

RSC Publishing

Response to OSTP Request for Information: Public Access to Peer-Reviewed Scholarly Publications Resulting from Federally Funded Research

On behalf of the Royal Society of Chemistry, UK

To: Office of Science and Technology Policy (OSTP)
Washington, DC 20502, USA

via e-mail to: digitaldata@ostp.gov

From:

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About RSC Publishing

RSC Publishing is one of the largest and most dynamic publishers of chemical science information in the world. We publish 34 international peer reviewed scholarly journals, almost 100 scientific books per annum, two highly acclaimed magazines, and a number of successful databases.

Not-for-profit

We are a not-for-profit publisher wholly owned by the Royal Society of Chemistry. Our authors, readers and customers are truly international and our publishing activity dates back to 1841.

Authoritative

RSC Publishing is a member of ALPSP, the Association of Learned and Professional Society Publishers, and we adhere to the ALPSP principles of scholarly-friendly journal publishing practice.

All research articles published by the RSC are peer reviewed. The journals are considered to be of the highest standards in their field, with an average impact factor of an impressive 5.4. Through the professional management of the publishing process, from submission through to publication, RSC content satisfies the pillars of scholarly publishing:

- Certification (validation of quality and integrity)
- Registration (recognition of achievement)
- Accessibility (unparalleled online access, worldwide)
- Archiving (reliable perpetual accessibility)
- Navigation (industry leading services to identify content)

Award-winning

RSC Publishing has been recognised by a number of prestigious awards, including the 2011 ALPSP Best New Journal Award for the high impact journal *Chemical Science*. The Award citation reads “Launched to present high quality cutting edge research across the chemical sciences, it has achieved swift success. There are very close links with the community and the journal is clearly defined by the science and the user,”

Professional

The publishing operation is based in Cambridge, UK, and employs around 275 people on the Science Park. These professional publishing staff engage in the preparation, peer review, selection, editing, production, marketing and distribution of information in the chemical sciences. Additional publishing staff are based internationally in Philadelphia and Raleigh, USA; Beijing and Shanghai, China and Tokyo, Japan.

Investing for the Research Good

As a Not For Profit organization, the RSC sustains its proven and established publishing activities primarily through subscription revenue. This model also enables the RSC to invest in new highly valued services for the community, generally at no additional cost to the user.

By way of example, during 2009 RSC Publishing acquired ChemSpider, a structure centric database for chemists. ChemSpider provides searchable access to over 26 million chemical structures and is considered to be one of the richest single sources of structure-based chemistry information worldwide. RSC Publishing provides free access to this service, as part of its publishing operations.

We welcome the opportunity to respond to the Office of Science and Technology Policy (OSTP) Request for Information (RFI): Public Access to Peer-Reviewed Scholarly Publications Resulting From Federally Funded Research.

The RSC is the largest organisation in Europe for advancing the chemical sciences. Supported by a network of over 47,000 members worldwide and an internationally acclaimed publishing business, its activities span education and training, conferences and science policy, and the promotion of the chemical sciences to the public. This document represents the views of the RSC. The RSC has a duty under its Royal Charter "to serve the public interest" by acting in an independent advisory capacity, and it is in this spirit that this submission is made.

Our comments are presented below, in response to the questions posed in the RFI.

(1) Are there steps that agencies could take to grow existing and new markets related to the access and analysis of peer-reviewed publications that result from federally funded scientific research? How can policies for archiving publications and making them publically accessible be used to grow the economy and improve the productivity of the scientific enterprise? What are the relative costs and benefits of such policies? What type of access to these publications is required to maximize U.S. economic growth and improve the productivity of the American scientific enterprise?

- Peer review publications are an international product, disseminating information globally in a highly effective manner. Many channels of access have been developed by publishers, to ensure content can be easily discovered and accessed by those with an interest in consuming the material
- Researchers in North America have exceptional access to research content, with a recent survey suggesting that 97% of North American researchers have very or fairly easy access to research journals (source: www.publishingresearch.net/projects.htm)
- Consideration should be given to who may genuinely wish to access research articles, with reference to differing subject areas and public interest.
- Publisher led initiatives have recently opened up access to content far more broadly than ever before. In addition to pay per view, services such as DeepDyve (www.deepdyve.com) provide a low cost article rental service extending accessibility to content more broadly.
- Initiatives supported by publishers also provide free or very low cost access to the lowest gross national income per capita countries. Several such initiatives exist, including Reseach4Life (www.who.int/hinari).
- It is important that each research community (subject) is considered individually, as each have their specific needs and opportunities. Policies should reflect such nuances.

