



Smarter Learning response to Request for Information on Maximizing Research Funds by Limiting Allowable Publishing Costs

Notice Number: NOT-OD-25-138

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Summary response

We welcome the opportunity to respond to the National Institutes of Health Request for Information on Maximizing Research Funds by Limiting Allowable Publishing Costs (hereafter “the NIH RFI”), issued July 30, 2025 as [NOT-OD-25-138](#).

Smarter Learning is a US-based publishing consultancy.¹ Our clients include startups building products and services using large language models (LLMs) and artificial intelligence (AI), with a focus on companies using AI for scholarly and academic content published in the scientific, technical, and medical (STM) fields.

Our work covers all aspects of STM publishing and concentrates on Gold Open Access (ie, peer-reviewed science without paywalls), in which the article processing charge (APC) is the prevalent business model.

Because the cost of APCs is a particular point of interest in the NIH RFI, Smarter Learning is distinctly suited to comment. Our position is three-fold:

1. APCs, as a transparent fee for service, provide the maximum amount of end-user access and help to meet the tenets of gold standard science² that NIH seeks to implement.
2. NIH should encourage the use of peer-reviewed scholarly articles as training data to improve LLMs and AI – with APC-supported Gold OA publications ideally positioned for this task.
3. The NIH RFI is right to take interest in finding remedies to long-standing concerns about the process of scientific publishing, including timely and accurate peer review. But APCs are not the cause of – nor are APC price caps the solution to – the limitations in disseminating research accurately and efficiently.

¹ Smarter Learning LLC, registered in the state of Delaware

² [Leading in Gold Standard Science: An NIH Implementation Plan](#), page 2

Full Response

1. APCs, as a transparent fee for service, provide the maximum amount of end-user access and help to meet the tenets of gold standard science³ that NIH seeks to implement.

The Benefits of Open Access

The Open Access (OA) publishing model has its roots in American innovation, as outlined by the 2003 Bethesda Statement.⁴ OA publishing improves the pace and value of research to society, enables the efficient exchange of ideas, and greatly increases the visibility and potential impact of researchers' work.

More specifically, the output known as “Gold OA” unlocks discoverability and promotes trust and transparency. Gold OA research articles are peer-reviewed and free to read immediately upon publication, without paywalls or subscriptions. These articles are found in both fully open journals and in hybrid journals⁵ that publish a mix of open articles, be they embargoed (ie, with restricted access before becoming fully open) or available only via credentialed access.⁶

Gold OA articles and their underlying data are transferred to public, federal repositories and typically are stored in other commercial or non-profit databases. The metadata are provided in XML files and other standardized, machine-readable formats to meet the data principles of findability, accessibility, interoperability, and reuse.⁷

To provide this perpetual openness, and to offset the costs of research integrity necessities such as peer review, Gold OA articles are funded by article processing charges (APCs). APCs are a transparent fee for service that are cost-effective and commercially sustainable because their pricing is regularly revisited (typically annually) to align with the needs of funders, institutions, and individual researchers.

The Wisdom of Federal Public Access

Smarter Learning supports the August 2022 Office of Science and Technology Policy (OSTP) guidelines on immediate public access to federally funded research.⁸ We encourage

³ [Leading in Gold Standard Science: An NIH Implementation Plan](#), page 2

⁴ Bethesda Statement on Open Access Publishing (2003): https://archive.org/details/jlis_it-8628

⁵ Sometimes called “transformative journals”

⁶ Such access can be individual (such as a username/password), collective (such as through an IP range or seat licensing), or a combination thereof.

⁷ FAIR Principles: <https://www.go-fair.org/fair-principles/>

⁸ “Ensuring Free, Immediate, and Equitable Access to Federally Funded Research”; August 25, 2022

Congress to formalize these guidelines – the framework of which was developed by OSTP during President Trump’s first administration⁹ – as federal law.

The 2022 OSTP guidelines mandate public access but do not specify delivery models for achieving that access. Smarter Learning supports a publishing ecosystem with more than one business model, as no single method of distribution can meet the varying needs of researchers across the physical sciences, social sciences, and humanities.¹⁰

With that said, supporting Gold OA is the most effective way for NIH to secure the ends sought by both OSTP’s 2022 guidelines and the 2025 Executive Order (EO) on Restoring Gold Standard Science,¹¹ as detailed in the Agency Guidance for Implementing Gold Standard Science in the Conduct and Management of Scientific Activities.¹²

And to support Gold OA is to support APCs – not to set limits on them, and certainly not to disallow them, both of which the NIH RFI sets forth as possibilities.¹³

How Gold OA saves money and promotes transparency

Gold OA – underpinned by APCs – delivers NIH’s desired results for public access in an efficient, effective, and affordable way. It reduces burdens on researchers and institutions and provides clear protections for researchers’ rights.

