SULAN J

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R V ANDRE CHAD PARENZEE

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RESUMING 10.33 A.M.

+VALENDAR FRANCIS TURNER CONTINUING

+CROSS-EXAMINATION BY MS MCDONALD

Q. I want to go back to a couple of discrete topics and the first relates to your evidence yesterday about collaborating with Professor French. When do you say that occurred.

A. Look I can't honestly remember the date. It was over a decade ago but I don't know the year. There is a letter somewhere in our files from the Royal Perth which would indicate the exact date but I'm sorry I can't tell you.

Q. But over a decade ago.

A. I think so.

Q. Is your rough memory.

A. I'd say at least a decade ago.

Q. What was the extent of the collaboration that you say occurred.

A. We approached Dr French for permission to test some of his patients for their redocs status and to compare that with clinical outcomes and we had a person who measured these in the medical physics laboratory and on at least a couple of occasions I remember meeting with one of his registrars whose name I think was Dominique Mellon, but I'm not sure of the surname, but his first name was Dominique, and we went through case notes. But I mean I emphasise it was very low key, very low level study and for $10,000 you can't do very much.

Q. Did you have any direct dealings with Professor French in relation to this so-called collaboration.

A. Not very much, I mean an initial approach and I can't actually recall discussing individual cases with him at

all. I mean it was not unusual for him to send his registrar in.

Q. I suggest to you there was no collaboration between yourself and others and Professor French, at most he may have given you some access to some samples.

A. Well he - I mean my memory is that there was a collaboration because we had to have access to his patients, I mean I thought that was a collaboration and there is a letter in which we discussed possible authorship of a paper if ever the findings were considered worthy of publication but I can't produce that.

HIS HONOUR

Q. Were any publications ever produced.

A. No, they weren't.

Q. Well, whatever you might call it, whether it be collaboration or otherwise, it didn't result in anything of any scientific value, did it.

A. Well it resulted in some data and I can't remember whether, how much value that data had.

Q. That data was never published in any papers, was it.

A. No.

Q. And no conclusions were ever drawn from that data.

A. Not - no.

Q. So, whether you would characterise what you did as a collaboration or not, the fact of the matter is that there was nothing that resulted from the work you did.

A. There was nothing published.

Q. Well that's the way medical research is recognised, by the publication of papers and by others considering materials, is it not.

A. It is but I mean maybe my definition of 'collaboration' is somewhat different from the court's, but I mean we had to agree with each other to undertake this study and -

Q. Yes, I understand that, but an agreement to undertake a study, and as I say whatever you might call it, a collaboration or otherwise, is just a first step, is it

not.

A. Yes, it is the first step but it's a very significant step and we did actually commence doing some measurements and I think we did about 20 or 30 from memory. I mean I've got - this is all a long time ago and I can't remember exactly how many patients were involved, I can remember sitting for a couple of hours and going through case notes in my ward, so something was happening.

Q. Yes, I don't question that for a moment, all I'm asking is that whatever occurred it did not result in anything that resulted in a paper or any research that has been considered even by Professor French.

A. Unfortunately not. Others took this up and published based on this idea.

Q. Professor French was not a party to any of that, was he.

A. No, no.

XXN

Q. Do you say, as Ms Eleopulos did, that Professor French agreed to co-author any reports that came about as a result of this study.

A. My memory honestly is not that good on this, I know there is a letter on the files and my best recollection is that Professor French agreed to be a co-author provided he agreed with the interpretation of the data; in other words, provided he was happy to put his name to something that - he didn't want to put his name to something that he didn't agree with, which is fair enough. That's the extent of my memory about the correspondence.

Q. Are you aware that at about this time, about a decade ago, 12 years ago, Professor French actually wrote to the head of the hospital complaining about the views being expressed by Ms Eleopulos and asking that she be in some way disciplined, at about that time.

A. I wasn't aware of that.

Q. That wouldn't really sit with him collaborating with you on a study, would it.

A. Well, all I'm saying is that there - Dr French did in fact agree to provide patients and their blood samples to us and we discussed the case history, so that to me doesn't sit with him complaining about Ms Papadopulos.

Q. But I take it from your evidence that really since that time you haven't had very much to do with Professor French.

A. No, we see each other occasionally and, you know, are occasionally involved in a bit of social chitchat but we don't discuss the HIV theory of AIDS. Dr French has never sought our views and as far as I know - I don't know if he has read our papers.

