COURT OF CRIMINAL APPEAL

SULAN J

R V ANDRE CHAD PARENZEE

TUESDAY, 30 JANUARY 2007

RESUMING 10.10 A.M.

+ELENI PAPADOPULOS-ELEOPULOS CONTINUING.

+CROSS-EXAMINATION BY MS MCDONALD

Q. Ms Papadopulos this morning I want -

HIS HONOUR: I should remind you Ms Papadopulos you're still under oath.

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Q. This morning I want to start off by asking you some questions about some discrete topics that arose in the evidence you've previously given and then I wanted to move on to with pick up where we left off on the last occasion, that is going through the various articles you relied on for your sexual transmission power point presentation. I want to remind you of something you told us on the last occasion you gave evidence, p.253. The question starts at line 3. You were asked this question 'Martyn French is an expert who is in Western Australia, based in Western Australia like yourself'. This was your answer 'Of course I know him. I know him;

we have been in two different camps with regard to HIV. He has always been, like many HIV experts, he has always been very polite. From 1984 we agreed to disagree that HIV exist and is the cause of AIDS but we have been always - like many HIV experts he's always been very polite. As I've said, we try to collaborate and do experimental work together'. Firstly, do you agree that is the answer you gave to that question on the last occasion.

A. Yes.

Q. When you told this court that your relationship with Martyn French was such that you tried to collaborate and

do experimental work together, what you were you talking about.

A. We have designed some experiments to show, to prove that one of the prediction of our theory, that is that patients could develop AIDS, induce AIDS, they have - they are oxidised, relatively to - their tissue is oxidised relatively to normal individuals, to healthy individuals. We wanted to do that for long time but we never get any money. Then Dr Turner's father donated us $10,000 to try and do this experiment and we ask Professor French if he will collaborate with us and the documents are there, we have many letters, many exchange letters. He agreed to collaborate. In fact, he asked one of his registrars to help us in collecting the blood and we are trying to develop the test, and we did develop the test and this is just a preliminary study. Unfortunately the money, the $10,000, can't go too far these days and we have to stop the collaboration and the test, but, yes, we did agree - he agreed, in fact he agreed to be a co-author of any paper which result from this study, but he has to read the interpretation and agree with that which would be all right.

Q. So when you say 'we have designed some experiments to prove one of your predictions', who is the 'we' you are talking about.

A. It was me, that was my theory, my theory predicted that

AIDS patients would be relatively oxidised, their tissues would be oxidised and this prediction, I must say it, has been proven by several people who do HIV research and the best prediction - the best proof came from researchers from Germany and from the University of Stamford. They had a couple of immunologists who worked at the University of Stamford and their evidence, they have been shown that oxidation is a much better prediction of AIDS development than actual decrease in CD4 cells.

Q. So I'll go back to the question I actually asked you, that is when you talked about 'we have designed some

experiments' you weren't suggesting, were you, that Professor French was involved in designing those experts.

A. No, I just said the group, and Professor French agreed to collaborate with us.

Q. I suggest that all Professor French did was let you have some blood samples, that was the extent of the collaboration and doing the experimental work together.

A. Not only that, he agreed to be a co-author of the paper. We have the letter where he responded.

Q. Any other, as you put it, collaboration.

A. He wouldn't collaborate in any other different way because we were doing the test. The test was developed in the Department of Medical Physics with money by Dr Turner's father.

Q. Any other collaboration and conducting experiments work with Professor French that you can tell us about.

A. No.

Q. I want to take you to another topic that was dealt with in your evidence on the last occasion and it relates to blood transfusions, p.287. Just to put this into some context for you, I was asking you some questions at this stage about blood transfusions, screening of blood and blood transfusions and a particular Sydney case in which a child was given a blood transfusion and then diagnosed as being HIV positive. Just to take you to the general

topic.

A. Yes, I know; I know the Sydney case, the Sydney cohort, the blood transfusion Sydney cohort.

Q. At line 23 - sorry line 16 I asked this question, 'Are you aware of the case' and you gave this answer '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 researches is in Italy, says that blood transfusion leads to causative antibody tests'; do you agree that is the answer.

A. I agree.

Q. Was it your evidence that a blood transfusion of itself can result in a person reacting positively to an HIV test.

A. Yes. Dr Colizzi's information proved, and he's a collaborator with Montagnier in this study, but he collaborates with many other studies with Montagnier, and he himself has shown that.

Q. Your evidence is the act of the blood transfusion can cause someone to give a positive reaction to an HIV test.

A. Yes.

Q. How does that work, by what mechanism.

A. Blood is full of antigens and when you do a blood transfusion you take antigen from one person and you give this antigen to another person and when foreign proteins come into our body, we develop antibodies, so people who are transfused, and especially who are repeatedly transfused like people with thalassemia, develop antibodies and these antibodies react with the proteins which are in the so-called HIV test. It's very simple.

Q. Let's add to that the epidemiology. Isn't it the case that when these people who have had a blood transfusion and given a positive reaction to an HIV test have been looked at, a pattern of clustering of infections has emerged. Have you heard of that.

A. No. All they do is when a person is given a blood transfusion, sometimes they go back. If a person is sick and the people are given a blood transfusion because they are sick, healthy people are not given a blood transfusion, the vast majority, I think 50% of the people who are given blood transfusion in the US die within one year; they are very sick people. So sometimes when these people, the experts go and look where the blood came from when they test these patients and they found - sometimes they found people who donated the blood were themselves HIV positive. Yes, that happens.

Q. What do you understand by the term 'clustering of infections'.

A. Clustering of infections would mean that you find only a group of people who test positive.

Q. Who had sexual contact with each other.

A. We are talking about blood transfusion? We are talking about sexual transmission?

Q. Let me make it plain.

A. The two things are different.

Q. What I am suggesting to you is that epidemiological studies are littered with examples in which someone who has had a blood transfusion is diagnosed as being HIV positive and when one goes back and looks at the people they have had sexual contact with, there is a cluster of people who are in fact HIV positive.

A. It is not a cluster, only one person. You find one person who donated the blood was positive. When they give blood transfusion usually they take it from not that many people, two or three, and one of them could be positive. The donors are not clusters.

Q. I want to move on to a different topic. Did you happen to hear the radio news this morning.

A. No.

Q. Are you aware that it was announced this morning that the federal government had just committed $10 million to a national public education campaign that HIV is

sexually transmitted.

A. Maybe, I don't know.

Q. Are you aware that last year there was an increase of 41% in the number of people diagnosed as being HIV positive in Australia.

A. Yes, I did hear that, and maybe there's a good explanation for that.

Q. The explanation that's been accepted by the government in proposing the $10 million I suggest is that there has been less emphasis in recent years on an education campaign about sexual transmission and that people have become complacent in their sexual habits.

A. Why did they become complacent? It is because Professor McDonald in his document at one point here says that antiretroviral controls HIV transmission. That's in Australia. I think I am correct in saying that the people who have the increase in the incidence of a positive antibody test is mainly in gay men. So the gay men, by making these kind of claims, they have stopped practising safe sex and that led to an increase in a positive test.

Q. But the increase hasn't just been in gay man, has it. There's an increase in the number of women who were diagnosed last year.

A. How many women?

Q. Let me finish.

A. Everything is relative. They say, and I read it in many newspapers, and I have heard it on the news, that the main group is in gay men. In fact, they admit it is because they are not practising safe sex; that's the reason. Yes, we agree that they are increased and yes, we agree we should spend more money to educate people for safe sex. We are in full agreement there.

Q. You agree that heterosexuals should be given the same education.

A. If they practise, doesn't matter, it's not important if it's heterosexual or is homosexual or gay men, it is the same thing. There is more women - nomadically there are

more women who practise anal intercourse than gay men who practise passive anal intercourse. The question is, as I said before, it's not sexual orientation or sexual practice, it is the frequency of anal intercourse in heterosexuals and the passive anal intercourse in gay men, the frequency.

Q. So when you say that you agree completely that there should be education about practising safe sexual intercourse, what you are really saying is that education needs to go no further than practising safe sexual intercourse when you are the receptive partner in anal sex.

A. Yes.

Q. Because there's no risk according to you.

A. This is not what I said, this is what the HIV experts have shown, it's not me. This is evidenced by every single study which has been performed in heterosexuals or in gay men. That's what the conclusion is. The only practise which is a risk factor for the development of a positive test is anal intercourse in heterosexual women and in gay men, passive anal intercourse. Let me give you - I have shown this in all my sexual transmission studies, but I omitted one study which was published in Australia by Australians.

Q. Before we go any further, what are you looking at. You put a document in front of yourself there. What are you looking at.

A. I'm looking at a paper of Australia which was published by Professor Ian Fraser. Last year he was Australian of the Year, his collaborators in the medical journal of Australia 944 of 186.

Q. Is this an article you have previously relied on in your evidence.

A. I did not put this evidence previously but -

Q. It's one that we have not seen, you have not produced it for us.

A. I produce the article, it's no problem to produce it. You gave so many articles here which you never produced

them before. You gave us many articles. You always give me the evidence in front here and I did not object to that, and here is an article published by Australians in the Medical Journal of Australia. If you want the article, do it, and I am quoting.

Q. Do you have the whole article there.

A. Not here.

Q. What do you have in front of you, what is that document in front of you.

A. This one?

Q. Yes.

A. The article is in my office.

Q. This is a passage that you have excised from an article that you want to read from.

A. I'm quoting from there, I am not misinterpreting. I am not making my interpretation, I am not doing nothing, I am quoting from an article published in the Medical Journal of Australia by last year's Australian of the Year.

Q. Do you have the full article with you.

A. Not with me.

Q. So you brought that one page, that little passage that you have taken out of an article for the purposes of giving your evidence today.

A. I cannot bring all the articles here. If you come you'll see not only my office, but my laboratory and my colleagues' offices are full with my articles, can't bring them all here.

Q. How long is the article.

A. It's a short article. I can't remember now; it's a few pages.

Q. But you only chose to bring that one page of yet another excised passage from an article to give evidence in this court.

A. So what's wrong with that? I cannot see - I am saying what they are saying and I'm quoting, I'm putting it in quotes.

Q. What I suggest is wrong, and we'll come to the other

articles in a moment, is that throughout your evidence you have excised parts of articles and misrepresented what the authors are actually saying.

A. We've been quoting all the way. You cannot misrepresent quotes.

Q. And more than that -

A. Tell me which? Sorry, but you have to tell me, you have to tell me what we misrepresented.

Q. We'll go to the other article.

A. The request cannot be like that, you have to tell me what it is, you have to present evidence. With all due respect, in science we believe only in data, in

evidence.

Q. We'll go to the articles in a moment one by one. Let me put this to you: in your presentation on sexual transmissions you relied on a number of different articles written by different authors and I suggest not one author that you relied on in that presentation supports your theory that HIV is only transmitted via receptive anal intercourse.

A. Which is the author, could you please tell me?

Q. I suggest not one author supports you in that conclusion.

A. Now, first of all, I present their data, I believe in the data. Scientists believe the data, not on their interpretation, the data, and that's what the data shows. Secondly, I would like you to tell me where are the authors who deny their findings?

Q. I go back to the question. Do you agree -

A. I like you to tell me. You say that I misinterpret so I would like you to tell me which are the authors who say that I misinterpreting their findings.

Q. We'll come to that in a moment. What I am asking you first of all is a general question. Putting aside what use you made of their data, what I am actually asking you is do you agree that not one of the authors of the reports that you relied on for your presentation on sexual transmission agrees with your conclusion that

it's only transmittable via receptive anal intercourse.

A. Is not my conclusion, is their conclusion.

Q. It's your conclusion.

A. No, I put their conclusion. Their conclusion is passive anal intercourse, passive anal intercourse. All the studies in gay men and heterosexuals end up by saying passive anal intercourse. It's not my conclusion, is their conclusion, and we quoted them.

Q. It is your conclusion -

A. No.

Q. Please let me finish the questions or we're going to be here a long time.

A. Sorry.

Q. It has been your evidence, evidence of an expert witness, that in your opinion HIV is only transmitted via receptive anal intercourse. It is your conclusion, isn't it.

A. Not HIV. To say that HIV - I don't admit that HIV is transmitted. To say that HIV is transmitted I have to have evidence that HIV exists, and no such evidence exists today, but I do agree all the data, all the evidence today shows that the risk factor for the acquisition of a positive test is passive anal intercourse.

Q. Coming back to sexual transmission in a moment because I want to deal with the articles in sequence, I want to move on to another topic that we dealt with in your evidence on the last occasion. P.291, this relates to the issue of the transmission of HIV from a mother to a child. Let me just remind you of your evidence from the last occasion. I want to ask you some questions about it. At about line 30 'Q. Do you accept that mothers who are HIV positive have children who are tested at birth and are also HIV positive'. Your answer was this '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'. First, do you agree that was the question that was asked and the answer that you gave.

A. Yes.

Q. I suggest you are right about that, that the child does receive antibodies from its mother and those antibodies remain in the system for about nine months, but that is the reason that when children who are born to HIV positive mothers are tested, they are tested using

nucleic acid, not looking for antibodies. Do you agree with that.

A. Yes, I agree with that, but what the test is showing, because first of all to prove a child is positive, if you read, we have written a lengthy monograph. We have it with us but not here. We have studied - if we omit any study disease the omission was inadvertent. We have analysed every single study we could find on mother to child transmission and there we have shown that at present there is no evidence, even if we assumed that HIV exists, that there is a transmission of this virus from the mother to the child or that the antiretrovirus decrease or lower this in transmission. The test they are doing is antibody test and with antibody tests, as I said, the antibodies from the mother go to the child and if the mother tests positive, then the child will test positive, and all HIV experts, virologists, agree that these antibodies should disappear by nine months. So if a child has a positive antibody test, up until nine months it's impossible to say if this child is infected with HIV and the antibodies are made by the child or they are the mother's antibodies which are present in the child. So instead of using, and this is admitted by everyone, instead of using this criteria for the antibody test, they use other criteria for showing that the child is infected. Sometimes - and most of the

times in fact in Africa it is disease. If the child is sick, then they say 'Aha, the antibodies are HIV antibodies and the child is infected'. The other test most often used is viral load. However, viral load, according to the CDC and according to the manufacturers, cannot be used to prove infection with HIV, so they are using a test which the manufacturers and the CDC say that it cannot be used to prove infection, but the CDC then goes and says viral load cannot be used to prove infection in adolescents, in adults or even in children to prove infection, for example, through transfusion, but it can't be used to prove infection of the child for

transmission from the mother to the child. If a test cannot be used anywhere else, and cannot be used even to prove infection of a child, for example, via blood transfusion, how can you use it to prove infection by the mother? It makes no sense, so the test you are using, we have not got tests. There is a European study, which I have the study with me, and if you want to, I show it to you and discuss that study; if a child tests positive after nine months since the mother's antibodies are lost after nine months, and if the antibody tests are HIV, once infected with HIV you are always infected, no matter if you are or you are not treated with the antiretrovirus, these children who test positive at nine months should continue testing positive forever, and this is not happening; about 50% of the children lose their antibodies after nine months.

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Q. I suggest to you that most children in the womb who are diagnosed as being HIV positive using nucleic acid tests developing antibodies looking at nucleic acid, most children who are diagnosed by the age of six months are dead by the age of 15. What do you say to that statistic.

A. No, I would not say that. As I said, nucleic acid is - nucleic viral load is nucleic acid, and I said that is not be used.

Q. Do you reject that statistic as true.

A. I reject it is proof. It is not I reject. That's what the CDC - that's what the manufacture says, you cannot use to prove infection, you cannot use even to prove infection of a child. If the infection is, for example, by blood transfusion, how can you use it to prove infection by the mother? It's the same virus.

Q. Assume for a moment that statistic is in fact correct, so assume that most children that are diagnosed as being HIV positive, by the time they are six months of age, by nucleic acid testing are dead by the age of 15, doesn't that suggest some sort of link between the diagnosis of being HIV positive and death.

A. No, no, no. That doesn't assume that HIV - you cannot assume that - first of all, as we said, if the antibody tests do not prove HIV infection, even if it proves HIV infection, you cannot say, unless you have evidence,

that HIV causes the disease and the death, you cannot say that. You cannot say they die because of HIV. If you say that there is a relationship between a positive test and healthy outcome, I totally agree. You don't make antibodies. If you are well, if you are healthy, antibodies are made there for a reason. So yes, we totally agree there is a relationship between - we said it before and I am repeating it - there is a relationship between a positive antibody test and some - it's associated between unhealthiness, shall I say it, and a positive test but not that they die from HIV infection, no.

Q. You just said you accept there's a link between a positive antibody test and some unhealthiness.

A. I say some future, some future or present - some future or present abnormality.

Q. What sort of abnormality.

A. Can be anything.

Q. Anything.

A. Yes. If a child dies in Africa from diarrhoea and it tests positive, it dies from HIV infection. African children, you know, they die from diarrhoea all the time.

Q. It would be a very rare case, indeed, that a child's death is put down to diarrhoea. It's normally the underlying -

A. There are signs. It's not a disease. In Africa the Bangui definition does not require an illness. You can have AIDS just by having some signs and symptoms, not disease. You don't have to have a disease.

Q. Isn't it the case that research has shown that where there is an HIV positive mother, so a mother who's tested positive to the test for HIV, who is not on any sort of medication, has a 30 to 40% chance of having a child who also tests positive for HIV using the nucleic acid tests.

A. No.

Q. So that's the statistic. In a mother diagnosed with

HIV, receiving no medication, if she has a child, that child has a 30 to 40% of also having a viral load of HIV.

A. No, there is no such studies. There are no such studies.

Q. Do you agree that one of the great achievements, if you like, of the antiretroviral medication is that that statistic has been reduced right down now to a point where we can almost stop a mother passing on HIV to a child.

A. Definitely don't agree on that. We have analysed that very thoroughly and there is no such evidence. We have

published on that. There is no such evidence. There have been only two studies conducted so far, one on AZT and one of Nevirapine. None of these studies have there - to do that kind of studies you have to have randomised blind control studies, and no such studies exist.

Q. Wasn't there a study conducted in I think it was Africa but wasn't there a study conducted that had to be stopped in relation to this because of ethical issues; are you aware of that one.

