

# Debate on AIDS Origin: *Rolling Stone* Weighs in

*A controversial article angers vaccine experts by claiming AIDS could have been spread by polio vaccines in Africa*

OVER THE YEARS, THE ORIGIN OF AIDS HAS been the subject of wild speculations, many of them heavy with the odor of conspiracy—such as the possibility that HIV was created in a U.S. Army germ warfare lab. Most of these rumors fade away, but as soon as they do, new ones spring up in their place. The latest in the crop of HIV origin stories can be found in the current issue of *Rolling Stone*. The rock-and-roll magazine's hypothesis, offered up in a piece by Houston free-lance writer Tom Curtis called "The Origin of Aids," is that the AIDS virus first entered humans in Africa as a contaminant of an oral polio vaccine widely administered in the late 1950s.

Some researchers contend that the article's hypothesis is not beyond the realm of possibility. After all, simian viruses were found to contaminate some early polio vaccines. But most AIDS investigators think the hypothesis is far too speculative to be taken seriously—since, they argue, there isn't a picogram of evidence for it. Nonetheless, the story has spread like an epidemic through television networks, magazines, wire services, and newspapers, prompting testy responses from the Centers for Disease Control (CDC), Philadelphia's venerable Wistar Institute, and researchers quoted in the story who feel their viewpoints were distorted.

The *Rolling Stone* article speculates that some as-yet-undiscovered simian form of HIV-1 may have contaminated a polio vaccine formulated by former Wistar director Hilary Koprowski. That precursor might have come, the article continues, from the monkey kidney cells in which Koprowski grew the vaccine's weakened poliovirus. The vaccine was tested in what is now Rwanda, Zaire, and Burundi during the late 1950s, where it was spray-injected into the mouths of several hundred thousand people. Piling speculation on speculation, Curtis suggests that HIV infection might have occurred through mucosal cells, lesions in the mouth, or via aerosolized virus trickling into the lungs.

Koprowski insists that existing data defuses the polio-vaccine/AIDS hypothesis. Koprowski notes that in preparing his polio vaccine, he used macaques from the Philippines and India—and no wild macaques have been found that were infected with a

lentivirus, the group that includes HIV and its simian relative, SIV.

Curtis, however, argued that the animals could have been gang-caged with other lentivirus-infected monkeys. And he quoted Thomas Folks, chief of CDC's retrovirus branch, explaining how SIV might—in theory—have infected monkey kidney cell cultures, lending credence to the notion that HIV could have done the same. "Possibility" was the key word," Curtis told *Science*. "All these people said it can't grow in kidney cells. End of story, right? I learned otherwise from Tom Folks."

But Folks damns the story as "a flagrant case of selective editing and journalistic malpractice."

He adds: "The fact that [Curtis] attempted to use my position to support the theory is really unconscionable." Folks charges that Curtis used their discussion selectively, ignoring the epidemiologic and lab data Folks offered against the polio-vaccine hypothesis.

Other evidence against the hypothesis comes from Gerald Quinnan Jr., deputy director of the Food and Drug Administration branch that oversees vaccines, who says he deliberately tried to infect monkey kidney cells with SIV and failed. "It is not possible for SIV to be present in polio vaccines in any substantial amount," Quinnan maintains.

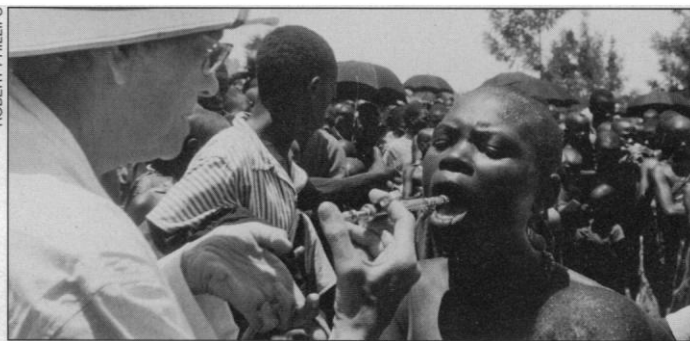
Koprowski is equally adamant. He said in a statement to *Science*: "Immunization of children in Africa against polio could be used as a model for the approach to the mass immunization against AIDS once a vaccine becomes available. It is a pity in a sense that instead of using his journalistic skills to show this, Curtis chose to misconstrue the information...to propagate a hypothesis without basis in fact."

Curtis replies that unlike science, journalism allows for theories without hard proof. What's more, he asks, "Is there rigorous proof for the other origin theories that have appeared in the scientific literature? I think part of the problem here is these other

theories didn't have the temerity to come out in *Rolling Stone*."

After Reuters, UPI, CNN's "Larry King Live," and *Time* magazine picked up the story, CDC issued a terse official statement that said, in part: "The weight of scientific evidence does not support this idea and there is no more reason to believe this hypothesis than many others which have been considered and rejected on scientific grounds."

Curtis also irritated Gerald Myers of the Los Alamos National Laboratory, a specialist on the genealogy of the AIDS virus, by writing that the "timing seems right" for polio vaccines to have carried AIDS from monkeys to humans. Curtis writes that, according to Myers, "HIV dates from about 1960." In fact, Myers says he thinks the major known *subtypes* of HIV-1 appear to



**Dangerous dose?** Could an oral polio vaccine tested in Africa in the 1950s cause AIDS? Most researchers doubt it.

have arisen as recently as 1960. "I stood on my head to try to get it right with *Rolling Stone*," says an exasperated Myers.

Some AIDS researchers not mentioned in Curtis' article don't dismiss the hypothesis out of hand. SIV researcher Ronald Desrosiers of the New England Regional Primate Research Center says he's "never heard a good reason why it's not plausible." Still, Desrosiers lambastes *Rolling Stone* as "irresponsible." He adds, "It's like saying that [a famous professional athlete] does cocaine and is on steroids without producing any evidence."

Curtis argues that he was simply trying to prod researchers into examining a "testable hypothesis." One test could come soon, since the Wistar Institute has announced that it is forming a committee "to evaluate the *Rolling Stone* speculations." If the Wistar can find frozen samples of Koprowski's vaccine—or, more likely, the initial "seed stock" used to make it—researchers will test for HIV and SIV. It isn't clear what will come of such a test, but for the moment, most of the evidence seems to be against the idea that AIDS came from a polio vaccine. ■ JON COHEN

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