John Crewdson: Science Journalist as Investigator

Is the man who's been dogging Robert Gallo for more than 3 years the harbinger of a new breed of science writer?

THREE WEEKS AGO, NIH'S INVESTIGATION OF Robert Gallo reached a crucial turning point with the completion of a report on a selection of samples, now 8 years old, pulled from the freezers in Gallo's Laboratory of Tumor Cell Biology at the National Institutes of Health. The goal of the report was to trace the biological history of the famous "pool"—a concoction of blood samples supposedly taken from 10 AIDS patients—from which Gallo's lab isolated the virus they initially called HTLV-IIIB (now known, of course, as HIV). The "biological report," as it's referred to by insiders, was closely held, distributed to only a few at NIH. As usual though, one journalist managed to find out what the report said before any other and immediately published a provocative story. That journalist was John Crewdson of *The Chicago Tribune*, who has been doggedly pursuing Gallo for more than 3 years, and whose massive report on the isolation of HIV, appearing in the *Tribune* in November 1989, kicked off NIH's lingering investigation.

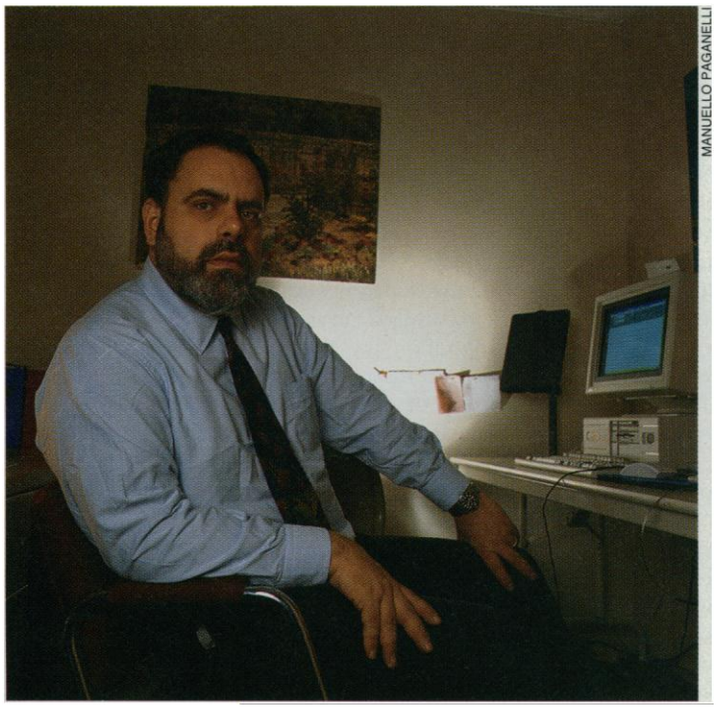
Crewdson's story on the biological report was of a piece with his other reporting on Gallo. In it, he explored the possibility that Gallo or his co-workers had misappropriated their HIV isolate from samples sent to them by Luc Montagnier at the Pasteur Institute. But, unfortunately for Crewdson, he hadn't managed to find the "smoking gun"—conclusive proof that Gallo's lab had, in fact, stolen the virus. As a result, he was forced to fall back on an ingenious and carefully documented, but ultimately circumstantial, argument. So had Crewdson lost his final chance to justify all those years of work? Was he never going to be able to show that Gallo's lab stole the AIDS virus? Was it possible Crewdson was wrong? And beyond that, was Crewdson's very approach flawed, leading him into an adversarial relationship to science that distorted his patient and careful attempt to sift through a mountain of facts and find the truth?

Indeed, one of the most interesting aspects of the story of John Crewdson and Robert Gallo is Crewdson's approach—the new model he brought to science journalism. Traditional science journalists have focused on interesting research, covering science's underbelly only when rumors of scientific malfeasance emerged from a scientist whistle blower or other easily available source or when a credit spat erupted. Not all science reporters have been like that, of course. But even the most enterprising have never pursued a Watergate style of journalism on a scientific target.

