SULAN J

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R V ANDRE CHAD

WEDNESDAY, 20 DECEMBER 2006

RESUMING 10.06 A.M.

+ELENI PAPADOPULOS-ELEOPULOS CONTINUING

HIS HONOUR

Q. Ms Eleopulos, I know it is difficult because it is hard to change one's style or speed of speaking, but the reporters, particularly when you are using technical language, have some difficulty understanding and keeping up with you because you speak quite quickly, so if you could try and just slow down a little bit. I know it is difficult but if you could just slow down a little bit so that we could try and get it down accurately.

A. I will try. I have been promising to myself and that's why I'm so nervous and it is becoming a vicious circle. I promise to myself I'm not going to be nervous and I will speak - this is my problem. I am not good in expressing my views.

Q. I understand. You are not alone when you say that you are nervous. Lots of people are when they come into the witness box. Anyway, you do the best you can and I will

slow you down, if you don't mind, if you are going too quick.

A. I don't mind at all.

MS MCDONALD: Before I continue, my learned friend has advised this morning that there are some slides which are going to be withdrawn from your Honour's consideration, given that the material they are based on can't be find. I would invite my learned friend to indicate that before I continue so I don't cross-examine on slides which are not before your Honour.

MR BORICK: Slide 88 in the isolation presentation; slides 18 and 19 in the sexual transmission

presentation.

MS MCDONALD: Can I check? It seems to me that No.20 also comes from the same study as 18 and 19.

MR BORICK: I will check that. Slides 39 and slide 52, and in the antibody testing presentation, slide 26.

The Constantine book is on an aeroplane between here and Perth. It is in every library in the country other than in South Australia. It was supposed to be here at huge expense early this morning but they haven't got it to us. We expect it mid morning.

HIS HONOUR: Thank you.

+CROSS-EXAMINATION BY MS MCDONALD

Q. Before I pick up where I left off yesterday, I just want to go back and ask you a couple of questions about the evidence you have given already. Yesterday when I was asking you some questions about the number of people who are reported to be HIV positive in the world, I asked you this question and you gave this answer. I am going to read it to you and I invite you to listen to it. P.218. You might recall it was at a point in time when that UN document was in front of you.

A. Beg your pardon?

Q. It was at a point in time when that UN document, the booklet, was in front of you.

A. The UN?

Q. Yes.

A. Yes.

Q. I asked you this question: 'What do you think is wrong with these 39.5 million people', and you gave this answer: 'If you have just a small glance of this, now HIV existed or AIDS existed for 25 years, HIV existed for more because they claim it was in the population even before 1980, right'.

HIS HONOUR: What page are you on?

MS MCDONALD: I have moved to 219.

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Q. 'And it is sexually transmitted. Why, even today, this virus, if you go through the document, you will find out

that this virus is still only restricted to blacks or to, say, Africans and Asians. Why? What's happened? We live in a global village. People moving left, right and centre'. The first question is: do you agree that was the answer you gave to that question yesterday.

A. Yes.

Q. What did you mean when you said 'even today, this virus, if you go through the document, you'll find out the virus is still only restricted to blacks or to, say, Africans and Asians'.

A. If you read the document and you find out that the vast majority of people who were reported to be positive are either from Asia or Africa, or migrants to Europe from Africa and Asia, or blacks in America. That is, the vast majority out of that 39 million supposedly belong to these groups. If you go to England, for example, a few years ago, I can't recall the exact number, but it was about 100, no more than 250 white British citizens born in England and whites who are HIV positive.

Q. But yesterday you didn't talk about the vast majority, you used the words 'You'll find out this virus is still only restricted to blacks or to, say, Africans and Asians'.

A. By 'restriction', I meant relative. It is all there. Relatively speaking, it is very, very, very minor proportion of people who are reported to be HIV infected

in Europe, whites in Europe, Australia or the USA.

Q. Can I move on to another topic for a moment. Yesterday I asked you some questions about the web site of the Perth group. Do you recall that.

A. Yes.

Q. And you indicated - and these are my words, not yours - really, you don't have very much to do with that web site.

A. As I said yesterday, we are a group of people which others call us the 'Perth group', and we inherited this name. So to make sense easier, we call now ourselves the 'Perth group', but not one of us does HIV/AIDS

research. It is a minor part of our duties in hospital. As I said to you yesterday, my work is not HIV research. I do even less than 50, no more. In fact, much less than 50% of my research in the hospital is related to HIV/AIDS. In fact, now even less, because what we have to say about HIV and AIDS -

Q. I'm going to stop you.

A. We have said it -

Q. I'm going to stop you.

A. Yes.

Q. Because this has nothing to do with the question I just asked you.

A. Sorry, yes.

Q. The question I just asked you is about the web site.

A. Yes, and I was going to come back to answer that answer because we are -

Q. Let's just deal -

A. Because we are a group, each of us, who divide your tasks to make things easier to be able to do the work. We don't have staff to do the work for us and we don't ourselves - are not doing this work all the time. So we have to come up with data. We have to divide to make things easier. I have to do. Everybody is responsible for something.

Q. Let's try and actually go back to the question. My question is: do you agree that yesterday you told the

court that really you don't have very much to do with this web site.

A. Yes, I did. Dr Turner is mostly responsible for the web site.

Q. When you say 'mostly responsible', do you have a role.

A. Not much.

Q. Looking at this document, the document you have in front of you is two pages.

A. Yes.

Q. If you look on the left, there is a column headed 'Home' on the first page.

A. On the first page? On the front page.

Q. There is a column to the left, a dot point, headed 'Home'.

A. Yes, yes.

Q. And then if you go to the second page, you will see that column continues down.

A. Yes.

Q. And it ends with 'Perth group and VirusMyth'.

A. Yes.

Q. Do you see that.

A. There is there the context to other web sites.

Q. So those points that run down the page on the left, that's like the index or the menu, if you like, of different areas of the web site. Is that right.

A. Sorry?

Q. That column on the left, the dot points -

A. Yes.

Q. - that is the index or the menu into the web site.

A. It is contact list. It gives the contact list and the contributors, and the Perth group -

HIS HONOUR: They are talking about the VirusMyth.

XXN

Q. So if someone was to go into this web site and look for who the contributors are, we have seen what we see on page one on that document in front of you; correct.

A. Yes, you will see this.

Q. Your name is the first name on that list.

A. Yes, I am the leader of the Perth group and this is the Perth group web site.

Q. And the second name is Dr Turner.

A. Yes.

Q. And then the left two names, what's their role.

A. The last two names are, Dr Turner is the person who is actually keeping the web site going, technically going.

Q. So that's it. You and Dr Turner are the contributors to the web site.

A. No. No, the Perth group is not only me and Dr Turner. If you go through, I'm sure you will find all our names.

Q. Why aren't there other names listed under the

contributors' heading if that is the case.

A. I don't know. They should be there. All the Perth group should be there.

EXHIBIT #P15 COPY OF WEB SITE ENTITLED 'PERTH GROUP, THE HIV/AIDS DEBATE' TENDERED BY MS MCDONALD. ADMITTED.

Q. I want to ask you about another answer you gave yesterday at p.195. This was very early in the cross-examination yesterday when I was asking you some questions about whether you had the backing or support of your employer in expressing the views that you had put to the court. In that context, I asked you this question at line 21: 'To make it quite clear, the question is simple. Do you have the backing -' and then you interrupted me and this was your answer: 'Simple, I said it. It is in my duty, 30% is research and development of which, according to my head of department, I can use about 50% of it in HIV/AIDS but my research in HIV/AIDS is mostly done in my private time'. Firstly, do you agree that's the answer you gave yesterday.

A. Yes, I agree.

Q. Are you saying, in that answer, you have the authority of the head of your department to use 50% of your research time in relation to researching HIV and AIDS.

A. Yes.

Q. So you are saying that you have the authority of the Royal Perth Hospital to spend 50% of your research time on HIV/AIDS.

A. In 1988 it was agreed there has been some complaint from the HIV experts that I contacted one of the AIDS patients, and they know this, and especially one haematologist, because the gentlemen who was a haematologist complained to the medical superintendent that I have interfered with their patients, and he wrote a letter, that haematologist - the patient I had contacted was a haemophiliac who was the president of the AIDS Council in the Haemophiliac Society in Perth.

I was trying to find out from the haematologist, which member I was friendly, to ask what per cent of haemophiliacs were testing positive in 1988. Nobody would give me an answer, not even a private answer. Since we were friends, I thought I would be able to get that information either as a scientist or as a friend. Nobody would give me that response. So there was the the gentlemen who was very often on the news on our TV, and as I said, who was the president of the Haemophiliac Society and then he had an article. There was an article in Western Australia about him. So one day I write him and I ask him, not as his capacity, I didn't know that he was HIV positive, I asked him 'Will you please tell me how many of the haemophiliacs test positive for HIV?' and he replied about 75% of the ones that have been tested.

CONTINUED

27
28
29
30
31
32
33
34
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38

.SMR...00502 266 E. PAPADOPULOS-ELEOPULOS XXN

So I said 'That high a percentage?' and he said 'Of the ones which have been tested' and I said 'Yes, I understand not all of them have been tested but of the ones who have been tested'.

Q. I am going to interrupt you.

A. But you asked me to explain to you what is going on, is my work on AIDS, so I have to give you an answer. Your Honour please allow me to say what happened and what I was being told by the medical superintendent of the Royal Perth Hospital.

MS MCDONALD: She has just directed a question to your Honour.

HIS HONOUR

Q. You go ahead and answer the question.

A. Thank you. Now, as I said the - I told the President of the Haemophilia Society and he said 'About 75%' and after he gave me all the information I said 'But how many of them have AIDS?' And he said '2'. And I said 'What do they have?'. He said 'What do you mean what do they have?'. I said 'What diseases they have' and he said 'They haven't got any disease'. 'They don't have AIDS'. But he said 'They do, I am one of them'. And I said 'What do you have?'. He said 'Apart from haemophilia he said I have low T4 cells' and I said 'But low T4 cells, you are haemophiliac, are you injected with T4?' And he said 'Yes'. He said 'Yes, I am

injected with and I am on AZT'. Then the T4 cells are made - are dual to the factor 8 you are given. He said 'But that cannot - factor 8 I know that AZT is toxic but factor 8 can't decrease the T4 cells'. But I said 'But yes, it can decrease'. He said 'Who are you - '

Q. Ms Papadopulos -

A. To make the short story - to make the long story short, well after the complaint they have - they wrote letters - the haematologist wrote letters to the medical superintendent and the medical superintendent asked the head of the department and after all we had a meeting in the medical superintendent's office and it was decided

that I can do as much AIDS research and that was with my head of the department, then head of the department, and the medical superintendent, and I can publish in scientific journal as much as I want but, I should not talk to the public or press on behalf of the hospital and I fully understand this; the hospital cannot have two policies totally opposite policies in regard to AIDS and I kept that promise, I promised and I did that. We never wanted to give interviews and we always, when people arrived and they asked me, I always specify what I say and I did say in this court what I say is not on behalf of the hospital, I am talking here in my behalf, Eleni Papadopulos-Eleopoulos, as a private citizen, not as a representative of Royal Perth hospital.

XXN

Q. You didn't say this in your evidence-in-chief you only said that when you were cross-examined about it.

A. I wasn't asked. I didn't know that I have to say that.

Q. Can we go back to the question I asked you some minutes ago now: is it your position in court today that currently, not 10 or fifteen years ago, 50% of your research work at the hospital is HIV/AIDS.

A. No, it is not, but I can use up to 50% of it but I am not using that much because I don't need to do that because now - by now we have published everything which can be said about HIV and AIDS. The only work now I am

doing is when we have some papers like the ones from Europe by May on HAART.

MR BORICK: It is not a person.

A. Drugs. So when such a paper is published, like, as I said, which are very, very fundamental regarding the HIV and AIDS, then I read the papers - in fact I don't even have to look in the journal because there is a professor in America who always he has access. He said he'll send the papers before you see the copy out on the street or papers like the British paper where HIV is said to be responsible only for 4-6% of the decrease in T4 cells and something else causes the decrease of the over 90%.

These papers doesn't tell me - I read them in bed. So I don't have to use that 50% and I am not using it.

XXN

Q. You still not have answered my question which is do you say you had the authority.

A. Yes, I do, I did say.

Q. Let me finish the question. Do you say you have the support of your employer, the Royal Perth Hospital, to use 50% of your research time researching HIV and AIDS.

A. I said the hospital knows about my work, the hospital decided in 1998 I can do this research and I was doing - I was spending about 50% of my time then, now I don't have to spend.

HIS HONOUR

Q. The question is though do you say you don't spend it now because you don't have to.

A. But I still have authority.

Q. You still have the authority.

A. Yes.

XXN

Q. You have the authority of the hospital to use that time researching HIV and AIDS.

A. My head of the department - I don't go directly to the medical superintendent. Is the head of the department who is directly responsible, I am directly responsible to.

Q. We will come back to that later when I put some documents to you, but I want to move on to a different topic for the moment. It relates to some evidence you gave about slide 26. This is slide 26 from that first component, the virus isolation. Looking at A5.

A. P.5, slide 26.

HIS HONOUR

Q. Virus taxonomy.

A. Yes.

Q. On the right-hand side at the top.

A. Yes.

XXN

Q. You will see the slide after number 27 down on the next row to the left was also related to slide 26 in that it came from the Hans Gelderblom publication, is that right

A. Yes, two slides there, taxonomy.

Q. What do you mean looks like -

A. Yes.

Q. Did that image come from that publication.

A. This is what is generally accepted. This is generally accepted. I do not give - this is taken from Montagnier from Luc Montagnier's book 'Virus'.

HIS HONOUR

Q. That is slide 27.

A. Slide 27, yes.

XXN

Q. Is that your evidence, it didn't come from the Gelderblom publication you have referred to in slide 26.

A. Slide 26, no, that is virus taxonomy, that is the same. Gelderblom has a similar thing in the web site. Both - almost everybody present the same. This is a standard presentation of HIV you can find in all - slide 27 can be found in nearly everything including Harrison's textbook of medicine. In one - Harrison in one - I forgot now which edition - in one of the editions it is presented the core is presented cylindrical and in another edition - I apologise, don't know which edition but later edition - the core is presented as cone-shaped

and yet give exactly the same editor, the same electromicrogram. The same electromicrogram in the Harrison book is interpreted diagrammatically in one of them as the core being a cylinder and in the other the same electromicrograph is presented as the core being totally different, cone-shaped core, the same photograph, and one doesn't know what to think which is the right one. How can you have the same electromicrograph in the most prestigious textbook of medicine being represented in totally different forms.

Q. Have you finished.

A. Yes.

Q. I will remind you of what your evidence was about slide 26 to put it in context, some questions that I am going to ask you.

A. Yes.

Q. When we got to slide 26 in your PowerPoint presentation, you said the following and this is at p.29 line 25 I am going to start part-way through an answer because it is a very long answer that goes for over a page but we will start from the point of the answer where you moved on on to deal with slide 26. Slide 26 'The viruses are also divided into families, genera and species. By definition particles belonging to the family of retroviruses are "Enveloped viruses with a diameter of 100 to 120 nm budding at cellular membranes. Cell released virions, that is, individual virus particles, contain condensed inner bodies known as cores and are studded with projections which are known as spikes or knobs".

A. Yes.

Q. That from a paper by Hans Gelderblom.

A. Yes.

Q. One of the best known microscopia -

A. Elctromicroscopia.

Q. In general, in HIV in particular. This is a diagram of what a retrovirus looks like. Then you talk about the diagram. Firstly, do you agree that was your evidence.

A. Yes.

Q. And you were there referring to an article produced by a number of authors, but particularly Gelderblom.

A. Yes.

Q. Have you subsequently provided the prosecution with a copy of that article.

A. No, I don't know if we have done.

Q. That was one of the ones you didn't provide the prosecution with that we had to ask for.

A. That is possible.

Q. Looking at an article headed 'Fine Structure of Human Immunodeficiency Virus'.

MS MCDONALD: There is a copy for your Honour and I will tender that article.

HIS HONOUR: Any objection?

MR BORICK: No.

EXHIBIT #P16 ARTICLE HEADED 'FINE STRUCTURE OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) IMMUNOLOCALISATION OF STRUCTURAL PROTEINS AND VIRUS CELL RELATION BY GELDERBLOM AND OTHERS' RECEIVED 3/12/1987 TENDERED BY MS MCDONALD. ADMITTED.

XXN

Q. Firstly, do you agree that is the article that you relied upon for those slides, 26 and 27, in your PowerPoint presentation.

A. If I gave this reference, then, yes.

Q. This was the article. During your evidence you have been at pains to tell us, haven't you, that there are HIV - HIV has never been photographed.

A. Sorry?

Q. During your evidence you have told us many times that HIV has never been photographed.

A. No, no, no, no. I never said that HIV has not been photographed. I never said - just saying here - what I meant - let us make it clear now, you can take photographs from the culture there are numerous photographs not only by Hans Gelderblom but by many

including Montagnier and including Gallo. Also, a lawyer found out what Gallo represented as his electromicrograph actually was Montagnier's electromicrograph but let us not go into those details. There are numerous - let us forget what Gallo did. There are numerous photographs of what is called - what is meant to represent HIV particles from the cultures. I can give you hundreds of papers. What we are saying is as in this document you have given us yesterday -

HIS HONOUR

Q. P 4.

A. Is that there are no electromicrographs - what is meant

to represent apart from Best and Ushenko 1997 papers there are no photographs of the banded material, to show that what they are saying is pure HIV actually is pure HIV.

XXN

Q. You see in this very article that you relied on -

A. I am relying on many articles, that is not the only articles we are relying on.

Q. I realise that but talking about this one at the moment. In this very article you relied on it is full of photographs that the author purports are of HIV.

A. We corresponded with Hans Gelderblom - I can give you all our correspondence with Hans Gelderblom for years. He never denied that there are no pictures of the pure virus, that is what we are interested in, and, as I say, this is what is required to prove the HIV RNA and to do what you repeatedly yesterday said, molecular studies of the HIV: you cannot do molecular studies if you don't have this, this is banded. If you don't present this kind of evidence we can forget all the molecular studies, all.

Q. In fact in this article what the authors were doing was comparing two strains of HIV, HIV 1 and HIV 2.

A. Yes, you can - I am not saying that they don't say they have HIV, I am not saying that they don't have HIV - that is all the debate. That is all the debate between

what is called dissidents and what is is called HIV protagonists and apropos the dissidents - there are at least two Nobel laureates including Walter Gilbert, a physicist, who has given the Nobel for his work in biology without ever having a formal study in biology.

HIS HONOUR

Q. Is he a protagonist for the view that HIV has not been identified as a virus.

A. He - there isn't only one group of people who are questioning the isolation of the HIV. We have many supporters but we are the first who ever say that HIV - there is no evidence for existence of HIV. As far as I

know, he says there is no evidence that HIV - because he is close to Peter Deusberg - that there is no evidence that HIV causes AIDS. I am not fully familiar with what he exactly says.

CONTINUED

Q. So let's go back to this article that you relied on and cited in your presentation. Now that was an article in which the authors set about comparing the morphology and the appearance of HIV 1 and HIV 2. Do you agree that is what they were doing in this article.

A. Yes, they are saying that. But, as I said, I didn't give them any other articles which say that.

Q. So is it your evidence that 'Well, they're wrong about that'. What are you saying about it.

A. They are seeing some particles there but seeing particles, every retrovirologist, including Gallo; in fact in 1976 Gallo published a paper - I have to answer - Gallo published a paper in which he says, finding virus particles, that is particles which have the morphology of retroviruses, which have, even in scriptures, is not proof that they are viruses, these particles just have the right condition in your culture and you will get these particles. There is no argument about this between us and the retrovirologists.

Q. So when you decided to include an exert from this article in your PowerPoint demonstration you chose not to put some of the photographs of particles said to be HIV 1 and HIV 2.