A. Ethical issues?

Q. Firstly, are you aware of a study into the issue of transmission of HIV from a mother to a child that had to be stopped because of some ethical concerns.

A. They say there are. They have the studies have to be - for example Nevirapine studies, the authors said 'We are going to do blind randomised blind control studies to prove that Nevirapine stops mother to child transmission', but in no time after 19 - had 19 cases, they stop the placebo. You cannot - and the principal author of that study said after, that you cannot prove if your treatment is better than nothing unless you have a placebo. That is the principal author of the Nevirapine study.

Q. Is the study that you are referring to a US study that was called 076.

A. 076, no, that is the AZT study.

Q. What I'm suggesting is there was a study that was embarked on called 076 in which one group of pregnant women were given antiretroviral medication and another group were given a placebo.

A. Yes.

Q. The results were so stark that the study was put to an end, that is that so many women who were given the placebo passed on the virus as compared to those who were given the medication.

A. No, as I said, this study is very thoroughly analysed and, if you like, I will give you our analysis of that paper. That paper is not - does not prove the

inhibition of transmission by AZT from the mother to the child. The analysis is very thorough. No, that study does not prove it.

Q. Isn't that what happened, that this study was undertaken, embarked upon and then stopped because of ethical concerns about not providing antiretroviral medication to some others.

A. That's what they say.

Q. That's what actually happened.

A. That's what they say, not did not happen. They did stop the study but the studies have been stopped but not because there is evidence that there is proof for, as I said, you have to have the tests. Don't forget you have to have the tests and you don't have the tests, one, secondly, for AZT, one of the main objections to this study is that for AZT to stop transmission, to have any antiretroviral effect, AZT has to be transfer related, there is a change for relation. Right. So AZT has to be transfer related. AZT is given as a proper drug, so it has to be transfer related. It has to get there, to have any antiretroviral effect.

Q. Are you aware that in this State every pregnant woman must have an HIV test, it is compulsory.

A. Yes.

Q. Do you know of one the reasons for that.

A. To give antiretrovirals to women, if the woman is found

positive and to the child.

Q. That's right, so that every unborn child has the chance of receiving antiretroviral medication so they don't become HIV positive.

A. No, no, there is no evidence that - let's point it again. There is no evidence for the existence of HIV, there is no evidence of mother to child transmission. There is no evidence for the antiretroviral inhibiting it.

HIS HONOUR

Q. So if the policy is to give AZT to pregnant women who test positive, is it your evidence that that's just a

waste of resources.

A. Yes, yes. Your Honour, you have to have evidence and the only evidence we have is this study 076 and there is no evidence, there is no proof, there is no proof, that AZT inhibits transmission and it is impossible to do it because AZT is given to the mothers and to the child. Just take one problem with that 076 study. AZT is given to both, to the mothers and the child as a proper drug. That is given in a form which is not biologically active. To be biologically active it has to be modified in the body. And today, we have conducted very thorough analysis of AZT and its use. And there is no evidence, not even one single paper, which showed that in the body AZT is transformed from a proper drug to an active drug. So it cannot be. Now, this said, in this paper which was published as part of a current medical research journal because it was a very lengthy, very thoroughly examination of AZT, we say - we do not say that AZT cannot have any beneficial clinical effects. We do not know that. But if there is any effect, if there's any clinical effect, if there is - we are not saying that there is - if there is, we are not saying either it should not be given, if it has any beneficial clinical effect, let's give it, but it cannot be, it's effect cannot be as anti-HIV drug. It just cannot have an effect on HIV.

Q. Let me ask you this question: assume for a moment a woman comes to you and she tells you that she's been diagnosed as being HIV positive and that she's pregnant and she's heard of your knowledge on HIV and wants you to give her some advice about whether she should take antiretroviral medication. What would your advice be.

A. I wouldn't advise a patient. We get many such requests. We never give advice to patients.

Q. So you'd sit on the fence, would you.

A. Sorry?

Q. So you'd sit on the fence.

A. No, we are not sitting on the fence. We are not treating patients. We are scientists. We are not treating patients. The patient can go to a physician and if she knows about us, then she will discuss the problem with the physician and agree with them what should be done and what should not be done. We cannot treat patients from all over the world. We are getting requests all day, every day. We cannot treat patients full stop.

Q. Putting aside what you actually would or wouldn't tell her if that woman came to you and asked for that advice, you say 'I'm not going to give it to you because I don't' - in your opinion your private view would be you're thinking it's a waste of time to take the antiretroviral medication.

A. If I was pregnant, put it this way, if I was pregnant and I'm told that I am HIV positive I won't take any of these drugs and I won't give it to the child either.

Q. Would you have unprotected vaginal sexual intercourse with a male who was HIV positive.

A. Any time, any time.

Q. I want you to assume another situation, that Dr Gordon will give some evidence.

A. Yes.

Q. And he treated Mr Parenzee. And assume this for a moment, that once Mr Parenzee was diagnosed as being HIV

positive, his medical records indicate that over those times that he was consistently using his antiretroviral medication his CD4 count was high and his viral load was low or undetectable. But that on other occasions, other periods of time, when Mr Parenzee reported that he wasn't using his antiretrovirals consistently that his CD4 count plummeted and his viral load increased significantly. If you assume that scenario for a moment, doesn't that indicate that the antiretroviral medication was assisting Mr Parenzee in his illness.

A. First of all, HIV, there is no evidence, your Honour, that HIV destroys the T4 cells. When the HIV hypothesis

was put forward the hypothesis states HIV destroys the T4 cells. The decrease in T4 cells leads to AIDS, or 'AID' stands for decreased T4 cells and 'S' stands for syndrome. The syndrome varies. Initially it was only about two main diseases, then - now is about 30 diseases. In America you don't need to have a disease to be called HIV, is enough to have a decrease in T4 cells. So HIV destroyed the T4 cells. Destruction of T4 cells leads to the syndrome, to disease, to death.

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Decrease in T4 cells was considered to be the hallmark of HIV in AIDS. All the evidence to date have shown that this is not the case. In fact, even by 1984, Montagnier himself, and Gallo, they knew that the decrease in T4 cells may not be due to killing of the T4 cells or destruction of the T4 cells, but may be due to a change of the T4 cells to some other lymphocyte, namely T8 cells. In fact, I would like to just quote what Montagnier said in 1985 and I'm quoting -

XXN

Q. What are you quoting from.

A. From Klatzmann and Montagnier, March 1984: 'This phenomenon -' that is decrease in T4 cells '- could not be related to the cytopathic effects of "HIV" -' HIV is out of quote '- but "is probably due to either modulation of the T4 molecules at the cell membrane or steric hindrance of antibody binding sites"'. So Montagnier in 1984 said that these may not be due - in fact, I think the date here should be 1985, January 1985 - it is not due to a decrease in T4 cells. The T4 cells are measured by usual antibody tests. Antibodies; they have linked an antibody to a molecule which is on the lymphocytes. That molecule is called a protein, is called CD4, and the cells are called CD4 cells or T4 cells. So if that molecule is on the surface of the cell and you use the antibody-like protein, the antibody

will bind and you have - you think that you have a CD4 cell. But if that molecule goes inside the cell, as Montagnier said, or for some other reason the antibody cannot bind to this CD4, then the number of the T4 cells are decreased, or appear to be decreased, but actually they're there. They're there, you just don't see them. That's all Montagnier has shown. Now, in 1986, Gallo himself -

HIS HONOUR

Q. I don't want to stop you. We have been through this evidence earlier when you gave your evidence. I would like to go back to the question that was asked just to

get an answer to the question.

HIS HONOUR: Do you remember the question, Ms McDonald? I think I can.

MS MCDONALD: No.

A. The question was the HIV decreases the T4 cells, kill the T4 cells, call this AIDS.

HIS HONOUR

Q. Your answer is you do not agree with the proposition.

A. No, there is no evidence for that.

XXN

Q. I think I remember. The question now related to -

HIS HONOUR

Q. Related to Mr Parenzee and Dr Gordon's evidence that when he was taking his antiretroviral drugs, his CD4 count increased and his viral load decreased, and when he wasn't, his viral load increased and his CD4 count decreased. The question related to that and your answer is you don't associate that with necessarily taking antiretroviral drugs.

A. It can't be. It can't be, just because the HIV has no role in decreasing or increasing the CD4s.

Q. And the viral load.

A. And the viral load. It doesn't prove HIV infection. Everybody agrees.

XXN

Q. So in your evidence, this pattern - you have shown this

pattern is there - is just a coincidence. It just so happens that when he is taking antiretrovirals, his counts are good, and when he is not, they're bad.

A. We are not here - in science, you don't go with one case. I don't know. I have to have all the information and we are trying to get information and you can't get any information from Mr Parenzee. Certainly we don't have enough information. But in science you go with scientific studies. There are no scientific studies which show a relationship that HIV - there are no scientific studies which show, firstly, that HIV exists, and if we assume that it exists, that HIV destroys the

T4 cells and, as I said, Montagnier admits that, Gallo has shown that in 1986, Montagnier has shown it in 1991. HIV does not destroy the T4 cells. Viral load cannot be used to prove HIV infection. Whatever that means - there's an article, one of the latest articles in science, commentaries - whatever that means, whatever that is, it is not HIV.

Q. Can I turn to deal with the topic of virus isolation for a moment and I don't want spend long on this because you have given your evidence about this. Do you accept the existence of a polio virus.

A. Yes. It exists, it may not exist, I'm not interested, has nothing to do with HIV. As Professor Riesenberg, one of the great experts in retrovirology, says: you cannot prove the existence of one virus or non-existence by proving the existence or non-existence of another virus. I mean only with HIV.

Q. Let me asking the question again. You're here holding yourself out as an expert. Do you accept that the polio virus exists.

A. That's what they say and I accept it. I have not ever analysed the polio virus.

Q. Do you accept that the hepatitis C virus exists.

A. As I said, again, I did not study the hepatitis C virus. I guess it may exist, and I accept, like everybody else, you know, it exists.

Q. You say the polio virus and the hepatitis C virus have never been isolated in the way that you've said the HIV virus must be isolated before it can be proven to exist.

A. I'm not saying. You gave a document here. You gave us the document and we are fully in agreement with it. It is your document. It is your document for retroviruses.

Q. Can you answer the question please and I will put it to you again: that the polio virus and hepatitis C virus have never been isolated in the way you have suggested the HIV virus needs to be isolated before it can be proven to exist.

A. I don't know and I'm not interested.

HIS HONOUR

Q. Assuming for a moment the polio virus has not been isolated in the way in which you suggest -

A. I don't know how it -

Q. No, I'm asking you to make an assumption, I'm not asking for your knowledge. Assume for a moment the polio virus had not been isolated in the manner in which you suggest is necessary for the HIV virus to be isolated before it is evidence that it exists. Assume that for the moment. If that is the case, would you say that there is no evidence then that the polio virus exists.

A. Your Honour, there is a big difference between other viruses and retroviruses and that is that unlike other viruses, to have something, to have an indication, a way of detecting them, if you detect them by some means, that indicates that they come from outside.

Q. The short answer to my question is, you wouldn't agree with that proposition as correct, because the polio virus may well be detected in some other way other than -

A. Exactly, and it may be good because it is not a retrovirus. There is a big difference between polio virus and retrovirus. There are different ways of proving their existence.

XXN

Q. Let me ask you the same sort of question from a

different perspective. Can you name any virus that has ever been isolated exactly according to the rules that you have put before this court.

A. There are many retroviruses, I'm interested in retroviruses, and there are many who have been.

Q. Tell us.

A. For example? The rous-sarcoma virus. They have been purified, there are plenty of electromicrographs that show that. The papilloma virus has been purified. There are many which have been purified. There are penalty of electromicrographs to show their purification.

Q. We have looked at some electromicrographs on the last occasion of HIV, haven't we.

A. Yes.

Q. So there are electromicrographs of the HIV virus.

A. No, no.

Q. That's different, is it.

A. We're confusing - no, please don't -

HIS HONOUR

Q. You just answer. What are you saying we have confused.

A. There are electromicrographs of some particles in the cell culture, none of which to date has been shown to have all the characteristics of the retroviruses in the culture. Now, we're not talking about in the culture, in the mixture there with cells, cell fragments and all the rest. We are talking about electromicrographs of purified viruses; that is, electromicrographs which, as you will see, Klatzmann, the principal author of Montagnier's 1983 paper, in 1973, said you must have particles which have the same morphology, not a difference in morphology. The whole mass should have nothing else but particles with the same morphology.

XXN

Q. I want to turn to some of the articles that you relied on for your presentation in relation to sexual transmission and we started this process on the last occasion and we got to the point of dealing with slide

12 in A8.

HIS HONOUR: It is on p.2, it is headed 'Gay Men'.

XXN

Q. For that slide, you relied on a particular article that reported a study that was conducted.

A. Sorry?

Q. In preparing that slide, that is No.12 headed 'Gay Men', bottom right-hand corner, you relied upon a report of a study that was conducted.

A. Yes.

Q. And you excised from that report what we see in inverted commas in slide 12.

A. Yes.

Q. And that is 'Data from this and previous studies have shown that receptive rectal intercourse ... is an important risk factor for HTLV-III' - and you put in brackets 'HIV infection' and then in brackets 'positive antibody tests' - 'We found no evidence that other forms of sexual activity contributed to the risk'. That is the passage that you have excised to put in that slide, isn't it.

A. Yes.

Q. What I suggest is in putting that before the court, you were relying on that to support your argument that HIV has never been proved to be sexually transmitted other than through receptive intercourse.

A. That's said there.

Q. That was the point of putting that passage to the court.

A. Yes, true.

CONTINUED

Q. Do you have that study with you.

A. No, I haven't got it with me.

Q. Do those who are assisting you have a copy of the study that forms the basis for slide 12.

A. I think that study was given to you.

Q. I'm going to ask you some questions about this study you relied on, and I'd like you to have a copy in front of you.

A. No, no, it doesn't matter; I know it. Just tell me what you want.

HIS HONOUR: Mr Borick, do you have a copy?

MR BORICK: I'm just checking for it now. But we can proceed.

MS MCDONALD: I don't want to proceed. I would like the article put to her.

HIS HONOUR: I think that's fair.

MS MCDONALD: Would your Honour like to take a five minute break? I'm about to talk about a number of studies and it might be easier for everyone if the witness can have those in front of her, and we can proceed with the exercise.

HIS HONOUR: I'll take a 10 minute break. Perhaps you can speak to Mr Borick and identify the various articles to which you're going to be referring. If Mr Borick doesn't have a copy for the witness, maybe arrangements can be made to copy them so they're available when you

come to them.

ADJOURNED 11.20 A.M.

RESUMING 11.40 A.M.

XXN

Q. Ms Papadopulos just before we go to this study there are a couple of general questions I want to ask you. The first is what are your rules or criteria for viral identification.

A. They are not my rules or criteria.

Q. What are the rules or criteria that you apply for viral -

A. I agree with the document you have given us.

Q. Tell us.

A. I am in a fully agreement, so the rules and criteria for identification of viruses is here and I agree with you. You gave this document to us and shall I read it again, what are the rules here?

Q. I don't want you to read anything; I want you, as the expert in this court, to tell us what criteria you apply for viral identification.

A. Here it is. (INDICATES)

Q. I want you to give your opinion; not read from an article.

A. No, I agree with what is there. The viruses are particle; first of all you have to have a particle which has the morphology of a virus. If the virus is a retrovirus, if you claim that the virus is a retrovirus, belongs to a certain family of viruses, then the particles you have should have morphological characteristics of retroviruses. If you claim to have a unique retrovirus, then the particles of that retrovirus should differ by some way or the other from other retroviruses; that is the first step. Second, now, as I said, you have to analyse the particles on position. If you claim that these are virus, then, as I said, the main components of a virus are proteins and, in the case of retroviruses, RNA. How you have to prove that these particles has unique proteins and unique RNA; how can

you prove that? As the document which was supplied to us by the prosecution says, you must purify -

MR BORICK: Sorry to interrupt; that's P4 I think your Honour.

A. We've been saying this, anyone who looks on our publications will find out we are in total agreement with the prosecution here. That's all we've been saying from the very beginning. You have to purify the virus. Now, viruses cannot grow outside the cells. Why you need purification? There is a good reason to why you need purification. Viruses grow inside the cells. Some of them, to obtain the particles, you have to destroy

the cells and the viral particles come out. Others, like the retroviruses, the particles abut from the cells and come in the culture fluid, but the culture fluid does not have only retrovirus particles; it has cell fragments, it has free RNA, it has free proteins, so to be able to discriminate what is viral and what is cellular, as it says here, you have to purify the virus. That is, you have to obtain the viral particles separate from all the cellular fragments, all other viruses; if it's a retrovirus you have to obtain a retrovirus, particles which have the morphology of retroviruses. We've been saying, and this is not again our invention, for long time now; in fact, in the 1940's were the first time when the method in bending in density gradients was developed, to purify viruses. And that's what the document which was supplied to us by the prosecution says. Viruses can be purified by bending in density gradients. Only then, only then, as this document says, only then, once you have a material which contains nothing else but virus particles, then you analyse the proteins and their RNA and show that they are unique proteins and unique RNA and that is how, then and only then, you can say that you have identified a retrovirus or a unique retrovirus which is said for HIV. Then and only then as he further on said, on p.11, I think it's p.11, then and only then you can do viral cloning. So

you cannot do antibody tests, you cannot do nucleic acid tests, you cannot do viral cloning unless, and that is as this document said, unless you purify the virus particles and obtain the proteins to use them in their antibody tests and the RNA to use it in nucleic acid tests. If you don't have these basics, you cut - everything we are talking here is superfluous. It makes no sense if you don't have proof for HIV purification. If you don't have proof of HIV purification our scientific problem is finished. There are only two solution to the problem we are discussing here, either the virus has been - the particles have been purified

and then we have no choice but to admit that there are viruses, the Rhesus virus which has unique proteins and unique RNA, that is HIV exist. On the other hand, if, today, there is no evidence for viral purification, for HIV purification, if there is no proof for HIV purification then any scientist, no matter who he or she is, has no choice, no choice but to accept that, at present, no evidence exists to the prove the existence of HIV.

