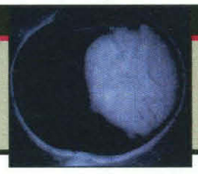
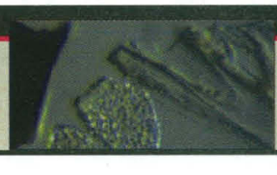


PAGE 2066
RAC says no to eye cancer therapy

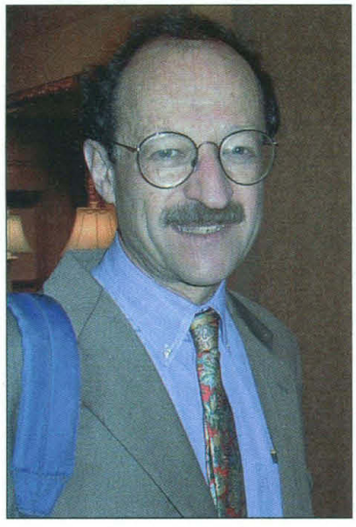


2069
The march of the Little Ice Ages

SCIENTIFIC PUBLISHING

Varmus Defends E-biomed Proposal, Prepares to Push Ahead

This summer, many biomedical editors and publishers are wondering how their journals will survive if the government goes ahead with a plan to distribute biomedical papers for free on the Internet. But such qualms do not trouble the plan's author, Harold Varmus, director of the National Institutes of Health (NIH). He's charging forward with "E-biomed," as he calls it. His idea is to create "free, fast, and full access to the entire biomedical research literature" for anyone with a computer and an Internet connection. E-biomed would distribute unedited preprints, as well as articles that have been through the traditional mill of peer review. Varmus's reason for doing this: Taxpayers have paid for the research already, he says, so NIH should make the results widely available.



Varmus released a written description of E-biomed in April (*Science*, 30 April, p. 718), and since then he has defended the proposal in public and private venues. His most recent defense came in an "addendum" posted on NIH's Web site on 21 June (www.nih.gov/welcome/director/ebiomed/ebiomed.htm). This six-page memo suggests that the planning is moving toward a dramatic climax. Indeed, in an e-mail response to questions from *Science*, Varmus said "we are in the process of assembling" cost estimates to submit to Congress.

The addendum also indicates that the venture has picked up key support from Europe. Both the European Molecular Biology Organization and the European Molecular Biology Laboratory have expressed their support, Varmus writes. "We are discussing a potential partnership with them," he says, which would allow joint development of technology and "encourage other organizations to collaborate." Varmus told *Science* that "we agree on the basic principles" and that the Europeans "are presenting the issues to their boards" right now. He hopes to create an international governance structure. Varmus is also sounding out private backers: In mid-June, he met with Vitek Tracz, chair of Britain's Current Science Group, which publishes Internet-distributed journals, but they apparently did not reach any agreement.

Despite Varmus's forceful advocacy, E-biomed has been taking flak in the past month. On 2 June, Varmus met privately with leaders of journals published by the Federation of American Societies for Experimental Biology (FASEB), who worry that the project could undermine not just their societies' revenues but cherished traditions of scientific publishing. Those who attended say Varmus seems determined to launch E-biomed in some form in the next 9 months and describe the session as "tense." "We were not reassured," says FASEB publications committee chair Ed Rekas. Individual researchers appear to be more receptive, but in hundreds of responses to the original proposal posted on Varmus's Web page, many worry about the threat to peer review, the need for editorial independence, and how E-biomed would be financed.

The New England Journal of Medicine has weighed in heavily, firing a blast at E-biomed in its 10 June issue. In an editorial, former editor Arnold Relman wrote: "A system that allowed immediate electronic publication of new clinical studies without the usual careful process of peer review and revision would be risky at best and might well fill the clinical databases with misleading and inadequately evaluated information." He suggested that E-biomed might undermine the clinical journals "enough to threaten their survival." The American Physiological Society, the *Journal of Immunology*, and other society-based publications have expressed similar concerns. But the American Association of Pharmaceutical Scientists is "enthusiastic" about E-biomed, its president Larry Augsburger wrote, as are some other clinical groups and even basic science organizations within FASEB, like the American Society for Cell Biology (ASCB). Elizabeth Marincola, ASCB's executive director, says, "My feeling is that a society like ASCB has more to gain than to lose" from E-biomed, as "we are not making any money on our journal."

E-biomed "would not be owned by the NIH or any other component of the U.S. government."

—Harold Varmus

Varmus released the addendum to his proposal to try to allay the worries and to review some of the many unresolved practical issues. He writes that E-biomed "most emphatically" would not eliminate peer review or create "vast quantities" of useless data. Existing journals, he hopes, will "establish peer-reviewed electronic journals operating within E-biomed." And although the system will permit the posting of unreviewed material, Varmus argues that "few scientists would knowingly" put sloppy reports in the public domain, "because it would soon diminish their reputations."

But tough questions remain unanswered, including: Who will run the operation, and who will pay for it? It is "an unfortunate misreading" of the proposal, Varmus writes, to think that the government will be in charge. "It would not be owned by the NIH or any other component of the U.S. government." NIH would only provide technical and financial support. But Varmus leaves many details to be filled in by a proposed E-biomed governing board, whose authority and composition remain undefined. Critics are annoyed by what one editor calls this "foggy" aspect of the plan.