A. If you look at the slide, the slide says 'Virus taxonomy' and we are not talking about if these

particles there represent HIV or not. We only say what the viruses - in fact, here exactly define what HIV should be and this is again something which you find in all papers on HIV. It's nothing, it's nothing unusual about it and I do not have to put the pictures here.

Q. Do you think it might be a fair representation of what this article was about if you had included the pictures.

A. No, there is no need for a picture here.

Q. Because -

A. There is no way you have to put a picture. We do this on viruses, on retroviruses what HIV should be, that is what we describe here.

Q. Because later in your presentation when we get to slides 30 -

A. In fact, may I clear something here, now that I look again. No, here we describe what the retroviruses are in general, not HIV 1, HIV 2, or any other HIV. What retroviruses are; this is a textbook -

HIS HONOUR

Q. Definition.

A. Everywhere. Nothing, nothing special about it and of course we didn't have to put a picture. It is not misrepresentation at all.

XXN

Q. Because you did go on at slides 30, 35, 36, they are over the page -

A. Yes, I know what is here.

Q. - to include some photographs -

A. Yes.

Q. - of particles said to be HIV.

A. Yes, they are particles.

Q. You were critical of those photographs and what they did or do not show.

A. I haven't got these particles because I am discussing now paragraph by paragraph and I can say to you paragraph by paragraph what is in this paper and Montagnier had some pictures there. Now, this is relevant here. Montagnier had these pictures and this

picture is said to be the first picture of HIV. I had to put it there. It is a totally different matter.

Q. I suggest you have been very, very selective in what you've put in your PowerPoint presentation and misrepresented a number of articles including this one.

A. I'm sorry, but there is no scientist, and I mean no scientist will concede that this misrepresentation, and you can bring here and you can give it to any scientist these papers and let's see anyone who say that this is a misrepresentation. I'd like to see one scientist saying that.

Q. Can I just turn to Montagnier and Gallo, given that

you've again mentioned them. Would you agree that at the time it was said that Montagnier and Gallo had isolated HIV as the cause of AIDS -

A. No, sorry, may I correct you here because the question is I don't - with due respect -

HIS HONOUR

Q. Just let Ms McDonald ask a question and then see if you can answer it, all right.

XXN

Q. What I'm asking you is, do you agree with this proposition, so if you listen to it first: do you agree with the proposition that Montagnier and Gallo were reported as being responsible for isolating HIV. We will break it down, do you agree with that proposition first of all.

A. I agree that now initially there was a big argument between Montagnier and Gallo because they wanted, each of them wanted to be the discoverer of HIV. There was an agreement between the French and the American government that Montagnier was the discoverer of HIV, there was an agreement between governments that Montagnier was the discoverer of HIV and Gallo was the one who proved - Montagnier discovered HIV in 1983 in his science paper, in May 1983, and Montagnier and Gallo, or Gallo proved that HIV is the cause of AIDS and in his May 1984 paper, papers, four papers.

Q. Back then wasn't part of the controversy or the issue about whether or not the virus that Montagnier was said to have discovered and the virus that Gallo was said to have discovered was in fact the same thing.

A. Yes, that was what the controversy was about. Because Gallo was accused of two things. First of all, he was accused of misappropriating the French virus. Secondly - and he was found, the principal paper, there were four papers in science in 1984. In the principal paper the principal author is Popovic. He is the principal author and Popovic and Gallo were found by the, by a senate committee to have committed scientific

misconduct. Now, but as I said, ultimately this was agreed that still, after all this, it was agreed that Montagnier discovered it and Gallo proved that it is the cause of AIDS.

Q. Do you agree that it's since been acknowledged that part of the issue was confused, if you like, by the genetic instability of the virus, the fact that the virus is genetically unstable.

A. Yes, they said it cannot be because we don't have, we don't have, it cannot be - first of all, Popovic - Gallo did not have anything - Montagnier did not have anything for Gallo to steal, but let's forget that part and, secondly, Gallo could not steal Montagnier - could not misappropriate Montagnier's virus because Montagnier sent to him a cell free substance HIV, a cell free HIV cannot infect even if we admit that there is HIV and that there are HIV particles, the particles lose their knobs and the knobs are, everybody agrees, absolutely necessary for infectivity. By the time the Montagnier material reached Gallo all the knobs will have disappeared so it will have been impossible for Gallo to steal Montagnier's virus if Montagnier had a virus.

Q. Have you finished.

A. Yes.

Q. Would you accept that both Montagnier and Gallo have been internationally recognised and acclaimed for

isolating the virus HIV said to cause AIDS. There is international recognition for that now.

A. Yes, I do agree, but let us think a little bit.

MR BORICK: Excuse me, I would like to make sure the transcript has one word in it, that Montagnier and Gallo have international recognition 'now'. That was the question but I'm not sure whether the 'now' would have been picked up.

A. I've answered the question. Did you say the AIDS virus or HIV, excuse me?

XXN

Q. HIV as the cause of AIDS.

A. You called it?

Q. The HIV virus as the cause of AIDS.

A. Yes. That is the accepted - no, there is a debate. It is a debate that this is a cause of and it is a debate if they really prove the existence, so none of them is generally accepted. It is accepted by many and I will say the dissidents I will have to agree are minority, but there - you cannot say that there is a total agreement, or agreement beyond reasonable doubt.

HIS HONOUR

Q. That might be a matter for others to decide.

A. No, no, sorry -

Q. Not me, but for others in a certain forum. That is what your view is.

A. No.

Q. You're expressing your view.

A. Your Honour, what I meant is that there is no agreement between scientists.

Q. You say there is a group of scientists, of which you are one, who don't accept that it has been scientifically established that HIV exists as a virus.

A. Yes.

Q. And there are a group of scientists, of which you are one, who don't accept that, whatever it might be, if you called it HIV, that it is sexually transmittable.

A. No, and there is a group of scientists who say that even

if HIV exists there is no proof that it is the cause of AIDS. In fact, that was accepted by a judge in a court of law in Argentina.

XXN

Q. Are you one of that group that says that there is no proof that HIV causes AIDS.

A. Is the cause of AIDS? We say much more than that. That is what all this is all about.

HIS HONOUR

Q. But assuming for a moment that HIV does exist, are you part of the group that would say that it has not been established that HIV causes AIDS. I know that you say

it has not been established that HIV exists as a virus, that is your starting point, but assume for a moment that HIV does exist, are you part of the group who question whether HIV causes AIDS.

A. But your Honour, I cannot assume that.

Q. You can't move from the first premise.

A. I cannot. If there is no evidence I cannot assume, I cannot as a scientist, I cannot work on assumptions.

Q. So you don't even need to enter into that debate, is that accurate.

A. Sorry?

Q. You would not even enter into the debate as to whether HIV causes AIDS because you don't acknowledge that HIV exists as a virus.

A. That's true.

XXN

Q. Didn't you give evidence in this court when Mr Borick was asking you questions that there is no proof that HIV causes AIDS. That was part of your evidence.

A. Sorry, I don't understand the question?

HIS HONOUR

Q. The question is, was it part of your evidence when you were answering questions from Mr Borick that there is no proof that HIV causes AIDS.

A. I gave evidence - the first thing to say that HIV is the cause of AIDS, the first step is to prove its existence

and since HIV, according to us, the evidence that not proven the existence of HIV, then HIV cannot be the cause of AIDS.

Q. And it can't be sexually transmitted - if it isn't proved to exist.

A. Yes, true.

Q. So all of your evidence, and I want to make sure I understand it, all of your evidence is premised on your view that it has not been established that HIV exists as a virus.

A. No, as I said is what you have to start with, but we published in many of our papers, we assume that the HIV

exists.

Q. I thought when you were giving your evidence a moment ago you said that you were not prepared to assume that or you could not assume that in answering the question whether you accept or reject that HIV causes AIDS.

A. Yes.

Q. I thought that was your evidence, but I might have misunderstood you.

A. No, I say it now as well that is the first step.

Q. Assume for the moment that HIV does exist because you seem to have acknowledged that in some of your papers.

A. In published papers, yes.

Q. Assume it does exist, the question is do you take issue with those scientists who say or have concluded that HIV causes AIDS.

A. Yes, of course, of course I do. In fact, not only that I do but I have an alternative hypothesis, as I said, which I put in the beginning of the HIV arena and interestingly enough many of the HIV experts have proven my - the prediction, a theory. It was - I have here that I may not be an expert witness because I don't do experimental work. There is a big difference between experimental work and between theories, both play a vital role, I'm not denying the role experimental research plays, but you can have a lot of experimental data and that is what now, for people who work in

biology, that is the big discussion. In biology now there is so much data but nobody can put it together, there is a big problem and if anyone goes into biology you will see that everybody expects that physicists like me, who do not have training in biology, to come and answer this question. In fact, I have a few slides here and maybe I will, if I, with your permission, can present this?

CONTINUED

Q. Well you can, I'm not sure it's answering the question. It's going further than answering the question. Perhaps we'll go back to Ms McDonald's question and if it needs further elaboration -

A. Yes, there is no evidence that HIV causes AIDS. If you assume HIV is this, this there is no evidence that HIV causes AIDS.

XXN

Q. Do you accept that AIDS exists.

A. Yes, I accept that. What I accept is that in 1981 in gay men a very high frequency of some existing diseases, but relatively uncommon, come - start to appear in very high frequency. And then this later on became known as AIDS. The main diseases were Kaposi's Sarcoma, a malignancy of the skin and internal organs, and Pneumocystis Carinii Pneumonia; PCP. They are the main diseases. And they become AIDS. In fact, up till 1985 they were the main diseases, are known as AIDS. Then in 1985 there are a few more diseases then. By 1987 the number of AIDS cases start to decrease. So AIDS was redefined and then suddenly the number of AIDS cases jumped by, I think by 90%. Then by 1993 AIDS cases started to increase again. So AIDS was re-defined again. And now, we don't even have AIDS, what usually is in the press you hear AIDS-related. HIV-related diseases or HIV-AIDS. The reporting had changed, all

the way along the years. Now, Kaposi's Sarcoma by now, which was the main reason for the introduction of the retrovirus epithelial phase, is accepted as not - it's caused not to be HIV. And it's interesting that in 1988 Dr Turner and I sent a paper to the Medical Journal of Australia giving reason why this disease cannot be caused by HIV. We accept that HIV exists. And the paper was rejected. And it may be interesting to know how, why it was rejected.

HIS HONOUR

Q. We won't go to that now.

A. That is what is happening all the time, how the HIV

experts reject things. Now everybody accept Kaposi's Sarcoma, one of the two main diseases, is not caused by HIV. Now we have many other diseases which have been added by definition of AIDS. And now the vast majority of what is called 'AIDS' is found in Africa and Asia, according to Richard Horton, the editor of Lancet. And about 90% he said, I think, roughly, and then he said of these most of them are TB. So the vast majority of AIDS in the world is TB.

Q. Tuberculosis.

A. Tuberculosis; a disease which existed forever, and it was caused by totally different microbes. Now, do I agree with HIV? I don't have to say any more your Honour, that HIV is not a - cause diseases, because Montagnier is with me.

XXN

Q. Isn't the reason, the largest number of people with HIV is in Africa is because the government has refused to give them access to antiretroviral treatment.

A. Let me come to why give the antiretroviral. Now we have the evidence from the main paper on HAART diseases, with whom we have responded -

Q. Have you finished your answer.

A. No.

Q. I didn't think so.

A. With the HAART we have the main paper of 22,000 people,

over 22,000 people where according to Professor Cooper the finding is paradoxical; is paradoxical. Paradoxical means you have evidence -

Q. We know what paradoxical means.

HIS HONOUR: Maybe you do, Ms Papadopulos-Eleopulos may understand it differently.

Q. What do you understand to be paradoxical.

A. Paradoxical means totally opposite to what you expect.

HIS HONOUR: I think we are all agreed on that.

A. That is Professor Cooper's, not my interpretation. That is that you expect with HAART to have less HIV but you have more.

XXN

Q. Do you accept that a disproportionate number of people, who have been diagnosed with HIV, die of AIDS.

A. Not die - if the majority of people who have AIDS, who are said to have AIDS test die from TB, then I cannot say they die from AIDS. Let me say, a very good reason, why you say AIDS and if the people who die, we agree on that, that the vast majority of people who die from AIDS are TB patient. Now TB, before the HIV era, it was known that TB, just the infection, leads to a decrease in T4 cells. In fact, even when the disease is not active the T4 cells still remain low. Essex - and Essex is a big name in HIV-AIDS - Essex himself in 1993 proved that more than 60% of people who have TB, who test positive for HIV, even if they don't, even if they're not infected with HIV, in fact they will be positive for HIV with the most rigid criteria, which is used in Australia or was used at that time. Now we have relaxed our criteria I believe. So the vast majority of TB people who have low T4 cells, and you have TB like this AIDS, AIDS tests for low T4 cells. You have TB because that is what the disease is. It will test positive even if they are not infected. So if you want to call them AIDS, you call them AIDS. But, you name - you give just another name to TB, that's all. And -

HIS HONOUR

Q. Let Ms McDonald ask the next question.

XXN

Q. Do you accept it's extremely rare for anyone in Australia to die from TB these days.

A. Yes, I accept that.

Q. Do you accept that in Australia a disproportionate number of people who die of AIDS have tested HIV positive.

A. Yes, they're gay men; the vast majority of people in Australia who die of AIDS are gay men.

Q. Not all though.

A. I said the vast majority are gay men.

Q. Do you accept that you may have been wrong in your views that HIV doesn't exist.

A. I accept that, and we accepted it, and we've been asking, including in our publication, if you read our publication, in the titles, asking for people to tell us that we are wrong. We have written to people, we have asked Montagnier, and I - in 1992, in a meeting in Amsterdam, in a meeting in Amsterdam, Montagnier was present and he came to the meeting in the morning, and after the session -

HIS HONOUR

Q. I think you told us all about that meeting in your evidence-in-chief.

XXN

Q. Taxi stand meeting, we know about that.

A. I don't know if I said what Montagnier said?

HIS HONOUR

Q. I think you did.

A. That's all right. So he himself could not come with evidence, he told me the p24 is the only evidence that we have that people are infected with HIV. Because we know now by 1997 he said the p24 was in the materials, he found it in material which he did or didn't have retrovirus-type particle. So if that is the evidence then Montagnier - in fact, I wrote back to him and I said 'Here it is, what's going on with p24? It cannot

be.' He never responded, so I don't know. Now, when it comes to AIDS, in - because of AIDS, and Montagnier who is the discoverer of HIV, in 2003 there was a meeting of the European Parliament and Montagnier gave a talk, the meeting was on AIDS in Africa. There were some of the dissidents there, and Montagnier was there and he gave a talk, and Montagnier in his talk said that - this is the relation from French, I am not relating word by word and even if I do it may be wrong, he said that the decrease in T4 cell is due to apoptosis, and apoptosis is due to oxidation. And oxidation in Africans is due to malnutrition. That is the sum of his talk. In other

words, AIDS in Africa is due to malnutrition which should be same from day zero. So Montagnier agrees totally with us. Even with my oxidation theory and the cause of AIDS in Africa.

XXN

Q. Do you know how it is that blood is screened in this country, when someone gives a blood donation or there is to be a blood transfusion.

A. The blood is screened before it's transfused?

Q. Do you know how it is, how it's done? I'll start that again to make it clear for you. Firstly, do you accept that if someone donates blood or there is about to be a blood transfusion that blood is screened for HIV.

A. Yes, I do. It is screened -

HIS HONOUR

Q. Just say 'Yes, I agree' and let the next question come. You'll have an opportunity to explain if the question presumes something you don't agree with.

A. But your Honour, if I say they screen for HIV that means -

Q. It's simple, the answer is 'Yes, I do agree that in Australia they screen blood nor HIV'. I accept that you don't, I accept what you say, in the sense of I understand what you say, when you say as far as you're concerned it's not proved that HIV exists -

A. No, I say the tests do not prove HIV.

Q. Just answer the question and if it needs clarification you'll have an opportunity.

HIS HONOUR: Yes, you go on Ms McDonald.

XXN

Q. Do you know what method is used in this country to screen blood donations and blood that is going to be used for transfusions for HIV.

A. I think they use antibody test or they use a polymerase chain reaction; viral lot.

Q. Do you know which method is used.

A. I don't know exactly which one is used. I know these tests are used in general for screening blood, donated

blood.

Q. Well, isn't it the case that what usually occurs, they look at the nucleic acid of the virus.

A. That's what I said, that's what PCR is.

Q. Are you aware the reason they do that now is because a young child in Sydney was tested positive for HIV, having been given a blood transfusion. Are you aware of that case.

A. When?

Q. Are you aware in general terms of an incident in Sydney in which a child, in fact the child of a surgeon, was given blood and then was diagnosed as being HIV positive.

A. The child may have tested positive, but it's not because the child was given a virus.

Q. Are you aware of the case.

A. I'm aware that people who are given blood, and this is accepted even by Elizabeth Tucks and by many other HIV experts, that people who are given blood, including Professor Calici, one of the best HIV researchers in Italy, said that blood transfusion leads to causative antibody tests.

Q. Let's go back to this particular case. So are you saying you are aware.

A. I don't know this particular case. I am saying people who are given blood may test positive, and there is

ample evidence for that. People who are given - a Russian scientist who has said it himself, before he took his own blood, he tested himself. Put the blood in the blood bank, then he re-transfused it, into himself, his own blood, and he found out that after that he had at least some of the proteins, HIV proteins reacting with antibodies from himself.

Q. You see, I suggest that what happened with that child is that when they went back and traced who had donated that blood it was discovered that person also tested positive for HIV.

A. You may find out, that is possible to find out. I'm not

saying that you don't find that out. But if you do mainly, this is the thing that is not done, we have not got controls in HIV-AIDS. What should be done there is not to test one child randomly, because of one - or the other reason, what you do there is test all of the people who have been given blood transfusion. And then go back, then look back, what this kind of test said to be looking back. They should do for each patient, for each patient who is transfused, test him and see if there is only one person which is test positive. This has never been done.

Q. Do you accept that transfusion recipients or there have been transfusion recipients who have tested HIV positive and gone on to die of AIDS, without there being any risk factors present.

A. There are very few.

Q. Do you accept there are case studies of that situation.

A. No, they are not controlled cases, they are not, not randomly controlled study of this type. No way there is proof.

Q. So in this context -

A. Patients who are given transfusions are usually sick. In fact, in America the vast majority of people who are given transfusion die within a year.

HIS HONOUR

Q. No, that was not the question.

HIS H0NOUR: Ask the question again.

XXN

Q. Do you accept that there are reported studies of incidents of transfusion recipients testing positive for HIV and then dying of AIDS when there are no other risk factors present.

A. We have here a slide with all the transfusion people who are said to be - not all, but studies with the transfusion people who are said to have become positive. Now, as I say, blood transfusion, blood transfusion will lead to a positive test. And people who are given blood transfusion they are sick, and they will die. In fact,

the vast majority die within a year. So yes, some of these patients will die. And maybe some of them will have one of the diseases which is said to be AIDS. But it doesn't mean they die from HIV. They will die, of course they will die. The question is what was the cause of their death?

CONTINUED

27
28
29
30
31
32
33
34
35
36
37
38

I accept people who are transfused will test positive, but also, we must remember that HIV experts say that people who are transfused will test positive even if they are not given HIV and people who are given transfusion are very sick people, most of them, and half of them will die within a year. So some of them will die of diseases who are said to be HIV or the way now it is called, HIV-related disease. So if you test positive and you die, no matter from what, it will be HIV-related disease.

Q. Are you aware that in this State, when someone is diagnosed as having HIV they are subjected to the ELISA test and then the Western blot and then an RNA viral load test is done, that is a nucleic acid test, and then the genotype of that person's virus is profiled.

