

The Continuing Evolution of Open Access

The Academy's *Ophthalmology* family of publications is expanding once again—this time to include the basic science publication *Ophthalmology Science*. The peer-reviewed journal will launch this quarter, with Emily Y. Chew, MD, as its editor-in-chief. The new publication is unique in two ways. First, it does not focus solely on clinical topics like its sister publications *Ophthalmology*, *Ophthalmology Retina*, and *Ophthalmology Glaucoma*. Second, it's the Academy's first gold open access journal. (What is gold open access? See "Publication Models," next page.)

Adding a basic science journal to the family may not be surprising, but why is it important for the Academy to have a gold open access journal?

A Push for Gold Open Access

Changes are afoot in the world of academic publishing. In September of 2018, cOAlition S,¹ an international consortium of research organizations, institutions, and grant funders proposed its Plan S initiative to move rapidly toward open access publishing with fairly restrictive guidelines, said Dr. Chew, who is at the National Eye Institute. "They required that authors who received funding from signatories of Plan S could publish only in compliant open access journals beginning in January 2021."

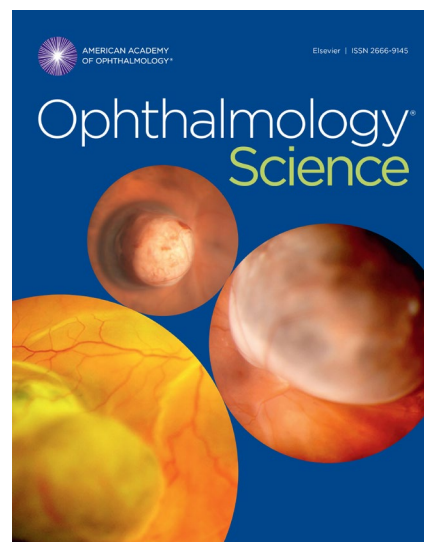
"Responding to pushback and recognizing the contribution of hybrid journals within the ecosystem, the cOAlition S has now shifted to a phased rollout that will be completely executed around 2024," said Stephen D. McLeod, MD, editor-in-chief of *Ophthalmology*.

A Publisher's Perspective on Open Access

"Few would argue against the benefits of making content immediately and freely available to all," said Jason Winkler, MBA, at Elsevier, the publishing house for the *Ophthalmology* journals. "However, most top-tier journals are hybrid—and with roughly 80% of published literature being subscription based, it would be very difficult and expensive to instantly convert publications to open access," he said.

Elsevier's goal is to work with various stakeholders within the scientific publishing community on a sustainable transition to open access, Mr. Winkler said. "And one aspect of that involves launching high-quality gold open access journals with our publishing partners, such as the Academy."

Where the United States stands. It is noteworthy, said Dr. Chew, that "even before open access was in the picture, there was a long-standing requirement that NIH-funded studies be available in raw format—unformatted and unedited—to everybody after a 12-month



OPEN ACCESS. *Ophthalmology Science*, launching in the first quarter of 2021, is the Academy's gold open access journal.

window of time," said Dr. Chew. "The United States is very supportive of open access," added Dr. McLeod, "but I don't think many have seen it as an imperative to promote at the expense of the subscription model."

To support the requirements of some grant funding agencies to make resulting research widely available, open access articles within subscription journals provide a mechanism for doing so, said Dr. McLeod. In fact, the Academy journals are seeing an increase in this trend. "In 2016, 9% of the articles in its journals were hybrid open access. In 2019, this had grown to 14%, while the total annual number of accepted articles grew 16%, regardless of access type," said Mr. Winkler.

BY ANNIE STUART, CONTRIBUTING WRITER, INTERVIEWING EMILY Y. CHEW, MD, STEPHEN D. MCLEOD, MD, SRINIVAS R. SADDA, MD, AND JASON WINKLER, MBA.

A Gold Open Access Journal From the Academy

Ophthalmology's family of journals has done very well as a traditional subscription model operating as a hybrid, said Dr. McLeod. "It's helped us meet the needs of major funding agencies for publishing their high-quality research, particularly in the area of clinical trials."

A gold access niche. But it's a broad ecosystem, said Dr. McLeod, and it was important to ask some questions: "What role can the Academy journals play in the gold open access space? What is the phenotype of papers funded by research grants that are best suited to an open access platform?"

First, it would include phase 1 and 2 trials, he said. Another big area is grant-funded laboratory-based translational science. "This allows us to offer earlier translational work with the potential to evolve into the clinically applied work that will appear in *Ophthalmology's* journals." The final big area is one of bioinformatics and artificial intelligence applications in ophthalmology.

Why basic science? "Most top-tier clinical journals are not interested in basic science. While the ideas are there, they are not quite ready for prime time," said Dr. Chew. "Especially in the medical science field, readers are inter-

ested in how a doctor can translate the study and apply it to day-to-day patient care. By adding another basic science journal to the ophthalmic literature, the Academy provides researchers expanded opportunities to present their early clinical research."

Golden? "As the Academy's first entirely open access journal that is compliant with Plan S, *Ophthalmology Science* has powerful advantages," said Srinivas R. Sadda, MD, at University of California Los Angeles and an *Ophthalmology* editorial board member. "Articles may be directed there from *Ophthalmology*, and these will have gone through a fairly rigorous peer-review process." In addition, he said, "making the entire journal open access may create an economy of scale to keep the article publishing charge (APC) for authors within a reasonable range." In fact, the APC for *Ophthalmology Science* will be \$2,000 for members and \$2,500 for nonmembers at launch.

