLA
President
Association of Academic Health
Sciences Libraries

MLA, a nonprofit, educational organization, is comprised of health sciences information professionals with more than 4,000 members worldwide. Through its programs and services, MLA provides lifelong educational opportunities, supports a knowledgebase of health information research, and works with a global network of partners to promote the importance of quality information for improved health to the health care community and the public.

AAHSL is composed of the directors of the libraries of 142 accredited American and Canadian medical schools that belong to the Association of American Medical Colleges (AAMC). AAHSL's goals are to promote excellence in academic health sciences libraries and to ensure that the next generation of health practitioners is trained in information-seeking skills that enhance the quality of healthcare delivery.