Admittedly, setting the Gold OA business model as first among equals is not universally embraced within the STM publishing industry. Subscription-based publishers have adopted Gold OA outputs but normally encourage publication in hybrid journals, which offer an OA option alongside the traditional subscription (that is, paywalled) access to content.

But **hybrid is more expensive than Gold OA**, according to a March 2025 report from the research firm Delta Think.¹⁴ Independent research published this month has replicated these findings.¹⁵

⁹ Request for Information 85 FR 9488: Public Access to Peer-Reviewed Scholarly Publications, Data, and Code Resulting from Federally-Funded Research; <https://www.federalregister.gov/documents/2020/02/19/2020-03189/request-for-information-public-access-to-peer-reviewed-scholarly-publications-data-and-code>

¹⁰ Ciavarella T, Colangelo E. The changing landscape of open access policies and transformative agreements. Sci Ed. 2025;48. <https://doi.org/10.36591/SE-4801-04>

¹¹ <https://www.whitehouse.gov/presidential-actions/2025/05/restoring-gold-standard-science/>

¹² <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

¹³ <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-25-138.html>

¹⁴ <https://www.deltathink.com/news-views-open-access-charges-price-increases-back-on-trend>

¹⁵ <https://www.scholcommlab.ca/2025/09/03/nih-apc-caps/>

Gold OA is more financially efficient¹⁶ because **the Gold OA model requires only a one-time investment**, when an article is published; this makes the content freely available perpetually. By contrast, articles in hybrid journals are delivered via institution-level contracts that typically require recurring payments, including annual subscription fees that keep journal articles behind paywalls and limit access to a particular academic or scholarly population.

It is vital that NIH funding of public access is as scalable and as good a value for money as possible, and in our view, Gold OA is the best way of securing that outcome. It offers a simple, transparent, and competitive means to unlock the benefits of fully accessible science. As such we believe that NIH, in allowing for compliance through multiple business models, should express a clear preference for Gold OA.

2. NIH should encourage the use of peer-reviewed scholarly articles as training data to improve LLMs and AI – with APC-supported Gold OA publications ideally positioned for this task.

Public access to the results of federally funded, peer-reviewed research offers significant social and economic benefits. NIH recognized this in April with its decision to speed up by six months implementation of the 2022 OSTP guidelines.¹⁷

At the same time, American citizens have embraced generative AI tools like ChatGPT to retrieve insights into that publicly funded data; NIH should therefore take an interest in the accuracy of these AI products and services in disseminating that data.

When training LLMs, better inputs – those that are scientifically accurate, validated by peer review, and tested by public opinion – will result in better generative AI outputs. Scientific publishers provide these inputs to train AI and LLMs, with Gold OA publications – underpinned by transparent APCs – again serving as an ideal standard.

More to the point, Gold OA articles published under the Creative Commons attribution license (CC BY)¹⁸ are the best non-governmental datasets available for LLM training. The

¹⁶ Specifically, Gold OA APCs are 64% of those charged by hybrid subscription journals.

¹⁷ <https://www.nih.gov/about-nih/nih-director/statements/accelerating-access-research-results-new-implementation-date-2024-nih-public-access-policy>

¹⁸ <https://creativecommons.org/licenses/by/4.0/>

CC BY license allows third parties to distribute, remix, adapt, and build on the published content – with the requirement that attribution be given to the articles' original creators.¹⁹

The Gold OA approach, coupled with CC BY, delivers truly open science that is freely and permanently available for anyone to view, download, and disseminate, allowing all researchers and rightsholders to commercially manage their intellectual property as they see fit.

3. The NIH RFI is right to take interest in finding remedies to long-standing concerns about the process of scientific publishing, including timely and accurate peer review. But APCs are not the cause of – nor are APC price caps the solution to – the limitations in disseminating research accurately and efficiently.

Given the significant monetary and infrastructure commitments the US federal government makes annually to research, NIH is right to look carefully at the processes, expenses, and outputs of the scientific publishing industry. As such, the NIH RFI “seeks to set a reasonable threshold for what the Agency spends on publication expenses from direct costs of awards.”²⁰

Briefly, those ideas are:

- Option 1: Disallow all publication costs.
- Option 2: Set a limit on allowable costs per publication.
- Option 3: Set a limit on allowable costs per publication and allow a higher amount to be paid when peer reviewers are compensated.
- Option 4: Set a limit on the total amount of an award that can be spent on publication costs.
- Option 5: Set a limit on both the per publication cost and the total amount of an award that can be spent on publications.