Q. I want to move on to a different topic now, and I want to go back to that assumed scenario that I gave you yesterday - I will just remind you so you don't have to try and remember the details - and that was a scenario in which someone came to you saying they had stuck a needle in their finger with blood that they believed was contaminated with HIV, they are concerned about contracting HIV and what advice you'd give them in terms of testing. So, generally speaking, that's the topic. Assuming that same scenario, if the patient wanted any medication that was available that may assist him, if he was HIV positive, so if he says 'Look, I don't know if I am HIV positive or not but if there is some medication out there I'd like to have some to improve my chances', would you prescribe antiretroviral medication for him.

A. Yes, in fact what happens in hospitals is that there is a clinical pathway for almost everything these days, even when they have lunch, this is how medicine has become, and for someone who is needle stuck, who is in a high risk group, for example, someone in whom you know the probabilities are that they may become HIV infected, it's not everybody who's needle stuck but, you know, then the protocol is to actually ring the immunology registrar and discuss the case and if the immunology registrar recommends that drugs are given, drugs are actually kept in the emergency department for this

specific purpose and I would give the person those drugs. As I said before I don't put anyone in the middle of this debate, I practice - if you didn't know - if you hadn't read our papers you would think that I was just a plain ordinary doctor doing what plain ordinary doctors do in this regard.

HIS HONOUR

Q. What do you mean by 'HIV infected'.

A. Well, I mean in the context we are talking about, infected with the retrovirus HIV. I mean I'm - this may sound a bit crazy to you, that I actually could do these things, I said yesterday this is an ethical dilemma for me which I've had to deal with. I'm the only clinician in the Perth group, my other colleagues aren't faced with this situation. And so I follow the party line, basically, if someone's HIV positive, as you said, and this is hypothetical, a needle stuck by someone HIV positive then I would follow the clinical protocol for that. I mean deep down inside I may not be happy but it would not influence my practice. I would not say to this person 'Look, do you know - this may not be true and do you know this website and have you read these papers', I never do that, I keep it to myself, and the only way I see maybe I cheat a little is if there is a patient in my emergency - I mean I don't do this any more, you understand that, but I have been faced with this situation - what I would do is I would get someone else to see the patient.

XXN

Q. So you are saying in effect that you live a lie, that you would prescribe these drugs, you'd recommend these tests not believing for one second that any of it was effective or useful.

A. Yes, I have to. If that's the way you wish to put it, I mean I wouldn't quite - I don't know I'm just trying to think, is living a lie is a little bit too harsh on me. I mean it's the same with people who come wanting a abortions, I mean many practitioners don't like

abortions, don't like doing abortions, don't believe in abortions but refer patients to doctors who do abortions.

HIS HONOUR

Q. Is that what you do if you get someone who might be HIV infected, you refer them to someone else and don't treat them yourself.

A. No, no, if I'm the only person around then I do what has to be done, but in emergency departments I am still achieving the same result by getting someone else to see them who knows the same thing that I know.

XXN

Q. Let's take the protocols out of it. Let's take them out of this scenario.

A. Sorry which protocols?

Q. The protocols that you say mean that you have to follow these courses, that you are required to recommend this testing or these drugs. Let's assume this scenario: there are no such protocols and someone just comes to you for some advice and they are coming for advice in that scenario we have been using. They have stuck themselves with a needle, with blood that's said to be HIV positive, they are very worried about whether they are going to be HIV positive and they want to know. What would you recommend.

CONTINUED

A. I don't think I would do anything differently. When you say there are no protocols. I mean all a protocol is is that someone has written down a mock diagram of the commonly accepted knowledge for the purposes of making life easier for residents and registrars in producing some uniformity. It is commonly called best practice. Although, as I say, there is no protocol, there is a sort of protocol that is in my head because I know, in my reading, what is the commonly accepted practice.

Q. You know that the best way for this person to find out if they're HIV-positive or not is to use the very test that you have been criticising in this court.

A. I know that when they refer, that will happen, yes. I do know that, I realise that.

Q. Before, when you were giving your answers about what you would do in this situation, you said you do these things because you have to and then you talked about hospital protocols. Now you're saying, if we even take those out of the equation, you'd do it even if you didn't have to.