XXN

Q. How do you explain that, in that textbook you're at pains to keep referring us to, P4, they have published in that book the existence of HIV according to their criteria. They say HIV is a virus that exists.

A. Yes, because they accept that there is - the authors accept that the HIV have been purified.

HIS HONOUR: Which article are we referring to?

MS MCDONALD: It's the Topley and Wilson publication, P4.

A. Excuse me, on what page do they say HIV exist?

Q. I'm asking you general questions Ms Papadopulos.

A. Sorry, can you put again the question.

HIS HONOUR: P4 is the Medical Virology, Third Edition.

MS MCDONALD: Can I just see that?

HIS HONOUR: I think that's P4.

MR BORICK: That is it, your Honour.

MS MCDONALD: What I might do, just to keep this moving, I'll come back to this topic.

HIS HONOUR: I think you might have been referring to a different article.

MS MCDONALD: I was, so we were at cross-purposes and I might abandon that last question and I'll come back to that topic briefly when I have the publication.

XXN

Q. Let's move to your presentation of sexual transmission. Firstly, isn't it the case that all of the data that you've relied on from the various studies in this

presentation has been established using the Western blot and ELISA tests, so in other words the people who have conducted these studies, in talking about how HIV may or may not have been transmitted, they all rely on the Western blot and the ELISA tests. Even though you say we can't rely on those tests, you're prepared in your evidence to rely on the results of these studies based on these tests.

A. No; I need to say I never said that this study show HIV transmission. I said that this study show acquisition of a positive test. Acquisition of a positive test which the HIV expert - for the HIV expert is synonymous with acquisition of HIV, but not for us. I made that clear I think repeatedly.

Q. You've told us that you relied on the data from these studies for your presentation.

A. Yes; I am quoting them, yes.

Q. A presentation that advanced a particular argument, that is that HIV is not generally sexually transmitted.

A. Yes.

Q. But the very data that you relied on supposedly in support of that argument relied upon the accuracy of the Western blot and ELISA tests.

A. Yes; we're saying not accuracy - I'm sorry accuracy of what, accuracy for HIV? There is no evidence that one single antibody test proves HIV infection, but we are

saying this is a positive test, whatever that means: not an HIV - there is a big difference here and I think you are confusing the two. This test we are saying here, this evidence prove the acquisition of a positive antibody test. I repeated it and I made it clear and I think it's still not very clear to everybody, it is a positive test, whatever that means. That's what we're saying: we're not saying it's accurate. To say that it's accurate you have to say that this means 'X' or 'Y' or 'Z': we are saying this is a positive test, whatever that means.

Q. Let's try and simplify this. When you're saying to the

court, for example, is 'Here is this study that was conducted with some prostitutes and they were having vaginal sex and none of them became HIV positive and therefore that study supports my proposition'. Isn't it the fact that those very results that you rely on were established using the Western blot and the ELISA tests. You're in fact relying on the results of those tests.

A. I think you are still very confused I'm sorry to say. The HIV expert - by a positive test, the HIV expert - by positive antibody test the HIV expert mean, for them, a positive test equals HIV infection. For us a positive test doesn't mean HIV infection, and when I presented the evidence I stress it repeatedly: a positive test, that is what the HIV expert call HIV. The risk factor for the acquisition of this positive test is on a passive anal intercourse in gay men and anal intercourse in woman, in heterosexual sex. We repeatedly said that so I don't know why you so confusing. Why - we can use those tests - I'm not saying - and that's exactly what we're saying. These tests, these are totally different interpretation and I don't know how - it's very clear, why you can't use it. The interpretation is different and, your Honour, I don't know, I don't know how to answer this.

HIS HONOUR

Q. You've answered the question as best you can.

Q. Slide 12, we've already gone to that, that's in A8, p.2. 28

A. Yes. 29

Q. You have it in front of you. 30

A. Yes, I do. 31

Q. And I've already taken you to the passage and suggested 32
to you that you relied on that to support your 33
particular position about sexual transmission of HIV. 34

A. May I correct you, not HIV; a positive antibody test. 35

MS MCDONALD: I hand up a copy of that your Honour. 36

37

38

EXHIBIT #P27 A PAPER FROM THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, ENTITLED 'HUMAN T-CELL LYMPHOTROPHIC VIRUS TYPE III INFECTION IN A COHORT OF HOMOSEXUAL MEN IN NEW YORK' DATED 25/04/1986 TENDERED BY MS MCDONALD. ADMITTED.

XXN

Q. This study was done in 1986 in the very early days of what's been described as the AIDS epidemic.

A. Yes, 1986.

Q. 20 years ago.

A. Yes.

Q. The epidemiological pattern of HIV was very different then than it is now, wasn't it, that initially in its early phase it was more limited to certain groups, like homosexual men, whereas these days there is a much broader group of people who have been diagnosed as HIV positive.

A. Yes, but this study has nothing to do with that.

Q. This was a study that was conducted -

A. You mean because the study was conducted in 1986 it's no good any more?

Q. Ms Papadopulos, I ask the questions and you answer them. That's what you're here for. This study was conducted in New York City; is that right.

A. Yes, that's what it says on the title.

Q. This is an article you've relied on isn't it.

A. Yes, it is, it is, I'm repeating, one of the articles - one, one of the first ones published.

Q. This was an article that was considering or looking at what the major risk factors were in terms of sexual transmission of HIV.

A. Acquisition of positive antibody tests.

Q. The authors of this report weren't talking about positive antibody tests: they were looking at the sexual transmission of HIV.

A. Based on a positive antibody test. You said it before, it was based on a positive antibody test. How can you

use that, when you say the positive antibody test, when you're talking about HIV infection?

Q. This was a study conducted of homosexual men.

A. Yes.

Q. Well, you might think the prevalence of anal intercourse was a bit higher than the average population.

A. Sorry?

Q. You might think, with a demographic like that, the prevalence of anal intercourse might be a bit higher than the general population.

A. Definitely.

Q. If we go over to the second page, 2168, under 'Subjects and Methods', that's the heading to the top left hand side of the page.

A. Yes.

Q. It talks about the group that we looked at.

A. Yes.

CONTINUED

Q. And if we continue down, there is a heading 'Laboratory Tests'.

A. Yes.

Q. Do you see there: 'Sera were tested under code for anti-HTLV3 prevalence by an enzyme-linked immuno-sorbent assay, ELISA, and by western blot analysis'; correct.

A. Yes.

Q. The authors were prepared to rely on those tests.

A. Sorry?

Q. The authors, here, were prepared to rely on those tests. They rely on the western blot of ELISA.

A. Yes, we agree on that.

Q. What I want to take you to is the next page, 2169, and it is about two-thirds of the way down, the first column, the paragraph commencing: 'Anti-HTLV prevalence'; do you see that.

A. Yes.

Q. It says there that: 'Anti-HTLV, through prevalence, correlated with numbers of different sex partners, the frequency of various types of sexual practices, history of common sexually transmitted diseases, use of recreational drugs, including intravenous drugs and known sexual contact with a person with AIDS. Because many of these variables correlated with each other step-wise, multiple logistics regression analysis was used to identify those that had an independent

predictive relationship with anti-body prevalence. In this analysis, only receptive rectal intercourse, douching, rectal bleeding, sexual contacts with a person known to have AIDS and use of intravenous drugs were significant predictors'. Do you see that's what it says there.

A. Sorry?

Q. Do you agree with what I have actually -

A. Yes of course I agree.

Q. - what I put in the passage.

A. Yes, of course I agree.

Q. Isn't it the case that in this study there are a number

of predictors of whether someone would test positive for an HIV anti-body test, including whether they were with a person, having sexual relations with a person known to have AIDS.

A. Yes, we agree.

Q. You see the authors in this article, at no stage, say the only way that you can have an HIV positive test is as a result of receptive anal intercourse.

A. I'm sorry - 'the only sexual act'. These are not sexual acts. We have to discriminate between all of these other factors in a sexual act and the only sexual act, according to Gallo, is receptive intercourse. These are not sexual acts. Where in there is a sexual transmission?

Q. The author in this article is not suggesting that the only sexual act that can cause someone to become HIV positive is receptive intercourse. I'm putting that as a proposition; do you agree or disagree.

A. No, I disagree.

Q. Let's go to the quote that you included -

A. Yes.

Q. And we might start at the bottom of p.2170.

A. Yes.

Q. Under the heading 'Comment'.

A. Yes.

Q. I won't take you through all of that. It talks about

chimpanzees and so forth. I want to start with the last column.

A. Yes.

Q. Bottom corner with the word 'Data'. Do you see that, about five/six lines up from the bottom.

A. In the middle corner. It says 'However - '.

HIS HONOUR

Q. No, it is the third column and it is about six lines from the bottom: 'Data from this'.

A. Yes.

XXN

Q. This is the passage that you quoted. 'Data from this

and previous studies have shown that receptive rectal intercourse for example is an important risk factor for HTLV infection'. Do you have your power point presentation there.

A. Sorry?

Q. Do you have your power point presentation there.

HIS HONOUR

Q. Have a look at A8, p.2, which has the heading 'Gay Men'.

A. A8, yes.

Q. P.2.

A. Yes.

Q. Bottom right-hand corner 'Gay Men'.

A. Yes.

XXN

Q. You have got some dot dots in the part that you excised.

A. Yes.

Q. So you have the words: 'Data from this and previous studies have shown that receptive rectal intercourse ... is an important risk factor'.

A. Yes, we said it is an important risk factor.

Q. You left out two words from that quote and you put dot, dot, dot.

A. Yes, but it is an important risk factor.

Q. The words 'for example' are not the only risk factor. The words are 'for example' -

A. Yes, it is an important risk factor so that's what I

say - analytical - it is an important risk factor.

HIS HONOUR

Q. Did you prepare these slides. Did you prepare the slides.

A. Most of them, not all of them.

Q. Did you prepare the slide No.12 'Gay Men'.

A. I can't remember, no.

Q. I would just like to know why the words 'for example' were left out.

A. Just to make the quote smaller that's all, because it does not aid or misinterpret because analytical is a risk factor. That's all they say and all introduced

that.

Q. It certainly says that, but it says that it is an example of a risk factor, it does not say 'it is the only one'.

A. No, it did not say is the only. We did not add 'it is the only'. We say it was a risk factor, we did not misinterpret.

XXN

Q. In that quote you have left out the two words 'for example' to save space.

A. Yes. We had so many slides and - some of them are so lazy. The important thing is not to misinterpret and gave the risk factor, the analytical is a risk factor.

Q. Let's go on and let his Honour form his own view as to whether you are misinterpreting. You will see that there are a second series of dot dots after the word 'infection' and you have put the words 'positive anti-body test' in there. Are they your words.

A. That's our interpretation.

Q. And there are even dot dots where those dot dots appear in the article. We see the words 'Yet, at the time of entering this project, nearly half of the participants have practiced this technique'. You chose not to include those words.

A. Why should I include them? They have no relationship of a sexual act which is a risk factor for the positive

test. They don't add or subtract. The main thing that we are looking for.

Q. Then you, in your power point, include the words 'We found no evidence that other forms of sexual activity contributed to the risk'. And you stop there.

A. Yes.

Q. What you don't tell the court is that the authors of this report then go on to say - expressly disavow what you have been putting to this court saying: 'However, these data should not be taken to indicate that other forms of sex are safe. It is possible that the virus may be transmitted by sexual activities other than

receptive rectal intercourse, although probably with lower efficiency and, therefore, not detectable in our present study. Retrospectively, data on sexual activity also may not accurately reflect the specific activities practised at the time of exposure'. Now that's what it says there, doesn't it.

A. Yes and that is commentary, it is not data. We are talking about data. Data. Not commentary. They are comments and they speculate, but we are not interested in speculation and in commentaries, we are only interested in the data.

HIS HONOUR

Q. Would you agree with this proposition: that certain conclusions can be drawn from certain data, but it does not follow, necessarily, that because you can draw a particular conclusion from some data that that is the only conclusion that you can draw from it.

A. It does not mean that in a few years time or the next day or the next - I totally agree with your Honour - the next day or the next year or 20 years after. You may have some other evidence who totally ameliorate - yes, you can have it, I totally agree but it did not have such data and they speculate. We agree with the speculation too.

XXN

Q. Don't you think that an expert in this court, here, to

assist the court, that you should have put all of the information forward about that article and that his Honour make a determination based on all of the information including the fact that the very authors that you rely upon say that their results cannot be used.

OBJECTION: MR BORICK OBJECTS

MR BORICK: I object for this reason: that the quote in the comment here says that there are bits missing. The words 'for example'. You are given the exact identification of the article so that myself or the prosecution can look at it all for ourselves and

although the prosecutor might have a difference of opinion with the witness about the way in which it should have been written down, the fact is that the witness was not hiding anything as the question suggests and I object to it.

HIS HONOUR: Ms McDonald, I'm not sure that the questions will help me a great deal in the sense that it is more comment perhaps than it is - if you are going to put the proposition to the witness that she has misled the court by not including it, certainly you are entitled to put that because that's an attack on credibility as to a witness, and if you want to put that as a positive proposition by all means I will permit you to do that and see what her answer may be. Mr Borick, it may be a matter for comment later on. I think the question is not permissible in the form it is being asked, but if it were put to the witness: 'Isn't it a fact that you misled the court by not putting the whole of the passage to which I have referred', that's a matter that can be put to the witness and we will see what comes from that. I understand what your position is. It may well be that the witness will say exactly what you said from the bar table.

MR BORICK: The question better be phrased fairly specifically if counsel is going to put that a witness has misled; to put all the facts, explain to the witness

why, including what I have said in the course of the objection.

HIS HONOUR: Let's see what the question is. I'm not permitting Ms McDonald to put that question. If she asks another question we will confront that when it is asked.

XXN

Q. I will be quite blunt. I suggest to you that you have deliberately attempted to mislead this court by leaving out words in that quote, namely, 'For example' and by stopping it at the point that you did and not presenting that quote in its proper context in that article.

A. We did not mis -

MR BORICK: Well, now it's changed to the crime of attempt, attempted to mislead. Is it being put specifically that the witness did mislead? I'm not sure that the answer is going to help. My proposition -

HIS HONOUR: Although, if there is going to be an attack on a witness and, say, on the basis that the witness has not been frank with the court or has misled the court by misusing quotations etc., it is only fair that the proposition should be put to the witness otherwise you would have a genuine complaint if later it was said 'Look, this is an attack on the witness, that was never ever put to the witness, the witness was never given an opportunity to explain the position'.

MR BORICK: Well, let my friend ask the question and Ms Papadopulos can look after herself.

HIS HONOUR: I think the question has been asked.

MR BORICK: Her experts are coming along. She'd better remember that and they'd better remember it too.

HIS HONOUR: I'm sure that everybody is well aware of the position, but I will allow the question.

HIS HONOUR

Q. Do you remember it.

A. Yes. We do not mislead. We put it there. In the quote we left two words out. It did not change the meaning or the finding of the study and the big lengthy passage

that you read after this is not evidence. That is speculation. The words, themselves, are speculation so why should we put speculation? We are presenting to the court data, not speculation. If you start putting all the speculation it would never end.

XXN

Q. Can we go to slide 13 over the page. Again, that slide relies on a particular study described as the 'Multi Centre AIDS, 1985'. Is that paper that you relied on, a paper headed 'The Lancet, Saturday, 14 February, 1987'.

A. 1987 it was.

EXHIBIT #P28 LANCET, SATURDAY, 14/02/1987 TITLED 'RISK FACTORS FOR SERO CONVERSION TO HUMAN IMMUNODEFICIENCY VIRUS AMONG MALE HOMOSEXUALS TENDERED BY MS MCDONALD. ADMITTED.

Q. I suggest that this article is probably the watermark of your argument that receptive sexual - anal sexual intercourse is the only risky form of sexual intercourse in terms of positive diagnosis of HIV positive, but even this article does not support your proposition that that is the only way in which it can be sexually transmitted.

A. Is the quote wrong there? Is the power slide wrong?

Q. It is your slide.

A. No, it is there, we took it from there so, you know, you can say that it is not there. If that is there, then why is it misleading?

Q. We might be at cross-purposes. Slide 13. We have been provided with this article headed 'Slide 13, the Lancet, Saturday, 14 February 1987'.

A. Yes.

Q. That is the article that you have relied on for the quote that we see in slide 13.

A. Yes.

Q. Is that the case.

A. Yes.

Q. What I'm suggesting to you is: although you have put a quote in that passage, that the actual study, itself,

does not support your proposition that the only way in which someone can get an HIV positive test result is from receptive anal intercourse in terms of sexual practices.

A. Is it not the conclusion of the sources of what is in our slide?

Q. Let's go through the article.

A. Are we misquoting them?

Q. Let's go through the article. We might perhaps, for expediency, go to the end and come to the discussions and conclusions. P.348, the last page in the article. I want to take you to the paragraph that begins with the

words 'From a public health'. Does the article there say: 'From a public health point of view, we can affirm to homosexual men that receptive anal intercourse is the principal route by which they may become infected with HIV. We must also communicate that a small but real risk from other exposures may have been undetectable, even in this large study. Receptive fisting, enema/douche before sex, and perianal bleeding, as markers rectal trauma have all been strongly associated with prevalent HIV infection in the cross-sectional Multicentre AIDS Cohort Study of nearly 5,000 men'. There is a figure in brackets '(38% HIV seropostive). That none of these trauma indicators were significantly associated with sero conversion in the present study, may indicate only that the smaller sample size' - and there is a figure '(95 sero converters) precluded their detection. Enema or douche use before sex did, however, show a trend towards association with sero conversion (odds ratio 1.5, less than .10)'.

HIS HONOUR: 'P less than'.

MS MCDONALD: Thank you.

XXN

Q. 'Although the prospective nature of this analysis makes it a more compelling assessment of risk factors, the potential importance of the traumatic practices promoting HIV infection should not be overlooked'.