By making *Ophthalmology Science* part of the *Ophthalmology* journal family, its reputation will be linked with the Academy's well-trusted brand, said Dr. Chew. This new journal will have the same quality and support that authors and readers expect from all the Academy journals, added Mr. Winkler. "It will benefit from the same peer review standards and rely on the same Acade-

my editorial office, as well as the same production staff on the Elsevier side."

Questions About Open Access

The Academy and Elsevier's shared commitment to excellence contradicts a common misperception about open access journals. Dr. McLeod noted that some people have the idea that because open access journals are online, it costs nothing to produce them. "It's true that online journals save on printing and mailing costs. But it takes people, time, and expertise to produce journals and cover costs of things like quality control, production, handling, and posting online."

There's a lot that happens behind the scenes, agreed Mr. Winkler. "This includes working with the editors to ensure all papers are being reviewed and acted upon in a timely manner, corresponding with authors to answer their questions, and facilitating the copyediting and proofing processes, all before a paper is finalized, no matter if that paper goes to a journal that is subscription or open access."

Who pays? To cover these costs, the open access model shifts the payment burden from the subscriber to the author. This creates a zero-sum game for the author, said Dr. Sadda. "That's because the money you have to pay to get your article published reduces the amount that you have left to do the original research. It's feasible if the expenses are modest, but when it's \$3,000 to \$4,000 or more, that can become prohibitive."

What about quality? Dr. Sadda admits that concerns about quality and "pay to play" are in the back of his mind with open access journals, especially those that aggressively seek submissions. But a high-quality open access journal will review articles, select and reject some, and produce exactly the same quality as would a subscription journal, said Dr. McLeod. "Having served as editor-in-chief of a subscription-based journal and interim editor-in-chief of an open access journal, I saw absolutely no difference in process. The only distinguishing feature was precisely how the costs were covered."

Publication Models

Unlike the traditional publication model, open access articles are online, don't lie behind a subscription wall, and are freely available to all readers, Dr. McLeod said. "But open access isn't monolithic."

Gold open access journals provide all articles free to readers immediately and permanently. The author (or the author's research grant funder or institution) covers costs upfront by paying an APC. The articles can be reused in several ways as defined by the user license.

Green open access relies on institutions and authors to make a version of subscription-based materials freely available in online repositories, such as PubMed Central, usually after an embargo period. Reuse of these articles is also governed by a user license. There is no APC because journal subscribers pay all the expenses needed to support the publication process.

Bronze open access offers the final version of the article free for a limited period of time. As the free access is temporary, there is no APC.

Hybrids are subscription journals that offer open access at the article level depending on the preference of the authors. *Ophthalmology*, *Ophthalmology Retina*, and *Ophthalmology Glaucoma* are all hybrids.



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On the downside, predatory publishing has long been a thorn in the side of legitimate open access journals, said Dr. Chew. Dr. McLeod acknowledged that “a subset is taking advantage of authors, saying, ‘Give us money and we’ll publish your paper.’ Virtually 100% of predatory journals operate under an open access model. How many are offering real editorial boards, real peer review, real value added to authors? It can be confusing, even for well-informed contributors and readers.” (See “Predatory Publishing,” *EyeNet* July 2018 available at aao.org/eyenet/archive. Also see “Think. Check. Submit.” below.)

An Author's Perspective

A mentor to Dr. Sadda once said: Every paper has a home. If you've done good work, it will get published. It's just a matter of finding a journal that fits your paper.

To determine this fit, several factors may come in to play.

Hybrid. Many hybrid journals have clout. Plus, authors don't have to pay to be published. “As an author, I prefer to publish in journals with a high impact factor,” said Dr. Sadda. “I believe my article will be more widely distributed, read, and cited.”

Open access. There are two scenarios in which Dr. Sadda chooses open access journals. One is when he is involved with a sponsored project such as a large multicenter trial, where the grant funder builds publications costs into its budget.

The other scenario? “I may also choose open access if my paper has wide interest that needs dissemination to the maximum possible audience,” he said. “For example, it might be a paper with a public health message—such as a new drug with a toxicity—where it's worth investing some of my precious research dollars in publication.”

The Future of Open Access

The global open access landscape is complicated, said Mr. Winkler. For example, he said, there is a strong preference for gold open access among funders in Western Europe. There are also differences between scientific disciplines. “However, I'm sure we'll

see growth in open access overall.”

More specifically, Mr. Winkler points to the likelihood of more transformative deals reached between publishers and consortia or universities—arrangements in which authors will have all or most of their fees covered to publish open access, whether in gold open access or hybrid journals. “Furthermore, gold open access journals that have launched in recent years will over time gain in their prominence, meaning they will achieve high impact factors and become indexed in MEDLINE—hallmarks that authors look for when deciding where to submit their research,” said Mr. Winkler.

Ultimately, how everything evolves, he said, is almost entirely dependent upon incentive structures. “Incentives to publish in open access journals will drive the open access trends most of all.”

1 “About Plan S.” <https://cOAlition-s.org>.

Dr. Chew is editor-in-chief of *Ophthalmology Science*. She is also the director of the Division of Epidemiology and Clinical Applications and chief of the Clinical Trials Branch at the National Eye Institute in Bethesda, Md. *Relevant financial disclosures:* Editor-in-chief of *Ophthalmology Science*. *NEI: E.*

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Dr. Sadda is a member of the *Ophthalmology* editorial board. He is also president and chief scientific officer of the Doheny Eye Institute and professor of ophthalmology at the University of California, Los Angeles Geffen School of Medicine in Los Angeles. *Relevant financial disclosures:* None.

Mr. Winkler is executive publisher at Elsevier in Philadelphia. *Relevant financial disclosures:* Elsevier: E.

See the disclosure key, page 8. For full disclosures, see this article at aao.org/eyenet.

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