The key to Crewdson's approach, which *is* closely linked to Watergate, is that he is more concerned with corruption—with absolute rights and wrongs—than with the latest research findings or credit quarrels. Which brings into the Crewdson story a novel note: Absolute conceptions of right and wrong set in an investigative framework aren't familiar in science, and some researchers, including some who are avowedly partisan, believe the conception is just plain misguided.

One of these, not surprisingly, is Howard Streicher, a researcher in Gallo's lab who lately has spent most of his days answering queries raised by Office of Scientific Integrity (OSI) investigators. But the fact that he has a built-in bias doesn't necessarily invalidate Streicher's point. He says Crewdson's "implication is because everything is not right, there was intent to do evil and everybody's corrupt. That seems to me the wrong model." Streicher argues that the "who knew what, where, when" types of questions that would be directed at a Ronald Reagan during Iran-contra don't make sense in talking about Gallo—or any other scientist. Science is provisional, he argues, and scientists should be rewarded for finding evidence that leads them to make up their minds. "Scientists usually don't know all the answers. You may have notions. You may have suspicions. You may have ideas....It doesn't mean there's fraud when some things change."

Luc Montagnier, a partisan on the opposite side, believes investigative reporting is a necessary adjunct to modern science. "To use a French expression," says the Frenchman, "*'garde fous'*—protect us against our own madness." He adds: "There is now power given to scientists. Like other powers—political, industrial, military—it needs some control. Not only from the inside (the scientific community, peer review) but also from outside bodies, particularly if problems or applications are concerned and if large amounts of money—in AIDS for instance—are involved."



MANUELLO PAGANELLI

Bulldog edition. Chicago Tribune *reporter John Crewdson.*

Though it's no shock that Crewdson would see eye to eye with Montagnier, it would surprise the targets of his relentless investigative skills that Crewdson also agrees with Streicher's thinking. The San Francisco-born reporter, now 45 years old, allows that the political corruption model isn't a good way to interpret the results of research or to understand how science works—when it works as it should. By no means are all mistakes fraud, he concedes. "There is happenstance and er-

ror." But, Crewdson argues, some science is corrupt, and his framework "is a good model for understanding corruption in science, because [then] it *does* matter who, what, where, and when."

Both those who have leaped to Crewdson's defense and those who have categorically rejected what he has done have a proclivity to extremes: praising him as a herald of truth or damning him as human sludge mucking the gears of research. But those polar views take Crewdson out of context, ignoring his previous reportorial agenda and making it difficult to assess whether scientists should welcome or shun—or something in between—journalists who share his aims.

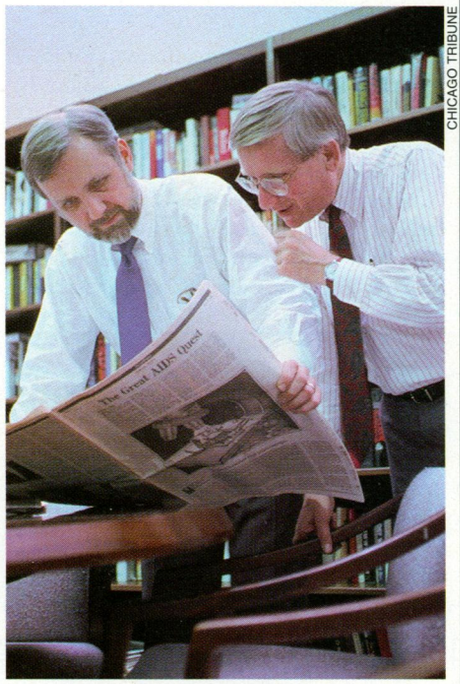
A hefty man who speaks with a calm and low voice in the cadence of a prosecutor persuading a jury, Crewdson found himself in high-profile firefights long before gray began to fleck his trademark beard. He began his career 18 years ago at *The New York Times* with the plum assignment of covering Watergate, and within months the *Times* was running stories *about* him: Crewdson was one of nine reporters who fought (successfully) a subpoena for their notes from then President Richard Nixon's re-election committee.