CONTINUED

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It then goes on to say 'the relative safety of the sexual practices not detected as risk factors for seroconversion in this report deserves comment. Oral intercourse with ejaculate introduced in the oral cavity, anilingus, fisting, enema/douche use, and dildo use are all potentially unsafe. HIV infection apart, many of these practices have already been associated with other sexually transmitted diseases', and the article goes on. Firstly, do you agree I correctly read out what appears in that passage.

A. Yes.

Q. The authors there aren't saying that receptive anal intercourse is the only way someone can test positive for HIV in terms of sexual practices.

A. We say all these people have found - these authors, they say that did not find, that's all they found. We are saying what this study has proven, not other studies and not speculation, only what they say. You read their summary. Let me read what they say in the summary.

Q. Where are you reading.

A. May I please read this?

Q. You need to tell the court -

HIS HONOUR

Q. The summary at the front of the article, refer me to the article.

A. The last sentence.

Q. You needn't read it because I can read it myself. I have the article so I will read the last sentence.

XXN

Q. So we look at that passage and we cross-reference that to what's in the slide, slide 13, that you have included, '... the hazards of this practice need to be emphasised in community education projects'. That comes from that passage that you have just brought to our attention.

A. Yes.

Q. What you have not included there though is the beginning of that sentence 'Receptive anal intercourse accounted

for nearly all new HIV infections amongst homosexual men enrolled in the study'. Why did you leave the first half of that sentence out.

A. Because if you read the study, they found three people who did not know how they had acquired it, but they said these people may have lied, they have been all practising anal intercourse and may have lied or they may have had some other risk factors. If you read the study, if you read the study carefully, that's what they say. They had only three men who they could not account by passive anal intercourse but they say they may have lied or they may have had some other reasons for seroconversion. Please read the whole study.

Q. If we look at what you have presented to us in the PowerPoint, that first passage that we see beginning with the words 'Receptive anal intercourse' in fact comes from p.347 under the heading 'Discussion'.

A. Yes.

Q. So what you have done there, you have selected that sentence from the body of the document in the discussion area and you've joined with it a quote from the summary section of the report and interrelated the two of them by presenting them on the one slide.

A. Yes. All this is the data. If you read the study, exactly that's what it says. Please read the whole study.

Q. If you put in that whole sentence, and I am referring now to the second passage, where we have got the dot dot dot dots, it would have been clear on a reading of the sentence that the authors are saying there that receptive anal intercourse is not the only way that new HIV infections come about.

A. Not in their study, not in their study.

HIS HONOUR

Q. What they were saying, and I am summarising it, on this particular topic is that there were three members of the study who claimed that they had not had anal sexual intercourse, yet they were still positive.

A. Yes, and also said they may have lied.

Q. I understand.

A. Yes, exactly.

XXN

Q. Go to slide 14. Again you have relied on a report of a particular study and you've included four separate quotes from that study or from that report rather. Do you have the slide.

HIS HONOUR

Q. It's at p.3 and it's the second slide at the top on the right-hand side, Gay Men.

A. Yes.

Q. It's got four paragraphs.

A. Yes.

Q. Four numbered paragraphs.

A. Yes.

XXN

Q. And those quotes numbered 1 to 4, do we take it from that slide you have extracted from that article that you have referred to at the bottom of the page.

A. Yes.

Q. Is that an article entitled 'Male Homosexual Transmission of HIV 1'.

A. Yes.

Q. We see some writing at the top there 'Homos C', is that your writing.

A. Yes, it's my writing because I put this for my database to know where I can put it.

EXHIBIT #P29 ARTICLE ENTITLED MALE HOMOSEXUAL TRANSMISSION OF HIV 1 REPORTED IN CURRENT SCIENCE LTD HEADED AIDS 1994 TENDERED BY MS MCDONALD. ADMITTED.

Q. On the first page of that report you go on to look under the heading 'Overview of Factors Potentially Influencing Male Homosexual Transmission'; do you see that heading.

A. Yes.

Q. The point I should make here is this study and the last two that you referred to have all been studies focused

on homosexual men.

A. Yes, that's why the whole Gay Men, Gay Men, Gay Men.

Q. And under that heading 'Overview of Factors', it says 'HIV 1 has been isolated from blood, semen, pre-ejaculatory fluid and a variety of other secretions'; see that.

A. Yes. I don't know where it is but yes, I may claim that.

Q. The authors that you have relied on seem convinced that it's been isolated.

A. They don't give this evidence. They say what others are claiming, not here. There is no evidence here, there is no data in this study. They accept what others are claiming. They are epidemiologists.

Q. The focus of this study is looking at risk factors in terms of sexual behaviour amongst homosexual men, correct.

A. Yes.

Q. Let's go to the conclusion which is at p.1058. Do you have that.

A. Yes.

Q. Under Conclusions the authors say 'Given the methodologic considerations and evaluation of the studies in the light of epidemiologic criteria, it can be said that the cited reports yield convincing evidence that (1) unprotected anogenital receptive intercourse

poses the highest risk for the sexual acquisition of HIV infection'. I will pause there. You agree I have accurately read out what's in the passage.

A. Yes.

Q. In fact, that passage that I have just read out, the No.1 is the first quote that you have included in your PowerPoint.

A. Yes.

Q. '(2) anogenital insertive intercourse poses the highest risk for the sexual transmission of HIV infection'.

A. Agree that's what we are saying.

Q. '(3) there is mounting epidemiologic evidence for a

small risk attached to orogenital receptive sex, biologic plausibility, credible case reports and some studies showing a modest risk, detectable only with powerful designs'. That's what the authors say there.

A. Yes.

Q. '(4) sexual practices involving the rectum and the presence of (ulcerative) STD facilitate the acquisition of HIV 1. (5) no or no consistent risk for the acquisition of HIV 1 infection has been reported regarding other sexual practices such as anogenital insertive intercourse and oroanal sex. It is likely that infectiousness of infected individuals is high during the early and late stages of infection and increases from low to moderate during the asymptomatic period'. Then there's reference not particularly relevant here to evidence about the effect of the use of condoms. Firstly, you agree I have read out what's in that passage.

A. Yes, very much so. That confirms what they are saying more than anything else.

Q. Again these authors are not saying that receptive anal intercourse is the only way you can be positive to a test for HIV.

A. Tell me which other sexual act these authors say that is a risk factor apart from passive anal intercourse, can you tell me please one, just give me please one. Give

me one other sexual act which these authors found to be a risk factor for the acquisition of a positive antibody test.

Q. Ms Papadopulos -

A. That's what I am asking.

Q. You are not here to ask questions, you are here to answer them.

A. You are accusing me.

Q. I direct your attention to point 3 under Conclusions beginning with the words 'There is mounting epidemiological evidence for a small risk attached to orogenital receptive sex'.

A. Receptive again.

Q. What does 'orogenital' mean.

A. Means receptive, is deposition of semen into the mouth. That's what it is, semen.

Q. So do you accept that is another way in which someone can test positive to HIV as a result of sexual contact through fellatio, that is taking the penis into the mouth, ejaculation into the mouth.

A. There has to be ejaculation, that's what they say. Ejaculation into the mouth, that's what it means.

HIS HONOUR

Q. That's not receptive anal intercourse.

A. Is all intercourse. They say there is 'mounting', they don't say that there is evidence. If you read all the evidence there, that is the only thing they conclude and they start with one and they call it - the second tells you, the second conclusion, they say anogenital is posing higher risk for the sexual transmission of HIV infection.

Q. The question that's being put to you is this, as I understand it, and Ms McDonald will correct me if I am wrong, it doesn't say that it's the only form of sexual transmission which can result in a positive test.

A. If you read the other risk factors there, there are no other risk factors, it's the only one. No matter how you take it, it's the only risk factor. If you are a

scientist, you cannot conclude anything else.

XXN

Q. At the risk of stating the obvious, when you are looking at two men engaging in sexual practices, there's a limit to the forms that can take, isn't there.

A. Definitely, definitely.

Q. And this study says no more than that, the highest risk factor is receptive anal intercourse, but does not exclude there being risks attached to other forms of sexual contact.

A. They don't give any other. They go and give everything else and they don't give any other risk factor so the

only conclusion as a scientist you can come to, you have no choice but to say that receptive anal intercourse is the only risk factor. May be passive intercourse which again supports our view that this test proved only exposure to antigens which have nothing to do with HIV.

Q. Let's go to what the authors finally suggest should arise as a result of that study. I am going to the third to last page, it's p.1059, the passage beginning with 'The public health implications'. Do you have that passage.

A. Yes.

Q. There the authors say 'The public health implications of these findings can be formulated as follows: (1), health education messages for homosexually active men regarding the restriction of anogenital intercourse and the use of condoms during its practice should remain in effect. (2) homosexual men should be informed about the risk of orogenital sex, although the risk is probably small, recommendations regarding its avoidance or the use of condoms should be considered'. So arising from that report in terms of public health implications, the authors conclude that whilst receptive anal intercourse might be the most risky that people should be warned about engaging in unsafe practices of orogenital sex. That's the bottom line in this report, isn't it.

A. We totally agree. There is no disagreement here. We

totally agree with the public health policy. In fact, now that we are talking about public health policy, our public health policies, if anything, are more conservative than those of the HIV experts. The HIV experts say safe sex. We totally agree, safe sex. The HIV experts say clean needles, we agree with clean needles. In fact, we go one step further and we say no needles, that is no drugs, because the drugs are the ones which are to be blamed, although a dirty needle because it contains antigens, it may have many other risk factors, should be avoided. We totally agree. We agree that the antibody test should be done, but the

antibody test - we disagree as to the interpretation of the antibody test. We agree that the blood which is used for transfusion should be tested using the antibody test, but we disagree again with the interpretation. Our public health policies are at least as good as that of the HIV experts.

CONTINUED

So total agreement there, total agreement. Nothing against the public health policy. They are very good.

Q. Let's go to your studies that relate to women and people who are in heterosexual relationships. I want to take you to slide 21, which is on the fourth page, left-hand column, in the middle, headed 'Prostitutes'. Do you have that slide.

A. Yes. Slide 19?

HIS HONOUR

Q. No, 21, 'Prostitutes'.

A. Yes.

XXN

Q. Now, there you have relied on another article and study, Day et al, St Mary's Hospital Medical School, London, 1993.

A. Yes.

Q. And let me just remind you of what you told the court about this particular slide. P.158, at line 2, you were asked this question from Mr Borick: 'I think you are now moving to a survey of the various study groups which have taken place since about 1984 or thereabouts'.

A. Sorry?

Q. Would you like me to repeat that.

A. We're talking again slide 21?

HIS HONOUR

Q. No, Ms McDonald is now reading you some evidence.

A. From the paper?

Q. Just listen to the question and it will become obvious.

XXN

Q. I'm asking you about some evidence you have already given in this courtroom and it was the evidence you were giving when we got to this slide 21 of your PowerPoint presentation and you were asked this question: 'I think you are now moving to a survey of the various study groups which have taken place since about 1984 or thereabouts' and then you gave this answer: 'Yes. In our study, we were addressing different studies, or studies in different groups, so we start with the

prostitutes, because if any group, heterosexual group, were going to be found as HIV infected, then it should be prostitutes, because prostitutes are the most promiscuous heterosexuals. There are several reasons why, apart from the fact that they are very promiscuous, why the prostitutes should have been infected, because the safe sex campaign started in 1986/1987, and by that time there were many bisexual and homosexual men who are HIV infected and, as you see from what I am quoting now, there are many of these men who are having sex with prostitutes. For example, in this study, in this study of men who had sex with female prostitutes, more than one-third reported having had sex with other men. So one-third of the men who were having sex with the prostitutes, they were also having sex with other men and, by then, there were many homosexuals who were infected, so one would have expected this is a very good reason for prostitutes also to be found to be infected'. Do you agree that was your evidence when we were talking about slide 21.

A. Yes.

Q. And in your slide you've excised a part of the report that you have relied on that says 'In this study of men who had sex with female prostitutes, more than one-third reported having had sex with other men'.

A. According to that.

Q. That's what you have included in your PowerPoint.

A. Yes.

Q. You didn't mention anything about condoms though in terms of your study, did you.

A. No.

Q. Do you think it might have been of assistance for his Honour to know, when you're talking about this study and how many people tested positive to HIV, that 82% of the study group always used a condom.

A. Sorry?

Q. 82% -

A. Yes.

Q. - of the group who were studied always used a condom.

A. Yes, but then you have another 80% who are not using condoms and they should have been infected by then. I'm saying that there is a high probability for these women, if anybody, to be infected.

Q. This article was from 1993.

A. 1993?

Q. Correct.

A. Yes, 1993.

Q. Still relatively early in the AIDS epidemic, as it is described.

A. These women, these prostitutes were, in 1993 they may have practised safe sex, but this started - these prostitutes were prostitutes before, before safe sex education was introduced. So at the time when they were practising unprotected sex, the HIV was in bisexual men, a very high percentage of bisexual men and homosexual men had a positive test. So the women who were practising unsafe sex, they should have been infected. But even if 82% of them are practising safe sex when the study was done, which was later, is still 80% which were exposed to a very high risk situation and should have tested positive. That's what we were saying.

Q. Wasn't this study about the risk posed to men by engaging in sexual intercourse with prostitutes. It's the risk to the men that the study focuses on.

A. There is no evidence of that.

Q. Is the article that you have relied on headed 'Prostitutes and Risk of HIV: Male Partners of Female Prostitutes' by Sophie Day.

A. Sorry, what -

Q. We're still on slide 21.

A. Which is the paper, sorry? I haven't got the paper.

Q. The paper that you have relied on for the quote we see in slide 21, is it a paper headed 'Prostitution and Risk of HIV: Male Partners of Female Prostitutes'.

A. Can you tell me what number this is.

Q. That's the article that you relied on.

A. Yes.

EXHIBIT #P30 PAPER HEADED 'PROSTITUTION AND RISK OF HIV: MALE PARTNERS OF FEMALE PROSTITUTES' PUBLISHED ON 7/8/1993, THE ACADEMIC DEPARTMENT FOR PUBLIC HEALTH ST MARY'S HOSPITAL MEDICAL SCHOOL, WITH THE AUTHOR BEING SOPHIE DAY, TENDERED BY MS MCDONALD. ADMITTED.

Q. At the top of the article there, the authors in the abstract set out their objective to describe risk behaviours for infection with HIV in male sexual partners of female prostitutes. Do you agree with that.

A. Yes, I agree.

Q. The subjects were 112 self-identified male sexual partners of female prostitutes; 101 who reported a commercial relationship with a prostitute, five who report non-commercial relationships only, and six who reported both. Then there is a heading of 'Results', do you see that.

A. Yes.

Q. Reding from the heading 'Results': 'Of the 40 men who had had previous HIV tests or were tested during the study, two were infected with HIV. Of the men who would answer the question 34/94 reported having sex with other men' - sorry, I will read that again.

HIS HONOUR: 34 out of 94.

XXN

Q. '2 out of 105 reported using injected drugs, 8 out of 105 had a history of blood transfusion, 14 out of 108 reported a past history of gonorrhoea, 44 out of 102 reported paying for sex abroad, and 8 out of 92 said that they had also been paid for sex. Of the 55 men who reported paying for vaginal intercourse in the past year, 45 or 82% of them said that they always used a condom. In contrast to the 11 non-paying partners of prostitutes, only two ever reported using a condom with their partners.' Do you agree that is what is said under the heading 'Results'.

A. Yes.

Q. I will read from the heading 'Conclusions': 'Men who have sex with female prostitutes cannot be assumed to be at risk of infection with HIV only by this route; homosexual contact may place them at greater risk. Despite the heterogeneity amongst male sexual partners of prostitutes, patterns of use of condoms were uniform when they were considered as a reflection of the type of relationship a man had with a female prostitute rather than a consequence of an individual's level of risk'. Do you agree I have read out what appears under the word 'Conclusions'.

A. Yes.

Q. So this article says no more than if a man is having sex with a prostitute, it shouldn't be assumed that that is the only risk factor in terms of contracting HIV.

A. Yes.

Q. There are other risk factors.

A. Yes. We totally agree.

Q. This study is not about prostitutes and circumstances in which they can contract HIV.

A. We are saying that if - they said that the men here may be at higher risk by having other sex than by - or homosexual men, than by having sex with prostitutes. We totally agree. But we also say that many prostitutes had sex with bisexual and homosexual men because they had many of them; one-third who are bisexual or

homosexual, could be clarified as bisexual or homosexual. So prostitutes, even in 1993, were at risk, at high risk, of developing a positive antibody test. Even more so at the beginning of the HIV era when they were not practising safe sex at all. Sexual education started in 1986/87 I think.

Q. Let's again go to the conclusion of the authors of this report and it starts on the second to last page with the heading 'Discussion'. Do you have that.

A. Yes.

Q. Under the heading 'Discussion' there is some discussion about the sample pool that was used for the study, and

then at the bottom of that column, in a passage that has been underlined, it commence with the words 'Men who have sex'. Do you see that.

A. Yes.

Q. Does it then say 'Men who have sex with prostitutes have been assumed to be at risk of infection with HIV solely from this route. This study, however, found a high prevalence of other known risk factors for infection amongst the subject. Thus 35.5% of the men reported sexual contacts with other men. Homosexual behaviour presents an additional risk of infection with HIV in this group that may be similar to that presented by use of injected drugs among prostitutes. As condom failures during commercial sex were also apparently common, it is possible that female prostitutes are as much at risk from infection from their clients as clients are at risk from prostitutes. Female prostitutes and their male sexual partners together appear to link otherwise separate parts of large populations through a range of relationships. Further research on these sexual networks and the interconnections between the different risk behaviours is needed for the assessment of potential transmission of HIV'. That is what it says there under that heading.

A. Yes.

Q. The authors in this report are saying basically no more

than because a man has sexual intercourse with a prostitute and the man then becomes HIV positive, you can't assume that that is the route by which he became HIV positive. You have to look at other risk factors.

A. Totally agree.

Q. Implicit in underlying this report is an acceptance, though, that a female prostitute can transmit HIV to a male customer.

A. They say that, but this is not a study of sexual transmission. They are commenting what are the risks, but they don't give you a study. This is not a study. That's what it said. They say only the potential here

is that prostitutes have very many risk factors to becoming positive and especially, especially since the prostitutes have so much - have come so much in contact with bisexual and homosexual men. Being a prostitute is a problem, but coming with bisexual and homosexual in contact so often is even bigger. So there should have been - by 1993, we should have had plenty of prostitutes, known drug-using prostitutes, testing positive. There is no such evidence.

