

Meeting on Open Access Publication in Life Sciences: Should scientific information be free for all?

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Speakers:

Introduction	Lisa Vozza, Italian Association for Cancer Research
The Scientist	Gordon McVie, European Institute of Oncology
The Scientific Organisation	1. Les Grivell, EMBO 2. Laurent Romary, Max Planck Society
The Funding Agency	Lucia Monaco, Telethon
The Publisher	David Hoole, Nature Publishing Group
The Open Access Publisher	Mark Patterson, Public Library of Science
The Sustainability of the Open Access Model	Paola Dubini, Università Bocconi

On a sunny Monday in June several figures from the world of Biomedicine met at the Università degli Studi di Milano. The agenda was fundamental in nature: The future of scientific publishing in the 21st Century.

Science is often seen as lagging behind society on the issue of free information for all. The Open Access (OA) model has gained in popularity in recent years but is based on solid principles put forward hundreds of years ago that scientific research must be available to all, rich or poor. It has two simple components:

- 1.) Free, irrevocable, worldwide right of access to, and licence to copy, use, distribute, transmit and display work publicly and to distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship.
- 2.) The publishing is supported by an academic institution, scholarly society, government agency, or other well-established organisation that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving.

Speakers were invited from all areas affected by OA developments; scientists, clinicians, funding organisations, publishers, OA publishers and Universities gave their opinions on the principles, logistics and future of medical research publishing.

Lisa Vozza from the AIRC (Italian Association for Cancer Research) kicked off proceedings with an introduction to OA in Life Sciences, referring to the relatively new institutions 'Public Library of Science' (PLOS) and 'Biomed', both of which are pioneers in the OA field. She detailed several arguments for OA, quoting Guardian columnist Ben Goldacre: "OA journals are young and online only; they are bringing innovation to scientific publishing with supplementary, interactive materials; readers' feedback; and signed peer-review."

Lisa continued by discussing a survey on the citation rates of OA papers compared to regular articles, both published in Proceedings of the National Academy of Sciences (PNAS) between June and December 2004. It was found that the average number of citations of OA articles was higher than that of

non-OA articles, indicating that OA articles are more immediately recognized and cited by peers than non-OA articles published in the same journal. Thus, she suggested, OA is likely to benefit science by accelerating dissemination and uptake of research findings.

However, Lisa also highlighted some potential drawbacks of OA, such as the increased financial pressure on public funding agencies and charities, a possible decrease in numbers of journals with a reduction in the base of paying readers, and learned societies that publish journals lacking money for conferences, workshops and scholarships.

Gordon McVie from the European Institute of Oncology started his talk with a characteristically feisty "only dinosaurs and elderly professors read print journals". While this might not be true in the literal sense, the movement for the free sharing of all scientific research is one that is gaining in size at a rate which should alarm any publishing company, or at least its shareholders. McVie further highlighted the tendency towards large quantities of computer data, dealt with far better online, where instant updates can be made. He also put forward the idea that OA online TV and online learning were set to strengthen academic research.

Les Grivell, from the European Molecular Biology Organisation, further represented the opinions of a scientific organisation. His views were also overwhelmingly positive towards OA, emphasising the benefit to less developed countries, and the danger of scientists "needlessly manipulating manuscripts and courting editors" to be published in a few top restricted access (RA) journals.

Laurent Romary talked about the Open Access strategy of the Max-Planck Institute (MPI). They initiated the "Berlin Declaration" which was signed by all the major German research institutions and many other European ones.

He discussed at length the MPI institutional repository, eDoc server, for self-archiving of research publications, which are freely accessible to all.

Mark Patterson from PLOS detailed the large benefits of OA and covered some of the technicalities involved. He started by noting that the inspiration for OA is not a new idea quoting Antonio Panizzi, Principal Librarian of the British Museum in 1836:

"I want a poor student to have the same means of indulging his learned curiosity, of following his rational pursuits, of consulting the same authorities, of fathoming the most intricate inquiry as the richest man in the kingdom..."

He also went on to quote Nobel Laureate Richard J. Roberts: "Scientific literature is our lifeblood, because only by reading our colleagues' work can we know where the cutting edge of knowledge currently lies and hence where our work should be directed. Yet ... the information vital to our research is needlessly restricted"

Patterson emphasized the importance of OA; the free, immediate access online, with unrestricted use of material. He also discussed the two OA paths: 'Gold' being research published by peer-reviewed journals, and 'green' being scientists self-publishing online. Finally he touched on who should pay for OA publishing. As the end goal of the researcher is to publish his results the obvious provider should be the funding body, as he saw it. He also pointed out that the catalysts for change are the funding agencies, of which many already insist that articles be made freely available within 6 months of publication.

Concerns were voiced, however, as to the quality of peer review if biomedicine were to be swamped by a multitude of OA journals. For example; the time and money needed to ensure research is well put together, and accurate. David Hoole from the Nature Publishing Group pointed out that peer-reviewed paper journals had sustained scientific research for more than a century and would not suddenly

disappear in importance or impact factor. "We need revenue to support peer review, and specifically a high rejection rate, to preserve quality. Subscription models have benefits for users, and will not disappear. The future will be a mix of business models, and new types of publication"

The last speaker, Paola Dubini, discussed the RA versus OA models in life sciences, specifically the costs of the two business models. She concluded that the OA model is a very effective way to counterbalance the economic rent some publishers enjoy at the detriment of public access to the results of scientific activity.

Though opinions varied, the general consensus was that open access publishing was the future. Whether OA dominates the scientific publishing world or works alongside varying levels of access and cost remains to be seen.