A. Which one? Which person?

Q. In this State, with every person who is diagnosed HIV positive, that is on the basis of the ELISA test, a Western blot test and RNA viral load test, or a nucleic acid test, then on top of that, their virus is genetically profiled.

A. I'm aware that the people who are said to be HIV positive have an ELISA test, but all the HIV experts admit that a positive ELISA doesn't mean HIV infection. Then I admit that there is Western blot but there is no proof of the Western blot, nobody, and this does not

mean - as I said before the HIV expert, including Blattner, including Mortimer and including many other HIV experts and test kit manufacturers, say that is not possible to say that the person who has a positive antibody test is infected with HIV. Now, the viral load, according to the CDC and every other HIV expert, the viral load cannot be used to prove HIV infection in adults, adolescents or in children, apart from children - and this is really incredible - apart from children who are set to have acquired the disease, to have acquired HIV from their mother. So, you can have a child or two children, one is said to be infected from a

blood transfusion and another one to be infected from the mother. You can use viral load to prove HIV infection from the mother but you cannot use viral load to prove infection in the child who got blood transfusion. As I said, normally everybody says that you cannot use - not only CDC, you cannot use viral load to prove HIV infection but you can use viral load to say how many virus particles you have in the plasma. This is like saying 'I can use viral load to count how many apples in the basket but I cannot use to tell of these apples'.

Q. But isn't that test for measuring the viral load specific to the HIV virus.

A. As I said, if it was specific it would have been used to prove infection. How can it be specific if you cannot use it to prove infection? Even if we admit that there is - 'viral load' means molecular testing. That is HIV genome, HIV RNA, not that you prove its existence. Now, as far as profile is concerned, this is not done routinely. This is done only in a way to prove transmission from one person to another.

Q. I suggest to you, in this State it is routinely done and kept on a database.

A. It is routinely done. Why do you do it routinely? For what purpose? For what purpose, unless you want to prove the infection from one person to another,

otherwise it is a very expensive thing to do, and still I will give evidence, you cannot use viral load itself much less profiling to prove anything.

Q. Do you accept that mothers who are HIV positive have children who are tested at birth and are also HIV positive.

A. Yes, if the mother is positive. If the mother has antibodies which react with the HIV test kit, then the child will have the same antibodies because the antibodies are transmitted through the placenta and it will be there until the child becomes about nine months. The mother's antibody will be in the child, so up until

nine months we expect that - at birth all of them will be positive, and after nine months we will have none -

Q. You are saying that the antibodies just go after nine months.

A. Yes, the antibodies from the mother are gone, yes. These antibodies, the infant cannot make any antibodies, so the antibodies are transmitted from the mother to the child but then the child little by little starts to make antibodies and during that time the mother's antibodies disappear.

ADJOURNED 11.33 A.M.

RESUMING 11.48 A.M.

Q. Can we go back to a document I was asking you about yesterday that you wanted some time to consider overnight, P12, the Intrafamilial Transmission. Having read that particular article, did that jog your memory as to whether you were aware of Professor French working on this case.

A. No, I didn't know that he was working on this case.

Q. Let me just take you through it. The objective is described at the beginning and it is described as 'to describe the clinical epidemiological and molecular evidence for transmission of HIV infection from a person with unrecognised HIV infection to a family member in two unconnected families where the route of transmission could not be conclusively determined'. Do you agree

that was the objective of this study.

A. Yes.

Q. Basically, there were two family groups in which a person tested positive for HIV.

A. Yes.

Q. And there was one family - I withdraw that.

A. I can explain.

Q. I'm asking the questions. That these were two families in different Australian cities who both had received a blood donation.

A. Yes.

Q. Correct.

A. Correct.

Q. And that with one of the females in particular, when it was found that she was HIV positive, it was found that she had a very unusual strain of HIV. Do you agree that's what the article indicates.

A. That's what it said.

Q. And that when they went back and checked her family members, it turned out her sister also tested HIV positive with the same unusual strain.

A. No, the strains were determined after the two sisters were found positive.

Q. And both of them had the same unusual strain of HIV.

A. That's what it says here.

Q. One that hadn't been seen in Australia.

A. That's what it says.

Q. And when they dug a bit further and looked at the epidemiology of the situation, it turns out the older sister had had an affair or a sexual relationship with a Russian sailor.

A. That's what it says.

Q. And low and behold, he had the same HIV strain.

A. No, that is not said. There is no such evidence there.

Q. Isn't it the case that that strain that the two sisters had, had never been seen in Australia before.

A. Well, it don't say that we have never seen. They say it is not a strain which is usually found in Australia.

That's what they say. Now, it doesn't mean that I agree with it.

Q. So you would accept, on the basis of that testing, it would appear that one sister has given the virus to the her.

A. No. That's what they claim but that is not proof and that is not only what I say. May I remind you about a court case which just took place in London not long ago in which a gay man was accused to have transmitted a virus to another gay man, and because what they have done through genetic analysis, that the virus from what is called virus from the two people was found to be

related, the accused gay man was advised to plead guilty but then he changed his legal team and ultimately he was found not guilty, and this was because an HIV expert, an expert on the so-called HIV genome and through genetic analysis from London gave court evidence and it was accepted that you cannot prove transmission with this kind of profiling or this kind of testing, and here it is, she had a power point presentation.

MR BORICK: 'She' is the expert witness. Perhaps that name could go on the transcript.

HIS HONOUR: The expert witness in London had a PowerPoint presentation.

MR BORICK: Maria Garetti, she had a PowerPoint presentation and she gave evidence that it is not possible to determine transmission by this kind of testing.

Your Honour, I think they say we don't give you more information. I have already indicated that but it was a prosecution witness.

XXN

Q. Isn't it the case that one of the key pieces of evidence that HIV exists is that the virus is being cultured and vaccines created that had successfully treated HIV.

A. They have - in 1984, when it was announced by the Secretary of Health, I don't know what exactly they are called in America, that the Americans discovered the

course of AIDS, she said, and Gallo said, that in two years we will have a vaccine. Now, more than 20 years after, we still haven't got a vaccine and never has been a vaccine, and according to David Hall, one of the best known HIV experts, he says we are not going to have an HIV vaccine in our lifetime or even in our children's lifetime.

CONTINUED

Q. Do you accept there are millions of people around the world who have been diagnosed as HIV positive who are managing their condition with antiretroviral medication.

A. They are. There are many people around the world who are given antiretrovirus. That is what it is, antiretroviral drugs. Now, as I said, that is the only study which has ever examined and actually properly conducted a study which has examined the relationship between treatment and the outcome. Montagnier's study, that was the main study. That study found out that although the viral load, the more HIV you have - HIV is the cause of AIDS, which means the more HIV you have the higher the viral load because the viral load is assumed to determine how many HIV particles there are and the higher the viral load, the more AIDS you have. The lower the viral load, the less HIV you have. According to this study, this study found out that, yes, the antiretroviral caused a decrease in the viral load.

Q. I am going to cut you off because I'll turn to that study in due course and you'll have an opportunity to put that then. I'm asking you about general probabilities. Do you accept that it is now the case that pregnant women are treated with antiviral medication and they're having children who don't have antiretroviral bodies.

A. There is no evidence that the antiretroviral drugs

decrease the transmission or the HIV.

HIS HONOUR

Q. The question was a fairly straightforward question. Do you accept that there are pregnant women who are HIV positive who are being treated with antiretroviral drugs, whose children are now testing not to have HIV.

A. There are many women that test positive for HIV and their children do not test positive but there is no evidence that the antiretroviral decreased the so-called HIV transmission.

XXN

Q. Would you be prepared to tell Mr Parenzee to give up his

antiretroviral medication then.

A. We're asked repeatedly by many people around the world what advice we give regarding antiretrovirus. We never give any advice.

HIS HONOUR: That is not the question.

A. I wouldn't advise neither Mr Parenzee nor anybody else. I never do it and I won't do it. The physician who cares for the patient, they will advise them. I won't advise them what treatment they have.

Q. Would it be your view that the antiretroviral drugs that Mr Parenzee is taking are of no assistance to his condition.

MR BORICK: That assumption ought not to be made.

HIS HONOUR: I just asked -

MR BORICK: You shouldn't phrase assuming because, frankly, he's not on any drugs.

HIS HONOUR: I will withdraw the question.

XXN

Q. Are you aware of a situation in Thailand in recent years, a scheme under which pregnant Thai women who had tested HIV positive were given antiretroviral medication for a limited period of time. They all had their children, they were all born without being HIV positive - they tested negative.

A. There is no such a finding as far as I know.

HIS HONOUR: Let Ms McDonald finish.

Q. I didn't suggest there was a study, I'm saying this is a situation in Thailand in recent years.

A. I am aware of studies that were conducted in Thailand but I am not aware of any studies in Thailand that have shown that when given antiretroviral that no child had HIV.

Q. I will put the question to you again and I'll finish it this time before you answer. Are you aware of a situation in Thailand in recent years, an international program, whereby women who were pregnant who tested HIV positive were given medication for a limited period to

enable them to have their children and the children, when born, were HIV negative.

A. As far as I know there is no such study. I will be grateful if you give it to me.

Q. For completeness, I'll take you through the second half. Within a few years, a large percentage of those children were orphaned because their mothers died of AIDS.

A. No.

Q. I suggest that was the situation that occurred in Thailand only some years ago.

A. I should have the scientific study. I have based my views on scientific papers or scientific evidence. I have to have the scientific evidence. I cannot comment on some claims, I can't comment on that.

Q. I want to ask you more questions about the antiretroviral medication. Are you aware of the approval process that a drug has to go through before it can be used in a particular country and then subsidised.

A. They have the clinical trials and this was done. This is done only to test for toxicity. It is not done for what is called efficacy. The clinical trials used to be done, blind studies. There are very rare studies in HIV testing now which are introduced in clinical trials, falling this time with clinical trials. As I said, the clinical trials are only done for toxicity, not for efficacy.

Q. Are you aware that in Australia, before any drug can be prescribed, it has to be approved by the Therapeutic Goods Administration.

A. Yes.

Q. That has occurred here with the antiretroviral.

A. That is most likely what has happened, otherwise it won't be on the market.

Q. Is the advisory body the Australian Drug Valuation Committee.

A. Yes.

Q. They assess and evaluate whether that drug should be on the market.

A. They evaluate it on its toxicity.

Q. They weigh up the evidence by the drug companies about whether their claims are valid -

NOT ANSWERED

Q. Part of the process to get approval is that that body weighs up the evidence that comes from the drug companies to determine whether or not their claims about the effectiveness of the medication.

A. Yes, usually on HIV - I have to answer it.

Q. Please don't cut me off.

HIS HONOUR: If you answer the question.

XXN

Q. Are you aware that is what occurs.

A. I don't know what the question is, sorry.

Q. Are you aware that the Therapeutic Goods Administration, being advised by the Australian Drug Valuation Committee, weighs up the evidence provided by the drug companies to determine whether their claims about the effectiveness of the medication are valid.

A. They do it but it is not always right. Let me give you an example. The Food and Drug Administration in America approved the introduction of AIDS and now in very high doses and yet now it is known that it hasn't got any frequency and it is shown by the study after the drug was also approved by the Food and Drug Administration. It is shown by the study, a laboratory study between the

English and French scientists, that the drug, if anything, leads to higher mobility than mortality in the patient.

Q. So, it was incorrect before when you said that the only thing that is assessed is the toxicity of a drug. What they in fact -

A. Usually now, that's all they do.

Q. Not usually, you told us before that all that was considered is the toxicity. Are you now agreeing that in fact this organisation or body weighs up how effective the medication is.

A. They evaluate - they won't introduce in the market if

they don't do any evaluation, it has to be evaluated. You cannot introduce a drug into the market if it is not evaluated.

Q. In Australia, with the antiretroviral medication, you're aware that is the subject of a government subsidy; in other words people get it cheaper than what it actually costs.

A. Yes.

Q. Again, for that to occur there's another hurdle that has to be jumped. It has to go through the pharmaceutical benefits committee.

A. That is true.

Q. Again another body who looks at the costs benefits analysis of this medication.

A. That is true.

Q. To determine how much of the taxpayers' money should be contributed.

A. That is true.

Q. On that body, again there are scientists who look at how effective the medication is.

A. That is true, there are scientists.

Q. For the antiretrovirals to have the status they do today and that is being widely prescribed in Australia and subsidised, the drug companies have had to jump through all those hoops.

A. Yes.

Q. In the United States, are you aware there's a similar sort of body.

A. The Food and Drug Administration.

Q. They have approved the antiretrovirals.

A. Yes.

Q. Right across the United States.

A. It is an international body, the Food and Drug Administration. If it is approved, it goes and it is valid throughout all of the United States.

Q. In Europe it is the European Medicines Assessment Committee.

A. Yes.

Q. They have approved the antiretrovirals.

A. Yes, but I don't know what this has to do with this case.

Q. In Thailand, given recent events, the government there also are providing antiretroviral medication; do you accept that.

A. Yes.

Q. In Africa, although there is some resistance in the government, the mining companies are providing antiretroviral medication to their workers: were you aware of that.

A. Yes.

Q. To keep their workers alive.

A. No. Let me tell you what the United Nations representative said in one of the latest interviews he gave. He said there is a big problem. People on drugs, 11% of them died, so there is a problem there. We have to do something about it, the people who are on drugs, 11% died. They are very worried about this fact, including Lewis.

Q. If you dispute that the reason that the mining companies in Africa are giving their workers antiretroviral medication is to keep their work force alive, why do you say they're giving them medication.

A. Everybody tries to do what they think is good for their people. Their action, I cannot blame them, nobody would

blame them. They have based their action on what the scientists are telling them.

Q. Before I move onto some specific studies, I want to deal with the question of publications and that is publications by yourself and overnight we have been provided with a list of publications. I propose to tender that. Do you have your own copy with you.

A. I don't have it with me but they are my publications.

EXHIBIT #P17 DOCUMENT HEADED 'PUBLICATIONS ELENI PAPADOPULOS-ELEOPULOS' TENDERED BY MS MCDONALD. ADMITTED.

Q. Do you have a copy of this.

A. Yes, I do.

Q. Yesterday you were telling us about a letter that you had written in recent times.

A. Yes.

Q. Which of these particular publications were you talking about there.

A. I don't have it, sorry.

Q. The letter you were telling us about yesterday, which publication is that.

A. It is the first one, it says 'Would Montagnier please clarify whether HIV or oxidation by the risk factors is the primary cause of AIDS', medical hypothesis 2006 volume 67(3)666-8.

Q. You told us yesterday that is a letter that consequently was not peer-reviewed by anyone.

A. Yes.

Q. In effect, a letter to the editor.

A. I never said it was peer-reviewed.

Q. That particular journal, the medical hypotheses, that is not one of the mainstream prestigious journals, is it.

A. It is a very prestigious journal.

Q. The next one you have listed, 2006, what form did that publication take.

A. That is a response to an article which was published in

emergency medicine, a comment on an article. It is a comment on an article which was published in Emergency Medicine Australia, which claimed that a very high percentage of people are infected in Papua New Guinea.

Q. When you say a 'response' or a 'comment', we're talking about something, again, in the form of like a letter to the editor.

A. You can say it like that.

Q. You had this article last time, this is what we say about it.

A. It is the people which responded. What I did was I commented on their paper.

HIS HONOUR

Q. Commentary or critique.

A. Yes.

XXN

Q. You're not talking about a full article that went through and critiqued everything that was in the paper, we're talking about a short -

A. Yes, it is a short article.

Q. Like in the form of something like a letter to the editor.

A. It is a short article, it is not a letter to the editor.

Q. Was that peer-reviewed.

A. Yes, and it was sent to the authors and the authors replied but they did not respond to their question or to the problems we arrived at.

Q. Was it peer-reviewed by the journal.

A. I beg your pardon?

Q. Was it peer-reviewed in the journal.

A. Yes, as far as I know it was peer-reviewed by the journal. It was peer-reviewed by the journal.

Q. That particular journal; Emergency Medicine Australia.

A. Yes.

Q. That is not a specialist journal, of course.

A. It is a specialist journal. Turner is an emergency physician and it is a journal of the association. It is a specialist journal.

Q. Not a specialist journal, in the sense that it relates to urology, epidemiology or biology, it is emergency.

A. It is a clinical journal, that is what I am saying. There is a big difference between a clinical scientist and a research scientist. There is a difference between them.

CONTINUED

Q. You see if we go through their list of articles, what we see is they are all critiques of other people's work.

A. No, they are theories. They are theories and let me tell you what is the difference between a theory and experimental work. Theory: experiments produced data. The experiments produced data. The theories unite this data and make predictions. Maybe you will allow me to read something of - one page of what the experts is saying about AIDS; prediction. That is what Montagnier did, that is what Val did and that is what I did. The theories, they unite and they come out with a united few, and they make prediction in and a theory is - theoretical research is the one which makes science to progress. The theories make science progress. Maybe you will allow me to read something from the editor - from the ex-editor of Medical Hypothesis. In fact I will read from HIV expert.

Q. What are you reading.

A. I am reading what is a theory.

Q. Where is it from, who wrote it, what document are you referring to.

A. It was written by a gentlemen who is a HIV expert published in 'Genetica'. This is a journal, 'Genetica', published in 1995.

MS MCDONALD: Could I see what the witness is referring to?

HIS HONOUR: Show the document to Ms McDonald.

MS MCDONALD: No, I don't consent to the witness referring to that document, it is a secondary document. Can I indicate from now on, if the witness is going to refer to other documents, it should be the primary document and referred in court.

A. There is a slide, I am just reading.

HIS HONOUR

Q. We need the primary document. There is no point in referring to something that was prepared from a primary document. If you are going to refer to something you need the primary document.

A. It is article published in the journal 'Genetica'.

MR BORICK: To say it is a secondary document in this jurisdiction is taking it a bit far. She has got a note of what was said. It is an accurate note of what was said and she wants to refer to it.

MS MCDONALD: I don't necessarily accept it is an accurate note.

HIS HONOUR: It is supposed to be a quote I assume Ms McDonald.

MS MCDONALD: Therein lies the problem. As your Honour will see as we go through these articles now, the quotes are quite often out of context and quite misleading.

MR BORICK: I object to that because there has so far been one allegation of misrepresentation put and that had no legs in it whatsoever. If they want to make these claims of misrepresentation, get them out in the open.

HIS HONOUR: Right.

HIS HONOUR

Q. Is the original of this article available.

A. The original?

Q. The actual Genetica 1995.

A. It is. I have the whole - I can ask somebody in my department to photocopy the whole article and send it to me. I have the whole journal because I published two papers there and they gave me - send me the actual

issue.

HIS HONOUR: On the assumption that the journal can be produced I will allow the evidence de bene esse.

MS MCDONALD: Can I ask if there are going to be further articles relied on, we get copies of them. We are being ambushed every step of the way.

HIS HONOUR: I understand the difficulty.

MR BORICK: You are not being ambushed because there is a huge amount of material and it is impossible for a layman to know where the scientist is going to come from in this. It could take up this whole courtroom.

HIS HONOUR: Ms Papadopulos-Eleopoulos said she would

get a copy of the article, it can be faxed across, or I presume that the publication might be available in some medical library here.

MR BORICK: Could well be available here, I need to check.

HIS HONOUR: In any event, I will allow the evidence to be given rather than have an argument about whether it can be given on the basis that the original article be produced.

HIS HONOUR

Q. You were saying.

A. He says -

MR BORICK: Sorry, I am not sure we got who 'he' was.