Q. Let's go back to what you had to say in evidence in the context of this slide before we actually looked at what the article said, back to p.158. 'Yes. In our study, we were addressing different studies, or studies in different groups, so we start with the prostitutes, because if any group, heterosexual group, were going to be found as HIV infected, then it should be prostitutes, because prostitutes are the most promiscuous heterosexuals'. Then you go on to say why, talk about promiscuity and so forth, when the safe sex campaign occurred. 'And by that time there were many bisexual and homosexual men who were HIV infected and, as you can see from what I am quoting now -' slide 21 '- there are many of these men who are having sex with prostitutes. For example, in this study, in this study of men who had sex with female prostitutes, more than one-third reported having had sex with other men'. Now I pause

there. Do you agree that was your evidence.

A. Yes.

Q. What you were suggesting to this court when you were presenting slide 21 was that this study somehow supported you in terms of your theory; that is, someone is going to be infected as prostitutes, in fact there aren't that many prostitutes shown to be infected and there are other routes of infection, supports you in that HIV is only transmitted in certain ways.

A. No, no, no, no. No, this study, it doesn't have any evidence. It shows - the evidence it has there that prostitutes have sex, your Honour, come very often in

contact with bisexual and homosexual men. This being the case, and at the same time taking into consideration that by 1982 there were many bisexual and homosexual men, in fact a very high percentage of them were testing positive, they have positive antibody test, and since - you can't have any other expectation. And since safe sex campaign started in 1986/1987, by this time, prostitutes will have had plenty of opportunities to become HIV positive. So is there such a limit? That's all it is. These people do not say they have or they don't. They only tell you what are the risk factors for prostitutes to become positive or for their clients to become positive. One of the risk factors of prostitutes to become positive, apart from being very promiscuous, is having sex with men who are positive, gay men and bisexual men, and coming in contact with them and they have no safe sex. That's all we're saying. That's all the interpretation. If given that the prostitutes come in contact often with bisexual and homosexual men, there is a very high opportunity for them to be also infected. That's all we're saying . We don't say no more, nothing less, and that's all we're saying.

CONTINUED

Q. The bottom line is, in this article, what they were looking at was the risk to the male partner in having sexual intercourse with a prostitute and that, with the majority of the people in the group who were studied, there was a consistent use of condoms.

A. A consistent use of condoms not in 1982, '84, '85 or '86 or maybe '87 or whatever. It is not only for the men and woman - don't misinterpret this. I cannot see why you bringing this study and what is wrong with our science. Please tell me what is wrong with science interpretation and our slide. I don't know.

ADJOURNED 1.04 P.M.

RESUMING 2.25 P.M.

Q. Before we move back to the prostitutes studies that we were discussing before the lunchbreak, I want to ask you about an article that was produced to you just shortly before the court resumed. It is an article headed 'The New England Journal of Medicine' and it is entitled 'Reduction of Maternal/Infant Transmission of Human Immunodeficiency Virus Type 1 With Zidovudine Treatment'. Do you have that article in front of you.

A. Yes.

Q. Do you agree that the New England Journal of Medicine is a reputable journal.

A. Yes.

EXHIBIT #P31 ARTICLE DATED 3/11/1994 TITLED 'REDUCTION OF MATERNAL/INFANT TRANSMISSION OF HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 WITH ZIDOVUDINE TREATMENT TENDERED BY MS MCDONALD. ADMITTED.

Q. A number of times during your evidence, you made reference to the fact that there have been no double-blind studies conducted in relation to the transmission of HIV.

A. Yes.

Q. The article that I have just put in front of you relates to a double-blind study in relation to the transmission of HIV from mothers to children, doesn't it.

A. Yes.

Q. Double-blind because there were two groups; one group got the antiretroviral -

A. Double-blind because nobody knew what it was there, that's why it is double blind.

Q. One group who gets the drug and one who doesn't and one doesn't know in which group they belong.

A. Yes, that's why it's double-blind.

Q. We go to 'Abstract'. It sets up the method and double-blind placebo study. It says: 'Maternal/infant transmission is the primary means by which young children become infected with immunodeficiency virus

type 1 (HIV). We conducted a randomised, double-blind, placebo-controlled trial of the efficacy and safety of Zidovudine in reducing the risk of maternal/infant HIV transmission'. And then it goes on to set out what drugs women were given. I won't take you through that, and it concluded at the bottom of that paragraph, in the background - it concludes: 'Infants with at least one positive HIV culture of peripheral blood mononucleus cells were classified as HIV-infected'. Do you agree that I accurately read out what appears in those two passages.

A. Yes.

Q. This was a situation in which pregnant women, a group of pregnant women, on a random basis, some given a drug and some given placebo.

A. Yes.

Q. Now this study, it seems, occurred in the early 90s so would you agree that was at a point in time where the use of antiretroviral medication was very recent.

A. Yes.

Q. And particularly, in terms of attempts to use that medication, to stop the transmission of HIV from mother to child. It was in the experimental early days.

A. Yes.

Q. In fact, the drug that was given to the woman, AZT, is that the drug that is still given these days.

A. Yes I believe so. It is AZT and Nevirapine.

Q. Isn't it the case that a combination of drugs are used because it was discovered that during this experimental phase, that just using one drug, like AZT, had a problem in that people became resistant to it.

A. No, not in this - in this it was not discovered and not - this is the reason why AZT is not effective.

Q. I'm not asking you about the article at the moment, I'm asking about a separate topic, some general questions. What I'm putting to you is this: isn't it the case that AZT was the drug that was initially used, antiretroviral, that was initially used with pregnant

women but since then, a combination of drugs have been used because of concerns of a person building up a tolerance if they were just using one drug.

A. No, the question of tolerance is just an interpretation, there is no evidence. What it is, is when they found out that the efficacy or safety is not good it was an easy explanation.

Q. Well, you might have your own explanation.

A. Or I don't have, I don't have but certainly cannot be because there is a tolerance to the virus or because the virus mutates.

Q. I'm not putting to you a scenario that I'm asking you to agree with in terms of your views, what I'm asking you is this: do you accept that, amongst the HIV experts people who were working in this field, there was a change to using a cocktail of drugs, if you like, because they believed that people were building up a resistance to one drug. I'm not asking you if that's your view, I'm asking you if you accept that was a widely held position.

A. Yes I accept.

Q. So in this particular article, I'm now referring to P31, the article in front of you, it was still at a time when just one drug, AZT, was being used.

A. Yes that's true.

Q. If we go to the second paragraph, to the passage I

alluded you to, the last sentence under 'Abstract': 'Infants with at least one positive HIV culture of peripheral blood mononuclear cells were classified as HIV-infected'. We accept what the authors are saying there, what they are saying is that they didn't look to see if the children were HIV positive by looking at anything other than an HIV culture.

A. Yes, but the culture is no different. It is thin and anti-reactive.

Q. They weren't looking for antibodies -

A. They are looking for antigens. In the anti-body test, your Honour, you have or the HIV expert called the HIV

proteins. You are given the proteins and you look to see if the patients have anti-bodies which react with these proteins. It is called HIV culture is the other way around. You are given the anti-bodies to P24, to the protein which Montagnier found in material which did not have antiretroviral particles and called it HIV protein. So they are taking anti-bodies to this protein and they look even in the culture if there are any proteins or any other supplements which would react with this anti-body and that is called HIV culture. So, is the same test only in the anti-bodies; you are given one parameter and in the culture you are given the opposite parameter, so it is the same test. Especially with P24 which is, according to experts, promiscuous, it reacts. The anti-bodies to P24 are promiscuous.

Q. Going back to this article - and we will come back to the problem and look at the methodology - under the heading 'Results' on the first page: 'From April 1991 through 20 December 1993, the cut-off date for the first interim analysis efficacy 477 pregnant women were enrolled. During the study period, 409 gave birth to 415 live-born infants. The HIV infection status was known for 363 births. 180 in the Zidovudine group and 183 in the placebo group. 13 infants in the Zidovudine group and 40 in the placebo group were HIV-infected'. Do you agree I accurately read out what appears there.

A. That's what it says. I can't find it but I believe you.

Q. What we have here is what you have been suggesting that we need; that is, a double-blind study with a large random sample and you have dramatically different results in terms of whether the children were born and tested positive to HIV.

A. No. That is what is in the report. First of all, we haven't got controls. We haven't got any children who are born to mothers which are not infected. You should have that. You don't have that but let's - now, look at the graph. Please look at the graph which they categorise - the cut-off mark is given the probability

of transmission, which is on page - the fifth page, at the bottom left corner. There is a graph there. Now, if we look at the Zidovudine or ADT administration, it was given to the mothers before they gave birth and at the time of birth, and to the children, at the time of birth, in six hours, up till - I forgot which was - I think six weeks - sorry your Honour, but let me find out for how long the children were given it. I think it was six weeks, I may be wrong, maybe 24 weeks. For six weeks. Beginning eight to 12 hours after birth so the children were given it for six weeks. Now, ADT cannot function, cannot have any effect because it is very rapidly eliminated from the body. So it cannot have - even if we assume, which there is no evidence for that - the only way AZT to prevent mother to child transmission is to become from a pro drug the way that it is given to an active drug and this doesn't happen. Doesn't happen. There is no evidence for that.

Q. I'm sorry, I didn't understand that last sentence that you gave, would you mind repeating that.

A. Would you like me to explain it again?

Q. Just that last sentence.

A. AZT is given what is called a pro drug. That is given in a form which is not active, which is - it doesn't act against HIV, if we assume that HIV exists. It doesn't act as an antiretroviral. It has to be present in

mother to child transmission. It has to be triphosphorous-related and only then can it act, can have an effect and today nobody has presented any evidence that in the body AZT is transformed from a pro drug to an active drug. This is the first point. The second point, the children who are given the drug only is up to six weeks, and the drug is very rapidly eliminated from the body. So, if it will have any effect, it will have been only up to six weeks or even seven weeks, but if you look at the graph - at about six weeks, there was no significant difference between the two graphs. The difference starts to appear after the

six weeks. So, the effect must be something else other than AZT. Whatever it is it cannot be AZT.

Q. Just while that is being answered, let me take you to p.9 of that report.

A. Sorry?

Q. P.9 of the report.

A. Yes.

Q. There at the top of that page, the author really sets out, bottom line of their study: 'We found that administering Zidovudine to the mother during pregnancy and during labour and giving it to the infant for the first six weeks of life, reduced the risk of maternal/infant transmission of HIV by approximately two-thirds'.

A. Yes, that's what it says, but you don't know how it happened because it cannot happen.

Q. What cannot happen.

A. It cannot happen, AZT cannot act as an antiretroviral - it is not possible for AZT to act as an antiretroviral. That's the only way to stop - if you assume that it transmits - if you say that AZT stops, AZT it has to act as an antiretroviral. It is not possible for AZT to act as antiretroviral. As I said that is one, the second point is the significant difference between the placebo in the AZT starts after six weeks and it can't be because by then they stop giving AZT. So there might be

some other explanation, I don't know what but it cannot be AZT acting as an antiretroviral.

Q. Do you accept that on one interpretation of it is that the AZT has assisted in preventing the transmission of HIV from the mother to the child.

A. I don't interpret that. I won't give that interpretation. If it was so, if this interpretation was correct, then why don't continue to give AZT? AZT is never given as any mono therapy to anybody.

Q. What was that last answer.

A. Mono therapy. If it was so good, why are they given a cocktail or found an antiretroviral and not just AZT?

Q. Isn't it the case, as we have already been over, that the experts in this area, now diagnose a combination of drugs because of their belief that a single drug causes a person to build up a tolerance.

A. Sorry, single drugs cause?

Q. That a single drug - just giving someone one drug means that they build up a resistance to it and that's why the experts now prescribe a cocktail of drugs.

A. So if you have resistance, then you don't stop transmission.

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.AGC...00710 482 E. PAPADOPULOS-ELEOPULOS XXN

Q. Are you aware that AZT has been reviewed by the Therapeutic Goods Administration and approved for sale as an antiretroviral medication.

A. Not as a mono drug.

Q. It has been approved for the use in treatment.

A. As a combination, in combination with other drugs.

Q. Are you aware that this particular study stopped with those first results that I have taken you to, that is, when they have looked at that first group of women because there were such great concerns about the ethics of conducting a test like this when there was such a strong correlation between the AZT and the child not contracting HIV, are you aware of that.

A. They present a correlation here but, as I said, they stop many, many studies halfway through because they saw there is very good evidence, but after that they found no such evidence. In here they stopped the study. Not the first study. They did the same thing with Nevirapine, they had 90 - they went up to 90 people on the placebo and then they stop it. There was no evidence but they stop it.

Q. Isn't it the case -

A. This thing, that is what they do.

Q. Do you accept that as a result of this study and the results that came from it, bioethical concerns resulted in there being a decision internationally to conduct no

more double blind placebo-type studies.

A. Yes, they don't conduct, and that is the problem. If we listen to Sir Gustav Nossai, we should not rely on only one study, we should always have confirmatory studs. Not one but a few confirmatory studies and, if you like, I will read it to you. There should be confirmatory studies. You can't rely - even if this study was perfect and everything was as it is interpreted, and was all scientific data on which it happened, you cannot rely on one study you should continue to have at least a few confirmatory studies. Never happen with AZT.

Q. Let us go back to this issue we have touched on before

about the method by which a child was diagnosed as being HIV positive. If I can take you to p.4 of your report there is a heading 'laboratory methods'.

A. Yes.

Q. You will see it reads 'HIV cultures of peripheral blood miniscule cells and lymphocyte phenotyping were performed in certified laboratories according to published standard methods'. See it says that.

A. Yes.

Q. It gives a footnote, 22 or 23.

A. What page is it, could you tell me please?

Q. 12.

A. Yes. I am on p.14 - p.12, yes.

Q. And you see on p.12 there are the two footnotes referred to, 22 and 23.

A. References here? What I have in my page?

Q. Do you have p.12.

A. Yes, I have p.12. P.12 only references.

Q. Do you see the numbers 22 and 24.

A. Yes, I do see them. You said footnotes. They are given as references here.

Q. Aren't those the references that have been relied upon under the heading laboratory method. They talk about the standard methods and those are the two footnotes.

A. These are the references they gave, they are not footnotes. They are the references they suggest.

Q. What you glean from that is there was no antibody testing involved in this study, that is the approach that was used, immunophenotyping is a molecular approach by looking at nucleic acid.

A. Phenotyping has nothing to do with culture. Phenotyping has nothing to do in proving HIV infection. Phenotyping means separating the lymphocytes in different classes. That is what phenotyping is, nothing to do with culture or lymphocytes. Please give me - 23 you said?

Q. 22 and 23.

A. There it says 22, it says 'Standardisation on sensitive human immunodeficiency virus culture procedures and

establishment of a multi centre quality assurance program for AZT clinical trial group'. Has nothing to do with nucleic acids.

Q. It is a molecular approach.

A. It is not molecular approach. Where do you see molecular approach here?

Q. I put to you it is clear from that document that the tests relied on here for the children were not antibody tests.

A. I am not saying they were antibody tests.

Q. You were a moment ago.

A. It is the same reaction, it has nothing to do with nucleic acid, nothing at all. This here, they never use nucleic acid. This title means - does not even suggest remotely that they use nucleic acid and they did not. Culture is not nucleic acid - never nucleic acid. Never anyone will interpret culture as being nucleic acid tests.

Q. I want to turn back to now where we left off with the prostitute studies, slide 23. A8 is your PowerPoint presentation.

A. You mean -

Q. And slide 23, on the bottom left-hand corner.

A. Slide 24.

Q. 23.

A. 23, okay.

Q. In that slide you refer to a study that was done in Glasgow in Scotland.

A. Yes.

Q. Study that occurred in 1992.

A. Yes. I am sorry, can't find the paper. One second. Is this the one you gave us today?

Q. This is a paper that you have relied on.

A. Yes, yes, but that is one of the latest you gave us, that is what I am asking. I cannot see slide 23 here.

MS MCDONALD: I have no objection to someone assisting.

A. Unless they messed them up again. Okay, sorry.

Q. Do you have that now.

A. Yes, I do.

Q. That is a - it is not a particularly sensitive study, the article goes to a couple of pages.

A. Not a particularly sensitive study, an article that goes for a couple of pages, yes.

Q. The title probably explains what it was all about, that is, HIV prevalence among female street prostitutes attending a health care drop-in centre in Glasgow.

A. Yes.

Q. That is the document you relied on for what we see in number 23 in your PowerPoint.

A. Yes.

EXHIBIT #P32 PAPER 'HIV PREVALENCE AMONG FEMALE STREET PROSTITUTES ATTENDING A HEALTH CARE DROP-IN CENTRE IN GLASGOW' MARKED IN JOURNAL AIDS 1992 VOL.6, NUMBER 12, TENDERED BY MS MCDONALD. ADMITTED.

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Q. Let me remind you what you said when you put this slide up for us during of your evidence, p.158 line 31, in the middle of an answer because you show a number of slides and you spoke to the slides. You get to slide 23 and this is what you said 'Here is another study published again from England and it was 1992, in Glasgow. They divided the prostitutes into prostitutes who are using intravenous drugs and prostitutes who are non-drug

users. Of 127 prostitutes who were using drugs, six were found to be positive. Of 165 who are not using drugs, none, zero were, found to be positive'. You agree that was your evidence. It is a simple question: do you agree that was your evidence.

A. If it is there, it is true.

Q. Were you putting that before the court to say look there is some proof that HIV is not sexually transmitted between heterosexuals because when we look at the people who had it they were found to be drug users as well so there is an alternative explanation.

A. Yes.

Q. Let us just look at what this was actually about though shall we, this article. You see, wasn't this an article that was conducted in relation to women who were attending at a drop-in health centre in Glasgow.

