1. Is there anything unclear or are there any issues that have not been addressed by the guidance document?

It is unclear why different forms of Creative Commons licenses should be unacceptable to Plan S funders. For example, a CC-BY-NC-ND Creative Commons license is an alternative that will continue to foster full and immediate open access to research outputs. We maintain that Plan S funders should consider this or other options that will retain important protections of intellectual property.

Professional scientific and medical societies support public access to the scientific literature and have adopted various policies, including models of green open access (OA), that allow the scientific literature to be fully available while preserving traditional copyright. The US National Institutes of Health's (NIH) public access policy mandates that authors of all articles funded by NIH "... submit or have submitted for them to the National Library of Medicine's PubMed Central an electronic version of their final, peer-reviewed manuscripts upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication: Provided, that the NIH shall implement the public access policy in a manner consistent with copyright law." There are alternative licenses which will allow open access to scientific research for all parties absent a CC-BY license and publishers' relinquishing of copyright.

Publishers provide a service to the scientific community in maintaining an accurate record of published content and protecting its overall integrity. This service includes, but is not limited to, guarding against plagiarism, fraud, and improper reuse, as well as facilitating corrections. When they discover plagiarism, fraud, or reuse without standards, publishers take corrective measures and have in place penalties for such scientific misconduct. Mandating a CC-BY license eliminates both authors' and publishers' first line of defense against abuse by waiving most copyright and intellectual property protection and, ultimately, may have a negative impact on scientific discourse. In particular, there are instances where the integrity of a publication could be harmed, and the scientific record distorted through allowing derivatives or commercial reuse. This risk is not abstract. Scholarly Kitchen provides examples where CC-BY can enable intentional misuse of scholarly output. Consequently, we strongly encourage that the guidance is updated to allow authors and publishers the full spectrum of Creative Commons licenses, including CC-BY-NC-ND, so authors and publishers can best choose a license that complies with Plan S, while protecting the integrity of their scholarly scientific and medical output.

Another way that a CC-BY license disadvantages authors, especially young investigators, is that it can destabilize the citation record by allowing citations that should accrue to the original authors of a paper to be made incorrectly to any derivative versions. It also disadvantages authors who may not have the funds to publish in a sustainable publication that uses this license type. Most importantly, forcing authors to publish under one type of license narrows their academic freedom by limiting their publishing choices and forcing them to select journals that may not reach their intended audience.

Separately from types of licenses that should be acceptable to Plan S funders, mandating retention of copyright by authors, as Plan S would do, means that authors would have to take responsibility for and meet the expense of contesting any abuse of their work. Yet authors will generally not have the resources to contest abuses of their work that publishers have.

2. Are there other mechanisms or requirements funders should consider to foster full and immediate Open Access of research outputs?

Plan S seeks full and immediate access to publicly funded research; hybrid journals fully deliver on that goal.

Learned society publishers support a diversified blend of financial models, including hybrid and fully open access publications, because this allows us to sustainably offer rigorous peer review and an assortment of quality publishing options to the research communities we serve. The models proposed by cOAlition S do not currently serve the diverse needs of all researchers and research communities.

We urge Plan S funders to consider the practical benefits of traditional hybrid journals in the dissemination of scientific and biomedical literature in an economically feasible way. In many scholarly and scientific disciplines, the most respected journals for both authors and readers are hybrid titles published by learned societies. These society/journal brands have earned the trust of researchers, professionals, students, and the lay public through their commitment to investing in and continually improving publishing policies and practices in support of a quality- and impact-driven publishing mission and philosophy. Because of the society mission of inclusivity, some society journals offer a forum in a small, important but low citation discipline that may otherwise not be served. Current Plan S principles, if widely mandated by funders as written, would likely lead to the demise of many learned society journals that researchers depend on to publish, promote, protect, and ensure access (in perpetuity) to their research results.