HIS HONOUR

Q. Who is he.

A. Harris, an HIV expert in an article published in Genetica 1995. He says 'The power of prediction is thus all important in evaluating candidate causal factors for the cause of effects which cannot be directly manipulated such as in AIDS' he says. 'It has been observed by the late Karl Popper, noted philosopher of science, that almost no theory is ever absolutely wrote out, "falsified"' in parenthesis 'by experiment because with enough imagination nearly any theory can be linked after the fact so what' continues to explain all data. That is continuing to explain all data. 'If one causal

factor not explained, results statistically in a given 27
situation, it is not necessary to adopt it. One may 28
instead postulate an additional factor which explains 29
results in the case where the first one fails. In fact, 30
if one persists in hypothesising new factors each time 31
an old factor fails, one will need to never adopt any 32
hypothesis at all. At some point however, during this' 33
- during this - 'makes any theory simply too ugly and 34
unimaginative to be believed. In that "point"', in 35
parenthesis, 'if a better alternative is not in view 36
many scientists may decide to discard the whole theory 37
or at least most scientists will, as Max Blank pointed 38

out, "only death remove the last diehard belief in some theories".' So you can keep a theory going. You need a theory. First thing is you need a theory including AIDS.

XXN

Q. Can I check what you are referring to, still the PowerPoint slides.

A. It is a PowerPoint slide. So, you need the theory in any science. In any scientific subject you need theory including AIDS according to Harris. According to Harris, a theory, if you want it, can go and go and go forever. But at one point you have to stop it. Unfortunately, this is what happened with HIV. It has been modified so many times that I think it is reaching - it is my view - is reaching a point where you can't modify it any more. But, what I want to stress here, research is not what everybody thinks. Research is most of all a theory and in fact, maybe it will come later, if I can find - I can't find now - the purpose of the medical hypothesis, it was to encourage publication of theories of hypothesis because according to the author, to the editor, an MD, he says - and I will find and give later the PowerPoints - he says in medicine and biology we have too much data but we do not have theories to connect all this data and he thinks that physicists and chemists will be able to do that.

Q. I want to ask you about one of your PowerPoint slides, A5, slide number 95. If the witness could have to PowerPoint print-out in front of her.

A. I think if you read it, doesn't matter if I have it. Slide?

HIS HONOUR

Q. 95.

A. Yes.

XXN

Q. You gave some evidence about that slide and before we start to go into the study I want to remind you of what your evidence was in relation to this particular slide.

A. Yes.

Q. It appears at p.73 of the transcript, looking at number 95, this was your evidence 'This is the main study. This is a study published this year, so again, as I said, the more HIV you have, the more AIDS you have, the more death from AIDS you have. However, a paper published this year by Europe, it was a European study there were 22,000 - over 22,000 patients treated with HAART, that is active retroviral therapy. These are the drugs which are presently used to treat HIV infection. All they found - this drug came into clinical practice in about '96, but with time they are - the HIV experts claim they improve the treatment, improve the combining of the virus and that led to better control of HIV. Now by viral law'.

HIS HONOUR: That should be 'load' I think.

XXN

Q. 'By viral load, that means the number, they say that viral loads means the number of HIV particles in the population. So they found out that the better the retrovirus control, that is from 1996 until 2003, they had success in decreasing HIV, although this did not translate in having less mortality from AIDS. In fact they said the rate of AIDS in the most recent period increases. This is the - Professor Cooper made a comment, he wrote a commentary in Lancet about this

paper and he said that - this is his word - a "paradoxical finding", or it is paradoxical if you can see that the AIDS theory because the less HIV you have the less AIDS you should. They found the opposite. The less HIV they have in the last few years, not only the mortality did not decrease, the rate of AIDS increases. So something else must be involved in causing AIDS and increasing the cell'. Then you move on to another paper. Firstly, do you agree that was the evidence you gave.

A. Yes.

Q. Are you aware that people who are on antiretroviral

medication for a period of time build up a resistance to the drug.

A. No. No, no resistance to the drug you said.

Q. People on antiretroviral medication for an extended period of time can become resistant to the drug.

A. Yes, they can and they say if you become resistant to the drug you don't increase the viral load, that is what resistance means, you don't decrease the viral load.

Q. Is it also the situation at present it is believed that the period of time for which someone can be on an antiretroviral medication before building up a resistance for it, is about ten years.

A. Yes. Ten years? No, they have much - no they have said - even after a few years people start having increased viral load again. So, yes.

Q. This particular slide, and part of your evidence was based on an article called 'HIV treatment response and prognosis in Europe and North America in the first decade of highly active antiretroviral therapy: a collaborative analysis', is that correct,

A. Yes.

MS MCDONALD: I tender that and I have a copy for your Honour.

EXHIBIT #P18 ARTICLE ENTITLED 'HIV TREATMENT RESPONSE AND PROGNOSIS IN EUROPE AND NORTH AMERICA IN THE FIRST DECADE OF HIGHLY ACTIVE ANTIRETROVIRAL THERAPY: A COLLABORATIVE

ANALYSIS' TENDERED BY MS MCDONALD. ADMITTED.

XXN

Q. The paper that has been produced to you -

A. Yes.

Q. That is the one you have referred to.

A. Yes.

Q. I will go through this in a little detail. There is a summary at the beginning.

A. Yes.

Q. Which says 'Background to highly active antiretroviral therapy (HAART), the treatment of HIV infection was

introduced a decade ago. We aimed to examine trends in the characteristics of patients starting HAART in Europe and North America and their treatment response and short term prognosis. You agree that is a summary of what this is all about.

A. Yes.

Q. There are two things they're looking at there, aren't there. Firstly, the characteristics of someone who is going onto HAART for the first time.

A. Sorry?

Q. There are three things that summary would suggest that the authors of the article were looking at.

A. Yes.

Q. Firstly, the characteristics of a patient who was commencing with the antiretroviral medication.

A. What do you mean by 'characteristics'?

Q. Look at that summary. Can you see that.

A. Yes, I see the summary, yes, for the treatment of HIV infection introduced a decade ago.

HIS HONOUR

Q. You need not read it to me, I can read it. If you look at the summary the question is: was one of the purposes of the article to examine trends in the characteristics of patients starting HAART.

A. Yes. Yes.

Q. In Europe and America.

A. Yes.

XXN

Q. One of the things looked at what were the characteristics of the patients first starting on the medication.

A. Yes.

Q. Secondly, their treatment response, how they responded to the treatment.

A. Yes.

Q. And the third thing the authors were looking at was the short term prognosis of those individuals.

A. Yes. I agree.

Q. If we go down the article, we see that in relation to methods they set out how they approached this. I won't take you through all the detail. They looked at a number of - 22,217 people who were first starting on HAART and some other criteria.

A. Agree. Yes.

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Q. We then have what's described as the 'Results'.

A. Yes.

Q. And they are that the proportion of heterosexually infected patients increased from 20% in 1995 to 47% in 2002-2003. Do you agree that's what the author has reported.

A. Yes, that's what it says there.

Q. This is a paper that you relied on in your PowerPoint presentation; isn't it.

A. Yes.

Q. These authors seem to think that it's sexually transmitted.

A. That's what they claim but where is the evidence?

Q. These authors suggest that the work they have done indicates that heterosexual transmission is increasing.

A. That is all they claim, but as I presented in my evidence there is no, in my evidence in October, there is no evidence that there is any heterosexual transmission. There are no studies, scientific studies in which heterosexual transmission has been proven.

Q. You don't agree with that bit of the paper so you didn't bring it to our attention in the PowerPoint, is that the situation.

A. The PowerPoint was not about sexual transmission. This is not a study on sexual transmission. This is the study on the effects of antiretrovirals on the

progression to AIDS. It has nothing to do with a scientific study to prove heterosexual transmission, nothing.

Q. Wasn't one of the purposes of this article to examine the trends in the characteristics of patients starting HAART.

A. Yes. They were told there that this person had heterosexual - it does not prove, they don't present evidence that these people were heterosexually transmitted. What HIV - let us assume that there is such a thing, they accepted that, they accepted that these people got HIV, become HIV positive, they did not

present any data for that.

Q. One of the things they have reported as finding in the very first line of their results is an increase from 20% to 47% of heterosexually transmitted HIV.

A. Their study population - in their study population they had more people who have claimed over the years, who were claiming that they had acquired HIV heterosexually, but there is no proof of that and there is no need for that because this study was not conducted to prove heterosexual transmission. This study was conducted to prove or to find out what is the effect of antiretrovirals on the outcome of HIV, on AIDS, that is what it was all about.

Q. Is the next result that the authors reported on an increase in the proportion of women from 16% to 32%.

A. Yes, that's what they say there.

Q. So, again, looking at the characteristics -

A. That is what they have. They have more women at this time, that is true.

Q. Is the next result that they report at finding a change in what's described as the median CD4 cell count.

A. Yes.

Q. I will read it in context: 'The median CD4 cell count when starting HAART increased from 170 cells' - I will put it in general terms rather than putting too much detail - 'then decreased to about 200 cells'.

HIS HONOUR: 'Increased', '269 cells', is that right, what you're putting Ms McDonald?

MS MCDONALD: They have described it as 'decreasing'.

HIS HONOUR: From where are you reading?

MS MCDONALD: Sorry, under 'Results': the median CD4 cell count'.

HIS HONOUR: 'When starting HAART increased from -'

MS MCDONALD: Sorry.

XXN

Q. 'Increased from 170 cells to 269 cells in about 1998 but then decreased to about 200 cells'. Do you see that.

A. Yes, I do.

Q. And you agree that's another characteristic they were looking at in terms of people starting out on HAART, or antiretrovirals.

A. What they are doing there, they divided patients in different periods of time and they found out that when the patients were given in the first period of time the HAART they had a CD4 count of 170, then they increased to 269, but then in the next stage they increased again, but this is so small variation, scientifically insignificant. If you go and measure your CD4 counts in the morning and then you do a different count in the afternoon you will find much bigger variation than this, in fact the variation can be 2-300 counts, so this statistically and scientifically, biologically is not significant, but, if you see, that HAART did not have any affect on the CD4, that is Professor Cooper too. So immunologically, HAART did not have any significant effect.

Q. And the last line in terms of the results is the 'Interpretation' - I'm still looking at the first page.

A. The first page?

Q. Yes, under the heading 'Results'.

A. You're going back to the first page?

Q. Under the heading 'Results', 'Interpretation: virological response after starting HAART improved over calendar years', so the medication seemed to work.

A. The proportion - is that what you're reading, you're reading the results?

HIS HONOUR

Q. No, the interpretation on p.1.

A. Yes, the 'virological response after starting HAART' - XXN

Q. '- improved over calendar years', so there is an improvement with HAART.

A. Yes.

Q. But in statistical terms that improvement hasn't decreased - sorry, but such improvement has not translated into a decrease in mortality.

A. Exactly, it's what I am saying.

Q. We will go to some of the details about what the authors say about that. For that purpose we might go to p.454, the page numbers are at the bottom of the page.

A. That is in this?

HIS HONOUR

Q. Yes, the page numbers are at the bottom.

A. Yes, which page?

Q. 454.

A. Right, yes.

XXN

Q. We will go to the heading 'Discussion'.

A. Yes.

Q. So it starts off with a summary of the situation.

A. Yes.

Q. 'The results of this collaborative study, which involved 12 prospective cohorts, over 20,000 patients with HIV 1 from Europe and North America, show that the virological response after starting HAART has improved steadily since 1996'. Would you agree that's what it says there.

A. Yes.

Q. So things have improved since 1996.

A. What has improved, the HAART, the viral load decreased, but as it said in the interpretation, but such improvement, that is the decrease in the viral load, has not translated into a decrease in mortality. So that

is, we have a decrease in HIV, in viral load means HIV, but to have no decrease in mortality. The reason we give HAART is to decrease mortality, not to decrease the viral load.

Q. Can we go back to the section headed 'Discussion' where the authors set out their understanding of what's occurring here.

A. They start then to make assumptions.

HIS HONOUR

Q. One moment. Let Ms McDonald put the question and then you can answer it.

Q. I might follow up on that. Did you then say the authors then started 'to make assumptions'.

A. I'm trying to explain why this happened.

Q. They actually offer an explanation for why there is that paradoxical reaction in the discussion; don't they.

A. They don't have evidence for that. Please, just tell me please what is their evidence?

Q. The authors go through in some detail why it is that this sort of outcome has occurred; don't they.

A. They try to explain it.

Q. So you select from that paper or study a couple of sentences about an observed outcome and you just disregard the explanations provided by these authors for why that outcome might be so.

A. No, I have quoted there exactly what they say. A vast virological improvement which is not translated being a decrease in mortality and I reported - even Professor Cooper and Professor Cooper's interpretation is that this is a paradoxical finding - you have a decrease in viral load, no matter who are the people, whether it were women, it was blacks, because you treat all these people. The HAART is given to women, to men, to Africans, black, white, they all are on HAART and if HAART is to be used to decrease mortality they should have an effect in all of them, not in an effect in men

and not an effect in women and vice versa, and not an effect in blacks and not whites; HAART should be effective in everybody. As I said, I do not have to say anything, I don't have to make any interpretation. Professor Cooper's interpretation is that these findings is paradoxical and we quoted what Professor Cooper says. We didn't take anything out of context, neither from the main paper, not from what Professor Cooper says, comments.

Q. We will let Professor Cooper comment on that. In relying heavily, as you have, on this study and in giving your evidence you didn't think it appropriate as

an objective scientist to give his Honour the explanation given by the people who conducted the study.

A. We are saying what was the finding. What they're trying to explain, even then, they don't say 'This is the interpretation'. They don't say that.

Q. Let's go to what they say then, shall we.

A. Yes.

Q. So we have dealt with the first sentence which starts 'The results of this collaborative study which involved 12 prospective cohorts, 20,000 patients with HIV 1 from Europe and North America, showed that the virological response after starting HAART has improved steadily since 1996'. We have dealt with that. They go on to say -

A. No, please read the next sentence.

HIS HONOUR: She is about to.

XXN

Q. They go on to say 'However there was no corresponding decrease in the rates of AIDS or death up to one year of follow-up. Conversely, there was some evidence of an increase in the rate of AIDS in the most recent period'. I pause there. That's what you've been referred to as paradoxical outcome.

A. That's what Professor Cooper interpreted as the paradox and that's what we presented in our slides, so we did not misquote anything or misinterpret.

Q. Don't keep going back to Professor Cooper. It's your evidence that this is a paradoxical outcome.

HIS HONOUR

Q. You agree with Professor Cooper.

A. I do agree with Professor Cooper.

XXN

Q. The authors go on then to discuss that, don't they. They say 'The trends were accompanied by changes in the characteristics of patients starting with HAART. In the early years when HAART was being introduced most patients were men who were having sex with men but by 2002 most patients starting HAART had been infected

through heterosexual transmission. Over the same time a proportion of female patients doubled'. I will pause there, then. You disagree with all of that, you say that's not proof that it's sexually transmitted and so forth.

A. I do not disagree that the number of women may have increased. I do not know how much we have increased, from one to two. I do not know how much the increase was, but - yes, but I would - what I disagree is that these people got HIV by heterosexual conduct.

Q. Then there is another important detail that they provide, isn't there, that 'The median CD4 cell count when starting HAART has declined in recent years'.

A. Yes.

Q. So what that means is that when you look at the statistics that over the years people starting HAART were getting lower and lower CD4 counts.

A. Yes, that is what I'm saying. That was one of the paradoxes. The less HIV you have the less CD4 you have, should be that way around.

Q. What I'm suggesting to you is that if you read what the authors say there, is that a person starting HAART in, say, 1998 on average had a higher CD4 level than someone starting HAART in, say, the year 2000.

A. What is the difference?

Q. That you're having people later in time -

A. No, no, I'm saying what was the difference because we have to have the number?

Q. The difference is in the results.

A. Where? One second. In the early years - what is the sentence you read me?

Q. I'm sorry.

A. The sentence that you have read me?

Q. I've read to you the last sentence in the first paragraph under the heading 'Discussion'.

HIS HONOUR

Q. 'The median CD4 cell count when starting HAART has declined in recent years'.

A. Which place, sorry?

Q. Under 'Discussion' on p.454.

A. Yes, 'Discussion' in the second paragraph or the first?

Q. The first paragraph.

A. I see, 'The CD4 cell count when starting HAART has declined in recent years'. What was the decline? We have to have a number there.

Q. Do you say that you don't accept that statement.

A. It may have been but I don't know the exact number.

ADJOURNED 12.58 P.M.

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RESUMING 2.02 P.M.

MS MCDONALD: There is a matter I wish to raise before I continue cross-examining. At the beginning of the luncheon adjournment I raised with my learned friend, Mr Borick, whether he would speak to the witness about not speaking to the other witness about her evidence. Mr Borick has declined to do that on the basis they are experts. In my submission, he should be instructed his witness is not to confer about the witness's evidence during cross-examination. In the absence of that I would invite your Honour to say something to the witness, in my submission that is just not appropriate.

MR BORICK: It's again emotive, I didn't decline to, I had to go off somewhere in a hurry and I said to both of the witnesses not to talk about it at all during the lunch hour.

Now, I would like to clarify with you at some point in time, perhaps later in the afternoon, what they can and can't talk about. My view is very clear, they have been cited as collaborating together for 25 years. There is nothing new that has come out of this cross-examination and there can be no possible prejudice to the prosecution. In return I record a clear understanding that when the other side start their case they can all come and sit in here and all come and talk with each other as much as they like. Perhaps we'll

talk about it later.

HIS HONOUR: Ms McDonald, we'll speak about it later, in the meantime you continue your cross-examination. Mr Borick my preliminary view is though, whether it's an expert or not, whilst the witness is under cross-examination they really shouldn't discuss their evidence with another expert. Because it's their opinion which is being asked for and although there has been a collaboration - I'll hear you if there is any challenge about it - I think it's desirable that she not speak about her evidence whilst under cross-examination.

MR BORICK: Yes, but sometimes there's reference to

documents they haven't got or something. I need to know what they are about.

HIS HONOUR: You can certainly speak to her and you can speak to Dr Turner, I mean he is in court, so he is hearing what she's got to say. So if you need to speak to either of them about locating documents or getting instructions that is entirely appropriate. It's just that it would in my view be not appropriate for Ms Papadopulos-Eleopulos to speak to Dr Turner about the evidence that she is giving and to get his views perhaps about what she is saying in the witness box.

MR BORICK: I'll frame something during the course of the afternoon which they will both have and both can understand, I'll give it to your Honour and my friend.

HIS HONOUR: You don't need to frame anything Mr Borick, unless you take a different view to me then I'll hear any submission about it. But I can certainly tell the witness - clearly they are probably staying at the same hotel, they are probably eating together and so forth, but what they should not - and you know, they're professional people, but what would concern me is if they're discussing the substance of the evidence that Ms Papadopulos-Eleopulos is giving, that's all.

MR BORICK: They've heard that, I'll make it clear to them.

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Q. Have you been discussing your evidence with Dr Turner as events have proceeded in court so far.

A. We have not discussed anything, we cannot, we just went to lunch together. But we did not discuss anything about the court case. I had a look at the paper, but I never discuss it with Dr Turner.

Q. What about before the luncheon adjournment, when Mr Borick spoke to you.

A. No.

Q. At no stage have you spoken to -

A. Not in relation to my evidence.

Q. Can I go back to the document I was asking you about,

P18. If the witness could have that exhibit.

A. 27?

HIS HONOUR

Q. P18; that's the HIV treatment response.

A. HIV treatment response, yes.

XXN

Q. We were dealing with the page with the heading 'Discussion' which is 454.

A. Yes.

Q. We'd got to the end of that first paragraph which reads 'The median CD4 cell when starting HAART has declined in recent years'. You agree with what that says.

A. It says that, yes; that is what is written.

Q. You were asked before lunch 'Well, where are the figures'. If you go back to the first page, where it says 'Results', it sets out the figures. It indicates that in the very early stages, when the treatment was introduced, people started with a lower CD4 count, about 170, and then 95/96 it peaked if people were starting HAART.

A. If I could look -

Q. If I could finish. Starting HAART they would have 269, then at the end of the study period that had decreased back to about 200 cells. Firstly, do you agree that's what it says there under 'Results'.

