

## GENOME PROJECT

## Friends Say Jim Watson Will Resign Soon

The long-rumored resignation of James Watson, director of the National Center for Human Genome Research at the National Institutes of Health (NIH), appears to be imminent. Word spread across the country last week that the outspoken Nobel laureate, who has led the NIH genome effort since its inception in 1988, will step down this week or next. Watson would not comment, but many of his closest friends believe Watson is out—if not now, then soon.

Watson has wanted out for some time, his friends say. They note that the burden of holding two demanding jobs—he is also director of Cold Spring Harbor Laboratory—has taken both a physical and mental toll. In fact, at the January meeting of the NIH genome advisory committee in Irvine, Watson mused aloud about whether the project was well enough established so he could step down.

Watson also has a well-known propensity for resigning and then changing his mind—when he is angry. “Jim has resigned from everything about five times,” says one friend, pointing out that Watson threatened to quit this job 2 years ago when the genome project was under fire from scientific critics.

This time, however, the threat seems to be real. The root problem, rumors aside, would appear to be Watson's basic incompatibility with NIH director Bernadine Healy. It is no secret that Watson's relationship with Healy, not great to begin with, has soured in recent months. They have been at loggerheads over NIH's recent move to patent thousands of gene fragments (*Science*, 22 November 1991, p. 1004), which Watson has denounced as sheer lunacy and Healy has strongly defended.

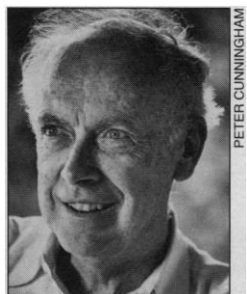
**Not thrilled.** Nor is Healy said to be thrilled by Watson's vocal criticisms of Frederick Bourke, a businessman who is attempting to lure several leading genome scientists into a sequencing company (*Science*, 7 February, p. 677). The equally outspoken Bourke has written to Healy, blasting Watson for his criticisms, which he considers out of line for a federal employee. Healy was sufficiently concerned to pass the letter on to Jack Kress, special counsel for ethics in the Department of Health and Human Services (HHS), says her spokeswoman, Joanna Schneider.

But the precipitating event of the current crisis seems to be Watson's yearly financial review, now under way, which has turned up some apparent conflicts of interest—reportedly, holdings in several biotech companies. Ethics watchdog Kress, who reviews the financial statements for HHS, told *Science* that he had approved Watson's holdings a-year-and-

a-half ago. Since he has had this post, Kress added, Watson has openly declared his substantial holdings. But this year, Kress noticed a few red flags that he says arose both from changes in Watson's holdings and changes in the law, which has become more stringent.

To Kress, “This is very common, nothing out of the ordinary. I had a meeting last week with Dr. Watson. I said here are a couple of things that concern me. Let's talk in a couple of weeks. I made it very clear to him that in no way, shape, or form did I find anything ethically improper about anything he was doing.”

By several accounts, Watson took the chat more seriously. Kress, too, says Watson told him at the time that he was thinking of resigning anyway. To Kress, the apparent conflicts shouldn't have precipitated such an action. There are several options for dealing with them, he insists: Watson could sell the stocks, recuse himself from any decision that might affect the company or companies or



Jim Watson

Healy could sign a waiver that would essentially say that Watson's financial interests are so insubstantial that they would not affect the performance of his duties.

Kress discussed those options with Healy in late February, at which time he raised the option of a waiver, which he portrayed as a routine step. Not routine to Healy, however. Her spokeswoman, Schneider, says that Healy believes that “there are questions surrounding his financial statement that clearly need to be answered and worked out.” And Schneider says that Healy considers the waiver a “pretty serious move” and has asked Kress for more information.

Healy has not spoken to Watson about the matter—and that, say Watson's friends, is indicative of the problem. “They both lost their cool and stopped talking,” says one. That may end this week, when Watson has asked for a meeting. But it may not change the outcome being widely predicted by those close to Watson. They believe he will leave, and the only question is when. Some suspect that once Watson calms down, he will decide to stay until a successor is named and the project is solidly on its feet. And everyone agrees that Watson is mercurial—a decision made in anger today could be reversed tomorrow.

—Leslie Roberts

## SCIENCE EDUCATION

## Science Teachers Offer a New Plan

Perhaps you're sick of reading about the dismal state of science education in the United States and are ready for a proposal. Enter the National Science Teacher's Association (NSTA) with their plan for improving U.S. science literacy, described in the book “The Core Content, A Guide for Curriculum Designers,” which was published last month. It's the latest development in NSTA's “Scope, Sequence, and Coordination of Secondary School Science Program,” known as SSC for short, which was begun 2 years ago with the aid of \$15 million from the Department of Education and the National Science Foundation (NSF).

According to SSC's director of research and development, Russell Aiuto, science students are usually exposed to one discipline at a time and rarely see the relationships between subjects necessary for a deep understanding of scientific ideas. But SSC aims at getting around that problem by giving students simultaneous exposure to different scientific disciplines throughout grades 6 to 12. “When evolution is taught, so is the history of the earth,” Aiuto explains. “The current layer cake approach—biology in the 9th grade, chemistry in the 10th, and physics in the 11th—is a remnant from 1891.”

And according to surveys made by SSC staff, the program is already successful in one

regard. Students exposed to the new approach in pilot studies, as well as their teachers and parents, like it. Houston, the site of one pilot study, is so enthusiastic it plans to extend the program to all its secondary schools, and about 1000 of the 16,000 school districts in the United States have requested information about SSC. That interest could be a good sign, and not just for SSC. “What [NSTA's] doing may turn out to be very helpful to us, if they can get the notion into secondary educators that there may be different ways of doing things,” says James Rutherford, head of the American Association for the Advancement of Science's Project 2061, SSC's chief competitor for funding.

But for all the positives, it's still too early to tell whether the SSC program is improving science literacy or enticing more students to become science majors. Nor do SSC's organizers think their new book is the last word in science education reform. To see what changes might be necessary, they want feedback both from people outside the pilot programs who try to use the SSC approach and also from 11th- and 12th-graders when they finish the courses.

—Robin Eisner

Robin Eisner is a science writer based in Boston.