A 2017 Universities UK study shows that gold OA article growth was the fastest in hybrid journals between 2012 and 2016.[1] Publishing model diversity, in which both hybrid and fully gold OA journals thrive, advances open access, open research, and new research disciplines. Hybrid journal surpluses enable societies to invest in mission-critical activities, including launching new, fully gold OA journals that are driven by the unique needs of their members and dynamics of their disciplines. Surpluses enable societies to invest in and support open research initiatives such as data credit and sharing, reproducibility, article deposition in repositories, and preprints. Lastly, hybrid journal surpluses fund the launch of niche titles to advance emerging and underserved areas of research.

In addition to original research, society journals publish reviews, editorials, commentaries, case reports, educational articles, news, and, increasingly, synoptic content—text summaries, infographics, podcasts, and videos—to serve time-constrained professionals, students,

journalists, policy makers, and the lay public. A stable mix of subscription and article publishing charge (APC) revenue enables hybrid journals to publish this important, unfunded content.

If hybrid journals are disallowed, financial stability of societies will be threatened unless another high-value opportunity can be identified, financed, and developed. Societies will have to recover lost dues revenue by charging higher fees for products and services and will have to cut educational and advocacy programs in order to remain viable organizations. This will have an unintended negative impact on authors, especially young investigators just entering the field with limited financial resources who are currently receiving membership benefits, such as journal subscriptions and reduced annual meeting registration fees. These types of society membership benefits offer researchers opportunities to increase their knowledge in the field, thereby enabling them to contribute to scholarly publishing. Also, many societies fund grants and travel support for future clinicians, researchers, and educators, especially investigators early in their careers. In all likelihood, the societies would be forced to curtail these efforts as well.

Most importantly, hybrid journals support an egalitarian, democratic publishing ethos in which anyone can publish in any journal—with some option for making their research open access—regardless of geography, status, income, funding, or funding source. A no-cost publishing option is essential for young scholars, fellows, theorists, and others for whom APC payments represent a significant financial burden or a reallocation of research budgets. This is especially important for authors in disciplines that receive minimal research funding, such as those in the humanities and social sciences. The demise of hybrid journals would result in funder-dependent publishing in which academic freedom is constrained by an ethos of a "one size fits all," "pay-to-play" publishing model. A monolithic model with a single definition of open access would bar authors from submitting to more than 80% of currently published journals.[2]

[1] Monitoring the Transition to Open Access: December 2017, Universities UK, p. 23

[2] H. Else, Radical open-access plan could spell end to journal subscriptions, *Nature* **561**, 17-18 (2018)

Plan S is overly reliant on APCs paid by authors or their sponsoring funders as its primary economic model to support its open access goals- green, gold, or hybrid. It is imprudent to put the entirety of global scholarly communications at risk by engaging in widespread adoption and precipitous implementation of Plan S on the basis of a primarily APC-driven model. The current global scholarly publishing landscape is a diverse, resilient, and distributed system that has enabled sustained support for peer review and editorial rigor and standards. Implementing such rigor comes at varying cost to each journal; one of the hallmarks of society journals is their emphasis on, and investment in, scientific rigor and relevance.

A key advantage of the current (i.e. subscription/OA "hybrid") model is that it has no "single point of failure." Alongside APCs received for OA publishing services, each journal relies to a varying

extent on a complex mix of subscription fees from academic, corporate, and government institutions (as well as individual/member subscribers)—typically augmented by paid advertising and other ancillary revenues and income from third-party and ancillary licensing revenue. All or most of these diverse revenue streams would be at risk, or forgone entirely, particularly when combined with the economic impact (to the primary publishers and professional societies) of the Plan S requirement of a CC-BY author license.

A significant consequence of heavy reliance on APCs would be to shift the cost burden of publishing from what is now a diverse group of customers and stakeholders onto individual (largely academic) research authors and their funders. An APC-funded model is problematic in three main respects: 1) the potential adverse impact of required APCs on authors without adequate funding from grants or other sources; 2) the potential unintended consequences of any price caps imposed on APCs; and 3) the prospect of regulations imposed on what is otherwise an independent and freely functioning publishing ecosystem.