A. Under 'Results' that's what it says. And that is what

is in the figure as well, in the table.

Q. That's what they're indicating isn't it, that a factor that is relevant here is that in the more recent times in the study, people who were starting HAART antiretroviral medication had a lower CD4 count; which in effect they were sicker.

A. No, I do not agree with that, because the difference - the first period was 170, that figure was the lowest CD4, 170. Now after that period, in the other periods, it increased. The CD4 increased. And in the last period it was 202, still higher than it was in the first period. But the changes which took place are not

statistically significant, and certainly not biologically significant.

Q. Well, the authors seemed to think it was statistically significant didn't they.

A. They couldn't say. They do say that there was a lower, but they don't say that was statistically significant.

Q. They say it was a significant.

A. The median - sorry, the median CD4 cell counts when started HAART declined in recent years; that's what it says.

HIS HONOUR

Q. One must assume, must one, that they would have thought that was significant otherwise they wouldn't have come to that conclusion.

A. Sorry your Honour, but you can say that they are, and some people they decline, but not significantly statistically significant difference, or they say they are higher statistical difference, they have to clarify that.

XXN

Q. We'll go through and look at how they clarify it then shall we.

A. Yes.

Q. Continue under what the authors say about 'Discussion', starting at the second paragraph under that heading. 'The discrepancy -', do you have that.

A. 'The discrepancy between the -' yes.

Q. Yes, they then say 'The discrepancy between the clear improvement we recorded virological response and the apparently worsening rates of clinical progression might be related to the change in the demographic characteristics of study participants, with an increasing number of patients from areas with a high incidence of tuberculosis. For example, in the Swiss HIV Cohort Study there was a steady increase in the number of patients from sub-Saharan Africa. These patients were younger, more likely to be female and more likely to have been infected heterosexually than other

study participants. Also, they had lower CD4 counts at presentation and the most frequent AIDS defining event was tuberculosis'. I'll keep going for a little bit more. 'Similar trends have been seen in other european countries and in North America. In the USA the rates of tuberculosis are increasing in foreign-born people, and outbreaks are increasingly common in other groups at high risk of HIV infection, including prisoners, homeless people, and gay and transvestite and transsexual HIV infected men.' I'll pause there. So you agree, the authors say they are actually characteristics about the people who are embarking upon a series of antiretrovirals which may explain why it is there has been this paradoxical result.

A. These people, they are AIDS patient, in the vast majority of people who are said to have AIDS, as I said before, TB. If HAART works then it should work more than anywhere else in people who have TB. If it doesn't work in this type of people then we can't, it cannot be an effective treatment. Now, may I your Honour respond to this, because there is evidence that we have to look at how HAART is supposed to work and how HAART - what is meant by HAART has a virological effect. By decreasing the viral lot there is no proof that the HAART has a virological effect. And it is a very good reason for it. HAART, the branch which are included in HAART by

define on the HIV DNA, they do not act directly on the HIV RNA, they act by decreasing the HIV DNA, in the profiles, what is called HIV DNA is incorporated in the cellular DNA. And if there is such a thing as an HIV profile, as an HIV DNA, by design these drugs should decrease the HIV DNA, and then in return because of the decrease of the DNA then we should have a decrease in the RNA. There is no other way. And this - in no study this has happened. In fact, we have a study from Australia which Professor Cooper, as the core author, they have shown that HAART does not decrease the HIV DNA. And we sent a letter to the journal, the Journal

of Infectious Diseases, putting several questions how can this be explained. How can we say that the HAART has an antiviral effect? And the journal published our letter and asked the authors to respond. Well they responded but they did not answer any of our questions. It is published there, they who can give their article and our letter and their response. It is impossible for HAART to have an antiviral effect. Similarly, a group from Italy they have studied the effect of HAART on the viral DNA, that was on HIV. And they can find out paradoxically - they use another word, I haven't got the word but is the same meaning - that following HAART treatment the HIV DNA increases instead of decreasing. So whichever what happens, whatever these drugs have it cannot be an antiviral effect.

Q. So you are referring there to some Italian study.

A. An Italian study, and study from here, I'll give you both studies.

Q. Sorry?

HIS HONOUR: She'll give you both studies.

A. I'll give you both studies.

XXN

Q. Before you finish your evidence tomorrow.

A. Yes.

Q. Now, going back to this article, the one that you relied on, there's reference in that passage I just read to you

'It was the most frequent AIDS defining event'. Now what do you understand by the term 'AIDS defining event'.

A. Is a disease which is said to prove AIDS; AIDS in communicable diseases.

Q. Said to be an opportunistic infection arising as a result of a person having AIDS.

A. Not of having HIV infection, not to having AIDS as a result of having HIV infection not to having AIDS. You have the disease, that is you have AIDS resulting from HIV infection.

Q. Isn't tuberculosis one of the opportunistic infections

that arise from someone having HIV.

A. That's what I've been saying all this morning. That the vast majority of people who are said to have AIDS are TB patients; that's what I'm saying.

Q. What I put to you that the experts in this field say is that TB is in fact an opportunistic infection that people with AIDS get.

A. TB is an AIDS indicator disease, that is what is said; that's what I've been saying all this morning. I've been saying, the vast majority of people that have AIDS today are said to have TB. This - AIDS equals - I'll say, put it in a different way. TB equal AIDS, if you have a positive test.

HIS HONOUR

Q. For HIV.

A. For HIV antibodies. TB equals TB if you have a negative test.

XXN

Q. Aren't there many people who have had positive HIV tests who then have gone on to develop TB.

A. I said yes there are. But let me repeat, is that proof for HIV infection?

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Q. Go back to this article. The authors there, don't they, seem to be providing, in fact, there are more than but at least two reasons, why it is that we might see this paradoxical outcome that you have referred to so often. One, is a change in the characteristics of those people starting antiretrovirals in that they are coming from countries like Africa where there is high TB, and secondly, that people starting the antiretrovirals at the time most recent to the end of the study, in fact, got to a point where they had a much lower CD4 count than they had previously in the mid 90s.

A. You repeat the question so let me repeat the answer.

Q. Sorry?

A. I said you repeated the question so let me repeat the answer. The answer is, that from what I can see, the decrease, there is no decrease. There is no statistically significant decrease and the papers do not say there is a significant decrease. If you take the first period and the last period, the first period was the period with the lower CD4 count. Now, that may have changes. Now they say most of the cases - they were doing the study, now we are doing the study - most of the cases which are presenting now they say had TB. Now, that may have been the case, I'm not deny it, but TB is AIDS. If TB is AIDS, we have to treat AIDS no matter what they have. So if TB say it is AIDS, it

should not have worse result. If HIV is the cause of AIDS when you have less of TB, when you have less HIV you should have less TB. It is as simple as that.

Q. Isn't it the case that the authors of this report, the people who conducted this study, were clearly of the view that the decline of the CD4 cell count in a person starting heart treatment was very significant in terms of the outcomes of this study.

A. Significant?

Q. Let me take you to their words.

A. Yes.

Q. P.455.

A. 455?

Q. Yes.

A. Yes.

Q. We will go right to the end to the ultimate comments. Starting with the last two lines on that page, don't they say there: 'The decline of CD4 cell count when starting the heart in recent years must also be of concern. Patients starting treatment with CD4 counts, less than 200 cells are at higher risk of disease progression and death in the long-term compared with those with higher base line CD4 cell counts. Early diagnosis and treatment is, therefore, of great importance to prevent clinical progression. A survey of new HIV diagnosis in the US and Ireland show that many opportunities for earlier diagnosis are missed. Our results indicate that such oversights could be common in many countries and settings and that, therefore, an expansion of voluntary and cost-effective screening in health care settings is likely to be beneficial. The ART cohort collaboration will continue to monitor the characteristics and prognosis of HIV infected patients starting heart and updating analysis at regular intervals'. Firstly, do you agree that that is the concluding paragraph in that report.

A. That is what they are saying they should do. If that's what they can do, they can do it. I'm not arguing with

that. I am only concerned about the effect of heart on the mortality and CD4. Now, 200, if you look at the CD4s, even in the last period, it was 202. So there was not more than 200, the medium count. So, this is what they are advising people to do. I'm not disagreeing with that.

Q. And aren't they also saying, in this report, that there are a number of explanations for why it is that they are saying what you have called the paradoxical outcome and a large part of it is the fact that people, when starting medication, have lower CD4 counts than they had previously.

A. But we said it again and again. They did not have lower CD4 counts.

Q. I want to move on.

A. The first period had 170. In the last period they had 202. In between, all of them had higher.

Q. I want to move on now to deal with another slide which you have produced to the court, slides 96 and 97 in A5.

A. Which page?

Q. It is slides 96 and 97.

A. Yes.

Q. And these slides related to what has been referred to as the Rodriguez study.

A. Yes.

Q. What I have done, as I have done before, is I will just remind you of what you have had to say about these slides in your evidence-in-chief before I ask you some questions.

A. Sure.

Q. P.75, line 28, you were asked to explain slide No.96 and your response was this: 'This is, as I said, even a more recent paper and in this study the authors examined HIV infected individuals who are not on any drugs and they call Heart to find out if it was - if HIV was the reason for the decline of the CD4 cells, that is for AIDS for immune deficiency. They concluded - now, really important - that "We report that plasma HIV RNA level

can account for only a small proportion of the variability in the rate of CD4 cell loss in chronic untreated HIV infection", and concluded, "Presenting HIV RNA level predict the rate of CD4 decline only minimally in untreated persons. Other factors as yet unidentified likely drive CD4 cell loss in HIV infection. This finding have implications for the treatment decisions in HIV infection and for understanding the pathogenesis of progressive immune deficiency". So, they're two important things which one concludes from these conclusions you draw. One, the HIV is responsible for only - what the words they use - for a minimal decline

of the CD4 cells. That's for acquired immune deficiency. There are other factors which cause the decline. Secondly, the risks get very important implication regarding the HIV theory and regarding treatment of HIV infected patient. And these authors are - I think' and then you go to slide 97. Firstly, do you agree that was your evidence.

A. Yes.

Q. Then you discuss slide 97. You talked about the people who are named there. I won't go through all of that. Then you refer to some commentary from those people in relation to the Rodriguez study and you quoted them as saying: 'The provocative main finding from their study, that is the Rodriguez study, was that the HIV load predicted no more than 10% of the observed CD4 loss in patient with chronic untreated HIV infection. What factors explain the other 90%? 25 years into the HIV epidemic, a complete understanding of what drives the decay of CD4 cells, the essential event of HIV disease is still lacking'. Then you said 'And they also wrote "The findings presented by Rodriguez et al provide support to those who favour non-virological mechanisms as the predominant cause of CD4 loss"', and then you go on to say 'That is, the AIDS is caused by factors other than HIV'. Do you agree that was your evidence.

A. Yes.

Q. I want to deal with that study, the Rodriguez study.

NOT ANSWERED

EXHIBIT #P19 PAPER HEADED 'PREDICTIVE VALUE OF PLASMA HIV RNA LEVEL ON RATE OF CD4 T-CELL DECLINE IN UNTREATED HIV INFECTION' BY RODRIGUEZ AND OTHERS REPORTED IN THE AMERICAN MEDICAL ASSOCIATION JOURNAL DATED 09/2006 TENDERED BY MS MCDONALD. ADMITTED.

Q. This is the paper you rely on at that point of your presentation.

A. That's what I was saying, yes, this is the paper.

Q. Do you have it in front of you at the moment.

A. Yes.

Q. You will see at the beginning there is a heading 'Context'. That is the context in which this study occurred.

A. Yes.

Q. And then 'Objective'.

A. Yes.

Q. And that is to estimate the proportion of variability in rate of CD4 cell loss predicted by presenting plasma HIV RNA levels in untreated HIV infected persons.

A. Yes.

Q. So it was to look at the relationship between CD4 cell loss and RNA.

A. Yes.

Q. Viral RNA. Sorry, HIV RNA. That was my mistake.

A. Yes.

Q. If we go down further, there is a heading 'Results' and it starts 'In both cohorts, higher presenting HIV RNA levels associated with greater subsequent CD4 cell decline'. Do you see that.

A. Yes.

Q. Do you agree that's what was said there.

A. Yes.

Q. And then, if we go down to 'Conclusions', 'Presenting HIV RNA level predicts the rate of CD4 decline only minimally in untreated persons. Other factors are

defined, likely drive CD4 cell loss in HIV infection. These findings have implications for treatment decisions for HIV infection and for understanding the pathogenesis progressive immune deficiency'. Do you agree with that.

A. Of course. That's what I said in the slide.

Q. You see, you have suggested in your evidence and by the way you have presented the PowerPoint in relation to this study that the authors of this paper concluded that it is something other than HIV, something quite separate, that is leading to the decline in the CD4 count.

A. That is all there was in the commentary to the authors

by Layne, which is one of the best HIV experts, said 'I didn't say that'. I mean, I said that but it was something else. Layne, that is the commentary. They say 90%. See, the viral load is responsible for 10%. In fact, in the text, he says 4 to 6%. Layne said 10%. Layne gives 10%. If you subtract 10 from 100, you are left with 90, so something else leads to 90% of CD4 decline, or if that something else is not HIV - they say it is something else, not me - so anything which is responsible for 90% must be considered to be the main cause of AIDS.

Q. Let's go back to what I was asking you. Is it your evidence that the authors of the Rodriguez report who undertook this study are saying it is something other than HIV that is leading to the depletion of the CD4 count.

A. That's what they say. It is not me who say, that's what I say. You read it. That's what they say.

Q. I'm about to take you through it. I suggest to you that that is not what the authors are saying. All the authors are saying is that it is a more complex equation than that. You just can't look at viral load and CD4 count. There is not necessarily a correlation.

A. Well, that's what HIV material says. They don't say it is more complex. They say that is the problem. The problem is that there is a more complex relationship

between AIDS - it is more complex between AIDS and its causes.

Q. You see, didn't two of the authors, the primary authors, Rodriguez and Lederman, actually subsequently publish a further paper to clarify what they meant in their conclusions and observations in the study, that is P19.

A. Are you meaning the paper or the request of Professor John Moore?

Q. The paper that is headed 'What our work means' by Mr Rodriguez and Lederman.

A. Yes, it was something published, a commentary in AIDS Truth, where nobody can respond.

Q. Is that -

A. Do you want me to say what they say there?

Q. Have you seen -

A. It is in the paper here. I have seen the paper.

Q. You have seen their response.

A. Yes, I have seen their response.

Q. To your understanding, did that response come about because there was a perception that this study was being misused by some members of the scientific community.

A. A commentary inside this magazine by HIV expert, including Furuchi, who says that the decline in AIDS with CD4s is due to stimulation, immune stimulation not immune suppression, that is a commentary in science. It was not me commenting on that paper in print anywhere.

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EXHIBIT #P20 DOCUMENT HEADED 'WHAT OUR WORK MEANS' BY BENIGNO RODRIGUEZ AND MICHAEL LEDERMAN TENDERED BY MS MCDONALD. ADMITTED.

XXN

Q. Have you seen this document prior to putting together your power point presentation.

A. We did not discuss it because it came after our power point presentation.

HIS HONOUR: Has this document got a date?

MS MCDONALD: The only date I pick up is the site was developed in March 2006. I will make some more inquiries about that.

XXN

Q. Just to make it clear, had you seen this response before you put together your power point presentation.

A. I am repeating, we could not get proof in our power point presentation of this because it came after we presented our evidence.

Q. At the beginning, the author's explain what it was that they did in relation to producing that report or study commencing 'predicted value of plasma'. They then go on and make this statement - this is two-thirds of the way in the paragraph - 'Positive, as we believe cross-examination of scientific findings to be, we have learned with growing concern about interpretation of the

works that are not only inaccurate but misleading and potentially dangerous to HIV-infected persons everywhere, thus, we are writing here to clarify the significance of this work, its implications for the role of HIV viral load measurement in clinical practice and its meaning to persons living with HIV and AIDS'. Do you agree that's what it says there.

A. That is what is written.

Q. When you read through this paper, that is clearly what it sets out to do, to make absolutely crystal clear what their position is in terms of the outcomes of these findings.

A. They change the interpretation of their own data.

Q. What they did was make sure that no-one - or attempted to make sure that no-one - would go around misrepresenting what their initial data had been.

A. If Furuchi misrepresents the data, it is not my problem. They should talk with Furuchi. Furuchi, as you know, is the main person in HIV/AIDS in America. He's responsible of distributing over $2 million a year for HIV research - $2 billion, sorry.

Q. The authors go on to explain what they did. 'Briefly used complex modelling to calculate the estimated speed which HIV-infected persons not receiving treatment for HIV would lose their CD4 cells over time' and then asked a simple question, based on a single measurement of those persons' viral loads: 'How well can one account for the variation in the rate of CD4 cell loss from one person to the next. To the surprise of many the answer is, very poorly, to the tune of about 4-6%'. Firstly, do you agree with what that says there.

A. Yes.

Q. Secondly, do you agree that that is what they did in the paper that's been tendered as P19.

A. They say, to the surprise of many, and to their own surprise they found out that there is a very poor account for the decline of CD4, only 4-6%.

Q. I am asking you, do you accept that summary.

A. I accept the summary, yes.

Q. As a summary of what it was, that was the outcome of the initial study.

A. This is the study. That's what they say in the study and that's what they say here. They say 4-6%.

Q. Then they explain it. They say 'Most disturbing amongst all the interpretation of this finding, this has been taken by some to mean that our data raise doubts about HIV being the cause of AIDS. Some have gone as far as to affirm that our results prove that it is not. As this is the most damaging of all the interpretation of our work, we will address it first'. That is what you

have been suggesting in this court, isn't it, that there is something else, other than HIV, that is causing people to die of AIDS.

A. I am not saying - this is not my saying, let me repeat. This is what the commentary to these papers said, that there is something else. They are their words, not mine.

HIS HONOUR

Q. What are your words.

A. My words are too. If HIV is responsible for 4-6%, then there must be something else.

Q. You agree with those critiques.

A. I agree with the commentary.

XXN

Q. That is the opinion that you have been giving in this court.

NOT ANSWERED

HIS HONOUR

Q. That is your opinion.

A. That is my opinion. I am doing nothing more than repeating their findings.

XXN

Q. Let's go on to see what these authors had to say in response to the sort of opinion that you are expressing. 'There is absolutely no doubt that HIV is the cause of AIDS. Far from challenging the veracity of this

statement, our work further confirms it. This is easily appreciated from our initial analysis of the data which shows that, on average, individuals with higher viral loads tend to lose CD4 cells more rapidly than those with lower viral loads. There is no contradiction between this finding and our main message because the overall trend among a group of subjects cannot be directly translated into a prediction of what will happen to a single individual within that group. Importantly, this finding replicates, rather than disputes the substances in the paper by Mellors et al and the citation. This demonstrates this 10 years ago,

thus using our work to claim that those previous conclusions are invalid precludes a combination of sloppy thinking, sloppy reading or malicious intent, which two you choose to believe'. Is that what it says there.

A. That's what it says there. I don't think it was misinterpreted and I don't think Furuchi did.

Q. Are the authors in this paper directly refuting the use that you seek to make of that study.

A. Of course not. They said in their summary and in here that the viral load predicts only 4-6% and that's what it is and they do say it here. I'm talking about what their data says and Furuchi said that and Layne said that.

Q. Do the authors then go on over the page to explain or to use an analogy to try and explain the findings they have arrived at. Going to the paragraph starting 'An often cited'; do you see that.

A. I know the analogy very, very well.

Q. Let's go back to it 'An often cited analogy deposits that the clinical course of HIV infection can be thought of as a train approaching a broken bridge. The CD4 cell count is the distance that separates the train from certain doom, whereas the viral load is the speed at which the train is travelling towards that point. Expanding on this image, we propose the train's fuel,

rather than a single material, can be thought of as a mixture of combustibles of which the number of viral particles in the blood, i.e. the viral load is but one of the components. As the relative component to the mixture changes, so does the efficiency of combustion and hence the power of the engine and speed of the train. From this follows that were the train to run out of fuel it would cease to move'. Do you agree with that.