A. Yes, what else can one do? I know I'm not supposed to ask the court questions but it is a rhetorical question. What else can one do? This could be a philosophical debate that could take weeks about what to do in these situations. I realise that I'm living a lie, in the sense, I don't disagree with that. You could argue that and say it is beyond belief, why don't I actually start a crusade amongst all the people that come to Royal Perth Hospital at the front door and put up a sign saying don't have an HIV test? I don't have the wit or the energy or strength to do that.

HIS HONOUR

Q. Did you go to South Africa, to the conference.

A. Yes, I went to the presidential conference.

Q. Did you speak at that conference.

A. Yes.

Q. What did you tell that conference.

A. Basically, I made the same presentation I made here. I argued that there was no specificity of antibody tests.

Q. Did you tell the conference, however, despite what you were saying, you would treat people or you would treat people for HIV if they presented to you.

A. No, I didn't. That is not part of the protocol but may I just say something about that conference, which may prove helpful to the court? Is that permissible?

Q. Yes.

A. That conference was the genesis of the Durban Declaration. The fact that President Umbecki organised that conference, it was great consignation amongst HIV experts and that was the reason the Durban Declaration was produced and published. That was the reason that the Durban Declaration was produced and signed by 5,250 people. Not all of them, I might add, had to be in the field, according to the email that was sent out by the organiser of the Durban Declaration. He invited people not in the HIV fields to decide. I don't know how many of those there were. What is important about the conference is this, to my knowledge - in fact there is no doubt about this - this was a conference where HIV experts from around the world, both sides of the camp - international experts - convened twice, had two meetings. We didn't go to the first meeting, we went to the second meeting. It included people from the CDC and International Institute of Health, Montagna attended the meeting and a lot of experts from South Africa. It was supervised and chaired by an international professor of law, Professor Stephen Owens from Canada, to keep everyone from each others throats, I suppose. We argued - it was a scientific debate between both sides. At the end of the second meeting no-one was any closer than they were at the first meeting. There was no consensus but what is significant is a report was issued, which is the Presidential AIDS Panel Advisory Report which I would in fact like to present to the court. What is significant about the report is that it concluded that there was a divide and it couldn't be resolved by a debate and further scientific work should

be done. I won't read it out but there is a conclusion which says that. Furthermore, the people who took part in this agreed and made recommendations that certain experiments should be done to resolve the issue and these experiments included experiments to determine the specificity of the antibody tests and whether HIV had been isolated. This report is public knowledge, it is on the Internet, there is a link to it on our website, and I'm sorry I only have one copy, but it is available. I think that is not probably common knowledge but it is highly significant that it was a debate between scientists about scientific matters. It wasn't politics. How do I go about doing this?

MS MCDONALD: I don't propose to tender it.

HIS HONOUR: Mr Borick can tender it later if he seeks to do so.

MR BORICK: Could I do that now, while it is being mentioned?

HIS HONOUR: Do you oppose it being tendered?

MS MCDONALD: No. Perhaps we can have an indication of the date of the report.

A. Could I just add, I'm not presenting this as scientific evidence before the court, I am only presenting it to show that there was such a scientific debate with conclusions and recommendations about performing experiments.

HIS HONOUR

Q. You heard Professor Cooper giving evidence yesterday, didn't you.

A. Yes, I did.

Q. He said that the tests - that is the ELISA test - was 99.9% specific.

A. Yes, I heard him say that.

Q. 99.9% accurate. Do you disagree with his proposition.

A. Our position on the specificity of the antibody tests is what this is all about and it is not a matter of disagreeing. The disagreement is: what is the proof of that?

Q. Do you disagree with his proposition. That is a simple question - yes or no.

A. I disagree with that. I can't answer that question because it is impossible for me to answer that question yes or no.

Q. This is part of what this case is all about. I'm being asked to make findings about these opinions. I want to know your opinion.

A. If I have to say yes or no, I say no, but if I can't qualify my answer I will stop.

Q. The next question is: why do you say no.

A. I say no because the specificity has not been determined using a proper gold standard and, therefore, the specificity is unknown and the specificity might be 100% or it might be 50% or it might be 0%. In the absence of proper scientific experiments to determine the specificity, one cannot say what it is. I don't know. I can speak to that - if this is an important issue, I can speak to it. Maybe I am remiss in that my presentation - my evidence-in-chief was not given with sufficient clarity. I could summarise it briefly, if you wish?

