The Perth Group HIV-AIDS Debate Website

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THE LAST DEBATE

Reappraising AIDS Dec. 1999

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There is a tide in the affairs of men, which, taken at the flood, leads on to fortune; Omitted, all the voyage of their life is bound in shallows and in miseries. On such a full sea are we now afloat; And we must take the current when it serves, or lose our ventures.

-- Julius Caesar Act V Scene III

Over recent months debate has been taking place amongst the HIV/AIDS dissident groups regarding the wisdom of taking up the issue of HIV isolation as an argument in our fight against mainstream AIDS science. According to some dissidents this question should not be raised because:

i. it will provide HIV/AIDS protagonists with additional ammunition with which to discredit us;
ii. it makes little difference if people are being killed in the name of a non-existent or a merely harmless virus;
iii. it is an "existentialist" discussion.

On the other hand, other dissidents are of the opinion that we have no strong arguments. To quote Vladimir Koliadin, "There are many observations...which seem to provide strong support for the official theory and to refute dissident views. Dissidents must "not turn the blind eye to inconvenient facts".

From the very beginning the Perth group questioned the evidence which may well prove the most significant "inconvenient" fact to fly in the face of all HIV/AIDS protagonists. If the data do not prove beyond reasonable doubt the existence of HIV then, in terms of a putative exogenous retrovirus, there can be no "observations...to provide strong support for the official theory". This is a point from which the staunchest of each side cannot escape. However, although our group has long published many scientific and epidemiological reasons for questioning the existence of HIV, we largely chose to leave the facts speak for themselves rather than making pronouncements such as "HIV does not exist". There were two reasons for this:

i. To facilitate publication;
ii. To avoid a split in the group which Charles Thomas founded. Also, we could not exclude the possibility that the HIV theory of AIDS could be deconstructed without questioning the existence of HIV.

In 1996, when Peter Duesberg wrote a paper claiming the *Continuum* prize, he directly challenged the Perth group. We then had no choice but to openly defend our position, and we repeated the reasons in our lecture given at the 1998 Geneva International AIDS Conference. At present there are four reasons why it is necessary to question the isolation and thus the existence of HIV:

i. Since 1996 it has become clear that, as far as the existence of HIV is concerned, the Group for Reappraising AIDS is divided. Some of the best known HIV experts are aware of this fact and it is now too late to pretend otherwise.
ii. There is no proof that such an entity exists. To claim the opposite is to deny the scientific evidence. Certainly conduct an anti-HIV debate avoiding this issue as exemplified by many in our midst. However, in arguing against the HIV hypothesis of AIDS in this manner one has to be content with half truths.
iii. "HIV" is the main obstacle, indeed, the only obstacle, in deconstructing the HIV theory of AIDS.
iv. Demonstrating that HIV has no been isolated is not an "existentialist" debate. In fact we consider this to be the strongest argument we can muster.

If we accept there is no proof for the existence of HIV then undoubtedly "the construction AIDS, also called HIV disease, collapses immediately and all so called "HIV tests" are automatically unmasked as being useless". If, on the other hand, we accept the existence of HIV, the debate could be endless, no matter how courageously one fights and what sacrifices one makes. In this regard Peter Duesberg's unprecedented contribution is a wise and timely reminder to all of us.

Why HIV isolation is necessary

The word "isolation" appears frequently in scientific papers and in debate concerning HIV and indeed in virology in general. For example, Montagnier's 1983 and two of Gallo's 1984 *Science* papers contain the word in their titles as well as the text. Use of this word signals the reader that the experimenter is claiming that the data presented proves that a virus exists. If this is the first such report the authors may claim to the discovery of a particular virus. What all scientists must consider is whether the data presented as "isolation" do indeed justify the claims.

A virus is an obligatory intracellular, replicating particle of particular physical and chemical properties. Thus the first absolutely necessary, but not sufficient step in proving the existence of a retrovirus is to isolate retrovirus-like particles. That is, obtain the particles separate from everything else. In other words, purify them. There are many reasons for this including the following:

1. To prove that the retrovirus-like particles are infectious, that is, the particles are a virus.

Finding a retrovirus either *in vitro* or *in vivo* is not proof that it originated from outside, that is, the virus is infectious, exogenous. Furthermore, Gallo was well aware of this problem as far back as 1976 when he wrote: "Release of virus-like particles morphologically and biochemically resembling type-C virus but apparently lacking the ability to replicate have been frequently observed from leukaemic tissue". In other words, it is not sufficient to claim a particle is a retrovirus merely on appearances. To prove that retrovirus-like particles observed in a culture are virus particles one must isolate (purify) the particles, characterise their proteins and RNA and introduce them in a secondary culture, preferably containing cells of a different type than the primary culture. If any particles are released in the secondary culture, isolate them and prove that their proteins and RNA are exactly the same as those of the particles isolated from the primary culture. In these types of experiments one must not ignore the pivotal importance of proper controls.