Many analyses into these options have already been published, with especially helpful thoughts from Haustein et al²¹ and Marcum.²²

¹⁹ Any publisher applying the CC BY license to its content presumes that said content has been scraped and ingested for LLM and AI training purposes, regardless of how individual startups might respond when asked.

²⁰ <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-25-138.html>

²¹ Haustein, S., Schares, E., Alperin, J.P., Camargo, F., Matthias, L., Céspedes, L., Poitras, C., & Strecker, D. (2025). APCs of 2,228 journals where NIH-funded authors published in 2025 (Version v1) [dataset]. Harvard Dataverse. <https://doi.org/10.7910/DVN/3XDMNF>

²² <https://upstream.force11.org/capping-apcs-may-not-work/>

To these important publications Smarter Learning adds the following observations:

APCs should continue to be allowable expenses in NIH awards, and there is no need for NIH price controls.

As a funder, NIH can certainly set rules around how its award funds can be used. But APC price caps are not advisable. Caps interfere with free market principles; disincentivize publishing companies from making investments in personnel and technology that can improve research integrity; and create an environment where companies can choose to meet NIH rules in practice but take actions that violate those terms in spirit. (For example, raising APC pricing for no other reason than NIH allows a certain threshold.)

What's more, recommending price caps or outright disallowing publication costs presumes an anticompetitive or antitrust environment in the STM publishing industry, an assertion with scant legal basis despite attempts to prove otherwise.²³ And even if evidence of such practices existed, the NIH RFI presumes that NIH itself should enact a remedy immediately and unilaterally, absent commentary from other grant-awarding federal agencies, federal courts, or the Federal Trade Commission, the latter of which has direct experience investigating legitimate matters of waste, fraud, and abuse carried out in the name of scientific publishing.²⁴

Recognition – not pay – drives quality peer review.

In Option 3 NIH admirably takes interest in research integrity by considering financial compensation for peer reviewers, an idea that has been investigated by the STM community many times, with recent research noting that “cash payments can incentivize peer review at a medical journal.”²⁵

However, research shows that overall recognition – not simply *monetary* recognition – is the true driver behind the timeliness and quality of peer review:

“Projecting the future state of peer review is fraught with uncertainty. Researchers, however, have a clear idea of what will make a difference: greater recognition and more formalized incentives for peer review. 83% of survey respondents stated that

²³ *Uddin v. Elsevier, BV et al*, Case No. 1:24-cv-06409-HG,
<https://storage.courtlistener.com/recap/gov.uscourts.nyed.520652/gov.uscourts.nyed.520652.63.0.pdf>

²⁴ *Federal Trade Commission v. OMICS Group Inc.*, <https://www.ftc.gov/legal-library/browse/cases-proceedings/152-3113-omics-group-inc>

²⁵ *Monetary Incentives for Peer Review at a Medical Journal: A Quasi-Randomized Experimental Study*. Christopher Cotton, Abid Alam, Sophie Tosta, Timothy Buchman, David Maslove. International Congress on Peer Review and Scientific Publication, Chicago, IL. September 4, 2025.
<https://peerreviewcongress.org/abstract/monetary-incentives-for-peer-review-at-a-medical-journal-a-quasi-randomized-experimental-study/>

greater recognition and career incentives to peer review would have a positive (54.7%) or extremely positive (28.6%) impact on the overall efficacy of the peer review process.”²⁶

The act of peer review, while increasingly necessary, often is not viewed by rank and tenure committees as the academic equal of authoring or co-authoring a research article. Even writing book chapters, which can be just as labor-intensive as writing or reviewing an article, typically is not considered a tenure-level contribution.

Put another way: it is the skewed incentive structure of academia – not the monetary incentives (or lack thereof) of STM publishers – that feeds the difficulty in procuring timely, quality peer review. As such, tying higher APCs to the promise of peer review payments would not achieve NIH’s desired end.

Conclusion

Smarter Learning welcomes NIH’s interest in a robust and transparent assessment of STM publishing practices. We stand ready to support all federal agencies as they work to implement the requirements of the 2022 OSTP guidelines. It is vital that the STM publishing industry back responsible efforts for the good of public access. And in judging those efforts, publishing via Gold Open Access – as supported by APCs and clear reuse licenses – delivers the outcomes NIH seeks.

About Smarter Learning

Smarter Learning is a consultancy specializing in relationship management, business development, communication strategy, and science policy. The company was founded in 2011 by Tom Ciavarella, who in a 25-year publishing career has worked in books (both trade and academic), news media, content licensing, government affairs, and public policy. He can be reached at tom@tomciav.com.

²⁶ 2018 Global State of Peer Review, page 49. <https://publons.com/static/Publons-Global-State-Of-Peer-Review-2018.pdf>