

**Statement of
Sir Richard Roberts, Ph.D F.R.S.
Chief Scientific Officer,
New England Biolabs**

**Before the
Subcommittee on Information Policy, the Census and National Archives
Committee on Oversight and Government Reform
Regarding Public Access to Publicly Funded Research**

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Chairman Clay, Ranking Member McHenry and members of the House Oversight and Government Reform Subcommittee on Information Policy, the Census and National Archives, thank you for the opportunity to testify today on the important issue of improving public access to the results of federally funded research.

My name is Sir Richard J. Roberts, Ph.D. F.R.S. and I am the Chief Scientific Officer at New England Biolabs, a small company in Ipswich, MA that makes reagents for biological research. I am also the 1993 Nobel Prize Laureate in Physiology or Medicine for the discovery of split genes.

I am pleased to have the opportunity to testify before your committee on the issue of public access. Because scientific research critically depends on knowledge of the scientific literature and building on the work of others, access to this literature is the key to progress. In my view, the open access movement is one of the single most important initiatives currently underway within the scientific community.

In addition to my role as Chief Scientific Officer, which involves producing the scientific vision for the future business of New England Biolabs, I am also an active working scientist running both an experimental laboratory and a computer-

based bioinformatics laboratory. In all of my various roles, I rely completely on digital access to a broad swath of the scientific literature so that I am aware of all major advances in biology, as well as the latest work in my own field. I read articles in a large number of different journals and am acutely aware of the difficulties accessing articles that are not available via open access.

Because of the ever-increasing cost of subscriptions, our company, like most small biotech companies, cannot afford subscriptions to all of the journals we might need. As a result, I often find myself paying the \$30 or more that is necessary to read an article in a journal to which my company does not subscribe. Since the use of the scientific literature depends on being able to quickly move from one article to another to find the relevant science, it is frustrating and inefficient when each step requires the time to make another payment. Even more disconcerting is when the article one paid to read turns out to be irrelevant to the search in hand.

Of course the biggest problem is that, without comprehensive access to the literature, it is impossible to know where the cutting edge of science lies – and it is at this cutting edge that scientists must work if they are to be productive. This lack of access has a deleterious impact on the small start-up biotech companies and others for whom cutting edge science is their bread and butter.

Promoting public access to publicly funded research results will have a huge impact in improving the health of small U.S. companies that depend on science and will also send a strong message that the routine practice of denying access to those who are unable to afford the subscription costs is actually impeding science. As we all know, it is these small entrepreneurial companies that create the new jobs in the U.S., jobs that are very badly needed at the present.

While major universities enjoy reasonably good access to the scientific literature, no institution can afford to subscribe to all of the journals that they might want to provide to their patrons. This is even more of a problem in other sectors of society. Many of the smaller colleges, including most of the liberal arts colleges that feed their graduates into the major research universities, have extremely limited access to the scientific literature. Ensuring public access to at least that subset of research results produced using public funds is something we can do right now and would be a useful and exemplary step towards filling this gap.

Even more importantly, as was brought home to me when I attended the recent 2010 Intel Science Fair in San Jose, is that high school students such as those preparing science fair projects increasingly require access to the scientific literature

if their projects are to demonstrate the type of innovation that can make them winners. While most schools now have good access to computers, it is only when articles are available through open access that they also have access to the full range of the scientific literature. And most high schools can only dream of affording access to pricey scientific journals.

We must remember that these young people going through our schools are the next generation of scientists that will enable our country to remain competitive into the foreseeable future. Providing public access to the results of publicly funded research would have an immediate and positive impact on the quality of information available to these students.

Too often, we forget that research is carried out in many places other than the well-known research universities. A strong policy demanding open access to the results of government-funded research can help small companies to be competitive, can stimulate job opportunities within those companies and can ensure that our students, the scientists of the future, can find out where the cutting edge of research really lies.