2. To determine their biological effects.

For this one must use pure particles otherwise it is impossible to determine whether the effects are due to the virus particle or to contaminants. As Peter Duesberg has pointed out in "*Koch's second postulate: The microbe must be isolated from the host and grown in pure culture*", "was designed to prove that a given disease was caused by a particular germ, rather than by some undetermined mixture of non-infectious

substances". Ironically Peyton Rous, the discoverer of retroviruses, issued the same caveat for "filterable agents", "retroviruses" in 1911.

3. To characterise the viral proteins.

The only way to prove that a protein is a viral protein is to obtain it from that object, or when the object is very small, as is the case of viruses, from material which contains nothing else but virus particles. In the material contains impurities which also have proteins it is not possible to determine what is viral and what is not. Only after the viral proteins are characterised they can be used as antigens in the antibody tests.

4. To characterise the viral genome.

As for viral proteins the only way to prove that a stretch of RNA is viral, it is to obtain it from material which contains nothing else but virus particles. If the material contains impurities, the impurities must not contain RNA. Then, and only then, can the RNA and its cDNA be used as probes and primers for genomic hybridisation and PCR studies.

5. To use it as a gold standard.

Just because a virus or viral protein reacts with an antibody present in a patient's sera, this does not prove that the antibody is directed against the virus or its proteins. That is, the reaction is specific. To determine the specificity of an antibody reaction one must use the virus as a gold standard. Protagonist HIV experts such as Dr. Donald Francis agree. Speculating on a viral cause for AIDS in 1983, Francis wrote, "One must rely on more elaborate detection methods through which, by some specific tool, one can "see" a virus. Some specific substances, such as antibody or nucleic acids, will identify viruses even if the cells remain alive. The problem here is that such methods can be developed only if we know what we are looking for. That is, if we are looking for a known virus we can vaccinate a guinea pig, for example, with *pure virus*...Obviously, though, if we don't know what virus we are searching for and we are thus unable to raise antibodies in guinea pigs, it is difficult to use these methods...we would be looking for something that might or might not be there using techniques that might or might not work" (italics ours). The only way to perform hybridisation and PCR studies is to use the viral RNA or its cDNA or small fragments of it, as probes and primers. However, as with antibodies which react with viral proteins, a positive result, especially a positive PCR result, does not guarantee that what is detected is viral RNA. To determine the specificity of the PCR the virus must be used as a gold standard.

HIV "Isolation"

All retrovirologists agree that one of the principal defining physical characteristics of retroviruses is their density. In sucrose density gradients they band at the density of 1.16g/ml. Using the method of sucrose density banding in 1983 Francoise Barre-Sinoussi, Luc Montagnier and their colleagues claimed to have isolated a retrovirus, that is, to have obtained material which contained nothing else but "purified labelled virus" which now is known as HIV. Similar claims were reported by Robert Gallo's group in 1984. It goes without saying that if the material was pure HIV, then all the proteins present in such material must be HIV proteins. Instead, only the proteins which were found to more often react with sera from AIDS patients and those at risk were said to be HIV proteins, and the antibodies which reacted with them the specific HIV antibodies. Since then the reaction of these proteins with antibodies is considered proof for HIV infection. Again, if their material was pure HIV then all the nucleic acids present in their material must be the HIV genome. Instead, only some fragments of RNA rich in adenine were arbitrary chosen and were said to constitute the HIV genome. Since then, these fragments have been used as probes and primers for hybridisation and PCR studies, including the determination of "viral load".

The biggest problem in accepting Montagnier's and Gallo's groups claims is the fact that neither published even one electron microscope picture of the "pure" HIV to prove that the material contained nothing else but isolated, retrovirus-like particles, "purified labelled virus". In 1997 Montagnier was asked by the French Journalist Djamel Tahi why such pictures were not published. Incredibly Montagnier replied because in what his group called "purified" HIV there were no particles with the "morphology typical of retroviruses". When he was asked if the Gallo group purified HIV, Montagnier replied: "I don't know if he really purified. I don't believe so". If this is the case then the 1983 Montagnier findings and the 1984 Gallo's finding, prove beyond all reasonable doubt that they did not have any retrovirus much less a unique retrovirus, and that the proteins and the RNAs which were present in their "purified" material could not have been of retroviral origin.

In the same year, 1997, some of the best known HIV experts accepted that no evidence existed which proved HIV isolation and thus a "virus to be used for biochemical and serological analyses or as an immunogen". In that year, two papers were published in *Virology* with the first electron micrographs of "purified HIV" obtained by banding the supernatant of "infected" cultures in sucrose density gradients. The authors of both studies claimed that their "purified" material contained some particles which looked like retroviruses and were said to be the HIV particles. But they admitted that their material predominantly contained particles which were not viruses but "mock virus", that is, "budding membrane particles frequently called microvesicles". Furthermore, "The cellular vesicles appear to be a heterogeneous population of both electron-lucent and electron-dense membrane delineated vesicles ranging in size from about 50 to 500nm". Many, but not all of these mock viruses "appear "empty" by electron microscopy". According to the authors of these studies, one of the reasons that some of the "mock virus" particles appear to have no core "might be that the vesicles contain large amounts of protein and nucleic acid which are unstructured". They showed that the microvesicles "are a major contaminant" of the "purified" HIV. Indeed, the caption to one of the electron micrographs reads, "Purified vesicles from infected H9 cells (a) and activated PBMC (b) supernatants", not purified HIV.