As for financing, Varmus notes that

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E-biomed could charge authors a fee—perhaps a low one to handle a simple submission and a higher one for peer-reviewed publication. How high? That will depend on several factors, Varmus says, "but will likely be in the range of $100 to $1000 per article" to cover the participating journals' costs. However, publishers of some FASEB journals report that they already have costs in the range of $1000 to $4000 per page, and that converting from subscriptions to a page-charge method of financing would drive authors away. FASEB members were not reassured when Varmus suggested in a meeting—as in the addendum—that societies should find other ways of raising money, such as raising meeting fees. As one observer said, "People didn't appreciate being told they should go out and sell Girl Scout cookies."

In general, editors who liked the original E-biomed idea are enthusiastic about the addendum; those who didn't are as cool as ever. But many society chiefs are reluctant to sound off in public, says Michele Hogan, executive editor of the *Journal of Immunology*. The E-biomed plan casts them as defenders of the status quo, even though many journals have led the way to e-publishing, she says: "We're a little afraid of how the scientific societies are going to look." Some will have a chance to air their views at a "summit meeting" of electronic publishers being held at the National Academy of Sciences in Washington, D.C., this week. But no matter what attendees think of E-biomed, says Marincola, it appears that Varmus considers this "possibly one of the most important things he's done as NIH director."

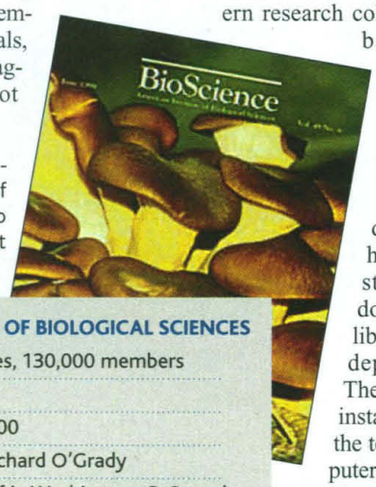
–ELIOT MARSHALL

ACADEMIC PUBLISHING

Library-Society Alliance Puts Bio Journals Online

Research libraries are taking their fight to hold down the cost of journals into cyberspace. This week the American Institute of Biological Sciences (AIBS) announced it will work with major U.S. research libraries and a private printer to distribute electronically dozens of nonmedical biological journals published by its 55 member societies. The arrangement is aimed at allowing smaller societies—some of whose journals may be threatened by the advent of preprint servers (see previous story)—to stay in the publishing business, while giving libraries a say on subscription prices, which are rising much faster than inflation, and access to archival material. But some observers predict the collaboration will face many of the same challenges confronting other scientific publishers that have gone online.

The joint venture will create a collection of Web material, called BioONE, that will debut in 2001. BioONE will initially offer about 50 journals published by AIBS member societies, which range from the 6000-member Ecological Society of America to the American Fern Society, with fewer than 1000 members. Most of the journals, including the AIBS's flagship *BioScience*, do not now offer full text online. Without financial help, many of the member societies might be forced to lease or sell their relatively low-cost journals to for-profit publishers, says Rick Johnson of the Scholarly Publishing and Academic Resources Coalition (SPARC), an organization of research libraries. "What's motivating us is the plight of the small society," he says. "If their journals can't make the jump to electronic dissemination, [the society] may get squeezed out of publishing."



Going electronic. *BioScience* is the flagship of the AIBS, which plans to put its journals online at BioONE.

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

MEMBERSHIP: 55 societies, 130,000 members

FOUNDED: 1947

JOURNALS: More than 100

EXECUTIVE DIRECTOR: Richard O'Grady

OFFICES: 30-person staff in Washington, D.C., and Northern Virginia

Research librarians have become increasingly alarmed in recent years about rising journal prices. Since 1986, median prices for journals issued by both commercial and nonprofit publishers have increased by more than three times the rate of inflation, according to the Association of Research Libraries (ARL) in Washington, D.C., which represents more than 120 collections in the United States and Canada. As a result, library budgets are being stretched to the breaking point to cover key commercial titles that can cost up to $15,000 annually. In 1997 ARL officials formed SPARC, which has helped to sponsor several new journals that compete head to head with pricier existing titles (*Science*, 30 October 1998, p. 853).

SPARC and its allies want to promote competition by helping small, cash-strapped scientific societies jump into online publishing. Over the next 2 years, it will work with the Washington, D.C.–based AIBS, the University of Kansas and Allen Press, both in Lawrence, Kansas, and the Big 12 Plus Libraries Consortium, a group of 23 midwestern research collections, to create a Web-based service that could eventually provide access to 200 journals in the biological, ecological, and environmental sciences.

Although the framework for BioONE is still under discussion, its organizers hope to raise $750,000 in start-up funds and in-kind donations from foundations, libraries, and other university departments, says Johnson. The University of Kansas, for instance, is planning to donate the technical expertise and computers needed to store and operate the database. Campus staff will also work with nearby Allen Press—which already prints more than 100 AIBS journals—to prepare papers for Web publication. The company will be paid for its work.

In return for their support, libraries will have a significant voice in setting BioONE's subscription prices and access policies. One major issue involves electronic back issues. Although libraries routinely store past issues of a printed journal, they are sometimes denied access to archives of electronic publications once a subscription lapses. At the same time, societies are seeking assurances that Web publishing won't shrink revenues by reducing the number of library subscriptions to their print journals.

BioONE isn't the only Web journal publisher looking for a winning formula. In recent years more than a dozen groups—both commercial and nonprofit—have become online "aggregators" of scientific journals, creating Web pages that allow subscribers to retrieve papers from a large number of related titles. The American Chemical Society, for example, has created ChemPort, which pro-

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