With a *Columbo* style of information gathering—feigning confusion, ever-patient, always more evidence in his breast pocket—Crewdson went on to crack stories about a senator snared in the Federal Bureau of Investigation's Abscam sting, corrupt U.S. immigration authorities, gambling by the National Football League's Kenny Stabler, the FBI's counterintelligence program ("Cointelpro") that targeted dissident political groups, and the Central Intelligence Agency's manhandling of the press. Along the way, Crewdson netted journalism's highest awards, including the Pulitzer Prize in 1981 for a series on U.S. immigration injustices.

Then, set to move to the *Times*' Mexico bureau, Crewdson had an eleventh-hour change of heart and looked for another posting. When he couldn't find what he wanted, he hopped to the *Tribune*, where he has settled into an investigative reporter's dream job—spending many months and many dollars—reporting on such diverse topics as the sexual abuse of children, the Mexican economy, and AIDS.

Whether they are admirers or detractors, journalists who have worked with Crewdson praise his persistence and aggressiveness. Yet those very qualities lead some scientists to conclude Crewdson is on a "witchhunt" with the implicit aim of destroying Gallo. Because of the ongoing OSI investigation, Gallo was reluctant to be interviewed for this article. But he did call Crewdson's reporting "conspiracy mongering," accusing him of attempting to "create a conspiracy where there isn't one." And in his recent book, *Virus Hunting*, Gallo wrote: "I had become the target of a reporter with a mission, a reporter who somehow turned from...analysis to assassination."

Crewdson retorts that he's "not out to destroy Bob Gallo. Gallo is comfortable with that view of me because it helps him understand why I did what I did. He thinks, 'Oh, well, Crewdson's just a threatening bully, and he's out to destroy me. Now I understand why this is happening to me.' "



CHICAGO TRIBUNE

Two heads are better. Tribune *editors Jack Fuller* (left) *and Howard Tynes examine Crewdson's 52,000-word special section on Gallo.*

These two curiously symbiotic and opposing views—Gallo's that he is being persecuted, Crewdson's that he is merely in search of the truth—have been intertwined since 1988. In that year Crewdson attended a World Health Organization conference where he met people who suggested he probe Gallo and the patent suit settlement. After interviewing researchers in England, Finland, Germany, and France (including clandestine midnight rendezvous with Pasteur Institute lab hands), Crewdson visited the offices of one of Pasteur's New York lawyers, James Swire. There, poring through the thousands of documents Swire had freed from NIH with Freedom of Information Act (FOIA) requests, Crewdson became convinced he had found an untold story.

Crewdson interviewed more than 150 people for "The Great AIDS Quest," his 52,000-word article that filled 16 pages of the 19 November 1989 *Tribune* and triggered OSI's Gallo investigation. Crewdson interviewed Gallo only once—over the phone in September 1988. Through an attorney, Gallo agreed to another interview if the questions were first submitted in writing, but the day before the scheduled interview, Crewdson submitted a 20-page list of 189 questions, and Gallo's lawyer called off the meeting.

Since beginning his Gallo research, Crewdson has filed more than 100 FOIA requests with NIH—many of them not directed to Gallo's lab—a fact that, by itself, has drawn strong criticism. In *Virus Hunting*, Gallo charges that the "FOI statute is capable of being turned into an instrument of personal harassment." Gallo friend Stuart Aaronson, chief of the National Cancer Institute's (NCI) Laboratory of Cellular and Molecular Biology, maintains that "100 FOIA requests can paralyze your ability to work."

"If I file a lot of FOIA requests it's because I was not given anything I asked for any other way," counters Crewdson, adding that Gallo's lab has responded to very few. "Once NIH figured out what I was doing, doors closed and the lights went out."