In a further experiment the supernatant from non-infected cultures was also banded in sucrose gradients. They claimed that the banded material from these cultures contained only microvesicles, "mock virus" particles but no particles with the morphology of HIV. The mock virus particles contains both DNA and RNA, including mRNA which is known to be poly-A rich.

No reason(s) is given, other than morphological, for why some of the particles in the fractions from the "infected" cells are virus particles and the others "mock virus". As far as morphology is concerned, none of the particles have all the morphological characteristics attributed to HIV, or even retroviruses.

The minimum absolutely necessary but not sufficient condition to claim that what are called "HIV-1 particles" are a retrovirus and not cellular microvesicles is to show that the sucrose density fractions obtained from the "infected" cells contain proteins which are not present in the same fractions obtained from non-infected cells. However, Bess *et al* have shown this is not the case. The only difference one can see in their SDS-polyacrylamide gel electrophoresis strips of "purified virus" and "mock virus" is quantitative, not qualitative. This quantitative difference may be due to many reasons including the fact that there were significant differences in the history and the mode of preparation of the non-infected and "infected" H9 cell cultures.

That the "viral" proteins are nothing more than cellular proteins was further demonstrated by Arthur, Bess and their associates. In their efforts to make an HIV vaccine they immunised macaques with, amongst other antigens, "mock virus", that is sucrose density banded material from the supernatants of non-infected H9 cell cultures. After the initial immunisation the monkeys were given boosters at 4, 8 and 12 weeks. The animals were then challenged with "SIV" propagated either in H9 cells or

macaque cells. When the WBs obtained after immunisation but before "SIV" challenge were compared with the WBs post-challenge, it was found that challenge with "SIV" propagated in macaque cells had some additional bands. However, the WBs obtained after the challenge with SIV propagated in H9 cells were identical with the WBs obtained after immunisation, but before challenge. In other words, the protein immunogens in the "virus" were identical with the immunogens in the "mock virus".

Since both the "mock virus" and "purified" virus contain the same proteins, then all the particles seen in the banded materials including what the authors of the 1997 virology papers call "HIV" particles must be cellular vesicles. Since there is no proof that the banded, "purified virus", material contains retrovirus particles then there can be no proof that any of the banded RNA is retroviral RNA. When such RNA (or its cDNA) is used as probes and primers for hybridisation and PCR studies, no matter what results are obtained, they cannot be considered proof for infection with a retrovirus, any retrovirus.

To quote dissident Paul Philpott "I think a very convincing case can be made against the HIV model. It's just that the points that really do refute the HIV model have not been taken up as the principal weapons of our most visible advocates." Any scientist of any persuasion acquainted with these data must question the evidence for the existence of HIV.

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References

1. Papadopulos-Eleopulos E. Reappraisal of AIDS: Is the oxidation caused by the risk factors the primary cause? Med Hypotheses 1988;25:151-162.

2. Papadopulos-Eleopulos E, Turner VF, Papadimitriou JM. Is a positive Western blot proof of HIV infection? Bio/Technology 1993;11:696-707.

3. Duesberg PH. Peter Duesberg responds. Continuum 1996;4:8-9.

4. Papadopulos-Eleopulos E, Turner VF, Papadimitriou JM, et al. The Isolation of HIV: Has it really been achieved? Continuum 1996;4:1s-24s.

5. Gallo RC, Wong-Staal F, Reitz M, et al. Some evidence for infectious type-C virus in humans. In: Balimore D, Huang AS, Fox CF, eds. Animal Virology. New York: Academic Press Inc., 1976:385-405.

6. Rous P. A Sarcoma of the Fowl transmissible by an agent separable from the Tumor Cells. J Exp Med 1911;13:397-411.

7. Francis DP. The search for the cause. In: Cahill KM, ed. The AIDS epidemic. 1st ed. Melbourne: Hutchinson Publishing Group, 1983:137-150.

8. Tahi D. Did Luc Montagnier discover HIV? Text of video interview with Professor Luc Montagnier at the Pasteur Institute July 18th 1997. Continuum 1998;5:30-34.

9. Bess JW, Gorelick RJ, Bosche WJ, et al. Microvesicles are a source of contaminating cellular proteins found in purified HIV-1 preparations. Virol 1997;230:134-144.

10. Gluschankof P, Mondor I, Gelderblom HR, et al. Cell membrane vesicles are a major contaminant of gradient-enriched human immunodeficiency virus type-1 preparations. Virol 1997;230:125-133.

11. Arthur LO, Bess JW, Jr., Urban RG, et al. Macaques immunized with HLA-DR are protected from challenge with simian immunodeficiency virus.