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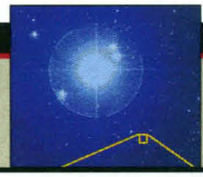
The pedigree of wine grapes



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The smallest brown dwarfs

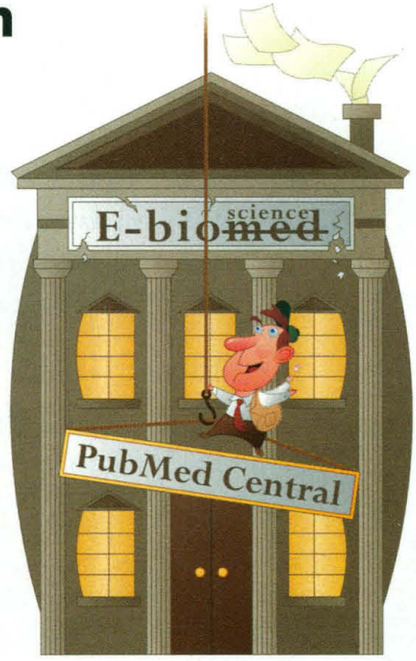
SCIENTIFIC PUBLISHING

NIH's Online Publishing Venture Ready for Launch

It's time to stop talking about a free, public Web site for life science articles and start building one, says Harold Varmus, director of the National Institutes of Health (NIH). This week, Varmus announced that NIH will launch its electronic archive and publication site, now called PubMed Central (formerly E-biomed), beginning in January 2000. It will accept reports—both reviewed and some unreviewed material—comments, and data files from journals and scientific groups and redistribute them on the Internet at no charge. The final plan is described in a notice released by NIH on 30 August (www.nih.gov/news/pr/aug99/od-30.htm).

The Web site also gained one of its first major recruits last week: the American Society for Cell Biology (ASCB). According to ASCB director of publications, Heather Joseph, the society's council voted to share the complete contents of ASCB's journal, *Molecular Biology of the Cell*, with a 2-month delay after publication, "on an experimental basis." Joseph explains, "We very strongly support the goal of barrier-free access to the scientific literature" and want to help NIH's "laudable" effort. Commercial journals have not shown any interest in donating text, however, and many nonprofit journals remain ambivalent. Although the plan would allow journals donating material to charge authors a fee, some editors and publishers worry that, if they do, they will drive away authors and ultimately lose revenues. Some, including *The New England Journal of Medicine* and *Science*, have published editorials criticizing NIH's plan as monopolistic and not adequately supportive of peer review (*Science*, 9 July, p. 197).

But Varmus believes the chilly reception does not reflect the views of rank-and-file scientists. In an interview with *Science*, he said: "Some major journals that have very little to lose here have been incredibly resistant," although "we've had a productive discussion" about how to make scientific data more widely available. He added, "I have heard less from the scientific community than I am used to, because people in the trenches are used to having their opinions



bubble up through their leaders, and [in this instance] some of their leaders have been a little resistant." Varmus seems convinced that the best way to test the concept is to launch it.

"To focus the next step," Varmus says, NIH will establish an Internet server called PubMed Central, which will be linked with the popular citation and abstract database, PubMed, run by the National Center for Biotechnology Information. "Any journal that wants to provide its content at any time after acceptance—and it doesn't have to be reviewed acceptance—can do so," he says. PubMed Central will accept contributions long after publication, "even a year later." The server will share its content on a daily basis with mirror sites in other countries. Varmus estimates the annual cost to NIH will be very low, $1 million to $3 million.

The only other group that so far has indicated it may be ready to join NIH in distributing reports electronically is the European Molecular Biology Organization (EMBO) in Heidelberg, Germany. Encouraged by EMBO's executive director, Frank Gannon, EMBO and its affiliates have been discussing plans to create a life sciences data center with about a dozen scientific groups. At a meeting in July, they drafted a set of principles for "E-bioscience," a name they preferred to "E-biomed" because they envisioned a broader site, encompassing all life sciences.

Varmus says NIH has also broadened its proposal to embrace the nonmedical life sciences, a change initiated partly in response to comments from the community. In addition, to allay concerns that a government organization will have too much power over the content of PubMed Central, NIH is taking steps to minimize its editorial role: "Nothing that goes on the server will be determined by NIH," he says. Instead, NIH will act as gatekeeper, accepting both peer-reviewed work and material that has only been "screened but not formally peer reviewed"—but only from approved groups. At the moment, NIH has some "very stringent" provisional rules limiting the kind of groups that may provide screened-only material. But Varmus is asking the National Academy of Sciences to create an international advisory body that would assume responsibility for deciding who should be allowed in the gate.

The academy could also help in another way—by contributing text from its own journal, the *Proceedings of the National Academy of Sciences (PNAS)*. Nicholas Cozzarelli, editor of *PNAS*, strongly supports public sharing of *PNAS*'s content and has asked for authority to send material to NIH's new data center. The academy's governing council considered the request last month and deferred to the publications committee, chaired by vision researcher Lubert Stryer of Stanford University. Stryer says that in general, "I favor PubMed Central." His committee will take up the matter on 13 September.

If the academy decides to donate full-text material from *PNAS*, Varmus will have won an important symbolic battle in his effort to establish the credibility of PubMed Central.

–ELIOT MARSHALL

CELL BIOLOGY

Introducing Proteins Into the Body's Cells

To pharmaceutical chemists and basic researchers, proteins are a bit like protégés who never quite fulfill their potential. Despite their wealth of biochemical talents, they generally lack the one skill scientists need to put those talents to work: the ability to make their way through the fatty membrane that surrounds

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