Questioning HIV/AIDS: Morally Reprehensible or Scientifically Warranted?

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ABSTRACT

One expects scientific discourse to be focused dispassionately on substantive issues. Yet doctors, scientists, and others who question whether human immunodeficiency virus (HIV) causes acquired immune deficiency syndrome (AIDS) have been called the moral equivalent of Holocaust deniers; their employers have been urged to dismiss them; laws under which they could be imprisoned have been envisioned; and media have been asked to purge their archives of anything potentially favorable to such doubting.

Evidently those who make these attacks are absolutely convinced that HIV causes AIDS. That raises the question of how much certainty is ever attainable in science, especially over so complex an issue as AIDS. Furthermore, the attackers fail to make a necessary distinction between raising questions and urging action. They have presented a number of flawed arguments, including those about the credentials or experience needed to assess evidence. Objectively speaking, both official reports and the peer-reviewed literature afford substantive grounds for doubting that HIV is the necessary and sufficient cause of AIDS and that antiretroviral treatment is unambiguously beneficial.

Introduction

Following the announced discovery in 1984 of human immunodeficiency virus (HIV) as the probable cause of acquired immunodeficiency syndrome (AIDS), this hypothesis soon became the ruling theory.[1] Doubts about the hypothesis were ignored; for instance, Duesberg's 1989 article[2] has an editorial footnote promising a rejoinder that never came.

For more than two decades, dissenters from the assertion that HIV = AIDS have published books and articles and maintained a presence on the Internet, but major media have paid little if any attention; thus most people seem unaware that there are any serious doubts about the matter. The media silence was breached briefly in 2000 when President Thabo Mbeki of South Africa convened a group comprising both HIV/AIDS believers and HIV/AIDS skeptics to advise him on the scientific status of the issue. However, the media coverage gave short shrift to the doubters' views by comparison to the believers' Durban Declaration with its 5,000 signatures, which asserted: "The evidence that AIDS is caused by HIV-1 or HIV-2 is clear-cut, exhaustive and unambiguous, meeting the highest standards of science…. It is unfortunate that a few vocal people deny the evidence. This position will cost countless lives."[3]

In March 2006, the magazine *Harper's* again brought dissenting views prominently into the public arena through the article "Out of Control" by Celia Farber.[4] This spurred furious rejoinders. A website[5] designed to dispel doubts was set up. Op-ed pieces and non-technical articles continue to reiterate that it is beyond reasonable doubt that HIV causes AIDS, but the restrained language of the Durban Declaration has been replaced by strident denunciations: Public dissent from HIV = AIDS is said to be on a moral par with Holocaust denial. *The New York Times* had an extraordinarily venomous editorial[6] asking, "What is it about South Africa's devastating AIDS epidemic that President Thabo Mbeki just doesn't want to understand?" and concluding, "Unless he finally starts listening to sensible advice on AIDS, he will leave a tragic legacy of junk science and unnecessary death." Similarly unrestrained critiques of doubters have appeared in such a variety of places as Canada's *Globe & Mail,*[7] *PLoSMedicine,*[8] *Skeptical Inquirer,*[9] and the London *Times.*[10]

Personal Attacks on the Skeptics

It is widely, perhaps universally recognized that arguments are properly carried on over the substantive matter under contention, and that personal attacks on those who hold other views are not only distasteful but also beside the point, since they do not serve to clarify the matter being disputed. Nevertheless, attacks on persons have become a prime feature of assertions of HIV = AIDS.

Mark Wainberg, director of the McGill University AIDS Center, has labeled as "irresponsible" those journalists who report on scientists who do not share Wainberg's certainty that HIV causes AIDS.[11] He has said that those who question the theory should be imprisoned on charges of public endangerment.[12,13] Together with John P. Moore, Wainberg sought the dismissal of an untenured faculty member who published a book denying that HIV causes AIDS.[7] Wainberg, Moore, and others have urged a second university to bar from contact with medical students a researcher who has offered evidence against an HIV-AIDS connection, according to e-mails supplied by the targeted researcher. In 2004, a documentary about clinical trials of HIV drugs using orphans in New York City as subjects had been shown in Britain,[14] and a letter demanding retraction of that program was sent to the British Broadcasting Corporation by a group including Moore, Wainberg, and other self-styled "HIV/AIDS activists."[15]

Moore is a researcher at Weill Cornell Medical School. In addition to his joint actions with Wainberg, he helped organize the AIDStruth website. Readers of this essay are invited to sample items on that website and to note the lack of substantive discussion and the preponderance of *ad hominem* attacks on so-called "HIV denialists."