A. Yes.

Q. And it starts off by explaining what they did or why they did it. It reads 'There is little documentation of the prevalence of HIV among women who work predominantly as street prostitutes in the United Kingdom. The establishment of a drop-in centre (DIC) for Glasgow's (Scotland UK) street working prostitutes in May 1998 by Strathclyde Regional Council provided a unique opportunity to determine the prevalence of HIV amongst this group'. So, are they there saying that because you have got these women going to this drop-in centre this is giving you the opportunity to have a look at this question, the issue.

A. Maybe.

Q. It goes on to explain the hours that the drop-in centre is open, run by a team of social workers, nurses and doctors employed by the Social Work Department and the Greater Glasgow Health Board.

A. Yes.

Q. It goes on to set out the services, a wide range of services are provided including condoms, contraception, injecting equipment, drug and HIV counselling services,

cervical screening, the treatment of a wide variety of medical conditions, especially cutaneous sepsis and trauma and comprehensive social welfare guidance and assistance'. You agree that is what is set out there.

A. Yes.

Q. This is hardly a random sample of prostitutes from the streets of Glasgow, is it, this is a group of women who are voluntarily attending a centre where they provide every service they possibly can to stop the transmission of HIV.

A. Yes.

Q. So, these are women who have been educated about

contraception and condoms, the subject of this study.

A. They were educated at the end of '98, not before that. If - and, more so, many, many, not only prostitutes, do not take any consideration of sexual education practices. There are studies - not in this study but there are studies where prostitutes and heterosexuals always do not carry much evidence or sexual education and gay men, on the other hand, before any sexual education, they realise what is going on and practice safe sex by their own initiative. So, yes, they are doing all these things there of course.

Q. This is a group of prostitutes who are choosing to avail themselves on a regular basis of services to assist them in not contracting HIV: condoms, counselling and the like.

A. Yes. Then in 1992, 1991 when the study was conducted, yes.

Q. Go over to p.154.

A. You mean the next page -

Q. To the ultimate paragraph beginning 'No new HIV infection was identified amongst women not previously known to be infected'. So there were no new cases identified. Do you agree that is what it says.

A. Yes, that is what it says.

Q. Considering HIV entered the IDU prostitute population no later than 1995 (5), this is very reassuring and is in

accordance with the low HIV prevalence, 1.8 per cent in 1990 found in a voluntary survey of Glasgow IDU, intravenous drug users, using a community-wide sampling strategy and also with the low prevalence rates of infection found amongst prostitutes having a named HIV test in Scotland during 1989, none out of 74 and 1990, one out of 86.

A. Yes. So there was no - even when no sex education, there never was any prostitutes having quality test.

Q. At that point in Glasgow in Scotland a very low prevalence rate of HIV.

A. Yes.

Q. Not talking about very big sample groups here, are we.

A. There always been non-existent so continuing to be non-existent. They were not there, when no sexual education, and were there when there - and were not there when sex education.

Q. I want to come now to the Philpot study, which is what you have relied on. That was a study conducted in Sydney Australia and was the subject of your PowerPoint slides number 25 and 26. In relation to this particular study, there are two slides.

A. Please one moment, yes.

Q. Two slides, 25 and 26.

A. Yes.

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.VJF...00711 489 E. PAPADOPULOS-ELEOPOULOS XXN

Q. Was the article you relied on an article named A Survey of Female Prostitutes At Risk of HIV Infection and Other Sexually Transmissible Diseases authored by Philpot, is that the one.

A. Yes.

EXHIBIT #P33 ARTICLE ENTITLED A SURVEY OF FEMALE PROSTITUTES AT RISK OF HIV INFECTION AND OTHER SEXUALLY TRANSMISSIBLE DISEASES AUTHORED BY C.F. PHILPOT AND OTHERS TENDERED BY MS MCDONALD. ADMITTED.

Q. At the top under the words 'Abstract' and 'Objective', it reads 'To determine risk factors for the transmission of human immunodeficiency virus (HIV), including injecting drug use (IDU), sexual behaviour and other sexually transmissible diseases (STDs) in female prostitutes who attended the Sydney Sexual Health Centre (previously STD)'. You agree that's what it says.

A. This case, I agree it's there, it's written, I'm agreeing.

Q. Under that there is the design, that is how many people were participating in the study.

A. Yes.

Q. And the main outcome was 'All the women were seronegative for HIV but a number of major risk factors for infection were identified'. You agree that's what it says there.

A. Yes, of course I agree, it's there.

Q. Then it goes on to set out some of the risk factors that may or may not have been present. We go to the bottom of that column, we come to 'Conclusion'. Do you see that.

A. Yes.

Q. The authors say 'In spite of behaviour change by some, there are still many women working as prostitutes in Sydney who remain seriously at risk of HIV infection. We recommend more widespread use of barrier methods of contraception, intensified efforts to prevent the sharing of intravenous needles, closer monitoring of the

health of prostitutes, and scientific study of their paying and non-paying sexual partners'. You agree that's what it says there.

A. Yes, I agree.

Q. Underpinning this whole study and article I suggest is the belief of the authors that HIV can be heterosexually transmitted.

A. They may believe, but we are presenting here their evidence, we are not presenting beliefs. I repeat in science we are repeating, we are saying what their finding is, not all their beliefs. They had zero and they said that means they don't practise safe sex. They still don't practise safe sex; that's what the study tells you, the prostitutes don't practise safe sex, and still zero of the prostitutes are infected.

Q. Can I take you to the column headed Introduction. About half way down there's a paragraph commencing 'Globally'. Here the authors refer to what's happening in the international arena. 'Globally, studies of female prostitutes continue to show wide variation in the prevalence of HIV infection. In Africa, and increasingly in Asia, female prostitution is a major conduit for transmission and a high proportion of prostitutes are infected. In Australia, most of Europe, and the UK, HIV infection in female prostitutes is mainly IDU related and has shown little tendency to

spread beyond identified high risk groups. HIV prevalence rates in female prostitutes are higher in the USA, but vary greatly from one locale to another. While risk levels vary with socio-economic status and racial background, there is still a strong association between IDU, prostitution and HIV infection in that country. Many women who have become infected have sexual partners who are injected drug users'. You agree that's what it says there.

A. Yes.

Q. They say a few things in that paragraph. One of those is that certainly in a number of countries HIV positive

results are commonly found in prostitutes.

A. They say IDU, intravenous drug users. They repeat it is intravenous drug users. No mention is made there of non-drug users.

Q. Let me take you to that passage 'In Africa, and increasingly in Asia, female prostitution is a major conduit for transmission and a high proportion of prostitutes are infected'. They are not talking about -

A. Who said there is no drug use in Africa and in Asia?

HIS HONOUR

Q. No, the sentence doesn't talk about drug use. It says 'In Africa, and increasingly in Asia, female prostitution is a major conduit for transmission and a high proportion of prostitutes are infected'.

A. There don't discriminate, one. Secondly, there is no study from Africa. As I said, we are not talking - we are saying all these people - we are discussing what is in the studies. In this study that's all the author said, in Australia there is no HIV infection in non-drug-using prostitutes, and that's what we are reporting. We are not - we cannot make assessments of their claims. It's one thing to claim and another thing to have evidence.

Q. In that sentence that I just read to you, they do give some bases for their conclusion. They refer to footnotes 4 to 6 which are three papers.

A. Sorry?

Q. They refer to footnotes 4 to 6 and if you go to footnotes 4 to 6 at p.388 there are three studies there on which they rely, one relating to Nairobi, another relating to India, and the third relating to Thailand.

A. These studies - I must admit probably I have them but I can't recall them, I can't remember what was in these studies, but no placebo control studies or blind control studies - not placebo, sorry, blind control studies in Asia or in Africa. There are very few studies we have. There are two from Uganda on heterosexual transmission and they are sure there is no heterosexual transmission,

so there's no evidence. I wish prosecution will come up with a study, I wish they will come up with a study, and that's what they should do if they want to prove us wrong. If they want to prove our conclusion wrong, they should come up with studies which are random control studies and show transmission. We are expecting - we have been asking for this, and I would be very glad if you come up with such studies.

XXN

Q. Don't you think there might be some bioethical consideration surrounding double blind control placebo studies in relation to the transmission of HIV.

A. Sorry, I correct myself, I say you can't do placebo studies in sexual transmission, but there should be studies, control studies, and there are not any. Please give us, we've been asking. Since the moment we have started publishing on HIV and AIDS, we were presenting our evidence and always asking for someone to prove us wrong. We've been asking. We never said 'Here it is, we're the truth'. Always said 'Please come with evidence and prove us wrong'. To date nobody has come with any evidence on any of our claims to prove that we are wrong. We are asking for this.

XXN

Q. Do you think it might be difficult to find people to volunteer to participate in a double blind study on the

transmission of HIV.

A. Then you don't have a study, then you cannot prove. You got to have these studies. If you don't have studies you cannot prove.

Q. Let's go back to that passage.

A. Sexual transmission is very easy to prove.

HIS HONOUR

Q. It's not so easy to prove, is it. Let's take, for example, a group of prostitutes. It's not so easy to prove because many of them would be using intravenous drugs. There may be a number of other reasons why they may contract HIV if HIV exists.

A. Your Honour, it would be very hard to prove sexual transmission because these women may lie. The women may lie, they may have other reasons for being infected, but when you come with proof of transmission, then that is what we need. If you claim sexual transmission, you may or may not have it because people can lie.

XXN

Q. So when a result goes against you on one of these studies and someone who is not in a risk group is diagnosed as being HIV positive, your answer to that is they must be lying about something.

A. No, I am saying give the study, we want that study, please give us a study. We would be very, very glad to have a study which proves sexual transmission. Please do. In gay men or heterosexual, please come with such evidence.

Q. Let's go back to the study you relied on to advance the proposition that HIV is not heterosexually transmitted.

A. That's what we are doing.

Q. No, I will ask the question and if you would respond please.

A. Sorry.

Q. Going back to the passage at p.384, the first page, the same article we've been looking at.

A. Philpot.

Q. Yes. The first page right on the front cover, p.384,

the heading on the top on the right-hand side is Introduction. Then I took you to the passage that starts halfway down with the word 'Globally'. What I put to you is that there the authors are relying on studies from other countries in the world to suggest that in those countries female prostitution is a major conduit for transmission, and the authors there, if you read on, are distinguishing between these countries and more western countries like Australia and Europe where there does seem to be more of a link between intravenous drug use and the presence of HIV, so they are clearly drawing a distinction in that paragraph. Do you agree

with that.

A. You mean they make a distinction between Africa and the western countries?

Q. They make a distinction here between Africa and increasingly Asia as compared to Australia, most of Europe and America.

A. Can you tell me how an infectious agent can discriminate between black and white or black and Asians and Australian and Asians, how can you discriminate that?

Q. I'm asking you a very simple question here if you just listen to the question.

A. Yes.

Q. Do you accept that the authors in that passage are making a distinction between two different groups of countries, those that you can look at like Africa and Asia where you can see that there is this apparent link between prostitution and HIV and the second group where there seems to be a greater correlation with intravenous drug use.

A. They do.

Q. This study occurred in Australia between 1986 and 1988, didn't it.

A. Yes.

Q. So that was right back at the beginning of what was known as the AIDS epidemic.

A. Yes.

Q. What can you tell us about the demographic of people who were being diagnosed as being HIV positive in those very early days, what part of the community was it.

A. Mostly gay men, like they are today as well, but gay men and heterosexual men frequent prostitutes so again if anyone should be infected, it should be prostitutes and we don't have it.

Q. You just put to the court that gay men frequent prostitutes. Where do you get that from.

A. You had the one before, the London study, exactly what they show, the English study where they show that's what they do, one-third bisexual or gay men classified as

bisexual or gay men. We are not much more different.

Q. You have no evidence that gay men in Australia are more likely to frequent female prostitutes.

A. They do in England so what's the difference here?

Q. Let's go back to here. Isn't it the case the demographics of the people who were being diagnosed as HIV positive in the time that this study was being done was predominantly gay men.

A. Yes, and still gay men.

Q. And the demographic has varied across the world, some countries there are more women who are infected than other countries.

A. That's what I am saying. We say in Africa and in Asia there is a vast epidemic of HIV infection because of heterosexual sex, and in Australia we don't have it. For why? This is after 25 years of AIDS. Surely there can't be only one explanation for HIV to discriminate between Asian and Africans on the one side and Europeans, Australians and white Americans in the USA. That's the only explanation.

Q. There are plenty of women now in Australia who have been diagnosed as HIV positive.

A. There are.

Q. You accept that basic proposition that in Australia at present there are plenty of women who have been diagnosed as being HIV positive.

A. What do you mean by 'plenty'. Plenty 10, plenty 20, plenty 100, plenty 1,000 or 100,000. .

Q. Many.

A. 'Many' can be, if my English is right, anything more than five.

Q. Let me ask you this then: what's your understanding of how many women in Australia have been diagnosed as being HIV positive.

A. I don't know.

Q. In excess of 100.

A. I don't remember. That's why I'm asking what do you mean by 'many'.

Q. I will find you a figure.

A. I will give you England because I am aware of what's going on in England. Up to a few years ago, I think it was 2003, something like that, plus or minus one, there were only a few hundred, only a few hundred, I think it was 103 men, 103 women, a few hundred of British born people who were diagnosed as being HIV infected from heterosexual circumstances. All the rest, thousands and thousands were either Asian or Africans, so again either were migrants or born in England. It means that this virus somehow not only discriminates between continents but discriminates between races in the same country. Can't be; infections do not discriminate.

Q. Do you accept the proposition that globally, internationally and in every region of the world more adult women than ever before are now living with HIV. Is there any region you want to look at, anywhere in the world, there are more women now living with a diagnosis of HIV than was previously the case.

A. Of course. We are doing more tests, and the more tests we are doing - they are antibody tests. No antibody test is 100% specific.

Q. Let's go back to this article.

A. Where are you going now?

Q. Back to Philpot. That particular study on female prostitutes occurred at a time when HIV was very much

limited to the gay community, the male gay community in Australia.

A. We agreed on that.

Q. You are not really going to find a lot of female prostitutes who are HIV positive in those circumstances.

A. If you find it anywhere you find it in prostitutes. I say two reasons, one because they are very promiscuous, and two because they are frequented, they have clients, gay and bisexual men.

Q. There's nothing in this study to support that proposition in relation to these findings, is there.

A. I said this is not a study. I am referring back to the

study we discussed just half an hour ago, whatever.

Q. Let's keep moving through this article. The last paragraph reads as follows, last paragraph on the front page 'A recent review of the literature on women and HIV makes three major points. These are: (1), worldwide the vast majority of AIDS cases arises from heterosexual transmission; (2) in the non-westernised world women and men are infected in almost equal numbers, while in the West women represent an increasing proportion of new cases; and (3) there is some evidence that transmission occurs more readily from men to women than vice versa.

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Co-factors for transmission to women include other STDs, anal sexual intercourse and possibly the use of the oral contraceptive pill.' That's what the authors of this report say.

A. Yes.

Q. So yet again another article that you have relied on in which the authors have a completely contrary view to yourself.

A. There was a - these things suggest - they don't say 'prove', they don't have evidence. We are looking for evidence. We are not looking for interpretation, I repeat it again and again. These authors here interpret the equal number in Africa and in Asia of men and women testing positive as proof that this heterosexual is transmitted and yet this is a point - this is a finding, not just a point, this is a finding which Padian has severely criticised. You cannot conclude from the fact that in Africa we have the same number of men and women testing positive as proving that there is HIV and this test prove HIV infection and HIV is heterosexually transmitted. This is not mine, these authors here choose to interpret differently but we are looking for data, for evidence, not for interpretation.

Q. Let's look at some more data which you have chosen not to put before the court, p.386.

A. The same article?

Q. Yes.

A. Yes.

Q. When you were telling the court about zero, no, none of these women were found to be HIV positive did you think to present a balanced perspective, that you might mention the topic of condom use.

A. I said this woman were not found to be positive. What balanced - this is what is reported. There are no women positive. What can I say? How can I balance it or unbalance it? They say there was no woman infected.

Q. Let's go to what they say was the situation with condom use. Bottom paragraph of the left-hand column on p.386,

heading 'Condom use', see that.

A. Yes.

Q. 'Nearly all prostitutes engaged in oral and vaginal sex with their clients. A majority, 160 out of 231, 69%, use condoms all the time for vaginal sex.' There's reference to the table. 'But less than half this number use condoms for oral sex as well. Most of them reported they were not engaged in anal sex with clients giving as a reason the risk of HIV infection. Nevertheless 21 or 9% of women said they did sometimes engage in anal intercourse with clients and three of those said infrequently. 14 of the 21 never used condoms for anal sex and only one used a condom on each occasion whilst the remaining used condoms infrequently.' They then go on to talk about these women's behaviours with their own sexual behaviours. You agree.

A. Of course I agree, it is there.

Q. It's part of the process.

A. Sorry, sorry, I agree.

Q. So this isn't again a random sample of educated people. This is a group of women, of prostitutes, in the mid 80s when the virus was very much limited to the gay community, who, on many occasions, were actually practising safe sex.

A. Yes but not all the time. Look, let me - I think we are going, your Honour, again and again with this thing.

All we want, all right, we have this - we have presented this studies. We have presented evidence from there, we did not present interpretations. Now, let's have a few studies. Certainly one study and a few confirmatory studies where there is evidence of heterosexual transmission with prostitutes or any other heterosexual group and then we will stop arguing. I don't know why we continue arguing and pick here and there on things which are not evidence. They are not data, so let's have some data. If you want to prove us wrong, please give us some evidence. Give us one study which proves sexual transmission and a few confirmatory studies and

then we will have no argument.

Q. Do you appreciate that your role before this court as a witness is not to run an argument but it is to assist this court with the benefit of your expertise.

A. Yes.

Q. And that involves presenting the evidence both for and against your position in a balanced way.

A. There is no evidence, we cannot find any evidence which prove heterosexual transmission, so please give it to us.

Q. Have you attempted at any stage to present your Powerpoint slides in a balanced way that gives the court the evidence both for and against your argument.

A. I haven't got data. We have interpretation but we have not got data. If we can find some data, if you can give us the data, then we totally agree. Give us data please, not interpretation.

MS MCDONALD: I am about to move on to a new study now. Is that an appropriate time?