Crewdson emphasizes that Gallo should expect journalists to examine his research closely. "If you're an NIH scientist," Crewdson says, "you're paid by the taxpayer. What you do on public time with public money must be open to public scrutiny, just like the Commerce Department, just like HUD [Housing and Urban Development], just like the Defense Department," he says. "If you don't like it, get a job someplace else."

It is this refusal to be reverent about researchers that sets Crewdson apart from most science journalists. Where scores of observers have viewed the Gallo-Montagnier story as a scientific feud over who discovered the virus that causes AIDS, Crewdson sees it through the lens of a reporter deeply skeptical of his government. "NIH is the least scrutinized part of the government because nobody understands what they do, and they all talk in four syllable words," says Crewdson. "Congress says, 'Here's the money. Come back and tell us how you

spent it.'" To Crewdson, the specter of corruption arises because of inaccurate information in the U.S. blood test patent and the way it was defended by Gallo, his superiors at NIH and the Public Health Service, and lawyers from the Department of Justice.

Duke University's Dani Bolognesi, a Gallo intimate, says Crewdson's long article is "a surrealistic picture" that suggests conspiracy where only human fallibility exists. Crewdson is, in short, a nitpicker, he says. "My guess would be if you go down Crewdson's article point by point with the [OSI] report, a lot of these things will be blown away," says Bolognesi. "The ring of dark issues—fraud, foul play—will be discounted, and it will boil down to a few issues. There are always glitches in papers. I'm bored by it."

In Crewdson's large article, he did not overtly make the corruption charge, preferring instead to wrap the malodorous facts he uncovered in question marks—Was there theft? Was there fraud? Were there coverups?

"What's interesting is not that he might have pushed things too far, but that he was able to do what he did."

—Dorothy Nelkin

While these are common questions for investigative reporters, they inflamed passions because they were asked of a laboratory that many believed helped stop the spread of a deadly disease.

Anger spills from Jacques Leibowitch when he makes this point. A Paris physician who has worked with both Gallo and Montagnier, Leibowitch sneers that Crewdson investigated science with little appreciation for the nexus of science and medicine. "The core of the bias in medicine is its intention toward the sick....You cannot judge the story of Gallo and the story of the discovery of the AIDS virus if you do not refer it to that. If you abstract it into the industrial matters and the scientific matters, then you are doing a perverse thing that is against the law of humans."

But the Crewdson partisans argue that even if he hasn't turned up the smoking gun—conclusive evidence of malfeasance in the Gallo lab—by turning the high beams on that lab, he has illuminated some issues that science badly needs to explore, including mores of collegiality, credit-sharing, and integrity. "To argue that we should forget all of this doesn't make sense," says Jay Levy, a virologist at the University of California, San Francisco, who was one of the first researchers to isolate HIV and has had an uncomfortable relationship with Gallo since. "Truth, accuracy, and ethics

Report Card on Crewdson's Reporting

For all the controversy generated by John Crewdson's reporting on Bob Gallo, few have attempted to sift through the mass of material Crewdson has turned up to see how accurate his reporting has been. In a strictly noncomprehensive way, *Science* has tried to do that. After interviews with more than 40 AIDS researchers, lawyers, and journalists familiar with the events described by the *Tribune*'s star reporter we found that Crewdson doesn't make many major errors of fact. Says UK AIDS researcher Robin Weiss: "It's very difficult to fault him on the facts." Crewdson has made some factual errors (it would be nearly impossible not to in a body of work the size of his reporting on Gallo), but most are not significant.

Yet we also found that in some instances, Crewdson has omitted facts—and these facts didn't fit conveniently with his overall argument of wrongdoing by the Gallo laboratory. In some cases he claims he didn't know the contradictory material, in others, it didn't seem relevant to him. But omissions there were. Here we present a sampling of both the issues Crewdson has correctly clarified—and some where he has left out facts that seem germane.

