

Gallo Inquiry Takes Puzzling New Turn

NIH clears Gallo on charges of stealing AIDS virus, but now will investigate details of key paper

"NIH bolsters claim of AIDS pioneer. Gallo all but cleared..." read a headline in the *Washington Post* on Saturday, 6 October. The *New York Times* covered the same story on its front page and came to a rather different conclusion: "U.S. inquiry on misconduct in discovery of AIDS virus," pronounced the *Times* headline, adding, "The [NIH] will open a full-scale investigation of possible misconduct...[by Gallo's lab]." Both stories were based on a press release put out by the National Institutes of Health, which has been examining allegations that Robert C. Gallo stole from French scientists the virus he discovered to be the cause of AIDS. And that left people who happened to read both papers baffled. What was NIH trying to say?

In an odd twist to the long-running drama of Gallo and the AIDS virus, NIH simultaneously cleared the virologist of allegations of stealing the AIDS virus and announced a "formal investigation" of a seminal AIDS paper published in the 4 May 1984 issue of *Science*. The principal author of the paper is Czech cell biologist Mikulas Popovic.

NIH acting director William F. Raub told *Science*, "This is not an investigation of misappropriation of the virus." Nor is it an investigation of the conclusions of the paper, which reported that Popovic, Gallo, and colleagues had grown the AIDS virus, which they called IIIB, in continuous culture. "If the authors knowingly misrepresented data in a paper, that is serious even if it does not alter the results," Raub said, adding, "We don't know that's what happened. That is what we want to find out."

This new twist is the latest development in a probe by a team of NIH investigators who have been conducting what NIH calls an "inquiry" on allegations of misconduct raised in a long article published by the *Chicago Tribune* last November. The inquiry has been run out of the institutes' Office of Scientific Integrity and a panel of outside consultants, headed by Yale biologist Frederick Richards, has been overseeing the matter.

Science has learned that the decision to conduct a formal "investigation" was pushed on Raub by the Richards panel. The consultants have maintained from the start that

calling the months-long NIH examination an inquiry was a semantic fiction, but Raub resisted an earlier request to designate it an "investigation." In NIH parlance, an investigation is a more serious matter than an inquiry, which is viewed as a fact-finding mission.

The advisory panel met with the inquiry team 2 weeks ago to review the team's 45-page report of its findings. Gallo and his attorney, Joseph Onek, were not permitted to attend that meeting, nor have they been given access to the report. It was based on that report and 2 days of discussion that the panel decided to call for an investigation. What the panel did not do is review all the material the inquiry team possessed.

The most important of the allegations raised in the *Tribune* article—the one that goes to the very heart of the charge that Gallo stole the French virus—was that the only virus growing in Gallo's lab during late 1983 and early 1984 was the virus he received from scientists at the Pasteur Institute in Paris. The presumption from that has been that the AIDS virus Gallo discovered was really the French virus under a new name. However, Gallo has convinced the

"There appear to be differences between what was described in the paper and what was done."

—William Raub

team that he did, in fact, have a number of viruses in culture in his lab. "We have no reason to believe the virus was misappropriated," said Raub, adding that he could not have made that statement several months ago. A Richards panel member, speaking on a promise of anonymity, said: "There was never any positive evidence of theft. And now, having seen his records, we know there was no motive. There was no conceivable reason to steal anything."

The panel is troubled, however, by what

the members believe is evidence that Gallo's laboratory records do not square with statements in his *Science* paper. According to a confidential letter from Raub to Gallo, several points are now subject to investigation. The first refers to an apparent discrepancy in one of the figures in the paper (figure 2a) and data in original laboratory notebooks about the growth of IIIB in continuous culture. "In particular, the culture was repeatedly fed with virus and thus cannot be accurately characterized as 'continuous,'" Raub wrote. Gallo has told the inquiry team that the culture was refed with uninfected cells, not virus, and disputes the point that "continuous" is therefore misleading. The letter also says that because primary data for reverse transcriptase analysis of viruses are not available, figure 2 "remains significantly in doubt."

Another question has to do with LAV, the name the French gave to their virus, which they had sent to Gallo's lab for study. The paper states that LAV "has not yet been transmitted to a permanently growing cell line for true isolation," yet laboratory notes show it was transmitted to a permanent cell line in Gallo's lab.

A third question deals with a statement in the paper that reverse transcriptase analyses were done "first," while the data show they were done contemporaneously with another study. And finally, there are questions about "missing data." For instance, the paper reports data for cell viability and doubling time, but no lab records can be found to support those data.

Gallo, who first learned of Raub's decision to conduct an investigation from the press, says he has already answered the NIH questions. Indeed, in a 5 September letter from Suzanne Hadley of the integrity office, the inquiry team asked for answers to 28 specific questions, many of them directed at the *Science* paper. "I can only conclude that the panel did not accept our answers," Gallo told *Science*. "It is true that we no longer have all of the primary data and there are problems with Mika's [Popovic's] notebooks because Mika never, in 10 years, kept a notebook. Period. He wrote things on scraps of paper and expected the technicians to keep the notebooks, which they did. What we've managed to find is about 11 pages of Mika's notes, but there sure weren't real notebooks."

Science asked panel members whether it would be fair to conclude that Gallo's answers to questions about the *Science* paper were not satisfactory. "Answers? What answers?" asked one panelist. As *Science* goes to press, it remains unclear just what the panel was told.