Commenting on Celia Farber's article in *Harper's*, Moore together with Robert Gallo and several other activists wrote:[16]

> [I]ntellectual dishonesty is the norm for Farber and other AIDS denialists including David Rasnick, Peter Duesberg, Kary Mullis and Harvey Bialy….
>
> Analogous to holocaust [*sic*] denialism, AIDS denialism is an insult to the memory of those who have died of AIDS, as well as to the dignity of their families, friends and survivors. As with Holocaust denialism, AIDS denialism is pseudo-scientific and contradicts an immense body of research.
>
> But in contrast to Holocaust denialism, AIDS denialism directly threatens lives *today* by trying to fool laypeople at risk of HIV not to get tested for the virus or not to practice safer sex. It also tries to fool those who need ARVs not to take them….
>
> Farber points out that Mullis discovered the PCR and is a Nobel laureate. What she fails to mention is that he has a wide range of odd beliefs. He does not believe in global warming, but does believe he might have been abducted by aliens and is partial to astrology.

Edwin Cameron, a South African judge, devotes several pages of his memoir to defending the equating of HIV/AIDS deniers with Holocaust denialists, concluding eventually that "I compared Holocaust denialism and AIDS denialism because I believed that the comparison between them was valid and true. And illuminating and important. I still do."[17]

On Being Certain

The HIV = AIDS believers insist that the mainstream consensus is so overwhelming that dissenters must be wrong. History of science is not kind to this argument. As scientific understanding has advanced, sooner or later the most firmly held mainstream views have been modified, indeed often overturned completely. Near the end of the 19th century it was the consensus that all the major discoveries had already been made—just before the Second Scientific Revolution turned on their heads the firmly held beliefs about atoms and much else. Medical science firmly believed that schizophrenia could be cured by infecting the sufferer with malaria (Nobel Prize, 1927) or by cutting out bits of brain (Nobel Prize, 1949) before settling—for the moment?—on drugs. Diseases like mad cow disease were firmly believed to be caused by lentiviruses (Nobel Prize, 1976) until the firm belief became that they are caused not by viruses but by prions (Nobel Prize, 1997). The proper, historically informed questions to ask are: How likely is it that HIV/AIDS theory will be significantly modified at some future time? What is likely to stimulate modification? When is that likely to happen?

Those questions could only be addressed properly by the usual procedure in science, with substantive interchanges over the evidence by people with disparate views and ideas. As already noted, from the very beginning defenders of the mainstream consensus have steadily declined, indeed specifically refused to engage in substantive discussion.[18]

> We will not:
>
> Engage in any public or private debate with AIDS denialists or respond to requests from journalists who overtly support AIDS denialist causes. The reasons are:
>
> 1. The debate has been settled: HIV causes AIDS….
>
> 2. The information proving the above is already in the peer-reviewed science literature….
>
> 4. Our time is better spent conducting research into HIV/AIDS and/or educating the general public….

Point 1 underscores how extreme are these dogmatists. As to point 2, dissidents continue to ask—so far to no avail—for the *specific literature citations* of publications that supposedly prove that HIV causes AIDS. Respecting point 4, these activists are spending an inordinate amount of time seeking to discredit skeptics. It is laughable, moreover, to describe propaganda that presents a fixed opinion as "educating the general public." It is especially inappropriate coming from people connected with universities: the proper aim of education is to stimulate people to think for themselves, the very opposite of indoctrinating them into a firm belief.