Some Critical Issues Crewdson Has Helped Clarify—by Getting them Right

Gallo's lab cultured LAV in 1983

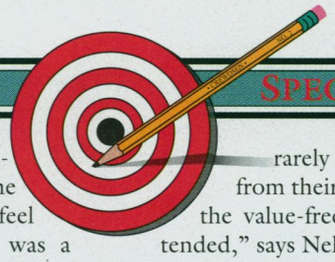
In their 1984 paper announcing the isolation of what they called HTLV-IIIB as the cause of AIDS, Gallo and his co-workers made no mention of the fact that their virus and Montagnier's LAV could be the same. In fact, they said, the two viruses "may be different." The differences, they said, however, might be due to "insufficient characterization of LAV," "which has not yet been transmitted to a permanently growing cell line." Crewdson reported in his *magnum opus* that a 1986 memo from Gallo co-worker Mikulas Popovic revealed that LAV was "successfully transmitted" to a permanent cell line in December 1983. The Gallo lab's defense has been that the 1984 paper was misinterpreted. They argue that the French workers had not yet managed to grow LAV in a continuous cell line—and that the Americans hadn't wanted to embarrass them. But Gallo also made other statements at the time, including some to *Science*, suggesting that the French virus had not been cultured.

The fact that HTLV-III is really LAV

Although the possibility that HTLV-III was really the French virus had been raised as early as 1984, it had not been settled. Crewdson's inquiries, albeit indirectly, caused both Gallo and Montagnier to re-examine the contamination possibility. That further work showed that both the original French isolate, called LAV-BRU, and the original American isolate, HTLV-IIIB, were in fact a particularly robust strain of LAV called LAI. This made it seem likely that contamination had occurred in the French laboratory during the work on LAV, and raised the possibility that something similar had happened in Gallo's laboratory as well, although it certainly did not rule out the prospect of "misappropriation." Aside from correcting scientific history, the finding also fortified Crewdson's allegation of government wrongdoing. As he first reported in the 18 March 1990 *Chicago Tribune*, when U.S. Department of Justice attorneys addressed the possibility of cross-contamination, they said the suggestion was "an outrageous attempt to impugn the reputation of one of the world's foremost virologists and his co-workers."

Clarifying the definition of "isolate"

In one of their May 1984 papers in *Science*, Gallo and colleagues claimed to have "isolated" the AIDS virus from 48 separate



are of ultimate importance."

Donald Francis, former head of the Centers for Disease Control (CDC) AIDS lab who now works for the state of California, applauds Crewdson for documenting how Gallo trumpeted "what I, I, I did" and splintered the AIDS field. An M.D. who later earned his Ph.D. at Harvard studying feline leukemia virus under Gallo's friend Myron Essex, Francis used to be part of the Gallo circle, once even donating a pint of his own blood for a Gallo experiment. But the bond is ancient history. "[Gallo's] done so much damage by dividing the world into for and against Gallo that he should be punished," says Francis. "Ultimately, anyone with those standards does harm to the field."

Other researchers, who perhaps have less of an ax to grind, are of two minds about Crewdson's sojourns into the lab. "The methods don't make me feel comfortable," says Robin Weiss, a retrovirologist at London's Institute of Cancer Research whose lab has worked with Montagnier's and Gallo's. "But what he did investigate doesn't make me feel comfortable either. At best, it was a mess....He made me think more about the apportioning of credit and the conduct of science."

Hard as it may be for Robert Gallo to believe right now, John Crewdson, too, shall soon pass as a personal irritant to Gallo. But Dorothy Nelkin, a New York University social scientist and author of *Selling Science: How the Press Covers Science and Technology*, believes more Crewdsons are on the way. In fact, she thinks Crewdson is a sign of the times in science writing. Until recently, says Nelkin, the myth of "value-free science" reigned. In this paradigm, the supposed value-free scientists, regardless of who signed their paychecks or published their papers, were viewed as neutral arbiters of truth. With few exceptions, Nelkin contends, journalists went along with the myth, rarely exhibiting any distance from their sources. "The myth of the value-free scientist was overextended," says Nelkin. "Now all this concern we're seeing about fraud is a backlash."