- Consideration should be given to sustainable archiving and the long term preservation of content. Efforts to provide free public access to content should work with stakeholders to ensure any policies do not adversely impact on the integrity of content archiving.
- Consideration should be given to the international nature of science publishing. Providing public access in one country is likely to provide access to researchers and other users throughout the world. Economic benefits are therefore likely to be no different for North America compared to other nations.

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

- The long-term sustainability of the system must be preserved, changes which impact on intellectual property rights must consider the impact on existing policies, processes and systems
- Policy and statements should be clearly defined, to differentiate what content may be openly (publicly) shared, and what may not.
- Policies should acknowledge the inherent costs involved in refereeing, copy-editing, typesetting, hosting, maintaining, preserving and making available scholarly journal content. Those who invest in these processes should be entitled to recover their costs to ensure sustainability of the systems for future generations.
- Funding Gold Open Access for researchers, as authors, enables all such work to be readily available to the public, immediately upon publication, in an accessible and reliable way. Gold Open Access is the arrangement whereby 'author side' payments replace 'reader side' payments (subscriptions), enabling costs to be covered and content to be freely accessible to all. Consideration should be given to supporting this option, including hybrid Gold Open Access, which works in harmony with established publishing systems.
- The consequences of making content freely available, particularly with respect to potential piracy and unauthorized onward distribution, should be considered carefully, and steps taken accordingly.
- Alternative means of disseminating the results of Federally funded work should also be considered. An example may be to make interim and final research / project reports freely and publically available.

(3) What are the pros and cons of centralized and decentralized approaches to managing public access to peer-reviewed scholarly publications that result from federally funded research in terms of interoperability, search, development of analytic tools, and other scientific and commercial opportunities? Are there reasons why a Federal agency (or agencies) should maintain custody of all published content, and are there ways that the government can ensure long-term stewardship if content is distributed across multiple private sources?

- It is important that consumers of research content are confident that the article they read is the final 'version of record'. This typically resides on the publisher's content delivery platform and is widely accessible.
- Creating an additional platform for one subset of content, could result in confusion as to where readers should go to access the authoritative version.
- Creating an additional platform, with the functionality expected from each research community, is likely to be expensive and would be a duplication of effort. Such a platform would require continuous development, to innovate and deliver value added services as these evolve over time. Supporting or utilizing established systems, which are often tailored to subject based needs, could be a highly efficient and effective way to implement a public access policy.
- Existing platforms are highly interconnected, through publisher led innovations such as DOIs (digital object identifiers), and CrossRef (reference linking). The investment in these activities are largely supported by Publishers, to aid navigation and discoverability of content.
- As mentioned in response to Q1, access to content for research professionals in North America is already good. Enhancing access, through making content publicly available, may be best and most effectively serviced, through the adoption of Gold or hybrid Gold Open Access. This would work with established and reliable systems, and enhance access worldwide.

(4) Are there models or new ideas for public-private partnerships that take advantage of existing publisher archives and encourage innovation in accessibility and interoperability, while ensuring long-term stewardship of the results of federally funded research?

- We, as with most publishers, are open to collaborating with Government and/or funding agencies, to explore how we can be part of the solution to increasing access to research content in a sustainable way.
- The RSC is a partner in the Open PHACTS consortium aimed at creating an open innovative platform, the Open Pharmacological Space, which will be freely accessible for knowledge discovery and verification. Funded by the Innovative Medicines Initiative (IMI), a private-public partnership, it will also serve other IMI projects, the broader pharmaceutical industry, and other public drug discovery efforts. This demonstrates

(5) What steps can be taken by Federal agencies, publishers, and/or scholarly and professional societies to encourage interoperable search, discovery, and analysis capacity across disciplines and archives? What are the minimum core metadata for scholarly publications that must be made available to the public to allow such capabilities? How should Federal agencies make certain that such minimum core metadata associated with peer-reviewed publications resulting from federally funded scientific research are publicly available to ensure that these publications can be easily found and linked to Federal science funding?

