

Elsevier Response: Request for Information on the National Institutes of Health on Maximizing Research Funds by Limiting Allowable Publishing Costs

Executive Summary

Elsevier is a global leader in advanced information and decision support for science and healthcare. We facilitate insights and critical decision-making for customers across the global research and health ecosystems.

Elsevier welcomes the opportunity to respond to the National Institutes of Health (NIH) request for comment on allowable publishing costs. Elsevier employs more than 2,500 people in the US, with offices in 14 states and the District of Columbia, with major sites in Boston, New York, Philadelphia, and St. Louis. We also publish around 1,100 journals on behalf of over 700 society partners, many of whom are based in the US.

We support NIH's goals for high-quality and impactful research by investing in publishing processes that ensure integrity and reproducibility in the scholarly record. Taking into account the risks of approaches such as APC caps, which unduly limit funding for publishing research outputs, the NIH's proposed Option 4 in its RFI: *Set a limit on the total amount of an award that can be spent on publication costs* offers a good starting point for further dialogue.

Our investments into the integrity of the scholarly record are maintained via sustainable publishing models, such as the gold open access model funded by Article Publishing Charges (APCs). We will support NIH's objectives on public access, outlined in its public access policy, via this model.

Proposed policy options

We support NIH's objectives to ensure the research outputs it funds are of substantive quality and impact, and to maximize the value of these outputs across the research lifecycle. Ensuring this quality via the publishing process requires continuous investment, particularly in the areas of content integrity, reliability, and reproducibility, to advance science, healthcare and innovation - goals that are more broadly reflected in the Administration's Restoring Gold Standard Science Executive Order. We support the NIH's ambition to lead in Gold Standard Science, outlined in its [Implementation Plan](#). We have launched policies and initiatives spanning many of the nine tenets of Gold Standard Science, including: [open data](#); open methods including implementing a version of Cell Press' [STAR Methods](#) across most of our journals; and testing new peer review approaches with [Results Masked Review](#). We are a signatory of the [Center for Open Science](#) (COS) [Transparency and Openness Promotion](#) (TOP) guidelines, a community initiative aiming to promote transparency, open sharing, and reproducibility. We would be happy to share further details about these initiatives with the NIH.

Our investments are maintained via sustainable publishing models. For instance, where research is required to be made immediately publicly accessible, we enable this through the gold open access model, funded by Article Publishing Charges (APCs), which provides a sustainable approach to cover publishers' investments and enables us to uphold the integrity

and veracity of the scholarly record. We have supported NIH's public access policy for the past twenty years, and we will continue to support NIH's most recent public access policy changes via the gold open access model.

It should be acknowledged that approaches that limit funding for publishing will pose risks to achieving NIH's goals of a trustworthy scholarly record to advance science. Mechanisms such as capping of APCs could cause significant unintended consequences, including market distortions, given price regulation would create interference in an established competitive market, as well as impacts to America's global competitiveness in research, should American researchers not have the requisite funds to publish in the most relevant and impactful journal for their research, compared to their global counterparts. Of the options presented, we thus contend that NIH's proposed Option 4: *Set a limit on the total amount of an award that can be spent on publication costs* offers a good starting point for further dialogue, given it acknowledges the investments that are necessary to support quality and integrity in publishing.

Importantly, the principle behind this option could positively incentivize researchers to think carefully about the type and calibre of papers they publish, while limiting risks of so-called 'salami slicing' – publishing multiple versions of the same research – to instead encourage a focus on quality and impact when publishing in reputable journals. Relatedly, researchers will be incentivized to reflect carefully upon the most suitable journal for their article, that will offer optimum readership and reach, thereby aligning with NIH's goals for impactful research.

Option 4 also recognizes that publishing is an integral part of the research process, key to achieving research impact and realizing downstream economic benefits, and provides a straightforward way for researchers to calculate and budget for publication costs, alleviating researcher burdens where they are required to make their work freely and immediately available. Furthermore, by ensuring budget is available for publishing, researchers will be able to publish in a trusted journal that secures a permanently-available version of record, such that other researchers can build on this research with confidence.

We would like to explore further with NIH the limit for the maximum funds that would be allowable to allocate towards publication costs. Key to this dialogue is understanding the appropriate level of funding required to support Option 4. We note that the calculations for the proposed options are based on estimates focused on researcher behavior *before* the NIH public access policy came into effect, and therefore likely underestimate the budget that may be required to support publication. Additionally, other aspects of how the research is conducted may need to be taken into account when calculating a maximum allowable threshold, such as the number of people involved in a project. We respectfully suggest that NIH revisit its calculations to think through various factors which may influence the thresholds for allowable costs. Ideally, NIH would first assess researcher behavior under the new public access policy before finalizing calculations for allowable costs for publication, or at the very least keep thresholds under formal review based on actual researcher need and behavior as the NIH public access policy is implemented. Finally, any stated limit will need to increase annually in line with inflation, and a process for exceptional cases would likely be needed to ensure that surfacing outstanding research with the potential to generate innovation and real-world impact is never hampered.