HIS HONOUR: Yes, we will have a 10 minute break now.

ADJOURNED 3.35 P.M.

RESUMING 3.45 P.M.

Q. I want to move on to what you referred to as the Filipino female commercial sex workers study, 27. If you go to 27, on A8. Do you have that.

A. Yes.

Q. That relates to a study of the Filipino female commercial sex workers, correct.

A. Yes.

Q. So another study that you have relied on on this topic of HIV transmission to prostitutes.

A. Yes.

Q. The study that you relied on was that one that was headed 'Natural History of HIV Infection in Filipino Female Commercial Sex Workers'.

A. Yes.

EXHIBIT #P34 ARTICLE ENTITLED 'NATURAL HISTORY OF HIV INFECTION IN FILIPINO FEMALE COMMERCIAL SEX WORKERS' AUTHORED BY CORAZON R. MANALOTO TENDERED BY MS MCDONALD. ADMITTED.

Q. Before we get to the details of what you told us about this study and about what the study says, do you agree epidemiological studies have shown that attempts to prevent the spread of HIV have been more effective in the Philippines than many other areas of the world, in particular other areas of Asia.

A. No, there is no such evidence.

Q. You haven't heard of that before, you are not aware that that is a view.

A. No.

Q. That that view is -

A. First of all, you have to have evidence for transmission. It is a scientific fact. I'm sorry but I can't go beyond it. To claim that something is inhibited by or prevented you have to have, first, evidence that it is happening. Then you prevent it. So first you have to have evidence for happening. Sorry, but that is science.

Q. Do you accept that the prevalence of people who test positive to a test for HIV is much less in the Philippines than it is in other areas in Asia.

A. The studies from everywhere in Asia are very, very scarce. So I cannot see from anywhere else, better evidence. So it's no better, no worse than anywhere else in Asia.

Q. Let's go to what you have told us about this study, p.159, line 21, and you said this when we got to slide No.27. 'This slide was conducted in the Philippines. They were testing from 1985 to 1992. They tested 53,903 prostitutes. 72 were found to have ELISA and "a confirmatory western blot". First of all, there are a few things to be said about this finding. The 72 prostitutes out of 53,903 tested is so small that no

test, even if the test was nearly one hundred per cent specific, you will find 72 to have false positive. Secondly, as the authors wrote, "All infections have been acquired -" they said, "- through vaginal intercourse with heterosexual men. Intravenous drug use was denied in all cases." Just because they denied, that does not mean that it was not happening. Furthermore, they said that "The majority of seroconversions occurred prior to 1989 and the rate declined significantly after 1987". One wonders if this has anything to do with the changes of criteria of the zero positive test.' So you agree that was your evidence in this court.

A. Yes, yes, I do.

Q. A few things about that. This was a test in which a number of people were tested and 72 were found to test positive.

A. Yes, over 50,000 cases and only 72 found positive. If you take a random heterosexual population in Australia even if - or anywhere else where no HIV has ever been introduced by any means, you will find that percentage of people testing positive even if the test is near, is near one hundred per cent specific.

Q. So your response to that positive finding of 72 people, that they have positive results to the HIV test, must be a false positive or perhaps maybe they are lying, maybe

they are intravenous drug users.

A. Even if HIV exists, if the existence of HIV tests are nearly one hundred per cent specific you will still find 72 out of out of 50,000 people tested to have a positive test, no matter what criteria you are using.

Q. Let's go to the study itself. On the front page, front cover heading 'Summary', see that.

A. Yes.

Q. 'A prospective follow-up study of the progress of HIV infection from seroconversion to onset of opportunistic infections (0I) indicative of immune deficiency and to death was performed in a cohort of 54 HIV-1 antibody

positive Filipino female commercial sex workers. The cumulative probability of having a CD4 plus T cell count of less than -' there is a figure there 200\mm to the factor of 3, and it goes on. I won't read all of that out. You agree that summary sets out what the article is about.

A. What are you talking about? I don't understand.

Q. It's the purpose of the summary, to summarise what this is about.

A. Yes, they start by saying that the cumulative probability of having a CD4 count of less than 200\mm, small 3 and/or an OI or indicative of severe immunodeficiency or 52.9% within five years. In 73.8% with six years after sero conversion. Yes, give us - you had a probability.

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Q. The authors go on to discuss the situation in Asia. Then the authors of the report -

A. Sorry, but I don't understand what, why, the way you read this, how you interpret it.

Q. You're here to answer the questions.

A. Sorry.

Q. I'm asking you another question. Do you agree that the authors then go on to talk about the situation in Asia, and they say, starting in the passage immediately under the summary 'Although more than ten years have passed since the first reports of HIV infection in the western hemisphere, introduction of the virus into South-East Asia has been a recent event'. Do you agree that is what is set out.

A. Yes, I do.

Q. And for that proposition, they refer to three different studies, or there are three to six in the references.

A. Yes. Yes, I agree.

Q. So at the time this study was done, that is in 1994, the introduction of this virus in South-East Asia was still very recent.

A. Was still very recent.

Q. And don't you think that might impact on the number of people who test positive for HIV in a study group.

A. In time they decrease, they do not increase. During the time they decrease.

Q. Then other countries are canvassed. If we go over to the next column, the paragraph commencing with the words 'The first case of AIDS', do you see that.

A. Yes.

Q. 'The first case of AIDS in the Philippine archipelago diagnosed in 1984 was a male homosexual who acquired the infection abroad. Ten years later -' so at the time this report was done '- 459 HIV1 infections have been reported, of which nearly 100 have been diagnosed as AIDS'. That's what it says there.

A. Yes.

Q. So when you're talking about 72 people being found to be

positive to the test for HIV in this study, you're talking of 72 people in a country in which the total number of diagnoses has been 459.

A. In gay men. In homosexual men.

Q. Let's go back to the article. It doesn't say that's in homosexual men. It says the first case that's reported was a male homosexual ten years later.

A. Yes.

Q. 459 HIV1 infections have been reported.

A. Yes.

Q. Where does it say that's all homosexual men.

A. It doesn't say, but - all right, let's say there were 400 heterosexual - or total. Now, they are not testing that. They are not testing. The test became widespread after. Without testing we don't know how many have been found. People were not being tested for HIV.

Q. Isn't the bottom line this, that when you said it was 72 people out of a sample of 53,903, that sounds a lot different to actually saying in fact in the whole country, out of the whole population, there have only been 459 diagnoses -

A. Sorry, but the whole population was not tested. We don't know how many of the whole population, of how many millions, I don't know how many there are, how many have been tested. You have to have - to compare the same thing, we have to know how many people have been tested

and how many were found positive.

Q. Let's go to the next page under 'Study Population'. Under that heading, on p.1158, it sets out the group that were studied and in the second paragraph it reads '72 HIV1 infected Filipino -' must be commercial sex workers '- were identified during this study. All infections had been acquired through vaginal sexual intercourse with heterosexual men. Intravenous drug use was denied in all cases.' That's what it says there.

A. Yes.

Q. So to the authors of this report, based on the data which they had - I mean, they conducted this study - 72

examples of vaginal sexual transmission of HIV.

A. But they qualify them, qualified that the woman denied having drugs. They denied, they don't say that the women didn't get drugs. The women denied having drugs. As I say, even if they didn't have drugs, if they had no HIV Filipino, not at all, not one, by then, if you test 52 or over 50,000 people with antibody test, you are bound to find there one per cent infected - sorry, not infected, testing positive. The tests are not specific. No antibody is 100% specific. So I don't know why we spent so much time on this study.

Q. You're the one who relied on it in your PowerPoint.

A. This study shows that there is no sexual transmission, no proof of sexual transmission.

Q. So is your evidence to this court that this study shows that there is no sexual transmission of HIV.

A. No, sorry, we're not basing our - we go through all the studies we could find and this is - some of the studies, this is a cross-section of studies. Even in my presentation, your Honour, I said we agreed to a study, a cross-section of studies, and I gave in fact a slide what we mean by 'cross-section of studies', and I did say that from cross-section of study you cannot get reliable information. So we put this cross-section of study so that people will know that we went through them. We did study as much as we could to find out

what's going on. The only reliable studies, as Gallo said, are the prospective studies, and we discuss every single prospective study which has been published in heterosexual and the studies do not prove heterosexual transmission. They show that it is present with heterosexual transmission. This is the London study, this is the Padian study and this is the Da Vinci study. There is no evidence.

Q. Can we just go back to the question and the evidence that you just gave in this court a moment ago. Did you just tell this court that this study, the Filipino female commercial sex workers study, prove that HIV is

not sexually transmitted.

A. We do not have - the evidence does not prove sexual transmission.

Q. You went one step further than that in your answer, didn't you. You told this court that this study proves that HIV is not sexually transmitted. Those were your words.

OBJECTION: MR BORICK OBJECTS.

MR BORICK: I don't think the witness said these studies.

HIS HONOUR: She might have said something like that, but I didn't interpret her evidence as saying that. I think I interpreted her evidence, because I take the position that at times Ms Papadolulos's expression is not entirely, because of the language difficulty, that I took her evidence as being that this study does not establish that HIV is sexually - if it exists, is sexually transmitted because of the criticisms she has of it. She says it is 72 out of 50,000 and there can be explanations for that and, in her opinion, it doesn't establish the position.

MR BORICK: I am satisfied with that.

A. Thank you, your Honour, but even -

HIS HONOUR: Let's wait until the next question. Ms McDonald, I don't think the question was unfair, but I think that is how I have interpreted it.

MS MCDONALD: If that is how your Honour has interpreted it, I won't quarrel with that.

XXN

Q. Do you even concede that on one interpretation of this study, the author's own interpretation, that this supports that HIV can be sexually transmitted.

A. It can support, it can support. I say why? In fact, that's what I was going to say, sorry, your Honour to interrupt. They say 'Natural History of HIV Infection in Filipino Female Commercial Sex Workers'. So they take it as granted that this study shows heterosexual transmission of HIV. I'm sorry, but this study cannot

be interpreted - I am repeating cannot - the evidence from this study cannot be interpreted as proof of heterosexual transmission of HIV.

Q. So the authors who actually conducted this study, developed it, watched it and report on it, have got it wrong in their interpretation.

A. I'm saying what is the data? The data shows that only .01% of women tested positive. With an antibody test, we would expect that so many tests - so many women to test positive, even if none of them is infected.

Q. This is in a country in which the HIV epidemic has only just begun.

A. I say that they interpret. You say that the HIV epidemic did not start, and yet they say that they prove, that this study proves heterosexual transmission, that's what the point is all about. On the one hand, you say that HIV epidemic didn't start by then in Filipino - in the Philippines and, on the other hand, you say that this study proves sexual transmission. I'm sorry, but this cannot be.

Q. Can we turn to the next study then in the sequence, the European study group, and there are a number of these. The first one is 1989, and that is referred to at slides 28 and 29. Do you have that.

A. Sorry, the study. I'm looking at the slides. I can't find it, but doesn't matter, I know the study, so ask me

what you have to ask me.

Q. Do you have the PowerPoint presentation in front of you.

A. Yes, I do.

Q. What I'm directing your attention to are the two slides, 28 and 29. Do you have those.

A. Yes.

Q. So you are there talking about a European study group.

A. Yes.

Q. The paper you relied on for this part of your presentation was a paper headed 'Risk Factors For Male to Female Transmission of HIV' by the European study.

A. Yes. Yes, please, go ahead.

Q. So that was a study you relied on for those two slides.

A. Yes.

EXHIBIT #P35 PAPER TITLED 'RISK FACTORS FOR MALE TO FEMALE TRANSMISSION OF HIV' DATED 18/2/1989, VOLUME 298 OF THE BRITISH MEDICAL JOURNAL, TENDERED BY MS MCDONALD. ADMITTED.

Q. Do we take it from what you have extrapolated from that report and put into your two slides that your position is that this study supports your assertion that the only way that a person can become positive for HIV is through receptive anal sex. Is that the point of referring to it here.

A. That's what they say.

Q. Let's go to what they say then, shall we. P.1, first page, there was a particular objective in this study, wasn't there, and that was to identify risk factors for sexual transmission of HIV from infected men to their female partners; correct.

A. Yes.

Q. It was a cross-sectional study; risks were assessed by comparing couples in which transmission had occurred, the woman became infected, and those in which had not, woman not infected. Do you see that.

A. Yes.

Q. And with the participants, there was 153 males and 155 female partners. Conclusion, at the bottom of that

column, 'The risk of sexual transmission of HIV from an infected man to his female partner varies considerably according to the characteristics of the couple. The differences in rates of transmission in high risk groups may be considerably reduced if the risk factors are taken into account during individual and public health counselling'. Now, that doesn't support your proposition that this article supports you in saying that anal sex is the only method of transmission.

A. There is nothing here what you read me that says that the conclusion is not correct, our conclusion is not correct. Nothing here, can't see anything. This is

risk factor, determining what is the risk factors.

Q. What the authors are saying in their conclusion about all of this, this work they have conducted, they have been involved, is the risk of sexual transmission of HIV for an infected man to his female partner varies considerably according to the characteristics of the couple.

A. Yes, I agree with that, that's what it says, I agree. It don't say nothing about sexual acts, nothing.

Q. Let just go a bit further, next paragraph, 'Introduction': 'In Africa the main route of transmission of HIV is by heterosexual contact'.

A. Yes, that's what it says, but they don't present the evidence.

Q. Again, they do. There is a reference there, No.1, and an article by Quinn and others, 'AIDS in Africa, an Epidemiological Paradigm'. They didn't just pull it out of the air.

A. That is not a prospective study. If it was a prospective study, all would have been reported on that. That is not a prospective study.

Q. Can I just ask you this general question -

A. Please let me have a look.

Q. I want to ask you a general question that is not related to the study.

A. Yes.

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Q. Are you listening to me.

A. Yes, I do.

Q. Do you accept the epidemiology has an important and valid role to play in science.

A. Epidemiology cannot prove or disprove anything. Epidemiology can only prove correlation but cannot give you scientific proof.

Q. Isn't it the case that as a scientist, you look at all the available evidence, you look at scientific studies, you look at epidemiology, you look at biology, virology, immunology and then, from the combined effect of all the information, you draw your conclusions.

A. You cannot have an epidemiological study of HIV if you have not got virological evidence for its existence. Professor Gallo would be the first one to tell you that you cannot prove the relationship between HIV and AIDS and claim scientific evidence or proof by epidemiological study. I think that is what it is in his statement.

Q. It is your evidence that studies that show that HIV strains have been traced between sexual partners, or found clustered together in a group who live together or have sexual contact, isn't valid legitimate information relevant to this issue.

A. No, no, that is not scientific proof. I am sorry, it is not. You can beg to differ. It is not proof. You

can't have scientific proof for HIV unless you have virological evidence for its existence. You can't have proof of this transmission, unless you have it first. It is as plain as that. Epidemiology cannot prove it. It can change you once you have HIV, it can give you an association, yes, I totally agree with you. You can start from there but, first, before you have to have the virus and epidemiological studies can be so biased that evidence from epidemiological depends how you design them, what answers you are going to get. That is why - and again Professor Gallo will agree on this - unless you have prospective studies, you can forget all the

cross-sectional studies. You can't have retrospective - you cannot have cross-section - you have to have prospective studies.

HIS HONOUR

Q. What do you mean by 'prospective' studies.

A. Prospective studies is, for example, like they have in the Dax studies, one of the best studies, epidemiological studies. In fact the study is so good, there was no need for any other epidemiological study anywhere in the world, that study in gay men. That study gives us everything we want to know. That means you get, in the Dax study, they started with 5,000 gay men and when the study started in 1984, they examined the gay men for diseases, people who are positive and people who are negative. They tried to find something to discriminate between the ones who are positive and the ones who are negative and then the study has been ongoing and you're trying to find out what are - for example, from the positive tests - what are the risk factors for acquiring a positive test and you follow the patients all the way and then you know the patients, you interview the patients every six or so - I don't know - they change the intervals and then you find out then what happened before. They tested the patient six months before and they tested them again six months after and they found some to test positive, so they

tried to find then what happened in the interval of time: what are the risk factors, what they are doing which may have led to this positive test. That is a prospective study - you follow the study. In cross-sectional studies, you go into a room here, you find - shall we say in a ballroom - five couples there and you test them on the spot and you find some of them will test positive and some will test negative and you'll find couples there where both partners will test positive. It is impossible to say who transmitted the virus to whom or if there was a third partner who transmitted it to both of them if HIV exists. That is

cross-sectional. Retrospective studies: you find some people - you have their blood, for example, and you test them 10 or 15 years after or five or two years after and then you go and ask them. You ask questions and try to work it out from there what happened. Epidemiology, as I said, Professor Gallo will be the first to admit that the longest study that you can get information from is the prospective studies.

XXN

Q. Going back to one of the studies that you have relied on and that is the one we have been looking at, the first of the European studies, 'Risk factors for male to female transmission of HIV', and I have taken you down to the bottom paragraph on the left-hand side heading 'Introduction'. I read to you the first sentence about Africa, the main route of transmission is heterosexual contact.

A. Yes.

Q. The authors go on to say 'In Europe most cases of AIDS still occur between heterosexual men, nevertheless, the sharp increase in the number of cases of AIDS among European heterosexual intravenous drug users is a key link to the spread of HIV to the heterosexual population and to children, through transmission from their mothers'. They're saying that spreading to the heterosexual population, in Europe, that that is linked

with intravenous drug use and also it has been passed on to children, through transmission from their mothers. I take it you disagree with that last proposition.

A. I'm not disagreeing, I'm saying there is no evidence. The European studies, they have all done their best to prove heterosexual transmission.

Q. The authors go on to say 'Since 1983 both male to female and female to male transmission of HIV has been well described'. 'Well described', 'male to female' and 'female to male' and they cite the study they rely on.

A. I am not saying they are lying, I am saying what is the evidence? Let me repeat what the European study has

shown. This is the cross-sectional part. They have also a prospective study. In that study they have shown that only four men were found to have acquired HIV from heterosexual sex and this was questioned by the Professor Dax and she wrote to JAMA and said 'This is not proof of heterosexual transmission'. You have so few cases of men. They could well have lied, that is sufficient to destroy all your evidence and she admitted that the European study does not prove heterosexual transmission. She admitted that there is no proof from the European study for heterosexual transmission but, she said 'Everywhere in the world they say it is heterosexually transmitted, so it must be'. Why are we wasting our time? It is in the European study, the same authors. They have admitted that the European study did not prove heterosexual transmission. It is not me, it is them. They have interpreted it that way.