Ten years ago, Nelkin argues, the climate would not have allowed Crewdson to launch an in-depth investigation of a prominent scientist. "So what's interesting is not that he might have pushed things too far," she says, "but that he was able to do what he did." And Nelkin concludes that far from being a flash in the pan, Crewdson represents a new model of reporting on science—a journalistic bulldog unleashed on the scientists who are now revealed in all their human nakedness and frailty. And unless conditions change, Nelkin says, scientists should prepare themselves for more of the same. ■ JON COHEN

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patients. Yet in another paper published in the same issue of *Science*, they stated that "true isolation" required growing the virus in a continuous cell line. By reviewing notes from Gallo's lab, Crewdson concluded that "even by his own definition," Gallo never had 48 isolates, since few of them were grown in continuous culture. Gallo has since acknowledged that the language in the original paper should have read "detected and isolated." Although such questions may seem like semantics, they bear on the issue of how many of *his own* isolates Gallo had at the time of the 1984 paper, and therefore what motivation he might have had for taking the French virus and calling it his own.

Omissions

Difference between French and American infection of permanent cell lines with HIV

Gallo has always claimed that his lab was the first to mass produce HIV from a continuous cell line successfully—a crucial step in making a commercial blood test and in demonstrating the cause of AIDS. In a sidebar to his large piece, Crewdson wrote that "the race between the Gallo and Pasteur labs to transmit the AIDS virus to a permanent cell line had ended in a dead heat." What Crewdson omitted was the fact that the B cell line that the French first succeeded in infecting did not yield enough virus for commercial production of a blood test. Gallo's T cell line did—to be followed months later by the French. Crewdson has never amended his version of events.

Credit for the French

At a press conference in Washington on 23 April 1984, where the Gallo lab's results were announced, Secretary of Health and Human Services Margaret Heckler promoted Gallo's work and made no mention of the French group. Gallo also equivocally answered a reporter's question about possible similarities between his virus and Montagnier's. Crewdson notes these facts. But he omits one other: Heckler, who had laryngitis, did not finish reading her statement to the press. In the statement, a paragraph was devoted to the French work, concluding that "we believe [the U.S. and French viruses] will prove to be the same." Crewdson says he didn't write about it in his major article because he didn't know it: He was working from a verbatim transcript of the press conference. Yet a document from the NIH Office of Scientific Integrity that Crewdson wrote about on 11 August 1991 mentions the credit-giving paragraph and says it was likely written with input from Gallo. Crewdson made no mention of these facts in the August article and again highlighted the supposed slight.

The abstract Gallo wrote for Montagnier's early LAV paper was not simply agreed to over the phone

Gallo refereed and wrote the abstract for a paper Montagnier published in *Science* in May 1983, which was the first report of the AIDS virus. Crewdson has charged that the abstract Gallo wrote for Montagnier as a favor "did not accurately reflect the conclusions" of the paper itself. Crewdson has also made it seem that Gallo steamrolled the Pasteur group into accepting his version during a phone call—without their having seen the written version. In fact, Montagnier told OSI investigators that, although his memory isn't entirely clear, he believes he did see galley proofs of the entire paper—including the abstract—before it was published.

Crewdson did not know this at the time of his large article. But that wasn't the last time he touched the matter. On 15 September 1991 he wrote a story on the OSI draft report on the Gallo investigation. The draft report devoted seven pages to the question of the abstract and concluded that because Montagnier received the galleys, "the content of the paper ultimately rests with him." Crewdson did not report this, even though he devoted six paragraphs to the question of the abstract and Gallo's handling of the paper. ■ J.C.