He may have stepped away from the hottest seat in biomedical research, but Nobel Laureate Harold Varmus shows no signs of withdrawing from the frontline of the biomedical research community, and he still displays the inimitable combination of political astuteness and scientific expertise that made his reign as director of the United States National Institutes of Health so successful. Varmus spoke to *Nature Medicine* for the first in a series of profiles that the journal will run on scientists that make a difference to biomedical research.

Harold Varmus

Discussions between Harold Varmus and a scientific journal almost inevitably include mention of the plan that he championed to create a freely accessible electronic repository of biomedical research papers on the web (*Nature*, **399**, 8; 1999).

Though he still believes that the goals of the originally-named 'E-Biomed' were correct, two years later he reflects, "Politically I think I made a bit of a mistake by laying the whole thing out at once. It was just too shocking. People got too nervous about removing the peer review system and depleting financial support for scientific journals." He says his intention was to make gradual changes, to retain a high level of peer review, and to take advantage of electronic publishing.

He is referring to the harsh resistance to the proposal by publishers, which meant that the initiative did not take off as planned (*Nature*, **401**, 6; 1999). The virtues of the system remain, he says, with three major components. In addition to PubMed Central, which houses the full content of a limited number of print journals plus BioMedCentral, Varmus is spearheading a new initiative to establish a digital 30-year archive of papers from the top few hundred journals. He is presently trying to raise \$100 million to support the venture. "Simply having your information online is not the same thing. We're talking about having the public-library searchable database like GenBank. It will save lots of money in the long run, because instead of having things moldering in libraries you'll have an active and fully accessible database containing the most important biomedical papers."

The third arm of his electronic publishing strategy—and the one that shows how much of a political animal Varmus really is—revolves around his leadership of a movement colloquially referred to as The Pledge. Hundreds of scientists have officially agreed that, starting in the fall they will only review for, and subscribe to journals that will provide their primary research reports to a centralized place such as PubMed central. Varmus argues that

this will have no effect on subscription rate and journal revenue because the content of primary research material will be six months or older.

Though Internet publishing is clearly one of Varmus's prime interests, his visions are not solely virtual. He is weeks away from a judgment as to whether derelict land in Queens, New York, can be developed into the state's first biotechnology park. He points out that "New York has a very high ratio of academic medical research to commercial endeavors in biotechnology compared, for example, with the Bay Area or the Washington-Baltimore corridor, or Seattle. Historically, this is part due to the major emphasis of New York business, which is traditional commerce, and perhaps also due to a lack of leadership and coordination."

Varmus has provided that leadership: "I've gathered a set of testimonials from leaders of biomedical research organizations, venture capitalists, big pharma and the biotech world that should provide reassurance to officials that such a venture is viable."

Lobbying those in office for the benefit of medical research is a particular skill of Varmus's, and led to a bipartisan agreement to double the research budget of the NIH while he was in office. Although that promise has held until now, he is extremely worried that if the stalemate over the Labor, Health and Education Appropriations bill continues—one of four bills left over from the 106th Congress that contains the NIH budget—because of the trouble-ridden Presidential election, there is a real risk that NIH will lose its increase for FY01 which began on 1 October 2000.

"There's been a Congress agreement on the increase, but when the vote goes to the

floor at a late stage, people will say that the NIH has made it through half the year without this, and that it couldn't possibly be the grants out of the door, so we can cut back on the \$2.7 billion increase." The money would be permanently lost from the baseline budget.

This month, Varmus completes his first year as President and Chief Executive Officer of Memorial Sloan-Kettering Cancer Center (MSKCC) in New York, where he has sewn the seeds of a substantial tri-institutional program. Using \$80 million over the next decade from an unnamed donor, which is matched by participating institutions, the program aims to enhance interactions with Rockefeller University and Cornell University Medical School. The main areas for collaboration are

Harold Varmus

chemistry, bioinformatics and cancer and developmental biology.

In addition, he has presided over an extensive evaluation of the entire research portfolio at MMSK, with the aim of setting priorities for the next 5–10 years. This research prospective was presented to the board last month and outlines the need to build new research facilities and carry out extensive refurbishment of existing labs at MMSKCC.

"The hospital is in good shape, but one of the things that concerns me is the overall coordination of our clinical research effort. MMSK doesn't have an ideal system for overseeing training in clinical research and its implementation. We plan to create an Office of Clinical Research responsible for clinical research oversight and quality."

Dr. Varmus's biography can be read at http://www.mskcc.org/medical_professionals/president_s_pages/biography/index.html

Karen Birmingham, New York