Since the dogmatists have several times compared HIV/AIDS doubters with Holocaust deniers, it seems pertinent to recall the words of Jacob Bronowski about "Knowledge and Certainty" in relation to the Holocaust.[19] As Bronowski squats next to a pond at Auschwitz, he scoops from it a handful of ashes and muses:

> Into this pond were flushed the ashes of some four million people. And that was not done by gas. It was done by arrogance. It was done by dogma. It was done by ignorance. When people believe that they have absolute knowledge, with no test in reality, this is how they behave. This is what men do when they aspire to the knowledge of gods.

For unambiguous certainty that HIV causes AIDS, every AIDS patient would have to be HIV positive. Indeed, the Durban Declaration makes that the first of its assertions: "Patients with acquired immune deficiency syndrome, regardless of where they live, are infected with HIV."[3] But that assertion is demonstrably false.

First: Kaposi's sarcoma (KS) with its purple skin-blotches was an icon of AIDS in the early 1980s, striking some 4,000 people by 1986, more than 10% of all patients diagnosed as having AIDS. Yet many KS patients are HIV-negative,[20] and for some 15 years it has been believed that KS is caused not by HIV but by human herpes virus 8: "All types of Kaposi's sarcoma are due to infection with human herpes virus-8 (HHV-8), which is transmitted sexually or via blood or saliva."[21]

Second: By the early 1990s, many reports had accumulated of clinically diagnosed AIDS patients who were HIV-negative. These cases were shunted aside by sleight of evidence through the invention of a brand-new disease, "idiopathic CD4-T-cell lymphopenia (ICL)"[22-24]—pathogenic immune deficiency of unknown cause, which is precisely the same as the definition of AIDS during the several years before the claimed discovery of HIV.

Note, too, that numerous HIV-positive people have remained healthy for upwards of two decades while eschewing treatment. Many have organized in support groups, for example, Alive & Well in Los Angeles and HEAL groups in several countries. The mainstream acknowledges that there are some unknown number—but certainly thousands—of HIV-positive people who do not get ill, the so-called "long-term non-progressors" or "elite controllers."[25,26]

Flawed Arguments, and Pots and Kettles

Knowledge and Action

Raising questions about HIV/AIDS is equated with seeking to dissuade people from practicing safe sex. That is a straw man. Perhaps one can find a doubter or two who has recommended unprotected sex, but no instance springs readily to mind, and it is far from the general rule. The skeptics differ over many details, agreeing only on the central claim that HIV has never been proven to be the cause of AIDS. That is a factual claim, not advice as to what human beings should or should not do.

Guilt by Association of Beliefs

The comments about Mullis's "odd" beliefs are not only *ad hominem*, but lack any empirical or logical basis. They imply that a person whose views on one topic are widely regarded as odd will therefore have equally odd views on all other matters. Under that criterion, one would dismiss Isaac Newton's laws of mechanics because Newton spent most of his time and energy on alchemical studies and Biblical exegesis.

Causing Harm

Those who so passionately defend HIV/AIDS theory seek to justify their uncivil tactics by appealing to the oft cited and widely approved exception to freedom of speech, that it does not extend to shouting "Fire!" in a crowded theater—perhaps overlooking that the penalty for doing that comes through the courts and not through character assassination. The attackers argue that, since HIV infection is an invariable precursor to deadly AIDS, it is a danger to public health to spread doubts and thereby encourage some HIV-positive people to avoid treatment. But, again, that displays absolute personal certainty, not the objective strength of the evidence.

These vigilantes of HIV/AIDS theory also find themselves in glass houses when they hold forth about the potential harm if laypeople accept the doubters' views. Tangible risks are associated with antiretroviral treatment. The official "HIV/AIDS Fact Sheet"[27] states that "the use of antiretroviral therapy is now associated with a series of serious side effects and long-term complications that may have a negative impact on mortality rates. More deaths occurring from liver failure, kidney disease, and cardiovascular complications are being observed in this patient population." The largest study published up to 2006 reported that among patients treated with antiretrovirals, AIDS events occurred earlier;[28] there was indeed "a negative impact on mortality rates": death rates did in fact increase.[29]

The manufacturers' pamphlets for antiretroviral drugs list such side effects as "nausea, vomiting, diarrhoea, rapid and deep breathing, stomach cramp, myalgia and paresthesia"; "lactic acidosis and severe hepatomegaly with steatosis, including fatal cases"; "mitochondrial toxicity"; "rapidly ascending muscular weakness"; "pancreatitis"; "peripheral neuropathy." Farber's article[4] centers on a death caused by a drug being tested for prevention of HIV transmission from mother to child. The BBC documentary[14] describes how orphans were subjects in tests of antiretroviral substances whose side effects can be so painful that many children refused to take the drugs; but they were forced to do so, sometimes via a stomach tube that had been surgically installed for that purpose.