We welcome the opportunity to discuss further with NIH how Option 4 could be utilized to best achieve our shared goals.

Available evidence related to publication costs and proposed options

Below we provide brief assessments of the other options outlined in NIH's Request for Information. In summary, the other options proposed by NIH will not meet NIH's goals for impactful and high-quality research, as particularly blunt instruments such as caps will distort a currently healthy and competitive publishing market, with impacts for American research and its competitive standing on the international stage as a result.

Option 1: Disallow all publication costs

Importantly, such an approach would be inconsistent with NIH's goals to ensure the research arising from its funding achieves quality and impact, and its stated aim to not prevent awardees from publishing in any particular journal. Where researchers would not have funding support for publishing, they may not be able to publish in the journal that would afford their research the greatest readership, visibility, and impact, which would have implications for the downstream uptake of that research, in America and globally.

Furthermore, there would be regulatory and legal parameters to consider in implementing any such approach, including alignment with the Office of Management and Budget Guidance, and it is not clear that such an action would be feasible or practical.

Finally, while the Request for Information notes that some funders are withdrawing funding for article publishing costs, where alternative models are being pursued e.g., pre-printing with open peer review or publishing article components individually, these tend to see low uptake and have not been shown to scale. Prominent examples include the EU's [Open Research Europe](#), and [Octopus](#) in the UK. There is also little evidence that not-for-profit alternatives are cheaper than existing APC-based models. For example, a [2024 study](#) commissioned by the European Commission shows that overall costs per publication for not-for-profits such as Open Research Europe will, at least initially, be similar to APC-based approaches.

Option 2: Set a limit on allowable costs per publication, and Option 5: Set a limit on both the per publication cost and the total amount of an award that can be spent on publications.

In free market economics, companies must have the ability to set pricing that makes sense in their individual context; healthy competition helps to regulate pricing, and drives innovation and efficiency. It is widely acknowledged that price regulation creates market distortions and typically leads to unintended consequences. By way of an example, rent controls implemented in major US cities in previous decades have led to issues including poor maintenance of housing given fewer incentives to invest in upkeep, and reduced housing supply due to developer fears of low returns. Similarly, with regard to the academic publishing industry, caps set too low will pressure the industry to cut costs and undermine publishers' ability to continue to make extensive and necessary investments into the scholarly record that ensure high quality and impactful research (see below for more details about these investments).

Additionally, we question whether the calculations for caps are wholly accurate, given they are based on DOAJ data and therefore do not take into account publishing in hybrid journals, which represent a large number of well-established journals, and that the calculations reflect researcher publishing behavior *prior* to the implementation of NIH's new public access policy. This will have real implications for researchers' ability to publish in their preferred journal.

Option 3: linking allowable costs per publication to peer review compensation and enhanced publisher best practices

Feedback from the research community through various surveys and direct engagements that we have undertaken have highlighted that there is no consensus view that peer review should be financially compensated; rather, the community sees peer review as part of the researcher role, and acknowledges its contribution to their career development and academic credentials. The community has widely [acknowledged](#) that financial incentives would risk biasing the peer review and validation process. For example, reviewers may be incentivized to write brief/ rapid reviews in return for payment, rather than focusing on the quality of their review.

Many peer reviews are conducted on papers that are ultimately rejected as a result, and multiple rounds of review and revision are undertaken with a broad range of reviewers. Requiring publishers to pay for peer review could have the unintended consequence of disincentivizing the extent of peer review that takes place, with downstream implications for the quality and veracity of the scholarly record.

Additionally, it is unclear how and who would confirm or validate the review compensation status, given the majority of peer review continues to be single/ double anonymized. Even if this were possible, it would place substantial burdens on the author/ publisher to confirm review compensation status.

Unless and until there is a consensus view on this topic and the above practical concerns could be satisfactorily addressed, we respectfully caution NIH from pursuing approaches which link allowable costs to peer review compensation. Further commentary on Option 3 is provided in the section on peer review compensation.

Underlining the above points on the RFI options on allowable costs is the fact that publishers are heavily and continuously investing in publishing processes that support integrity and reproducibility in the scholarly record. These investments support NIH's goals to fund high-quality and impactful research. Below we provide an overview of the nature of publishing costs and investments.