- Interoperability is an area that all stakeholders have an interest in continuously improving. It serves the community well, by increasing awareness, discoverability and (easy) accessibility to content.
- Linking mechanisms, developed by publishers, have set a benchmark for further development. For example, CrossRef, and utilization of DOIs.

- Additional interlinking between articles and key databases provides significant improvements for users. For example, linking from an article to the (free) ChemSpider chemical structure database (www.chemspider.com), can then take users to other articles with similar or identical chemical compounds.

(6) How can Federal agencies that fund science maximize the benefit of public access policies to U.S. taxpayers, and their investment in the peer-reviewed literature, while minimizing burden and costs for stakeholders, including awardee institutions, scientists, publishers, Federal agencies, and libraries?

- Federal agencies do not directly invest in peer reviewed literature. However, the output from agency funded research does contribute to the body of knowledge published in these journals. The investment costs are borne by publishers, with this investment recouped through subscription or alternative business models.
- Supporting Gold or hybrid Gold Open Access may be a cost effective solution to enhance public access to research content. This may also be a relatively quick route to providing public access to research articles derived from publicly funded research.

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

- There may be scope to consider these alternative publication types. However, they have quite unique characteristics and would need detailed investigation and evaluation to ensure any policies do not harm the sustainability of content dissemination for future generations
- It is unlikely these types of publication would have as much flexibility as journal content, such that care should be taken to avoid damaging the fundamental goal of content dissemination. By way of example, if a book of (say) seven chapters was made freely available to all, it is very unclear how the publisher could recoup their investment in commissioning the work, improving the content, copyediting, typesetting, publication, dissemination, and author royalties, if a reader can access these chapters without payment.

(8) What is the appropriate embargo period after publication before the public is granted free access to the full content of peer-reviewed scholarly publications resulting from federally funded research? Please describe the empirical basis for the recommended embargo period. Analyses that weigh public and private benefits and account for external market factors, such as competition, price changes, library budgets, and other factors, will be particularly useful. Are there evidence-based arguments that can be made that the delay period should be different for specific disciplines or types of publications?

- Each scientific discipline has different readership behavior, and should be considered independently.
- The embargo period route (i.e. Green Open Access) is not supported by the RSC. The period for the publisher to recoup their considerable investment in managing the entire publishing process would need to be preserved, and there is likely to be pressure to reduce the embargo year on year. When this causes widespread cancellation of journals, no funding is then available to support crucial publishing activities required to prepare the articles in the first place. This could cause the

entire system could collapse to the detriment of science. Green Open Access is generally considered to be a parasitic model or approach.

- In order to preserve the opportunity for publishers to recoup their investments, typically more than 50% of article downloads should be retained within the 'subscription access only' period. For the chemical sciences, this typically ranges from 12-18 months.
- If the intention of this policy is to make publicly funded research available publicly, the embargo period does not fully satisfy this objective. Content will not be publicly available until months or potentially years after first publication.
- Following from the above, if the intention is to make such content publicly available, supporting the Gold or hybrid Gold option satisfies this goal. Content is then publicly available, with no barriers or delay, immediately upon publication. Many funding agencies already support this route, allowing researchers (as authors) to use part of the funding to pay the author side fees associated with Gold Open Access. These articles are then publicly available, worldwide, immediately upon publication.
- Almost all publishers already provide the option of (hybrid) Gold Open Access. All RSC journals have this option, allowing authors to choose whether they wish to make their article publicly available.

Please identify any other items the Task Force might consider for Federal policies related to public access to peer-reviewed scholarly publications resulting from federally supported research.

- Consideration should be given to the global impact of any policy or proposal. Science knows no boundaries, and science publishing is also a global venture.
- Publishers, including the RSC, are open to working with agencies, to enhance access to content. This is a shared goal.
- Of paramount importance is the long term sustainability of the scientific publishing framework: certification, registration, accessibility, archiving and navigation. These factors are as relevant today, as they were when the first research journal was published in 1665.

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