Speaking objectively, any claim of potential harm ought to be based on a risk analysis, comparing the probability—following identification as HIV-positive—of becoming ill, and ill to what degree, with the probability of harm, and how much harm, from antiretroviral treatment. The official guidelines for treatment[30] spell out the risks of deferring treatment as follows:

- the possibility that damage to the immune system, which might otherwise be salvaged by earlier therapy, is irreversible;
- the increased possibility of progression to AIDS; and
- the increased risk for HIV transmission to others during a longer untreated period.

The benefits of deferring treatment are given as follows:

- avoidance of treatment-related negative effects on quality of life and drug-related toxicities;
- preservation of treatment options;
- delay in development of drug resistance if there is incomplete viral suppression;
- more time for the patient to have a greater understanding of treatment demands;
- decreased total time on medication with reduced chance of treatment fatigue;
- and more time for the development of more potent, less toxic, and better studied combinations of antiretrovirals.

However, no statistics are given, no quantitative guidance for deciding when the benefits might outweigh the risks, or vice-versa. Under those circumstances, deferring treatment might well seem the more prudent course.

Relevant Expertise

Skeptics are often accused of not being qualified to have an opinion on the matter because they have not themselves engaged in HIV/AIDS research. Thus Moore, Robert Gallo, and several other activists wrote, "Duesberg has almost no track record of published AIDS-related research in credible peer-reviewed journals,"[16] and the same point is made by others.[8,9] But it is entirely fallacious to claim that one needs to have done research personally in order to understand it and to build on it: Einstein, for example, received the Nobel Prize for his interpretation of the work that others had done on the photoelectric effect and Brownian motion.

Still, it is plausible that technicalities of retrovirology and molecular biology and so forth are more readily understood by people with credentials in those fields. The thing to note here is that the credentials of HIV/AIDS skeptics are at least as relevant as those of HIV/AIDS believers. Of about 2,500 publicly listed "AIDS rethinkers,"[31] about 300 have appropriate scientific credentials and roughly another 500 have medical degrees. Among the most prominent dissidents, Peter Duesberg's credentials in molecular biology and retrovirology are unquestionable. Kary Mullis received the Nobel Prize for inventing the DNA amplification technique universally applied in studies of DNA, including the "viral load" measurements made in HIV/AIDS work. The above-maligned David Rasnick is a biochemist who has worked on protease inhibitors, one of the components of the

"cocktail" antiretrovirals. Harvey Bialy served as editor of *Nature Biotechnology*. By contrast, a sizable proportion of the most strident HIV/AIDS believers lack relevant scientific credentials and might better be described as mainstream groupies than as HIV/AIDS experts. Thus the AIDStruth website lists about a dozen people of whom only half a dozen have the title "Dr.," and not all of these represent qualifications in medicine or in biological science.[32]

On Getting Personal

A doubtless unintended side-effect of attacking HIV/AIDS skeptics is that people who were previously unaware of the existence of dissenting views about HIV/AIDS have come to realize that doubts have been raised; thus even a self-styled "science blogger" had never heard of HIV/AIDS dissent[33] before coming across the Smith/Novella piece[8] in *PLoS Medicine*.

Not only are these attacks counterproductive for that reason, they are also likely to bring sympathy to the dissident cause from people not engaged in the HIV/AIDS matter but who recognize the importance of freedom of speech, and, in the particular realm of science, the need for open discussion and skepticism if scientific knowledge is to progress soundly. Furthermore, even HIV/AIDS believers deplore these personal attacks.[34]

Are There Reasonable Scientific Doubts?