Q. I have got your affidavit and I have got your evidence. If you want to expand on that, that is fine, please do so, otherwise I will ask Ms McDonald to go on. If you want to expand on material you have already put before me, that is fine.

A. I want to say that to measure the specificity of an antibody test for an outcome, in this case antibody tests are done to determine HIV infection. The problem is that you have to have the antigens, they have to come from HIV. That's one part of the test, and the antibodies, if the test is specific, should be HIV antibodies and they should react and you can tell that by various ways. The question is: are the antigens HIV and are the antibodies HIV? If the antigens - I don't want to go through what my colleague went through yesterday about the need to purify the virus to contain

the antigens, I'm sure you don't need me to do that but, in our view, that is the only way to prove ownership of the antigens. That has not been done in that manner but, nevertheless, there are some proteins that claim to be HIV and if these react with antibodies they're claimed to be HIV antibodies. But, as Sir Gustav Nossal said in his book, which he referred to as a textbook later in his report, which, in fact, is a book written for the laymen and it is an excellent book and one of my favourite immunology textbooks. It was written a long time ago but it is still very good. It says that antigens can react with different antibodies. Once you allow that into the equation you cannot say that a particular antibody belongs to a particular antigen. The only way to solve that problem is by seeing how often antibody reactions correlate with what you are trying to determine - in this case HIV. That's why I gave the example of the pregnancy test, if you remember, with Goldstein and the woman and the baby. I'm sure I don't need to go through that again. This is our opinion - rightly or wrongly - and whether people believe it or not, my purpose in expanding is to make sure that if it is not believed, then at least you know exactly what you're not believing. Is that any clearer?

Q. I understand - I think I understand.

XXN

Q. In that answer you referred a number of times to the need for a gold standard and you talked about that during your presentation. I want you to assume for a moment that there is evidence that a gene sequence unique for HIV has been isolated and identified. Would that be an appropriate gold standard.

A. I'm just getting over the fact - one has to make these assumptions as an expert witness. This is news to me, so I have trouble getting my head around that. You're asking me to assume there's a gene sequence unique to a retrovirus -

Q. I'll say it again: assume that there is some evidence

that there is a gene sequence unique to HIV that has been isolated and identified. If that was so, would that be an appropriate gold standard for the test.

A. Yes. If it has been shown to come from an unique retrovirus HIV, it would be a gold standard, yes, it could create a gold standard. Yes - look, gold standards don't have to be the viruses themselves, gold standards can be a clinical syndrome. Would you like me to give you an example just to show I'm not fixated on virus gold standards?

Q. It is up to you as to how much detail you want to go into.

A. If we were doing an antibody test, investigating an antibody test for chickenpox, for all intensive purposes, it is almost impossible to misdiagnose chickenpox. Mothers are better at diagnosing chickenpox than doctors and one could use the clinical syndrome of chickenpox as a gold standard.

HIS HONOUR

Q. What do you mean by the 'clinical syndrome'.

A. Just saying this child has got chickenpox because it has spots and it is itchy and it is sick and it looks like every other case of chickenpox ever seen.

Q. Why can't you apply that to HIV.

A. Because AIDS consists of 30 different diseases.

Q. I'm talking about HIV.

A. Because HIV - if it exists - is a virus, HIV is not a clinical syndrome. I am saying, with chickenpox, you can use as a disease in place of a virus. When you have a new diagnostic test for anything, you need a gold standard. There's no dispute about that. We teach all the students that. It is basic. You have to have something against which to measure your test - something independent of the test itself. In the case of HIV, we say you have to use the virus itself.