A. Yes, I know their analogy, as I said.

Q. It goes on to say 'Thus in two persons with the same amount of HIV in blood, the efficiency of combustion and

hence the speed of the train, rate of CD4 cell decline, may vary. That is precisely what our work shows. For the HIV-infected patient this means that it is very difficult to predict what the pace of his or her CD4 decline will be, just based on the measurements of the amount of HIV in the blood'. Do you agree that's what it says there.

A. Exactly and that's what we are saying. They say, can I explain their analogy please?

Q. Certainly.

A. The analogy, until now it was told that the number of CD4 cells tells you how far you are from the broken bridge. If you have high level of CD4 you are very far, if you have low, you are very close to the broken bridge. This is one viral load, the other viral load is the speed of the train and the speed, until now, is determined by the viral load. The higher the viral load, the higher the speed and, thus, the sooner you reach the broken bridge. Now, the Rodriguez paper tells us that the speed is not determined solely by the viral load, in fact the viral load is responsible only - the fuel for the speed is HIV only - is responsible of only 4-6%. The rest of the fuel, which speeds the train, is something else. It is exactly what they say in the paper. The rest is something else, what I told you here at the beginning, if you start with a low CD4, you can

start with low CD4 - in fact there is a very recent paper from Amsterdam where the authors, in a study for gay men, is one of the largest studies in gay men, apart from the second largest study - the Max study. And the authors, again HIV experts from Amsterdam, they found out that there is a decline of CD4 cells - statistically significant decline of CD4 cells, before a patient tests positive. That decline determines how quick - that is how quick - you are reaching the bridge before you are HIV-infected. Whatever causes that decline of the CD4 cells before you reach - you become positive, there was a factor there, these factors - surely they don't

disappear straightaway after you become positive, they will continue to be there and they will continue to decrease the CD4 cells. That is what the Max study has shown. The Max study has shown, again this is the largest - I'm repeating - is the largest study in gay men and the longest. It started in 1984, it was about 5,000 men and if we had no other study but the Max study, we would have known everything which has to be known about AIDS in gay men. The papers from there are very, very good. At one stage they publish a paper and it was shown that after you become positive there are other factors which determine - they use another word - determine the development of AIDS, so it means that there are factors there which are not HIV because they found out when you are HIV-infected and they study the patients after they were HIV-infected and they found out that people who continue to have sex and the higher the sexual frequency of passive anal intercourse, the higher the probability of them developing AIDS. That cannot be HIV because once infected with HIV - when they're infected with, say, the bacteria that caused syphilis, then you can have as much sexual contact with people who have syphilis as well, or who are infected with the bacteria and it won't make any difference to how you develop syphilis. Here, they found out that the most sexual intercourse, and specifically passive anal

intercourse, you have, the higher the probability that you will develop AIDS and you will develop it soon. It must be something else apart from HIV which determines - this is their word - determines the development of AIDS. We have now two studies - the best ever studies in gay men which say there are other factors which determine how quick the train or the speed of the train towards the broken bridge.

Q. You just told the court then, the words of the author was that it is something other than HIV that causes AIDS. The authors of this report never said that. At its highest they said there is not necessarily a direct

link between the level of viral load and the level of depletion of the CD4 cells.

A. AIDS is depletion - AID stands for the decrease in T4 cells and there's a decrease in T4 cells as shown in the slide there. According to HIV, HIV infection leads to the increase in T4 cells and T4 cells is the hallmark of AIDS, that is anyone who has the HIV serum, the increase of the cells is the hallmark of HIV infection and AIDS. That means only people who have HIV will have a decrease in T4 cells, which is totally shown to be not true. There are many people who have a negative test for HIV and they have low T4 cell counts. The second part of that hallmark means that only people who have low T4 cells will develop the disease. That is, again, not true. There are people who first develop the disease, first develop pre-existing PCP, and then develop decrease in T4 cells, that is the disease - as the cause of the decrease in T4 cells. There are people who have HIV who have positive tests and who have a decreased T4 cell - zero T4 cell - and they can live, from the evidence we have, up to five years without developing any disease. There goes your hallmark of HIV infection and AIDS.

Q. Isn't it as simple as this: you have relied on this study as supporting your opinion that HIV doesn't cause AIDS, when in fact the very authors of that study have

come out and said that is wrong, that is not what that study means at all.

A. That is what they said in the paper and that is what the commentary says. If the commentary was not written by me, it was written by Layne and if you read the paper and if you read what is here, their analogy tells you that is exactly what the analogy tells you. I know they're saying it, they said it in the paper, they said it in their analogy and that is what Layne said in the commentary to this paper and this is what Furuchi said in the commentary to this paper in science.

Q. Moving on to ask you questions about some of your slides

in relation to sexual transmission. Looking at Exhibit A8, slide 6 in A8, that is your presentation on sexual transmission, relating to contact tracing.

A. Slide 8?

Q. Slide 6.

A. Yes, sexually transmitted diseases.

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Q. You gave evidence in this court that there is no contact tracing in relation to HIV.

A. That is what Haverkos said.

Q. Wasn't that article you were relying on an article published in 1988.

A. Yes.

Q. An article that was published in the United States.

A. Yes.

Q. You see it is a matter of fact contact tracing occurs throughout Australia in relation to HIV.

A. I cannot find that published in any paper.

Q. You have prepared -

A. I am discussing on scientific evidence. Scientific evidence is from scientific papers.

Q. You are prepared, on the basis of an article from 1988, 18 years ago now, from America, to say, make a blanket statement, there is no contact tracing in relation to HIV.

A. I cannot - found any scientific papers where contact tracing can be done in a population or - people said to be sexually - to have been infected by sexual contact.

Q. I suggest this is a really good example of you just pulling out snippets from articles and studies to support your argument.

A. No, I totally disagree with you.

Q. A phone call to Department of Health would have told you

that contact tracing occurs in relation to HIV in this country.

A. I don't - I have to have scientific publication. I am discussing scientific publication.

Q. So what if you made a phone call to the Department of Health and they told you that as a matter of course there is contact tracing for everyone diagnosed with HIV, you wouldn't have included that in your presentation.

A. There is no contact tracing from everyone who has been said to be HIV infected by sexual contact.

Q. You see, in this state - we will deal with this state

for a moment - if someone has a positive result to ELISA test and Western Blot, their doctor, that is the doctor who ordered the tests, is advised to contact the Public Health Authority.

A. Yes.

Q. Do you know that.

A. Yes.

Q. You did know that.

A. Yes, I know that.

Q. Then the Public Health Authority either speaks to the person who has HIV directly or does it through the treating doctor.

A. Sorry, can you repeat the question?

Q. Once that notification is made to the Public Health Authority, once the doctor gets the results, is told that he has to notify the public health authorities.

A. Yes.

Q. I should just say, as an aside, are you aware also separately to that the IMVS is obliged to notify the Public Health Authority.

A. Yes.

Q. Did you know that.

A. Yes.

Q. And that the Public Health Authority, either directly with the person who has a positive result, or through that person's treating doctor, then speaks with that

person. Did you know that.

A. I do, yes.

Q. With the purpose of finding out recent sexual contacts.

A. Yes.

Q. Did you know that.

A. Yes, they will do that, they may do that now.

Q. Isn't that contact tracing.

A. That was - there is contact tracing which is done with one person, it is not a contact tracing when HIV was said to be sexually transmitted.

Q. What I am saying to you is that that is contact tracing now done as a matter of course around this country.

A. There is but this is not what other studies are on sexual transmission, the studies which claim heterosexual transmission, are based on. None of the respective studies in which sexual transmission is studied have done contact tracing. The cross-section of studies could not have done contact tracing.

Q. You gave evidence at p.114 not about studies, about generally how one proves the disease is sexually transmitted, and said this, starting at line 4, 'To prove that disease is sexually transmitted you have first of all to find the agent in genital secretions. It has to be in both partners, the passive and the active partner. As I said, it must be by sexually transmitted. The evidence for a sexually transmitted disease is usually obtained, or always is obtained by contact tracing, that is, if a man or woman is found to have a sexually transmitted disease then the doctor tries to trace her sexual partners before she became infected and sexual partners after she became infected and this goes on as far back as they can. This is not done for HIV '. That was your evidence, wasn't it.

A. This has not been done in any of the studies - in any of the studies which claim truth for sexual transmission, heterosexual transmission, and you can go through all the studies which claim heterosexual transmission and there is - never has been done. In fact, if you read -

if you read the latest commentary everybody now seems to comment on HIV/AIDS, on AIDS Truth, where nobody can respond. If you see the commentary by Nancy Padian and Bear, she implies there that there are contact tracing. In fact she - I think 6 to 9, numbers 6 to 9 - and when you go and look there, there is nothing like that, what you have - there is some mathematical orders in population, it is not contact tracing, but the studies that concluded heterosexual transmission -

Q. You mention Padian. She is someone else who has also written a response as a result of people doing what she describes as misusing the results of her studies.

A. That is what I said, I know the thing, that is what everybody does now, they go and publish in AIDS Truth where you cannot respond. It is such a truth that seems to be beyond reach of any scientist. They have - they are the gods, they have the truth, and nobody else can have it. So you just publish there and everybody who reads the - all you have to do is reach conclusion, editor finds it - he said - that is he said to Joan Moore whose web site it is, 'I disagree with your title. I don't like your - the name of your web site. It implies that only you have the truth'. That is what they want to portray, that only they have the truth and nobody else have the truth.

Q. Let us go back to what you told this court. You didn't tell the court, you didn't talk about studies, no studies on contact tracing, you put to this court that the normal method for tracing sexually transmitted diseases was contact tracing and this is not done for HIV.

A. This was not done for - in this study - say to prove sexually heterosexual transmission.

Q. You weren't talking about a study at that point in time you were making a general statement to the court.

A. Yes, and that was not - that is what I implied. I implied that was not done in the studies in which it is claimed to have proven heterosexual transmission.

Q. I might turn to that study that you excised that quote from, it is the epidemiology of immunodeficiency syndrome amongst heterosexuals. I indicate it is a 1988 paper.

MS MCDONALD: I tender that.

EXHIBIT #P21 ARTICLE 'EPIDEMIOLOGY OF IMMUNODEFICIENCY SYNDROME AMONGST HETEROSEXUALS' AUTHORS HARRY HAVERKOS AND ROBERT EDELMAN, PUBLISHED 7/10/1988 EDITION OF THE JAMA TENDERED BY MS MCDONALD. ADMITTED.

MS MCDONALD: I think that is the Journal of American Medicine Association.

Q. This is the article that you excised that quote from.

A. Yes.

Q. I will just take to you the relevant page, p.1927, the third to last page.

A. Yes.

Q. If you go into the middle column.

A. Yes.

Q. There is the word 'prevention' then, underneath that, the words 'sexual contact tracing', do you see that.

A. Yes.

Q. That is where you have extracted that passage that we see in slide number 6.

A. Yes.

Q. You just cut and paste it straight out of this paper.

A. That is what he said.

Q. In America in 1988 he is talking about, isn't he.

A. I am not talking only in America, I am talking all the studies which claim heterosexual transmission.

Q. Other than that little snippet, under 'sexual contact tracing', you didn't tell us anything else about this study in your PowerPoint, did you.

A. No.

Q. Let you just see what the study actually says there. Are you familiar with it.

A. I am familiar.

Q. Starts off with the purpose of this article. The purpose of this article is 'To inform health care professionals about the extent to which human immunodeficiency virus, HIV infection, and acquired immunodeficiency syndrome, AIDS, are spreading to the heterosexual population in this country', correct.

A. Yes.

Q. That is what this paper is about.

A. Yes, that is what it says.

Q. I will take you to some details in a moment, but would agree that the authors of this report absolutely express the view that HIV can be heterosexualally transmitted.

A. But they don't give evidence for it, and the evidence I discuss on the papers which have data, scientific evidence, this study does not have any evidence.

Q. You don't include anything about that aspect of this paper because there is no evidence about why it is -

A. I don't have to say.

Q. Could you let me finish please. Just let me finish.

A. Yes, sorry.

Q. Is it your evidence that the reason you have included none of the details of this paper in terms of the opinion of the authors, heterosexualally transmitted, is because they don't have the studies and the data there.

A. Look, there are most probably about maybe more than 100,000 articles where the authors say heterosexualally transmitted AIDS. Do I have to include all this article - I will have done nothing else but photocopying, to give them to you, all my life.

Q. There is an article you chose to rely on to put before the court.

A. I am - but this is an article which what is said in relation to what - how heterosexual - how sexually transmitted diseases are proven. I don't have to say every single article. As I say, if I say every single article - if I present to the court every single article where it is said heterosexualally transmitted AIDS, I will do nothing all my life but photocopying to give

them to you.

Q. Lets us go back to the part you did choose to include in your PowerPoint, the part in relation to sexual contact tracing.

A. Yes.

Q. You have just told us that the reason you didn't include any of the rest was because it didn't have the studies then.

A. Yes.

Q. There is no evidence to back up that there is no sexual contact tracing in this paper, is there.

A. Well, that is what he says.

Q. Well, why are you prepared to rely on what he says in that one paragraph without anything to back it up and not the rest of the article.

A. I have backed it up there, I have backed it up then with all the evidence I have presented and I have put - I didn't omit any of the major studies. If I omitted anything it was by, inadvertently, but I did not omit any studies to my knowledge which prove heterosexual - evidence for heterosexual transmission, either in Europe, Africa or America or anywhere else.

HIS HONOUR

Q. I just take you to p.1924 of this article

A. Yes.

Q. You see the heading 'Heterosexual transmission in the United States'.

A. Yes.

Q. He says 'In 1984 and 1985 there were initial reports of AIDS transmitted from men to women amongst spouses of military personnel and haemophiliacs in the United States'.

A. Yes.

Q. 'More recently transmission of HIV infection and AIDS from women to men has been reported.'

A. Yes.

Q. 'Isolation of HIV from cervical secretions of women at risk for AIDS supports the epidemiological evidence for

female to male transmission.' Now, in that paragraph he gives a number of references.

A. Yes.

Q. Commencing at 33 through to 42 and, if you go then to the references, 33 to 42, refers to various studies.

A. Yes. Yes, 32.

Q. 33 is Redfield.

A. Yes, I know where - I presented that study.

Q. 33 through to 42 are various studies.

A. Yes, I am aware of all these studies.

Q. You are aware of all of these studies.

A. Yes, I am aware of all these.

Q. Do you challenge the authors of this article that those studies are evidence of what they claim to be the position in 1984 and 1985;

A. Yes, and it is not only me for challenging, it is Nancy Padian herself who challenged this article.

Q. I am really only interested in your views.

A. Yes.

XXN

Q. If one goes to the end of this paper to where it has a list of references, there is a very long list of source material references that the author has relied on to produce this paper. So when you say the evidence for what they are saying is not there, that is just not true, there are 90 different studies or references that form the basis of their opinion.

A. But they are not related to that heterosexual transmission.

Q. The whole paper.

A. There is nothing - I am sorry, they are not, these papers are not giving data on heterosexual transmission. His Honour gave us - he was much quicker than both of us to find out which are the references which relate to this topic.

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27
28
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Q. Let's go to some of what the authors say in the references they rely on. On the first page there is a heading 'Heterosexual transmission in Africa and Haiti'. The author goes on to say 'Convincing evidence that heterosexual transmission could occur first came from epidemiologic studies of AIDS in Africa and Haiti. Heterosexual promiscuity and contacts with female prostitutes had been associated with HIV infection among Africans and Haitians'.

A. Yes, yes, that's what it says.

Q. He then goes on and breaks it down.

A. Yes.

Q. And littered throughout the following paragraphs in relation to Africa and then Haiti are studies that support the propositions the authors are putting forward.

A. No, they are not, no, I'm sorry. Give me one reference where he says evidence of heterosexual transmission.

Q. That is my point. Let's deal with the annexure under the 'Epidemiology of AIDS in Africa', so I'm on p.1923, the first column, second paragraph down.

A. 'Immediately'?

Q. Yes, 'Immediately, African, American and European investigators collaborated to survey parts of Africa for further evidence of AIDS. Similar findings strongly suggested heterosexual transmission with HIV, namely,

the nearly equal sex distribution and a lower mean age for female patients among subjects who are in their sexually most active years of age, were subsequently reported from Zambia and Rwanda. Acquired immunodeficiency syndrome in Africa epidemiologically resembled other sexually transmitted infections'. You agree that's what it says.

A. Yes, I agree.

Q. And if you look there we have got footnotes 14, 15 and 16.

A. Footnotes, yes, in the many references.

Q. If we turn then to 14, 'Evidence for heterosexual

transmission and clinical manifestations of human immunodeficiency virus infection and related conditions in Lusaka, Zambia. Published in Lancet; it's a very reputable publication, isn't it.

A. Yes, I agree, so is Jama.

Q. 15, 'Seroepidemiological studies of HTLV-III antibody prevalence among selected groups of heterosexual Africans'; do you see that, and HTLV-III is HIV; correct.

A. Sorry?

Q. HTLV-III.

A. Yes.

Q. The next one, 16, 'Prevalence of HTLV-III/LAV in household contacts of patients with confirmed AIDS and controls in Kinshasa, Zaire in JAMA'.

A. Yes.

Q. So there is one little paragraph and there we have three separate studies in reputable journals that support that proposition that have been relied on for that proposition.

A. This time they are not even - I'm aware of all the studies. If you want I will send you photocopies of all these studies. These are the studies which I have read again and again. Maybe you won't be able to read them because I have so many other ones there, but in not one of these studies there is evidence for heterosexual

transmission. In fact, these studies are not considered by anybody, definitely not by Padian, or any other research as proving heterosexual transmission of AIDS.

HIS HONOUR

Q. What do you say is the basic requirement necessary to prove heterosexual transmission.

A. What you have - all these studies did, let me say, they went there and they took some population of Africans and they tested them for HIV. They collected the HIV antibody. At that stage you go and test people and if you find their blood to have a p24 band reactive or 41 band reactive - this all done by pens in Africa - and

they will say you are infected. By this standard, 30% of us here will test positive, would be HIV infected, will have heterosexually acquired HIV. So these studies are not considered as proof for heterosexual transmission.

XXN

Q. What about in a situation in which, using the same country in Africa, using the same method of testing, so looking for the same proteins, the same bands, you see in a population a dramatic increase in HIV.

A. There that is not true. The first research by Montagnier and Gallo, they reported a very high HIV infection in Africans. In fact I think Gallo had about - may be confused here - Gallo or Montagnier, in one of their papers, even the controls had 12% been infected with HIV. So no, there is nowhere any evidence for an increase of HIV positive test in Africans.

Q. I'm asking you to assume a hypothetical. Let's assume a hypothetical African country, we won't be specific about which one, and that testing was done in that country to reveal that there was about a 5% prevalence of positive HIV results - I'm making these figures up - and that using those same tests a year later that's increased to 55% of the selection of the population tested, tested positive, the same community, the same country, the same testing for the same bands and proteins. Doesn't that

indicate an increase in HIV or whatever it is that's causing these positive results.

A. They never - you cannot have such paper and never has been one. Please give me one paper which has any scientific journal published where there has been such increase in positive test. In fact, in Uganda, which will have been the country more studied, they say we have a miracle now, we have a decrease by about 30% of the HIV and it is said that this is due to sexual education, but it is impossible to be due to sexual education your Honour because there is a study from Uganda where the population, they had about 16,000

people and they divided that and some of them were given very, very intensive sex education, others were left - their education was not that intensive and others were left to their own. When it came after the end of the study, the others were tested for HIV and for other sexually transmitted agents. They found out a significant difference in sexually transmitted disease between the group which had intensive sex education and the group which did not, but there was no difference in regard to HIV. So if it was a miracle in Uganda, it cannot be because of sexual education.