Several questions obviously arise when there are personal attacks rather than substantive arguments: Why not just cite the specific scientific articles that contain the proof? That would surely be less emotionally onerous, and certainly less time-consuming, than seeking ways to assassinate characters. Why the fury? Why make personal attacks on people, often respectably credentialed and substantially accomplished, who are mostly not personally known to the attackers and therefore have not been in any way personally offensive to them? The skeptics are just disagreeing over the interpretation of matters of medical science.

The inference seems clear: Personal attacks are made because the doubters raise issues for which HIV/AIDS theory has no answer. Here are some of the questions:

How Does HIV Cause Loss of CD4 Cells?

It is now acknowledged that HIV does not kill CD4 cells directly, but via some sort of "bystander" mechanism whose actual nature remains to be discovered.

Why Is There an Epidemic?

Epidemics arise when each infected person infects on average more than one other person within a short space of time. However, studies of transmission of the HIV-positive condition have found a very low probability, on the order of 1 per 1,000 acts of unprotected intercourse.[35, pp44-45] How could this lead to an epidemic?

Gonorrhea and syphilis have transmission probabilities hundreds of times greater, yet they have not produced epidemics of the scale attributed to HIV. Gisselquist and colleagues have shown in numerous articles[36-39] that sexual transmission cannot explain the purported extent of AIDS epidemics in Africa and Asia.

Why Does Antiretroviral Treatment Not Improve Patients' Health?

The largest and most recently published study found that the standard highly active antiretroviral treatment (HAART) treatment should, if judged by laboratory measures of CD4 counts and viral loads, stave off immune deficiency. Yet, as noted above, people treated with HAART tend to have earlier onsets of AIDS-type events,[28] and "a reduction in the median time to AIDS" to only 2 months after beginning therapy, as well as "a significant increase in combined AIDS/AIDS-related deaths."[29]

Just a few years after introduction of the "cocktail" or HAART treatment, lack of clinical improvement, despite increased CD4 counts and lowered viral loads, was seen in a large enough number of patients to call for an explanation. Rather than questioning the HIV = AIDS connection, researchers invented a new, highly implausible phenomenon, "immune restoration disease," whereby for some strange and unspecified reason, resuscitation of immune function supposedly worsens clinical outcomes in certain instances.[40,41]

Why No Vaccine?

No vaccine against HIV exists despite continued expressions of hopes stretching back to the vaccine promised, within a couple of years, in 1984. After more than 20 years of effort, there is not even agreement over what biological properties an effective vaccine would have. No one has identified what keeps healthy HIV-positive people healthy.[42]

Why Are Statistics So Unreliable?

A significant reason for doubt is the fact that official estimates of HIV and AIDS numbers and rates are not to be relied on. James Chin, epidemiologist for California and later the World Health Organization, has described UNAIDS figures as politically but not substantively correct.[43] News reports in the second half of 2007 confirmed this, as estimates of HIV infection in India were reduced from 5.7 to 2.5 million[44]. A book review in the *International Journal of STD and AIDS* acknowledges "major failings of HIV epidemiology during the first quarter century of its existence."[45]

Grounds for Denying that HIV Causes AIDS

Well beyond reasons for doubt, there are real grounds for positively denying that HIV causes AIDS:

KS was a very icon of AIDS in the 1980s, yet (as noted earlier) it occurs in patients diagnosed clinically as suffering from AIDS, but who are HIV negative.

Again, as mentioned above, HIV-negative AIDS has been explained away as a separate disease, ICL.

Two decades of data from HIV tests in the USA show that positive HIV tests do not correlate with AIDS geographically, chronologically, in their relative impact on men and on women, or in their relative impact on black and on white Americans.[35, cpt 9] If two things are not correlated, then one is not the cause of the other.

Conclusions

There remain many reasons for doubting the HIV = AIDS hypothesis, or even for positively denying it. The truth regarding

the cause of AIDS will only be established through civil, dispassionate scientific discussion, not by marginalizing or suppressing dissent. Furthermore, the doubts raised here indicate a need for additional research that explores alternative hypotheses.

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