Q. What do you believe is in the international gene bank at Los Alamos.

A. There are sequences of DNA, many.

Q. Any idea of how many.
A. I think there's thousands, actually, but I don't know exactly how many and they are lengths of DNA. I haven't looked at all the sequences but I don't think any two are the same length and many are different - in fact, they're very different. HIV experts are taught that genomes vary a lot and vary considerably, as we said. I believe there are DNA sequences there.
Q. That are believed to be gene sequences for HIV.
A. They are believed to be that by many people, yes.
Q. And they're available to all of the scientific community.
A. Anyone with a computer, yes.
Q. To study, to scrutinise, to critique.
A. Yes.
Q. Going back to where we went off on a tangent, and that is back to some questions that his Honour was asking you about your attendance in South Africa.
A. Yes.
Q. Bearing in mind that you have given evidence that you would recommend someone test for HIV and you would prescribe the antiretroviral drugs, in the context that I put it to you -
A. What was the context.
Q. The context was that particular scenario of someone being needle-stuck.
A. Yes.
Q. You told us you would advise them to take the tests and prescribe antiretroviral medication because it's 'best practice', was the term you used. In those circumstances, why did you go and chose to speak negatively about these tests in a third world country.
A. I think you have to separate - maybe I'm not making myself understood here and if I am not, I apologise. There's a big difference between being a scientist - and I'm not saying I'm a scientist, to build myself up as a scientist - I'm saying in this role of mine, looking at the literature for the last 20 years, dispassionately I

regard myself as undergoing scientific work. That is different from being a doctor. Medicine is pragmatic, there is so much to know, so much to do that you don't have time to go and check-up on everything. I just happened to get stuck on this. My role in South Africa was as a scientist going and discussing a scientific theory which does has clinical implications, I admit. I didn't feel uncomfortable about doing that.

Q. You knew that you were ventilating your views, publically, in an arena in which many people believed there was an AIDS epidemic in a third world country.

A. When you say 'publically', it was actually largely a private meeting.

Q. You knew it would get public ventilation, you didn't think it was going to be some sort of closed court, did you.

A. Well, it did get some press, yes, that's true, for a while, yes. President Umbecki also expressed some doubts about whether HIV was the cause of AIDS and why couldn't these things be discussed. He was on the public record as expressing those views before the conference.

HIS HONOUR

Q. His views are irrelevant, aren't they, he's not an expert.

A. No, I know. If one didn't express one's views about what one believes in, then we would all be running on the same conservative ticket. It is a democracy and one is allowed to express one's views. This is not the only time in the history of medicine when someone has become unpopular for expressing the views that no-one else believes. Ignas Semmelweis expressed views about washing your hands before delivering babies and he got hounded out of the profession and he got beaten up and then killed. The man that discovered that pellagra was actually a vitamin deficiency disease and not an infectious disease was exceedingly unpopular.

HIS HONOUR

Q. Stop a moment. I assume that the gentleman who advocated washing your hands before delivering at childbirth actually washed his hands before he actually delivered at childbirth, that he was doing that. That's the difficulty that I'm having. You have expressed a particular view, but when you come to putting it into practice, you don't, you do the opposite. That's my difficulty.

A. The fact that I do or don't do it doesn't make the science wrong or right. I mean I could be wrong about the science and practice conventionally. I could be right from our point of view and practice this lie, as McDonald calls it, but the science could still be right. The science doesn't care about my moral position.

Q. I wouldn't have thought it was a moral position. I would have thought it's a position you take. You take the position that treating people with antiretroviral drugs is pointless, it is a waste of money, yet you do so. That is the difficulty that I have. You would recommend that, you do so.

A. I don't say - we don't actually say it's pointless or a waste of money, we don't actually say that people shouldn't take antiretrovirals. We've said two things. We have said the fact that they take them and they may get better doesn't prove the HIV theory of AIDS. You can't prove the HIV theory of AIDS by the fact that people get better with certain drugs because drugs have so many effects it's never a pure experiment. When Professor Cooper said wards emptied and hospitals closed and all the rest of it, that's true. I have no problem. Seeing is believing. He is not making this up. These drugs seem to do things and, in some cases, they are beneficial. I don't know how often they are beneficial but they may have other actions. What this is all about is whether there is HIV and whether HIV causes AIDS. That's why I don't have such a problem with these antiretrovirals. You can criticise me until the cows

come home about my ethical dilemma about what to do with patients under your hypothetical situation, Ms McDonald, I accept all of that criticism, but I don't think it has any bearing on whether the science is correct or not.

XXN

Q. You've just told us that you don't have a problem with antiretrovirals but you knew, in presenting the argument that you did in South Africa, that may well have the potential to effect that government providing antiretrovirals to the people of South Africa.

A. No. No, that's not true. My purpose, and my colleagues' purpose, in going to South Africa was to have a scientific debate about whether HIV causes AIDS. That was it. Now if that is believed or if that - if people wish to change things because of that, if they are convinced, then it is up to the public health authorities to judge the evidence and believe us or not believe us and act accordingly, we are just expressing a view. I don't think our scientific views should be inhibited from being presented because it might have some effect on public health policy.