Q. Could it be because so many people have died of AIDS in Uganda that it wouldn't have increased.

A. They couldn't have died. In Uganda the population increased. There is statistical - I cannot give you the exact data but the population in Uganda has significantly increased in the time of the AIDS era. There is a doctor, an MD, in Switzerland who is following this very closely and he came with all the data and he has it at his fingertips. I can ask and if the court will like that data I will be able to present it. There is no evidence that Uganda population has decreased, to the contrary.

Q. Let's go back to this article. Still on p.1923, we have just gone through that paragraph commencing with the word 'Immediately' and finishing with the word

'Infections'. You then go on to describe the situation in Nairobi and said this: 'Female prostitutes emerged as an important reservoir of HIV in central Africa' and they cite four studies in support of that proposition.

A. Yes.

Q. 'In a retrospective serosurvey, only 4% of prostitutes in Nairobi, Kenya, were HIV positive in 1980 through '81, while 59% of prostitutes tested in 1985 through 1986 were seropositive' and again they have cited a study in support of that. Do you agree that's what it says.

A. Sorry?

Q. Do you agree with that.

A. Yes.

Q. So there is an example of a dramatic increase in HIV positive results.

A. Yes. How do they know the prostitutes - that all these prostitutes were not drug addicts? A scientific paper should exclude - if it's made to present sexual transmission it should exclude every other means of becoming positive including ever having TB or coming in contact with a TB person or a leprosy person or have leprosy or come in contact with any other person who is microbacteria infection. All of these things have to be excluded and the population should be prospectively followed up, not reduced to paper.

Q. Are you suggesting that there might be an alternate explanation that 55% or more of prostitutes in 1981 to 1985 become drug addicts.

A. It is possible.

HIS HONOUR

Q. Read the next sentence. It says 'The seroprevalence among prostitutes increased with the number of sexual contacts and lower socioeconomic status; a higher number of partners was inversely related to socioeconomic status'. Does that suggest anything to you.

A. It would suggest to me that these people are poor people and they will have all kind of infectious diseases,

including microbacteria infection which leads to a positive test.

Q. It says that the seroprevalence amongst prostitutes increased with the number of sexual contacts.

A. Then we have anal intercourse. Anal intercourse is not limited to gay men.

XXN

Q. So suddenly all these prostitutes, 4% before have HIV and 59, which everyone did know about it, started engaging in anal intercourse.

A. They have a mixture. Certainly these studies does not put heterosexual transmission and it is not me who says

that this study is not, does no prove heterosexual transmission. It is the people. Let's not repeat this again and again.

HIS HONOUR

Q. Would you agree that that is some evidence which might point to the fact.

A. It might point but it's not proof.

Q. It's a question of what you require as proof, isn't it. What you might require as proof others may not require that standard.

A. No, I think all the people who do heterosexual, who study heterosexual transmission of HIV have the same criteria.

Q. Certainly Harry Haverkos and Robert Edelman don't appear to have, do they.

A. They do not say it is proof.

Q. They used it as part of their material.

A. No, they stated a fact but they don't say that this is -

Q. If they are stating it as a fact you would assume that they think it's a relevant fact in preparation of their paper, wouldn't you. They wouldn't just state a fact if they didn't think it had some relevance.

A. They may think that. I'm not excluding that, they may think that.

Q. Do you agree that they are certainly people with high qualifications.

A. Yes, I agree. I correspond with Haverkos. In fact, he send us all his papers, he keeps us always informed.

XXN

Q. Do you accept that in Kenya there is next to none intravenous drug use because of poverty and cultural issues, they just can't afford it.

A. I do not think there is any country anywhere where there is no drug.

Q. Next to none, very, very little.

A. No, I don't - I don't have evidence of that and I doubt that anyone has that evidence.

Q. Do you have any evidence one way or the other.

A. No, not, I haven't got any evidence. I have seen but I doubt that there is any evidence that in Kenya there is no drug addiction anywhere or next to none; will be very surprised.

Q. I didn't put that to you. I suggested to you that there is very little intravenous drug use in Kenya.

A. I said I don't know, but it's not only intravenous drug which lead to a positive test. In fact, there was a study done where prostitutes who switched from intravenous to oral drugs and vice versa and it was found that the prostitutes, when there was a higher grade in the prostitutes when they are taking oral drugs than it was when they are taking intravenous drugs.

Q. Which study is this.

A. It's a study - I will give you the study, the author is just escaping me at the moment.

Q. The authors of this particular report then go on to discuss the epidemiology of AIDS in Haiti and say that the epidemiologic studies in relation to that country also suggest increasing heterosexual spread of AIDS.

A. Yes.

Q. And in the following passage relating to Haiti again they list numerous studies as support for that proposition.

A. Support, but in science we don't go, we are suggesting you go with proof and all the studies which have been

done following this, including the Padian study, show that there is no heterosexual transmission of HIV. Let me - there is a group of researchers from America, France and Germany who have done intensive studies on heterosexual transmission of HIV.

CONTINUED

RESUMING 3.55 P.M.

Q. Do you still have P21 in front of you.

A. May I read this paper?

Q. I would like to ask you some questions.

HIS HONOUR

Q. Ms Papadopulos-Eleopulos just allow Ms McDonald to ask you the questions, if you need to read further from the quote you can do so later. Just listen to the question.

XXN

Q. Do you have P21 in front of you still.

A. Thank you.

Q. P.1923, we have gone to what has been happening in Haiti.

A. Yes.

Q. If I take you to the middle column of the page, paragraph commencing with the words 'In another study'.

A. In the middle part of it?

Q. Towards the top, middle column, second paragraph down.

A. Middle column?

Q. It commences 'In another study Pape et al reported'.

HIS HONOUR

Q. Have you got page 1923.

A. Yes, 1923. The middle -

Q. The middle paragraph, about here (INDICATES).

A. In Haiti.

Q. 'In another study' it starts.

A. Yes, 'In another study', the second paragraph?

Q. Yes.

XXN

Q. 'In another study Pape et al reported that 60% of female spouses of Haitian men with AIDS and 63% of male spouses of Haitian women with AIDS were HIV positive, suggesting that female-to-male and male-to-female transmission were approximately equal. No differences in the types of sexual activities could be found between seropositive and seronegative spouses. Haitian men and women with AIDS were more likely than persons without AIDS to report having a large number of heterosexual partners'.

Do you agree that's what it says there.

A. Yes.

Q. The suggestion is there, if you accept what is written, that this isn't about some having anal intercourse and others not, I mean it says there was no difference in the types of sexual activities between these two groups.

A. Yes, this study - let me see which is the study. The pop study yes, this study was severely criticised because a finding that equal number of men and woman test positive, it was interpreted that there is heterosexual transmission, that these people got infected through heterosexual transmission. Again, this study not me, but no HIV expert at present will consider right.

HIS HONOUR

Q. Well, Dr Edelman and Dr Haverkos were prepared to rely on it, were they not.

A. I said previously, this was written in 1988.

Q. Are Dr Haverkos and Dr Edelman still practising, do you know.

A. They are still, and I think Haverkos is going to retire soon or - he may have left. I think he may have left in the middle.

Q. To your knowledge, in any of the papers that they have published since 1988, have they indicated that they would no longer rely upon these studies or that this

paper is inaccurate in any way.

A. As far as I know they don't discuss any more, that is more now on drugs, and in fact he is - the human papilloma virus paper is including human papilloma virus.

Q. The question I'm asking, do you know of any paper or any statement made by Mr Edelman or Haverkos that suggest this paper, and the data upon which it relies, is no longer available.

A. Yes, is no longer valid, yes. May I read from this paper which was published in 2003?

Q. Who is it by.

A. By researcher from the US, Germany and America.

Q. No, that's not the question. I'm asking whether Dr Haverkos or Dr Edelman, was there anything suggested from them that their paper is no longer valid.

A. I don't know if they publish any paper to retract this statement. No, sorry, I didn't understand the question.

XXN

Q. I'll try and speed up through this and move on to other things. If we move down the column we see 'Factors Modulating Heterosexual Transmission of HIV in Africa and Haiti'. They talk about condom use and that the epidemiology of condom use provides further evidence that HIV transmission occurs through heterosexual intercourse. That is that if you look at where condoms are used and where they're not used you find support for that proposition. That is that HIV is heterosexually transmitted. What do you say to that.

A. This is not a study, as I said, these studies are not any more considered study to be valid for heterosexual or sexual transmission of HIV.

Q. I might move up ahead to a further point. In the third column.

A. All this is a cross-section, and Professor Caldo will agree that cross-sectional studies do not - you cannot get information from cross-sectional study, or can't get proof, you may suggest but it doesn't prove. You have

to have prospective studies to come to conclusion in regard to sexual transmission of HIV.

Q. Or you can look at a whole load of studies and look at what the total picture tells you.

A. The total picture tell me that there is no heterosexual transmission. It is not me who tells, it is the HIV experts, their evidence who proves that.

Q. Let's move on to the third column. About halfway down there is a paragraph headed with the words 'It has also been suggested'.

A. Yes.

Q. It goes on to say 'It has also been suggested that HIV

may be acquired more readily from circumcised women or readily by uncircumcised men.' The first thing, do you agree with that proposition.

A. Firstly you have to prove it is heterosexual transmission. Before you can say condom and circumcision help you have to have proof of heterosexual transmission, such proof does not exist. So you can't talk about circumcision.

Q. Let's talk about circumcision for a moment, you are aware of a number of studies occurring in Africa in recent times comparing the rates of HIV in men who are circumcised as compared to men who are not.

A. No, no, these studies do not prove - you have to have, as I said, proof of heterosexual transmission and the studies, the best studies - the best studies from Africa do not prove heterosexual transmission. We have study, we have analysed this and published a letter, as I said in my evidence, in Lancet. Which ends up that in Africa there is no more heterosexual transmission than anywhere else. Including Europe/Australia.

Q. I'll go back to my question. Are you aware that in recent times there have been a number of studies, ongoing studies right up until in fact just weeks ago, comparing the prevalence of HIV in men who are circumcised as compared to those who are not.

A. Yes, I'm aware that now there are advocate circumcision,

but I don't know on what scientific evidence this is based, there is no scientific evidence.

HIS HONOUR

Q. No Mrs Papadopulos-Eleopulos, we'll get through your evidence a lot faster if you answer the question. The question was: are you aware there are a number of studies in respect of HIV infection in circumcised and uncircumcised men. Now there is a short answer to that, 'Yes, I am aware of those studies; no, I'm not aware of those studies'. What conclusions one may draw from those studies is not part of the question. The question is simply to ask you, are you aware of them.

A. Yes, I am.

Q. So if you can keep your answers just to the question, we'll get through your evidence faster and perhaps it will be easier, because every time you give a long answer which is not responsive to the question it's difficult to get back to the line of questioning. All right. Do you understand.

A. If I said 'yes' then it means that I agree with that.

Q. No it doesn't, it means you are aware of it or you're not aware of it; that's all it means.

A. I'm aware of it.

XXN

Q. Are you aware also that those studies have been stopped recently because there was such a clear pattern showing that men who were circumcised were less likely to get HIV that wanted to give all of the other men in the control group who were uncircumcised an opportunity to become circumcised.

A. I'm aware that's what they are saying.

Q. That's what is happening now, those studies have been stopped for that reason.

A. Yes, many studies were stopped because they thought prematurely. In AIDS many, many studies are stopped and they realise that they stopped it prematurely, so is no different.

Q. And back in 1988, when this article was written and

published, there was already some evidence that uncircumcised men would more readily contract HIV.

A. That's what it says.

Q. You disagree with that.

A. That's what it says here.

HIS HONOUR

Q. The question was do you agree or disagree.

A. I disagree with it.

XXN

Q. I might go to the very end of this article. Can I take you to p.1927. There is a column headed 'Extent and Rate of Heterosexual Transmission of HIV.'

A. 1927?

Q. In the last column, third column over.

A. Yes.

Q. The authors say 'It is not clear how far or how fast HIV infection will spread into the heterosexual population of the United States and the rest of the world; however, there can be no doubt that heterosexual transmission occurs and that, in a favourable environment, it can be an important factor in the dissemination of HIV injection and AIDS. Although AIDS is not "exploding" into the heterosexual population relative to other risk groups, the increase in the number of heterosexual cases is proportional to increases in other risk groups. These increases are resulting in a doubling of heterosexual cases every 14 to 16 months. From our perspective, AIDS is preponderantly a sexually transmitted disease and can be transmitted from man-to-man, man-to-woman, and woman-to-man. Recently, HIV transmission from woman-to-woman has been reported.' Firstly, do you agree with what's written there.

A. If it's written I have no choice but to agree.

Q. Do you agree with any part of what the authors have written there.

A. I don't agree that this is happening.

Q. And that they've even noted that there had been transmission from woman-to-woman.

A. No.

Q. The authors have noted that though, you might not agree with it, but the authors -

A. I know that. I mean, you have read it, I accept what is written there. You have read it, yes, it is written there.

Q. If we look at the references for that proposition, they have relied on a publication in Lancet, 87.

A. Yes.

Q. And two publications in fact, another one from Ann Intern Medicine Lancet.

A. Yes.

Q. Lancet is a reputable journal.

A. Very reputable, Intern Medicine is very reputable; they are reputable journals, yes.

Q. I just take you to other references in that list, 41 and 42.

A. In, sorry?

Q. In the list of reference, 41 and 42.

A. Yes.

Q. We see the authors of this publication have relied on a study entitled 'Isolation of HTLV-III/LAV from cervical secretions of women at risk for AIDS.' Published in Lancet.

A. Yes.

Q. There we go, there seems to be another reference to a person who is purported to isolate HIV.

A. They found out a positive - they use p24 and they found out people with antibodies and they found a reaction with p24. Now pregnant woman would have a p24, a positive p24. Normal pregnant woman who have no risk, so can't say that they have HIV infection or HIV in their secretion. What they did is not proof of HIV relation. That is not proving for HIV detention.

Q. The second one, 42.

A. They're the same.

Q. 'Isolation of AIDS associated retrovirus from genital secretions of women with antibodies to the virus'.

A. Yes.

Q. I want to turn to deal with a couple of other topics.

A. May I your Honour, with your permission, read all the latest report? This is a reputable group of people.

HIS HONOUR

Q. Have you got the article from which you want to read or is it just a slide.

A. I will present the article. I'll give the article.

Q. Just indicate what -

A. Thank you very much. As I say, the title, the article is called 'Mounting anomalies in epidemiology of HIV in Africa: cry the beloved paradigm'. And I quote: 'Though

heterosexual intercourse has been virtually the sole explanation offered for the AIDS epidemic in sub-Saharan Africa, to our knowledge in no other part of the world has penile-vaginal exposure; (as opposed to "heterosexual sex") been demonstrated to initiate or sustain rapid HIV propagation. HIV is not transmitted by sex -'

HIS HONOUR

Q. HIV is not transmitted by sex.

A. HIV is not transmitted by 'sex'. Sex in inverted commas.

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'But only by specific risk practices. Dispassionate assessment of our conclusions admittedly depend on willing suspicion of this belief since the current paradigm is deeply embodied'.

HIS HONOUR

Q. Where is that from.

A. I will give the author, the journalist, Journal of STD in AIDS 2003.

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Q. You have given some evidence about the insert from the ELISA test. By that, I mean the instructions, if you like, that come with the ELISA test. Looking at Exhibit A7, that is the insert that was provided by your colleague, Dr Turner, as an insert as part of the packaging for the ELISA test.

A. Yes.

Q. We see a date on there.

A. 1995. Yes, there is a date there.

Q. Is it 1995.

A. Yes.

Q. That has been superseded since then -

A. Yes.

Q. - by a new insert, if you like.

A. A new test kit, do you mean?

Q. New accompanying documents. What I am suggesting is it is now a 2001 -

A. Yes.

Q. - instruction booklet -

A. Yes.

Q. That currently accompanies the kit.

A. Yes.

Q. Looking at this document, that is the one which is currently used as opposed to the one from 1995.

A. I don't know. Most probably, yes. It is a more recent one. This will be the one which is used.

MR BORICK: It would certainly help me if my friend could indicate the purpose of this document. Is it suggested there is a change to the instructions from A7?

MS MCDONALD: I haven't sat and compared the two. It has been put before the court as the most current and I was only taking the witness to the most current passage in the most current version.

EXHIBIT #P22 DOCUMENT ENTITLED 'HIV REFERENCE 3D41-22 D3, D4, A0, 36-6381/R3 PRODUCED BY ABBOT AXSYM SYSTEM DATED 05/2003 TENDERED BY MS MCDONALD. ADMITTED.

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Q. Can I take you to the second to last page of the photocopy and there should be a heading on that page 'Sensitivity and specificity'.

A. Where? What page?

Q. On the second to last page.

A. Yes.

Q. Do you see that.

A. Yes.

Q. You have already told the court or drawn to the court's attention -

A. 'Sensitivity and specificity', yes.

Q. And there is an introductory sentence 'At present, there is no recognised standard for establishing the presence or absence of antibodies to HIV 1 and HIV 2 in human blood'.

A. Yes.

Q. It goes on to say though, doesn't it: 'Specificity is

based on testing of random blood donors and hospitalised patient populations'.

A. Yes.

Q. 'Serum and plasma specimens'.

A. Yes, so the specificity is determined -

Q. I have taken you there to that sentence commencing 'Specificity'. It goes on to say: 'Sensitivity for HIV 1 (including HIV 1 group 0) and HIV 2 antibodies is expressed in terms of detection rate using confirmatory assay results eg (Western blot) as a basis for comparison'. Is that what it says in the document you have.

A. Yes.

Q. It then indicates that all specimens in this study were tested and the test results revealed the following: '1, specificity based on zero prevalence of antibodies to HIV 1 and/or HIV 2 in random blood donors' - 6,340 were tested - 'is estimated to be 99.94% for the AXSYM HIV 1/2 gO assay'. Do you see that.

A. It says that.

Q. Doesn't that mean it is 99.94% specific for those particular antibodies.

A. You read the first sentence which tells you that this is not truth. You don't use blood donors to determine the sensitivity of - you don't use blood donors as a gold standard to determining the specificity of an antibody test no matter what test is that. The gold -

Q. Doesn't it -

A. Sorry, but I have to respond to this. Blood donors are very healthy people and they have very low antibodies to anything, to anything in their blood. So blood donors would test negative to - no matter what antibody test you are using, but to determine the specificity, the only way to determine the specificity of an HIV antibody test is to use HIV as a gold standard. The antibodies are done to prove HIV infection and you have to compare the 6,000 people who are there with the presence or absence of HIV. The specificity of the antibody test is

determined, your Honour, by taking people, including blood donors, people who are healthy, people who have diseases, any type of disease, and people who have infectious diseases and then you do, on the one hand in this group, you do an antibody test. The whole thing is done blindly, and on the other hand you do HIV qualification, that is to prove, and then you compare the two groups. The whole thing is done blindly, then unblind. After you do the test, unblind it and then you look. There is correspondence between the positive antibody test and the existence of HIV. If every single person - if it is 99% - if you had 100 people you tested

with the antibodies and you had 100 people who you did HIV qualification and you find out only one of these people is HIV positive, you will say - sorry, I should say if no person who has no HIV tests positive, then you will say that the test is 100% specific, but if there are people who have not got HIV and they test positive, then you cannot say that the test is 99 or 100% specific. The gold standard for the antibody test is what we looking for, what the test is telling you. If the test is done to prove HIV infection, you have to compare it with HIV. You don't use gold standard with blood donors, healthy people. This is not how specificity is determined.

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Q. Do you accept that this packaging indicates that the test is 99.94% specific for the presence of HIV.