We assert that reliance on APCs is neither an appropriate nor an affordable solution on a global scale, particularly given the disparity in the types (e.g. public/private) and amounts of research funding across scholarly disciplines and geographies, and the differences in how research funds are administered worldwide. In addition to including disadvantaged scholars in resource-poor countries, authors vary widely by career stage, research field, and employment status, and they often do not have access to funds that can be earmarked for publishing fees. The concept of APC waivers notwithstanding, if authors at well-funded institutions and/or located primarily in developed countries ultimately shoulder the cost burden of an APC-driven model, this risks creating a "tiered" inequity of entitled/unentitled authors that could have a distorting effect on their publishing choices, potentially leading underfunded authors to select less credible or predatory publishing outlets on the basis of cost alone. That sort of economic constraint on choices available to authors would de facto limit author freedom in a manner that the current subscription/hybrid model does not.

From the Plan S principles and implementation guidelines, extracting cost savings from the publishing enterprise seems to be an underlying central goal. We do not support the premise of price caps, and further, we find the notion of potential price regulations to be without legitimate basis. First, price caps typically create cost-shifting distortions and drive customer coping behaviors rather than succeed in extracting cost savings across markets as a whole. Second, it is unclear how APC caps would be determined, imposed, and enforced by Plan S funders and funders globally. What would be the impact of such caps on journals that impose a higher degree of editorial selectivity and standards and/or must sustain scientific and ethical rigor amidst higher rates of author submissions than other journals? Finally, we find it problematic that, focusing on potential savings, Plan S requires that "information on the publishing costs and on any factors impacting the publishing fees (for example, cross-subsidizing) must be open on the journal website/publishing platform. This must include details on direct costs, indirect costs, and potential surplus." To our knowledge, there are no parallels where private entities, whether commercial or not-for-profit, are required to disclose this level of detail. In that context, we are concerned

that the proposed Plan S compliance requirements for financial transparency by publishers, and the implied prospect of price regulations that would result from such transparency, could run afoul of antitrust laws that guard against price fixing and other anticompetitive practices. That significant concern aside, as not-for-profit entities in the United States, our financial statements are publicly disclosed at the summary level required by our taxing authority (IRS).

If pricing caps are imposed, it would be particularly deleterious to professional societies (as well as smaller publishers, and most professional societies are small publishers)—and, by extension, would negatively impact the scholarly communities they serve. Of note, the financial margins within which most societies operate are narrower than those of much larger commercial publishers. Moreover, any surplus revenues that we as professional societies derive from our publishing activities are invested into supporting the fabric of the very communities of practice that we serve.

Signatories:

AIP Publishing

American Academy of Child and Adolescent Psychiatry

American Academy of Hospice and Palliative Medicine

American Academy of Neurology

American Academy of Ophthalmology

American Association for Cancer Research

American Association for the Advancement of Science

American Association of Immunologists

American Chemical Society

American College of Cardiology

American College of Emergency Physicians

American College of Medical Genetics and Genomics

American College of Obstetricians and Gynecologists

American College of Physicians

American College of Rheumatology

American Diabetes Association

American Epilepsy Society

American Geriatrics Society

American Heart Association

American Medical Association

American Physiological Society

American Psychological Association

American Society for Investigative Pathology

American Society for Pharmacology and Experimental Therapeutics

American Society for Radiation Oncology

American Society of Civil Engineers

American Society of Clinical Oncology

American Society of Hematology

American Society of Nephrology

American Urological Association

American Water Works Association

Botanical Society of America

Endocrine Society

Federation of American Societies for Experimental Biology

GeoScienceWorld

Infectious Diseases Society of America

Institute of Food Technologists

Linguistic Society of America

Massachusetts Medical Society

Radiological Society of North America

Society for Vascular Surgery

Society of Critical Care Medicine

Society of Interventional Radiology

Society of Nuclear Medicine and Molecular Imaging

Society of Toxicology

The American Journal of Psychiatry

The RNA Society