NIH plan brings global electronic journal a step nearer reality

[PARIS] Harold Varmus, director of the US National Institutes of Health (NIH), has drafted a formal proposal to create an unprecedented global electronic publishing venture covering all the biomedical sciences.

The move follows an initial proposal for a similar scheme — revealed earlier this year in *Nature* (**397**, 91; 1999) — by Patrick Brown, a researcher at the Howard Hughes Medical Institute at Stanford University School of Medicine, and David Lipman, director of the US National Council for Biotechnology Information (NCBI), which operates the PubMed and GenBank databases.

The draft proposal, "E-Biomed: a proposal for electronic publishing in the biomedical sciences", was written by Varmus himself, with input from Brown and Lipman. It concludes that "The rise of the Internet offers an unprecedented opportunity to change scientific publishing in ways that could improve on virtually all aspects of the current system."

The stated goal of the E-Biomed repository is to short-circuit the existing print journal system and centralize most of the world's biomedical research publications at a single website. The repository would accept papers in every area of biomedicine, and provide free access to the full text of these to all readers.

Articles would either be posted without refereeing, or peer reviewed by third-party editorial boards. The whole would be run by an independent international governing body.

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Varmus: keen to make E-Biomed a success.

Varmus emphasizes that a large shift to electronics could overcome many drawbacks of the existing publishing system, in particular the high costs of maintaining a plethora of high-price, low-circulation journals. In 1997, for example, the 121 member libraries of the US Association of Research Libraries spent US$432 million of their $2.4 billion total budget on journals, or about $12,000 per scientist.

Fotis Kafatos, director of the European Molecular Biology Laboratory in Heidelberg, Germany, has argued that the proliferation of specialized journals has compartmentalized knowledge, and that electronics provides a means to organize information in ways more useful to readers.

The proposal similarly argues that taking advantage of the opportunities for organizing and disseminating knowledge offered by the Internet will depend on "low-cost, barrier-free access by scientists to all of the contributions of their fellow scientists in a conveniently displayed electronic format" (see *Nature* **397**,195–200; 1999).

Under Varmus's proposal, the NIH, through the National Council for Biotechnology Information, would provide "financial, technical, and administrative" help to create an electronic archive — 'E-Biomed'. The document emphasizes that NIH's role should be to instigate the project, but that it would neither own nor operate the archive.

E-Biomed should be a community effort, according to the document, which suggests that it should be run by a governing board, made up of representatives of the "scientific community (readers and authors), editors, computer specialists, and funding agencies".

Authors would retain their copyright, with papers being available freely from the archive. Articles would either be posted without refereeing — with immediate posting after "a simple screen for appropriateness," or submitted with a request for peer review. This would be done by "editorial boards… identical to those that represent current print journals, or they might be composed of members of scientific societies or other groups approved by the E-Biomed governing board."

Peer-reviewed articles would be posted immediately upon acceptance and, where passed by the editorial board, would be available both in the journal and in the archive.

Varmus also proposes that individual boards could create a new class of runner-up papers, which, while "less prestigious, still denote review and endorsement by the journal's editorial board". Commentaries would also be posted along with articles.

Varmus predicts that scientists would initially be reluctant to publish in E-Biomed, but would soon be won over "because of its simplicity, flexibility, and speed".

The archive would also consider introducing open peer reviewing, where reviews would be published alongside articles and possibly signed. Another innovation proposed is that papers could be regularly updated, with the original article being preserved.

The report acknowledges that many outstanding questions remain. Although NIH has offered to provide start-up funding for the venture, it would require sustained financing. One possibility is that the archive should be publicly funded, says the report, adding that an alternative would be a system based on billing authors for page charges to publish, and then making the articles free.

Similarly, rules to cover the appointment, composition and authority of the governing board remain to be established. To address these questions, Varmus plans to circulate his proposal within the scientific community for "constructive comments… with the intention of putting a suitably revised plan into operation in the near future". **Declan Butler**

National project to boost Japan's net presence

[TOKYO] Full electronic versions of a range of Japanese scientific journals will soon be available, thanks to a government-led project giving technical support to help national research institutes and academic societies to deliver their publications via the Internet.

The online journal project was launched earlier this month as a collaboration between the Japan Science and Technology Corporation (JST) and the National Centre for Scientific Information Systems. It will allow journals to receive, review, edit and publish manuscripts electronically, at a fraction of the current cost.

Software developed by the two organizations will enable authors to download templates for their articles which will be peer-reviewed and edited electronically. Authors, referees and editors will have real-time access to papers throughout the editorial process.

According to JST, the project has received ¥0.5 billion (US$4.2 million) for the current fiscal year, and will initially do a test-run on the journals of the Physics Society of Japan. It plans to register at least 25 academic societies by next March.

A few Japanese scientific journals, such as the *Bulletin of the Chemical Society of Japan* and the *Journal of Biochemistry*, are already available on the Internet. But Japan's science publishers have been slow to use the advantages of Internet publishing.

"The demand for online journals has been very high, but academic societies, particularly the less powerful ones, did not have the capacity – either technical or financial – to venture into Internet publishing," says Takashi Sahara of JST's information business division. "Unlike international publishers such as Reed-Elsevier and Springer, which hold a very strong position in the online publishing market, Japanese publishers have not been able to take a lead in this area." **Asako Saegusa**