Q. The bottom line of the study is this: the authors agree that anal intercourse - that is being the receptive partner in anal intercourse - increases the risk of someone then diagnosed as being HIV positive but nowhere does it suggest that that is the only way that HIV can be sexually transmitted.

A. Never did any other sexual - they said anal intercourse was the risk factor but they don't tell you if there was any other risk factors.

Q. They say that anal intercourse was the only sexual practice related to high rates of transmission. Of the women who engaged in anal intercourse, 52% were infected with HIV, versus 16% of those who then practised anal intercourse. There's a difference, but 16% of women who never practice anal intercourse, who were partnered with HIV positive men, were diagnosed as being positive.

A. But they did not tell you, as I said, that this woman may not have any other - and this is the cross-sectional study. They did not tell you if there is no other risks. This is a cross-sectional study. In the prospective study, that is only the standard which we

can accept the evidence and there - I cannot repeat it - they conclude, she accepted that they don't have proof for heterosexual transmission. It is not my interpretation, it is not our interpretation, it is not a group interpretation, it is her interpretation.

Q. Let's go back and look at what the authors had to say about what they did, in terms of excluding other risk groups and it comes under the heading of 'Patients and methods'. On the first page, the front cover, headed 'Patients and methods' on the right-hand side, and I want to go to the second paragraph beginning with the words 'participants'; do you see that.

A. Yes.

Q. They go on to explain what they did, don't they. 'Participants are interviewed individually on entry to the study and contact partners, negative HIV antibody, are followed up every six months. In most cases described here, 130 out of 155, both partners were interviewed on the same day. To ensure consistency, the number of interviewers is limited to one or two in each centre. Subjects are questioned about risk factors for HIV infection, history of sexually transmitted disease in the previous five years and number of sexual partners for various periods', and it gives some examples: 'lifetime' and 'five years' and so on. 'Contraceptive behaviour (including the use of condoms) and sexual

practices before and after diagnosis of HIV infection in the index patient are also investigated, current HIV antibody sustained is determined by enzyme-linked immunosorbent assay - ELISA and confirmed by Western blotting - or radioimmuno precipitation in the laboratories of the participating symptoms'. Do you agree that that is part of how they describe how this study was approached.

A. Yes.

A. Yes.

Q. I'm just going to jump ahead - if you think that there is anything that we need to refer to in the passage in between - to the word May. 'By May, 224 couples had been involved (161 male index patients with their 163 female partners). An index patient of two partners was considered to be two independent couples. Eight women who had a risk factor of HIV infection other than sexual contact with the index patient were excluded. Seven of these women had used intravenous drugs in the previous five years and one reported a previous regular heterosexual partner that originated from South Africa'. The people who had another risk factor like intravenous drug use, sexual relations with a West African, did not form part of the study.

A. The ones which omitted this is a cross-sectional study. I cannot - I cannot repeat - again this is - the input here is on their cross-sectional study. When they reported in 1994 on their prospective study - and that is the study which they summarised all their evidence and which is the most reliable - that is the study which you should address.

Q. Let's go back to what you told this court. A moment ago you were telling us that the explanation for the 16% of women who became HIV positive was that the -

A. How many women were there, sorry?

Q. Would you just let me finish the question.

A. You do.

Q. A moment ago you told this court that the reason that we couldn't rely on the 16% of women who become HIV positive, 17 out of 107, who never practised anal intercourse, because the authors of the report had not excluded people with the risk factors. You have now changed your position on that. Are you now saying that 'those people were excluded so I guess they must be lying, those 16%'.

A. It was a conclusion - I don't know, I did not study this, they concluded that it was anal intercourse and it

was a risk factor, it was not my conclusion.

Q. Is your response now, having been alerted to the fact that, in fact, people of other risk factors were excluded, that the 16% must be accounted for by people like -

A. You have to count it by some other way including that they may have lied. There are many women who don't admit not only to drug use but they don't admit to practising anal intercourse, so I don't know.

Q. You just put to the court -

A. But the words, themselves, say it is anal intercourse, not me.

Q. You just put to this court - I'm talking about that 16%, you have to account for it in some other way. Isn't the fact of the matter that 16% of people are telling the truth of never having practised anal intercourse and they were given HIV, through vaginal intercourse, through their partners.

A. No, they - they don't claim to have that evidence. They don't claim to have that evidence. As I said, Di Vincenzi admitted that they have not got proof for heterosexual transmission. The study did not prove heterosexual transmission.

HIS HONOUR

Q. If I refer to your slide No.36 and I assume that's the one that you are referring to, Di Vicenzi, where they

agree with Dr Brody.

A. Yes.

Q. Is that the one that you are referring to.

A. Yes your Honour, yes.

Q. They agree that their perspective analysis lacks power showing risk associated with anal intercourse and then they go on to say 'Indeed, we found such an association in the cross-sectional analysis'.

A. Yes, which is the study that we are talking about now, 1998. However -

Q. Yes, I understand.

A. It is their conclusion. She agrees with Brody and

Brody, may I add your Honour, is one of the people who has studied, extensively, heterosexual transmission and he has written books. He has published many papers and, in fact, last year or the year before, he and his colleagues presented evidence to the United Nations that there is no proof that the epidemic in Africa is caused by heterosexual transmission of HIV.

XXN

Q. Just one other final topic arising from this study. We have not really dealt with this particular topic for long. It is your evidence that in terms of a person being diagnosed as being HIV positive, through receptive anal intercourse, one of the risk factors is the frequency of the receptive anal intercourse.

A. Yes. In fact, it is the frequency, the most - one of the most important factors apart from practising anal intercourse, the frequency is important.

Q. Isn't it the case that it is also widely accepted by HIV experts that the state of a person's condition, that is, the state of the person who is HIV positive, may impact on whether or not they are likely to transmit the virus to another.

A. There is no study, there are no studies which prove it. There are studies that claim that, but no studies to claim that. However, I think by logical reasoning, to use the words 'the HIV expert', may suggest that,

because the semen - and we have evidence of that - the semen of AIDS patients is much more oxidised than of a healthy person and because it is oxidised, the proteins are changed and these proteins, when they are absorbed into the body, the probability exists. It will cause more anti-bodies than another semen from a healthy person, so yes it is possible, it is possible, I don't know if there is evidence or proof. We could not find any proof but it is possible.

Q. So you say -

A. Sorry. That to have - there will be a higher probability for being positive but not because of HIV.

Q. What do you mean when you say 'a person with HIV has semen that is more oxidised'; what do you mean by that phrase, 'more oxidised'.

A. All the - oxidisation means lack of electrons, that's what oxidisation means.

Q. That's how you are using that word.

A. Lack of electrons or addition of oxygen, that's the definition of oxidisation. One moment please, we predicted - I predicted, before there was any evidence, that all the tissues of AIDS patients will be oxidised. In fact, I said exactly how the oxidisation can be determined and I said the S age groups, the thyo groups in AIDS patients will be oxidised in all tissues and that has been proven repeatedly by German researchers and even better by the Hamsonbelts, the husband and wife team at Stanford University. Their studies are incredibly well-conducted and the design, interpretation and instituted - and they found out exactly what I predicted. In fact, I also predicted that if these patients are given anti-oxidants, like compounds which are excessive electrons - what I use as anti-oxidants, but I gave exactly what I mean by anti-oxidants. I don't mean by 'anti-oxidants' vitamin E or C, you know. Compounds which are reached in S age groups and that's what has happened. The Stanford University and the authors find out that if you give anti-oxidants, in fact

assisting the progression, weight is inhibited. That's what I mean by oxidisation.

Q. So is your evidence this: that males who are diagnosed with HIV positive have more oxidised semen and something about the fact that their semen is not oxidised means that whether that ends up in someone's anus, that triggers some anti-bodies that causes that second person to also test positive to HIV.

A. Now what I said is that this may trigger, this may release - how probable semen will be to a positive test but a semen from a normal - from an AIDS patient may - I didn't say 'I have evidence', I said 'may' lead to a

higher frequency of a positive test. I have no evidence, biological probability. As I say, to use the words that the HIV expert uses 'may', I did not say 'we have evidence'.

Q. Before I move on to the next topic let me take you to p.413, the one that you have in front of you, the 1989 study, the column on the right-hand side towards the bottom, the heading 'Discussion'.

A. Yes.

Q. Do you have that. There the authors report, don't they, that: 'Men with full-blown AIDS seem to be more effective than carriers without symptoms, a long relationship (and therefore a long exposure to the risk of transmission) may be a compounding factor. The clinical state of the carrier remains a risk factor regardless of the duration of the relationship and the frequency of the sexual contact'. That's what the authors say.

A. Exactly that's what I say.

Q. They say that there is a correlation between the state of the carrier's condition, namely, whether he is asymptomatic or he has full-blown AIDS and the likelihood that HIV will be passed on to the recipient.

A. That's what I said, that's what I been saying.

Q. So may we agree on this, that's one point.

A. We agree on some points, but we did agree that the cause

is the HIV.

Q. Do you agree that a person's viral load is an indicator of how likely it is that a person they are having sexual intercourse with will test positive with HIV.

A. That's not proof of that. One - just a second - just a second - when you say 'viral load' and a person hears you saying this, the first thing anyone who thinks - who doesn't know about HIV, and all that is meant by viral load, they will think viral load will tell you that this person - they are measuring the number - viral load measures the number of HIV particles in the blood.

They, the higher the viral load, the more HIV particles in the blood. That is what anyone will think. Well this is not. This is not true. In fact, the HIV expert say that you cannot - the viral load cannot be used to prove HIV infection and the person who invented polymerase chain reaction, and which is used to measure the viral load, says that the viral load is an oxymoron.

A. So whatever - as I said, I think I have another paper here from one of the latest papers published in science journal where they say 'whatever viral load means'. Whatever viral load means: nobody knows what viral load means. So we are measuring something and we don't know what it means - what it means.

MR BORICK: The witness mentioned the person who invented PCR and didn't give the name of the person. Could that be on the transcript.

A. Yes, I mentioned Mullis, Carly.

XXN

Q. Let us move on. The next European study group you relied on, that is the one from 1992, referred to in slide 30 in your Power.point presentation, have you relied on an article entitled 'Comparison of female to male and male to female transmission of HIV in 563 stable couples'.

A. Yes, that is the slide, yes.

EXHIBIT #P36 STUDY ENTITLED 'COMPARISON OF FEMALE TO MALE

AND MALE TO FEMALE TRANSMISSION OF HIV IN 563 STABLE COUPLES' PUBLISHED IN THE BRITISH MEDICAL JOURNAL 28/03/1992, VOL.304, TENDERED BY MS MCDONALD. ADMITTED.

A. 1992?

HIS HONOUR

Q. 28 March 1992.

A. Yes.

XXN

Q. Let me remind you what you told us about this study in your evidence. P.162, line 16, you are referring to that slide headed 'European study group 1992'. 'Now

this is again a European, a continuation of the Europe study. This time they had 151 and 388 female partners. Most of the cases were I drug users which, according to Nancy Padian, their partners may have been also drug users but they are not admitting it. Now 12% of the male partners were found to or were reported to be infected, likely to have a positive test and they said this meant they had a risk factor other than heterosexual contact but just because' - I think it is meant to be - it reads at the moment 'now 12% of the male partners were found to or reported to be infected, likely to have a positive test and they said this meant they had a risk factor other than heterosexual contact.' I pause there. I think that might be a mistake. I think what you told the court is that the authors said they had no risk factor other than heterosexual contact because you went on to say 'but just because they deny, doesn't mean it did not happen and 20% of the male partners were reported as infected and again, anal sex was the only sexual act which was a risk factor'. You agree that was your evidence.

A. Yes, I do.

Q. Let us go to what this study actually says then. The objective was 'To identify risk factors for heterosexual transmission of HIV and to compare the efficiency of male to female and female to male transmission'. That

was the purpose.

A. Yes.

Q. Was a cohort study of heterosexual couples in which one person was HIV positive. Then it sets out the subjects, 563 couples, 156 female index patients, and so on. I won't take you through all those details, you can read it there. The 'conclusion' is over in the next column: 'Several factors which potentiate the risk of transmission through unprotected vaginal intercourse have been identified. Knowledge of these factors could be helpful for counselling patients infected with HIV and their sexual partners'. So, firstly, you agree that

is what the conclusion is in this report.

A. Yes, yes.

Q. So the actual conclusion of the authors of this report who conducted this study is that there are several factors which potentiate the risk of transmission through unprotected vaginal intercourse.

A. There are several factors which potentiate - transmission through vaginal intercourse, that is all they say. But, first of all, you have to have proof for transmission by vaginal intercourse.

Q. But we look at the whole sentence and not just part of the sentence but all of what they say there. They are saying that in their view HIV is transmitted through vaginal intercourse and there are some other factors that may impact on whether that will occur.

A. Where is the evidence?

Q. Let us go to what they say.

A. Where is the evidence? Will you please tell me in this study, cross-sectional study - this is a cross-sectional study and please give me in this cross-sectional study where they had evidence for vaginal transmission.

Q. It was you who relied on this article before this court to support your theory that it isn't vaginally sexually transmitted.

A. I am asking you to give me the evidence.

Q. Let us go through the study.

A. Yes please.

Q. 'Introduction', the heading following on from 'Conclusions': 'Several studies have examined the risk of sexual transmission of HIV from infected men to their female partners. HIV prevalence amongst female partners of infected men ranges from 15% to 30% in most studies from Europe and the United States.' So there are seven different references there in support of that proposition, HIV prevalence amongst female partners of infected men ranges from 15 to 30%. That is what the authors say there, isn't it. 'In addition, to unprotected vaginal intercourse and sex'.

HIS HONOUR: Unprotected vaginal intercourse anal sex.

XXN

Q. I will start that again in fairness. 'In addition to unprotected vaginal intercourse anal sex and advanced clinical or immunological stage of HIV infection in men have been shown to significantly increase the risk of transmission'. So they are identifying a number of risk factors there, anal sex, you would agree, but also unprotected vaginal intercourse and the state of the partner's infection.

A. That is what they say. They - that is in their introduction. They don't - here they don't say that they have proved that. This is an introduction.

Q. Let us keep going, come to what they actually found in a moment. The bottom paragraph goes on to say 'We present the results of a European multicentre study, the aims of which are to measure the risk of and identify the risk factors for heterosexual transmission, to compare the relative efficiency of male to female and female to male transmission and to assess the effectiveness of counselling safer sex through the prospective follow-up of couples'. So the focus is to compare the risk, the man passing it to a women as compared to woman passing it to a man, do you agree that is what they say.

A. Yes.

Q. Let us go to the results over the page, p.810, the

column on the right-hand side under the heading 'Results'. 'By March 1991 a total of 563 couples had been enrolled. There are 156 female cases with 159 male contacts and 400 male index cases with 404 female contacts. At recruitment 16 male and 75 female contacts were found to be HIV positive. In addition seroconversions occurred in three males and seven female contacts after enrolment in this study'. Do you agree it says that there.

A. Yes.

Q. So some of the female contacts were being diagnosed as HIV positive and some of the male ones were too.

A. Sorry, what is - index cases were injected drug users - I am reading -

HIS HONOUR: We haven't got to that.

A. Sorry.

XXN

Q. I will take to you that passage. 'Most of the index cases were injecting drug users or former drug users'. Firstly, what do you understand by the phrase 'index cases'.

A. Index cases are the men which were found - the partners which were found to be positive when they enrolled in the study. They are the index cases. So most of the people who are found to be positive when enrolled in the study were drug users or former drug users.

Q. That is of the index cases, that's not in relation to the people who contracted the virus. Those are the people who had a pre-existing HIV diagnosis.

A. They were the people who had - when they enrol in the study, already positive.

Q. Let us look at what happened to those people who whether not HIV positive that were having sexual relations with someone who was. Over the page, p.811, right-hand column, the heading is 'Efficiency of male to female and female to male transmission'. Do you have that.

A. We have male transmission.

Q. Do you have that heading that I am referring you to,

male to female transmission

HIS HONOUR: P.811. Male to Female transmission.

MS MCDONALD: The paragraph that summarises efficiency of male to female and female to male transmission.

HIS HONOUR

Q. See the heading 'efficiency'.

A. Yes, yes.

XXN

Q. Let us look at what they actually found: '82 of the 404 female contacts were found to be infected with HIV representing a crude transmission rate of 20% (16-24%) compared with a crude rate of female to male

transmission of 12% (19 out of 159; 7% to 17%) male to female transmission was twice as efficient (odd ratio 1.9) (1.1 to 3.3)'.

HIS HONOUR: Odds ratio, not odd ratio.

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Q. So there we have it. Out of that study group, 12% of the HIV positive females transmitted the HIV to the males.

A. Yes. This is the cross-sectional study. In the cross-sectional study, let's look at the cross-sectional study. I am repeating it.

HIS HONOUR: I think the figure was 12% of the males who had contact with the females were found to be HIV positive. I think you put it around the other way, 12% females.

MS MCDONALD: Sorry, yes, I'm a bit fatigued.

MR BORICK: I think that is a fact of this case at the moment. There is a bit of fatigue setting in all around. I'm inclined to think it is time to stop.

MS MCDONALD: I will just clear up that last answer so I don't have to go back there tomorrow.

XXN

Q. Just so you are not under any misapprehension, what I am putting to you is that this study showed that there was a transmission rate from female to male of 12%.

A. Now, this study shows it is a cross-sectional study, one. Secondly, the indexed partners are drug users, which, according to Padian, the non-indexed partners may very well also be drug users. The probability is very high. Padian said this, not me. There is a high

probability that the non-index partners are also drug users. So there are two programs. There is the cross-sectional studies and the index partners are drug users. They are a problem.

ADJOURNED 5.02 P.M. TO WEDNESDAY, 31 JANUARY 2007 AT 10 A.M.