Response of **Raymond E. Spier,** Emeritus Professor of the University of Surrey, UK to the "Request for information on the Public Access to Peer-Reviewed Scholarly Publications resulting from Federally Funded Research.

Organisation: The Spier Partnership: 6 Parklands Place, Guildford, Surrey, GU1 2PS, UK

January, 10th, 2012

By way of introduction, the qualifications of this author and editor that enable him to contribute to this enquiry consist of:

He was the founder and Editor in Chief of the peer-reviewed journal "Vaccine" for some 28 years beginning in 1983.
He is the founder and Co-Editor in Chief of the peer reviewed journal "Science and Engineering Ethics" since 1995.
He was the originator of the European Society for Animal Cell Technology in 1975
He was the originator of the International Society for Vaccines in 1995
He is presently:

Past President of the International Society for Vaccines
Vaccine Series Editor in Chief
Reviews Editor for Vaccine
Editor in Chief of Procedia in Vaccinology (Web-based, not peer reviewed)
Editor in Chief of the peer reviewed and Web-based journal called Trials in Vaccinology
Principal of the about-to-be-launched Web-based information and Vaccinologists support facility called VaccineOrb

He was a Professor of Microbiology for 12 years and a Professor of Science and Engineering Ethics for 7 years at the University of Surrey, UK.
Presently, he is an Emeritus Professor of Science and Engineering Ethics of the University of Surrey, UK.

He is formally qualified in Chemistry, Biochemistry, Chemical Microbiology and Biochemical Engineering, and has Fellowships with the UK Institutions of Biology, Chemical Engineering, the Royal Society of Medicine, the Royal Society for Arts and Manufactures and the American Association for the Advancement of Science.

He presently enjoys a contractual relationship for his editorial and consultancy services with the publishers Elsevier and Springer

Response to the Request for Information.

In seeking to expand access to the latest breakthroughs in the area of vaccines and vaccination Elsevier has:-

- Launched two new web-based and openly accessible journals
  - Procedia in Vaccinology
  - Trials in Vaccinology
- Is about to launch a web-based facility called "VaccineOrb" which will include such nodes as:-
  - Events
  - Partnerships
  - Manufacturers
  - Experts
  - Jobs
  - Glossary of Terms
  - Acronyms
  - Vaccine Channel Webcasts
  - Trials in Vaccinology
  - Procedia in Vaccinology
  - Vaccine Table of Contents Page (with abstracts)
  - Views of the Vaccinologists
  - Latest Patents
  - Conferences/Congresses/Symposia/Workshops Calendar
  - Vaccine Safety (Brighton Collaboration)
  - Vaccine Safety Quarterly
  - About us
    - People
    - Mission statement/editorial Vaccine Alert Service
  - News and breaking events/ reports
  - Top Cited Papers
  - Hottest Articles
  - Just Published
  - Resource Centre
    - Publications
    - Contacts
    - Suggestions
    - Links
  - It is hoped at some future date to provide web-based courses in Vaccinology that may be freely available to students in the Developing World so that they may be able to invent and

make vaccines that will enhance the health and well being of their indigenous populations of humans and animals.

To underpin the above efforts in publication and information dissemination Elsevier, in conjunction with the International Society for Vaccines, has been active in setting up an Annual Global Congress for Vaccinologists and in supporting local Regional Congresses in the same area – the first such was held in Abu Dhabi in November, 2011.

It is clear that Elsevier is mindful of its role in collecting and disseminating the results of research in a way that constitutes a public good. This publisher takes risks when it funds the publication of a new and untried journal and its day to day commitment to the well being of its journals is a hallmark of its approach to its task. Its commitment to success in these activities is spurred on, not only by financial considerations but also by a sense of mission in being a catalyst for progress and improvements in the well being of humans, animals, biota in the round and the planet.

While the Elsevier journals make reports of research and experimentation available to the research community it should be noted that data and information that is used to progress a Patent application does not generally go through the open access journal system until the Patent has been accepted and published. It should also be noted that in writing a Patent patentees are required to give a full description of their purported invention. In so doing the precise conditions of a method are provided as a "within the range…" designation which may delay the direct implementation of the method as and when the protected period of the patent is exceeded.

Presently we have a system of journal publications that are available to those with a "need to know". They exist in repositories in libraries and journal collections. Many such journals become freely available on the Web after a period of 6 to 12 months. They are also made known to those who need such information via sophisticated search engines such as ScienceDirect, Sirius, SpringerLink, and, very often, a straight "Google" search will yield the required data. Also there is the area of the public access journals such as the PLoS, PubMed and Wikipedia. That such collections of information exist make the searching of the available literature practical. It will remain for the individual researcher to work out how to use the mass of data, information, papers and documents it is possible to cull from the vast repositories of information that are presently available and accessible. That they will be used mainly by

people in the field is necessitated by the requirement for expertise in the search and analysis processes. It cannot be reasonably expected that members of the general public would either wish to, or need to, use the masses of information that are generated and deposited in accessible form on a daily basis.

It should be a matter of concern that this wealth of data and information needs to be protected against all forms of destructive agencies. Malfunction or malevolent manipulation of this enormous data base of articles and reviews has to be countered. The effects of magnetic storms emanating from the Sun as well as the radiation from discharged nuclear weapons have to be taken into account when engineering storage and retrieval systems for the "knowledge of the world". We have to guard against the redundancy or incompatability of the software that enables access to the existing repository and the material stored in the future – we must make sure that however the data is stored, its accessibility in 100 or 1000 years from now must be secured. This will require the multiplication of storage systems, methods, locations and protective devices.

Publishers would take the view that, for legal reasons, they require the copyright of all the material they publish. This protects their intellectual property. This is a different form of protection than Intellectual Property Rights (IPR) measures. Generally, publishers respect the need of authors for private publication of limited numbers of copies for teaching purposes. They are less willing to let authors use copyright papers for publicity or public relations purposes.

Clearly, information and data generated as a result of the expenditure of Federally derived monies are not in the same category as the same kind of material from commercial, charity, foundation or private funding sources. There is a sense of obligation to make such information readily available to any *bona fide* member of the society. But this clearly does not pertain for work that is commissioned in the area of the military or in areas that may cause diplomatic unease. Indeed, work that impinges on the political sensitivities of elected representatives or civil servants (government employees) may also be deemed subject to restricted distribution orders. Police and criminal/legal matters can also be considered in this light also.

There is presently much work that is effected throughout the research community on the Responsible Conduct of Research (RCR) much of which is published in the journal Science and Engineering Ethics. The US government has set up the Office of Research Integrity (ORI) to oversee

the integrity of the science output and to adjudicate on disputes that arise from contentions of “Scientific Misconduct”. While there are many facets of the peer-review process that impede the publication of outstanding works (lack of understanding of a new paradigm, competitiveness of reviewer or jealousy) I have generally found, from some 30 years of handling peer-reviewed papers, that the reviewers bring to the area a careful and considered response that mostly leads to an improvement in the quality and impact of a paper. The mechanics of soliciting and receiving reviews and their dispatch to authors with the subsequent receipt of a revised manuscript is a highly refined operation often dependent on sophisticated software that takes all possible circumstances into account.

Clearly, any changes to the present system has to depend on the development of a consensus between all the interested and involved parties.