Research output continues to grow exponentially year on year, yet we maintain a commitment to quality and integrity in the outputs that we publish. Article submissions to Elsevier have tripled in the past decade, and increased by 600,000 submissions in just the last year; we received a total of 3.5 million submissions in 2024. Consistent with our focus on quality, we published only around one-fifth of the submissions we received (720,000 in 2024). We do this by investing substantially and at scale to screen and assess each submission. Our publication

costs and investments are therefore often focused on research that ultimately does not go on to be published, to safeguard the integrity of the scholarly record. As a result, articles in our journals account for over 17% of global research output but 29% of global citations, and have a field-weighted citation impact 41% higher than the world average. In support of this, we work with and provide honoraria for 36,000 expert editors, with whom we connect 1.7 million reviewers, providing tools and systems to manage and organize the editorial and peer review process. All of these factors must be considered when understanding the parameters of ‘publication costs’.

An additional and growing area of investment is in developing systematic approaches to address integrity issues, spanning detection of duplication, plagiarism and image manipulation; challenges that have been exacerbated by the widespread use of Generative AI. We develop tools to screen submissions for plagiarism, fabrication, and falsified images and data, and examine more than 100 data points indicative of potential integrity and ethics misconduct across all stages of the publication process, with new data points added regularly. Furthermore, we support industry-wide approaches by contributing our expertise, and our tools directly, for example through the [STM Integrity Hub](#), a pan-publisher service developed collectively by the [STM Association](#) publisher members, that enables publishers to detect manuscripts that violate research integrity standards.

Our investments also enable us to innovate to support the publication and discoverability of research in perpetuity. We invest in AI to enhance published content and its findability, for example, to complete metadata which allows insights to be extracted from articles more accurately. Other innovations enhance the dissemination and discoverability of research; the global scientific community accessed over 1.8 billion articles across our journal platforms in the past year.

As above, our substantial investments are only possible when underpinned by sustainable publishing models, such as the gold open access publishing model which enables immediate access to research via charging an APC per article. Our [pricing policy](#) outlines the range of factors considered when setting APCs; additionally each journal offers different service levels such as acceptance rates, editorial structures and levels of staff involvement, marketing support and more, which are reflected in varying APCs. Authors value having a range of options and flexibility on where to publish.

Finally, we price our APCs transparently and on the basis of quality, as explained in our [pricing policy](#), and display our APCs as part of our [APC price list](#) and on journal homepages. We are committed to pricing lower than other publishers for equivalent quality. We follow this pricing principle even though our commitment to quality, evident in the above data, means we must invest resources to assess many more articles than we eventually publish.

Further details and examples of our investments are covered under the section on publishing best practices, below.

Peer review compensation

Further to our points made above, here we provide additional detail about publishers' activities to support peer reviewers.

Outside of monetary compensation, many publishers including Elsevier provide compensation via benefits in kind, such as complimentary access to our paid for tools and services, including 30 days' complimentary access to Scopus and ScienceDirect. We have developed a Reviewer Hub which provides reviewers with a means of showcasing their efforts and receiving credit for their work, and which can support career progression, for example. Additionally, the platform offers discounts for several Elsevier services, including Elsevier's WebShop, which offers professional English language editing, translation and illustration services for researchers preparing their articles, and the Elsevier Book Store.

Publishing best practices

Further to our points made above regarding publication costs and investments, below we provide additional examples to illustrate the substantial investments we make to develop and maintain the version of record of a scientific article, ensuring the integrity, discoverability, accessibility and preservation of research in perpetuity.

As stated above, a particular area of investment focus for publishers such as Elsevier is in technology and human expertise to safeguard quality and integrity, to address emerging and increasing challenges in misinformation, disinformation and misuse of Generative AI. To offer some tangible evidence by way of illustration: More than 100 data points indicating potential integrity and ethics misconduct are examined across all stages of the publication process, and new data points are added regularly as behaviors change. 100% of papers flagged by our tools for potential integrity and ethics concerns are investigated by in-house experts. And those in-house experts have grown exponentially; our integrity team, which in 2020 consisted of just two people, now comprises more than 120 staff.

Added to this are our long-standing and ongoing investments in rigorous, multi-layered work to develop and maintain the version of record of a scientific article. By way of examples, these include the following investments:

Supporting and providing honoraria to 36,000 expert editors, with continuous healthy turnover to ensure new ideas and influences are sought; and expansion, such that each year we recruit and train 18,000 new editors and editorial board members who uphold the quality of the scholarly record. These editors operate under strict editorial independence; we align with the Committee on Publishing Ethics' position on [Editorial independence](#), and stand on the side of neutral unbiased information on science and health, free from corporate influence.

Connecting these editors with 1.7 million reviewers and providing tools and systems to manage and organize the editorial and peer review process; a bedrock of scholarly communication that underpins the quality of the scientific record. For example, we have developed a reviewer recommender tool to evaluate the suitability and expertise of millions of potential peer

reviewers and ensure that scientists with potentially different perspectives will also assess articles.

Maintaining the scientific record, overseeing updates and corrections to the record, including ethical investigations wherever necessary, and committing to permanent availability and preservation of the scholarly record in at least three places, working in partnership with third-party organizations as well as maintaining our own digital archive. More information is available in our [digital archive policy](#).