A. It is specified, if we use blood donors as the gold standard and that is what the problem is, they're using blood donors that are gold standard. You cannot use blood donors as a gold standard. This, I'm sure Professor McDonald will say that. This cannot be used as the gold standard.

Q. Let's go to the next paragraph and look at some unhealthy people. 'Do the manufacturers then report that specificity, based on zero prevalence of antibodies to HIV1 and/or 2 in a hospitalised population -' lots of sick people I suggest '- 1,670 tested is also estimated to be 99.94%'. Isn't that what it suggests or says.

A. How they compare it, it depends. With gold standard used as blood donors, you cannot use blood donors that are gold standard. This is a standard procedure. If you test for HIV, you have to compare with HIV, full stop.

Q. Haven't we got then a group of blood donors, on your assumption, who are healthy, a group of people in hospital, presumably unhealthy, and with both of them it is reported that this test is 99.94% specific for HIV.

A. No, there is another test. There is a test - this is the manufacture's claim but there are studies which are conducted in hospital patients and a very high percent

of people - and Dr Turner presented that evidence, I think - a very high percent of people test positive. In this study, the St Louis study, the authors went to great lengths to exclude any person who had even the most remote possibility of being infected with HIV and this is a scientific study.

Q. Doesn't para.3 read 'HIV antibody detection rate, in a limited population of 581 HIV1 antibody confirmed seropositive individuals is 100%. This rate includes 227 clinically diagnosed patients from different disease stages of HIV infections'. 100%.

A. This is not specificity. It has nothing to do with

specificity.

Q. Does it have anything to do with sensitivity.

A. Yes, but we're talking about specificity, what is important is specificity.

Q. 100% detection rate.

A. Yes. What - what do you mean by 100%?

Q. Para.4 'HIV2 antibody detection rate in a limited population of 304 -'

A. Could you please say para.3 again?

Q. We have just been through that, is there something you want to add to your answer.

A. Can we please go to para.3?

Q. Yes. Is there something you want to add to your answer about para.3.

A. How are they confirmed? How are these people confirmed to be HIV positive? What test do they use to confirm that they were HIV positive? The only way to confirm that they were HIV positive is to have HIV qualifications and nobody has used. I'm sorry I am repeating this - these are the retrovirologists who say 'We have not got a gold standard for the HIV antibody test and the gold standard in HIV qualification never has been done', so you cannot talk about specificity of the HIV antibodies. You have got to have HIV. That is one of the main ingredients, you have to have HIV. If you don't have HIV qualification, you cannot have HIV

proteins, you cannot have HIV nucleic acid tests, that is PCR tests. You have to have qualifications.

HIS HONOUR

Q. We're back to your original proposition, aren't we.

A. Exactly, but here it is stated that the antibody tests are 99% specific, this antibody test, and 100% sensitive. You cannot state that.

Q. You say that that is a completely misleading document.

A. It is.

MR BORICK: I am confused between paras.3 and 4.

MS MCDONALD: I will let my friend have a look at my copy.

HIS HONOUR

Q. We're dealing with all of that document, aren't we. When you say it is misleading, it is misleading both as to specificity and sensitivity.

A. Yes.

Q. It comes back to your original proposition.

A. Yes.

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Q. But you're prepared to rely on the first couple of lines of that document, though, in your evidence.

A. Sorry?

Q. You're prepared to rely on the first paragraph of that document in your evidence.

A. No, I say you cannot use the blood donors. I said you cannot use them.

Q. Are you aware that these tests - and by that I'm referring to both the ELISA and the Western blot - are approved by the TGA.

MR BORICK: I'm sorry to interrupt but I want to take an instruction on the previous question.

HIS HONOUR: Yes, we will wait while Mr Borick gets his instruction.

MR BORICK: The witness went back to para.3, 'HIV antibody detection rate in a limited population of 581, HIV1 antibody confirmed seropositive individuals as 100%'. What it doesn't tell us is how -

OBJECTION: MS MCDONALD OBJECTS

MS MCDONALD: I object to my learned friend giving evidence from the bar table.

MR BORICK: One moment, I have a query. How does my friend say that it is proved from this document that the 581 HIV antibody confirmed seropositive individuals is done? How do they prove that?

HIS HONOUR: That is the very proposition that the witness answered. My understanding was that she says her evidence is that that statement is presumptive of the fact that there is a virus called HIV and she doesn't accept that that's the position.

A. I want to say more here. I'm saying even if we assume that there is a virus HIV, in order to claim in this test, 99% specific and 100% sensitive, you have to compare the test with the actual virus, not to compare the specificity with blood donors and the sensitivity - we don't know what is what. What they have done, I assume here, is that they had some blood which they tested positive and how do they know that this blood is positive? What test did they use to prove that this test is positive?

MR BORICK: That is the very question that I wanted to get clarified.

HIS HONOUR: The witness has made the point.

A. They didn't tell you here what test they used to confirm that the blood was positive to start with and then they repeated it with ELISA and they found it in all the tests which all the blood was positive - it was positive with ELISA. They don't even tell us what test they use, so this is meaningless. You can't say - you cannot determine the specificity and sensitivity in this way.

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Q. Are you aware that these tests have also been approved by the Therapeutic Goods Administration.

A. If they are used in clinical productions, they have to be approved, yes.

Q. As you have already indicated in your evidence, you

accept that for that approval to occur, the manufacturers' claims about the effectiveness of the tests are examined and scrutinised.

A. I assume so.

Q. Moving on to another topic and it relates to the genetic profile of the HIV virus. When I was asking you some questions this morning about the methods of testing that are used in this State and I suggested to you that in this State the sequence of each individuals' virus is established and put on a database, you said, I think, that you doubted that because it is a very expensive exercise.

A. No, I said - what I understood by profile, it was to compare it with somebody else. If you said that the sequences of some small part of HIV, or what is called HIV DNA, then that may be done.

Q. Looking at this document, which was Exhibit P2 from the original trial, open it up so you can get a general overview of what it is.

A. Yes.

Q. There's been evidence that that document is a print-out of the genetic profile of every person in South Australia who is on the HIV database.

A. Yes, it is the profile but you don't give here the sequence. They made the sequence, they generate this, yes, I agree with that.

Q. Do you accept now, that in South Australia they don't only look at the ELISA and Western blot and nucleic acid test, but they do a sequence on each individual's genetic profile of the virus.

A. No, you cannot say they do the genetic profile of the virus. Let's assume that you have the HIV RNA or DNA and this is a long string. As you said yesterday, there is no agreement between the HIV expert as to how many genes the HIV genome has. I say very few, usually it is between 8 and 10. They come and go. Let's assume that there's a string of RNA or DNA, which is HIV. When they do the nucleic acid test, PCR, they don't do - they

don't take the whole genome, they take a small part of what is said to be HIV. They are called primers and they amplify only a very small part - not even one gene but a very small - of what is called a gene - but a very small part of HIV of that string of RNA DNA which is called HIV RNA or DNA. A very small part.

CONTINUED

But that small part does not tell you that, first of all, the whole genome is in that person because they take the DNA from the cells of the patient and then they look in that DNA of the patient if there are any similarities between what is called HIV and in the cell. So they don't, they take only a very, very small part. So just my amplifying this small part you don't prove that the whole genome is there, in fact maybe not even one whole gene is there, maybe you just have a look at only that part and, in fact, there is no proof that nobody has done a test, a study to prove that the PCR amplifies what you're looking for. It may be something totally different. So this does not give you a profile of the HIV genome, even if we assume that there is such a thing of an AIDS patient and this is, again, let me repeat, as I should, this is not only what I say and this is accepted by a court in London on the basis of an HIV expert. In fact, it is a pity that you don't have the paper, if you need it I will supply it. There was a paper published by a number of researchers from London where they are saying that you cannot use DNA profiles to prove epidemiologic studies in particular

Q. I would ask you to produce that paper.

A. Sorry, I will produce the paper, definitely, and if you want I will produce the paper. They say you cannot use it. They give several reasons and if you do that you

must do the whole HIV genome. Because, say, you have one person and you do the HIV genome and you do another, and you try to compare them, but you're comparing a very, very small part. It is like just taking a finger and a nose from one child and take a finger and a nose from another child, for example, and comparing them and say these children are twins. You have to have the whole person. This is not happening in HIV.

Q. I want you to assume a few things for a moment.

A. Assume?

Q. The first is this: the accused was diagnosed as being HIV positive via the ELISA test and the Western blot.

The woman with whom he had been in a sexual relationship for some time, some extended period of time, they lived together, also was determined to be HIV positive by virtue of the Western blot and the ELISA test. Both of them had their nucleic acid examined and both of them had the genetic profile, as much of it as we are seeing in that chart that has been produced to you, established.

A. I have to have the genetic profile. I have to see -

HIS HONOUR

Q. Just listen.

XXN

Q. Do you have all of that.

HIS HONOUR

Q. She is asking you to assume that.

XXN

Q. Assume those factors, and assume that out of all of the people in South Australia on that database, the profile most closely linked to the accused is that of the woman with whom he has been in a sexual relationship for an extended period of time.

OBJECTION: MR BORICK OBJECTS

MR BORICK: I don't think it's possible to make the last assumption, that is the issue. There is a document there which the prosecution say was a profile. The witness is saying it's not a profile of anything.

HIS HONOUR: All that the question asks the witness to do is to assume a whole lot of factors.

MR BORICK: I appreciate that, but the last submission can't be made. My friend should reframe the question and say 'Assume there is a document held by the South Australian Forensic Science Department which has a series of lines on it which demonstrates a profile', something along those lines, but not asking her to assume a genetic profile exists when the witness is saying it does not, as I understand the evidence.

MS MCDONALD: Your Honour has heard the evidence of Dr Higgins. In my submission, it's quite a proper

question. If at the end of the day these assumptions can't be made out, I can't make anything of it.

QUESTION ALLOWED

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Q. Do you recall the question.

A. Could you repeat it, please?

Q. It's a long one, so I will take my time.

A. Yes.

Q. I would like you to assume that the accused has been diagnosed as being HIV positive by the ELISA test and the Western blot test. He has also had his viral load measured by way of nucleic acid test.

A. Yes.

Q. And the genetic profile of his virus has been established. Assume also that he was living in a sexual relationship with a woman for an extended period of time. She subsequently, so after the accused was diagnosed, she too was diagnosed as being HIV positive with the ELISA, confirmed by the Western blot. Her viral load was measured by the nucleic acid test and the genetic profile of her virus was also established. I would like you to assume then that out of all of the genetic profiles of people who have been diagnosed as HIV positive, kept on a database at the IMVS in South Australia, the profile that was the closest to that of the accused was the woman with whom he had been living

with in a sexual relationship. Doesn't that indicate to you that one of them has passed the virus to the other one way or the other.

A. No, definitely not, and that is not what I say. This is not what the HIV expert say.

Q. What is it that you say, you're the one presented as an expert.

A. I say no, and I base my knowledge on what the HIV experts say.

Q. So it's just a coincidence then if their two profiles are the closest out of 850 or so profiles.

A. There is no profile. What do you call HIV profile?

Nobody has done any HIV profile. What they mean is a small, a tiny bit of DNA. There is no profile of the whole HIV genome on anybody. In fact, there is no evidence for the existence of the whole HIV genome in a human being. The HIV genome, as you say, the full HIV genome it's existence is from cell culture, not from people.

Q. Put aside for one moment whether it's the full genome, you can still have a genetic profile that is part of the genome, it doesn't need to be the full genome. If you assume here that they are the two closest related, that is the woman's is the most similar.

A. I understand the question.

Q. - to the accused, are you saying that's just a random coincidence.

A. No, because we don't know what's going on with the rest. The rest may be totally, totally - this is your assumption that the HIV exists and the HIV DNA exists. So if you find a small part, even if it's identical, even if it's identical, the rest of the genome may vary by 45%, because we say there the difference between our DNA and that of the chimpanzee is 2%, the difference being HIV in our DNAs is up to 40%, more than 40%, so. But we still have HIV, we still say that all these particles, whatever they are, all the genomes, all these bits of DNA are HIV DNA. They accord for the came

proteins, for the same particles, scientifically at least you can say it has to be questioned. You cannot have that big availability.

Q. So if we accept what you say, let's assume for a moment that this is a very small sample of the genome that's been examined, that it doesn't necessarily reflect the full genome of that person's virus. It's a pretty big coincidence that they so closely match as compared to the 848 other people or profiles in the database.

OBJECTION: MR BORICK OBJECTS

MR BORICK: I don't understand the phrase 'genome of a virus', maybe I missed something, I don't understand

that expression.

MS MCDONALD: It's the phrase the witness has been using. The whole genome.

MR BORICK: The 'genome of a viruses' that's what I'm querying.

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Q. The point I'm making is a simple one. If that isn't all of the genetic profile of the virus, it's just a little bit from the woman and a little bit from the man and not necessarily reflecting the entirety of their genetic profile, it is a pretty big coincidence that those couple of random samples from each of them match more closely than anyone else on the database.

A. No, it's not. You can look for HIV, they should be the same. They should be the same in every person. They should vary no more than a few percent at most, but not by 45%, so, no. Unless, as I said, that is not what I say. This is how - what the HIV experts say, including Wain-Hobson.

Q. That's not true, is it, that you would expect the virus to be the same in every person, because the HIV virus I suggest varies quite a bit.

A. That's what I said, varies by 45%. In fact, if the same person - in the same person you can have a million different HIV. Even if you're infected with one you have a million in a very short time and you cannot be

infected with one because everybody has another million, so you do not know what you're looking at. It is impossible to compare HIV genes. Each person has, and this is not my finding, this is what, as I said, the best HIV expert in the genome, including Wain-Hobson.

Q. HIV is genetically unstable, isn't it.

A. It's unstable, of course it's unstable, that's what we are talking. Even if you - let's assume that there is HIV and you're able to put one HIV in a person, but how can you do it because each person has over a million, so if person X has sex with person B, person X already has a million, so when it has sex you can't, if it is

transmittable, you cannot transmit one, you transmit many of them, if not 1 million and then the person A tells Mr person B, the person B in no time will start making other viruses, in the end, within a very short time, with totally different DNA and RNAs, so it is impossible to compare.

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Q. I suggest it is because HIV is genetically unstable that the sequence of analysis which occurs when one is looking at the genes is based on what are called conserve genes, that is constantly express genes. What do you say about that.

A. No, constantly - conserve genes, that means constantly express genes. Conserve gene is a gene which is present in all of the HIVs and it does not vary, but they all vary. What they say when they said 'conserved', they mean that this gene is found in no retrovirus, including the genome retrovirus. That is what 'conserve' is meant by. It is found by a gene which is found in all the retrovirus.

Q. I suggest, as I did to you yesterday, that there are six genes that are absolutely specific to HIV.

A. How can you suggest that there is six genes, that they are specific to HIV? Do you mean that these genes are found nowhere else, these sequences are found nowhere else?

Q. They are found nowhere else in a human body.

A. Well, let me give you a paper and I have it with me. This time I have the paper with me. Please be patient for me to find. Your Honour, may I?

HIS HONOUR

Q. Yes.

A. Thank you.

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Q. Do you have copies of the paper for us. 28

A. I will take it and I will give it to you. The paper is entitled 'Human Immunodeficiency Virus Type 1-Like DNA Sequences and Immunoreactive -'. 29 30 31

HIS HONOUR: Can I have a look at it? I will read it out. It might be easier. 32 33

DOCUMENT HANDED TO HIS HONOUR. 34

HIS HONOUR: The witness is referring to a paper entitled 'Human immunodeficiency virus type 1-like DNA sequences and immunoreactive viral particles with unique association with breast cancer'. It is a paper dated 22 35 36 37 38

December 1997 which was modified in 1998 and accepted on 27 May 1998.

MS MCDONALD: I have no objection at the moment, subject to me getting a chance to read it overnight.

HIS HONOUR

Q. You wanted to refer to some paragraph or some part of that passage.

A. May I read the abstract?

Q. I will read it. It is easier for the reporters if I read it and you can tell me if you agree: 'RAK antigens p120, p42, and p25 exhibit molecular and immunological similarity to the proteins encoded by human immunodeficiency virus type 1 (HIV-1) and are expressed by 95% of breast and gynaecological cancer cases in women and prostate cancer cases in men. The binding of an epitope-specific anti-HIV-1 gp120 monoclonal antibody (MAb)(amino acids 308 to 322) to cancer RAK antigens has been found to be inhibited by a peptide derived from variable loop V3 of HIV-1. Breast cancer DNAs of 40 patients were PCR amplified with HIV-1 gp41-derived primers, and all of the samples were found to be positive. The DNA fragments amplified in seven blindly selected breast cancer samples were sequenced. The breast cancer DNA sequences showed at least 90% homology to the HIV 1 gene for gp41. Antisense oligonucleotides complimentary to the HIV 1-like sequences inhibited

reverse transcriptase activity and inhibited the growth of breast cancer cells in vitro. Viral particles detected in breast cancer cell lines were strongly immunogold labelled with the anti-HIV 1 gp120 MAb. The results obtained strongly suggest that the long-postulated breast cancer virus may, in fact, be related to HIV 1'.

A. So you can't be specific. If they are found in breast cancer, in other genome cancers and in prostate cancers, and, in fact, they are 90%, the DNA is 90% commodious with the HIV 1. So, in fact, it appears they are closer to the HIV genome than the HIV genome between them, and

this is not - this is only just one paper. I have here many papers who have exactly the same thing. They are found in all general community. They are found in people who have a disease in which they have very low globins and, in fact, it appears they are tissues in which you could not find HIV DNA with ordinary hybridization techniques - I'm not talking about PCR - it was tissue cells, and as I said, Gallo admitted this in 1994. They could not find - in 1984 they published a paper. Then, in 1994, he said we did not find any HIV DNA in the Karposi's sarcoma cells and he said, in fact, we did not find any HIV DNA in T4 cells but they found in many other tissues, and I have here, as I said, it looks - I mean, they were found because at one stage at the beginning of the HIV thinking the HIV is transmitted to insects and people have tested insects for the HIV genome and they found the HIV DNA insects in a number of them, different types. So, you can find HIV DNA - you don't find it, only if you don't look.

MR BORICK: Logistically, we have got some documents to get from Perth.

HIS HONOUR: Do you want me to adjourn now?

MR BORICK: I think so, because we are going to need every bit of time we can get.

HIS HONOUR: Ms McDonald, how much longer do you think you will be with this witness?

MS MCDONALD: I'm not getting to ask many questions at the moment, so I'm not getting through things very quickly at all.

HIS HONOUR: We will just have to start at 10 o'clock tomorrow. If we don't complete her by 1, then we will have to start again in January.

MS MCDONALD: Also, obviously the sooner I can get any further articles which are being referred to, the better. Also, if the witness is going to be coming prepared with more articles tomorrow, if we can have them in advance then we won't have this problem again tomorrow.

HIS HONOUR: We will adjourn until 10 o'clock tomorrow and we will see how we go.

MS MCDONALD: That article probably should be tendered at this stage.

HIS HONOUR: Do you want it tendered, Mr Borick? It has been referred to.

MR BORICK: Yes. That is the one which has just been referred to?

HIS HONOUR: Yes.

MR BORICK: Yes.

HIS HONOUR: I will make it available to you, Ms McDonald, if you want to copy it overnight.

EXHIBIT #P23 DOCUMENT HEADED 'HUMAN IMMUNODEFICIENCY VIRUS TYPE ONE-LIKE DNA SEQUENCES AND IMMUNOREACTIVE VIRAL PARTICLES WITH UNIQUE ASSOCIATION WITH BREAST CANCER' TENDERED BY MS MCDONALD. ADMITTED.

HIS HONOUR: The document is only about 10 or 12 pages. I will have my associate copy it when I adjourn and provide each of you with a copy.

MR BORICK: I would be grateful for that.

ADJOURNED 5.12 P.M. TO THURSDAY, 21 DECEMBER 2006 AT 10 A.M.