The matter of discrepancies between the

data and the *Science* paper will soon be in the hands of a new committee. Having completed its "inquiry," NIH is disbanding the inquiry team and creating an "investigation" team of three outside scientists. When named, those three investigators will work under the mantle of the NIH integrity office and, like the inquiry team, their work

will be subject to review by the Richards panel. Raub says the new team will do a "hands-on investigation" and the Richards group will remain in its role as advisers one step removed.

The NIH inquiry team has conducted more than 20 interviews with Gallo during the past few months, each lasting several

hours (*Science*, 22 June, p. 1494). It has reviewed hundreds of pages of laboratory records and interviewed key members of the lab. If that isn't a "hands-on" investigation, it will be interesting to see what "hands-on" means as the new investigation takes shape.

■ BARBARA J. CULLITON

Tobacco Industry Does Slow Burn Over EPA Adviser

The tobacco industry is trying to prevent a medical expert from serving on a U.S. scientific panel that will review the risks of tobacco smoke for the Environmental Protection Agency (EPA) this fall. The effort appears to be unprecedented in its boldness, as EPA's technical staff reports it has never been pressured in this way before. And the pressure might succeed.

The nominee under fire is David Burns, an associate clinical professor and member of the pulmonary unit at the medical school of the University of California, San Diego. He can hardly be faulted for lack of experience: he drafted the U.S. Surgeon General's report on the risks of smoking in 1975 and has been involved almost continuously as a scientific editor of the Surgeon General's reports on other topics since 1980. The industry's chief complaint, in the words of Brennan Dawson of the Tobacco Institute, is that Burns is "not open minded" about tobacco because he has participated in antismoking campaigns.

The industry has a big stake in the outcome of the scientific panel's work. It will review two technical documents on the threat posed to nonsmokers by exposure to other peoples' cigarette smoke. The more important of the two is EPA's draft risk assessment, released in June, which labels indirect tobacco smoke a "class A" carcinogen like asbestos. It estimates that exposure to this substance causes about 3700 deaths from cancer in the United States each year. The second document is a policy guide recommending ways to limit exposure to tobacco smoke. EPA has no authority to issue regulations in this area, but many states will follow the agency's lead.

For this reason, the scientific review may have more potent results than usual. And the campaign to block Burns raises general questions about how the government obtains advice on a hot topic like this. Does an expert who has reached a firm conclusion on such a controversy automatically become unfit to serve as a public adviser? And how much influence should groups like the Tobacco Institute—or an environmental lobby—have in shaping U.S. advisory bodies?

The specific fight in this case focuses on who may sit on a subpanel to EPA's Science Advisory Board. The membership list, including Burns, was almost complete in August and the panel was scheduled to begin work in the first week of September. Then the Tobacco Institute sent a letter to EPA chief William Reilly objecting to Burns. In September it was followed by written and telephoned warnings from Representative Thomas Bliley, Jr. (R-VA), ranking Republican on the House subcommittee on oversight and investigations, that EPA must do more to ensure "balance" and "fairness" on the tobacco smoke panel.

The first meeting was put off for 3 months—according to EPA, for organizational reasons. But the membership list is still in limbo. Burns says: "I thought I had been selected." But Robert Flaak of EPA's staff says Burns is still under review.

The Tobacco Institute's letter, written by Samuel Chilcote, Jr., the institute's president, expressed "grave concern" about Burns's prejudice. "Frankly," the letter says, "we are mystified how an individual with Dr. Burns's long and intense involvement with the antismoking movement can be expected to contribute to a reasonable, objective examination of the two documents." Chilcote included a dossier on Burns compiled from a computer search of newspaper files. Among these items was a *Los Angeles Times* article headlined "UCSD Expert Is Smoking's Archenemy," describing Burns's volunteer work as an adviser and public witness for campaigns to ban smoking in public places. Chilcote also argued that Burns must be struck from the list because he had already served as a reviewer of an earlier draft of the risk study.

Bliley, mentioning no names, insisted EPA should exclude from its panel people who have testified for or against smoking restrictions, who are active members of groups that have "taken a firm position" on the subject, or who have previously advised EPA on its risk statement. That would knock out Burns and, if broadly applied, might deny EPA the expertise of other scientists it relies upon for advice. Bliley's staffer, Jeffrey Schlagenhauf, says his boss is concerned that EPA is playing fast and loose with its risk calculations. For example, he thinks the agency has been much tougher on tobacco smoke than diesel exhaust.

What is EPA's obligation to heed any of this advice? Flaak says the law requires only that advisory committees have "balance," a term it does not define. While the science office frequently gets nominations from other institutions, he cannot recall another case in the past 6 years in which outsiders have raised such a hue and cry against a candidate. He adds that he has not heard any complaint from the antismoking lobbyists.

The industry's hullabaloo has had an effect. Flaak says: "We've taken it seriously." EPA has forwarded Burns's curriculum vitae to "a number of people who we work with." The agency, according to Flaak, "asked them for some opinions about the type of work [Burns] is doing and where it fits into the mainstream." The final decision will be out in a week or two.

Burns, meanwhile, is trying to shrug it all off. If he has a bias, he says, it results from "a review of the available information, and it's called 'informed opinion.'" To Chilcote's charges, he replies: "I'm happy to stand on my reputation without having to defend it in front of the Tobacco Institute." ■ ELIOT MARSHALL



Tobacco's target. The industry wants David Burns off a peer-review committee.