Q. You're aware that, as a consequence of your group's position, the introduction of antiretrovirals into South Africa was delayed.

A. I don't think there is any - I challenge you to present any evidence for that. I don't know how you can say that. I don't know if that is true. It may be true, but I don't know how - I don't think there is any evidence of that.

Q. You aware the minister of health in South Africa suggest publicly that an alternative for HIV might be lemon juice and garlic.

A. And potatoes. Yes, I'm aware of that.

Q. Would you agree with that.

A. No, I think that is ridiculous; although an Australian has actually presented a thesis that lemon juice could be used as a spermicide.

Q. His Honour has already reminded you of some of the

things that Professor Cooper said yesterday. I just want to take you to another passage of his evidence and ask you if you agree that's what he told this court. At 674 line 25 'The next proposition that I want to put to you -'

HIS HONOUR: Before you do that, I would like to put - well, it's a matter for you if you want to put it - the passage at 673 line 8, before you get to 674.

MS MCDONALD: Thank you. Yes, I will start there.

XXN

Q. You remember Professor Cooper responded to a number of propositions that were put to him yesterday, and at p.673, in response to this question, he gave the following answer 'I'm going to put some propositions that have arisen in this court and ask you to comment. I ask you to do so based on your experience and involvement in HIV and AIDS around the world. The first is the proposition HIV has never been proved to exist'. Professor Cooper's response is 'Well, that's absolutely wrong. It's a virus, it's been isolated on many, many occasions now from many different types of patients worldwide. Its genetic sequence extensively known. It is probably one of the most studied viruses - indeed micro-organism - that has ever existed and, you know, with a gene bank where gene sequences are registered, there are thousands and thousands of sequences of this virus that have been deposited in a gene bank from laboratories all over the world and there are variances of this human immunodeficiency virus, so to say that it does not exist is simply a scientific untruth' I think that is a transcript correction that probably should be made.

HIS HONOUR: Should be 'a scientific untruth'.

MR BORICK: I agree.

XXN

Q. Do you agree with that proposition, or that answer, sorry.

A. Do I agree that it is his answer, or do I agree with the

answer?

Q. I will ask the question first: you agree that that is the evidence that he gave evidence.

A. That Professor Cooper gave yesterday?

Q. Yes.

A. Yes.

Q. Do you dispute any part of that.

A. Yes.

Q. What.

A. All of it.

Q. Based on what.

A. Based on our presentation - well, I didn't give the evidence-in-chief for the isolation for HIV, my colleague did - based on that.

Q. What personal experience have you had in dealing with people who are HIV positive.

A. Not very much.

Q. What experience have you had in conducting tests or sitting on world boards having to deal with this epidemic.

A. None.

Q. All you've done is sit and read books and papers and tried to pick holes in other people's work, isn't it.

A. That's not true. I object to that. That is a gross misrepresentation of what I have been doing for the last 20 years. What do you mean all I do is sit and read books?

Q. What else is that opinion based on.

A. That opinion is based on reading scientific literature, studying the scientific literature, spending a considerable amount of time thinking about its implications and reading a wide range of scientific literature, and that is genuine research. Research is not just working in laboratories and with test tubes, that's is bone fide research.

Q. Do you accept that your views have been rejected universally in the mainstream scientific world.

A. Not universally, but almost universally, yes.

Q. I used the word 'mainstream'. I suggest they have been rejected universally in the mainstream scientific university.

A. Professor Ettiene Deltarven is mainstream, so I stick to 'almost universally'. I have no problem with the notion that not very many people believe what we say.

Q. You talked before about -

A. Sorry, may I just - in response to that question, Professor Cooper didn't present any evidence when he gave his answer. We have presented lots of evidence.

Q. You talked before about the need for there to be debate and dissenters when new ideas emerge in the scientific community, and you gave some examples.

A. I did.

Q. I'm not disputing that, that when there is thought to be a new virus or some new development, there needs to be a period of debate, scrutiny, and dissent if people feel that that is their view.

A. Yes.

Q. Do you agree there is a point at which, though, that as a scientist, that debate is over.

A. The debate is over when the debate is over, but I would be very foolish to judge how long it should take. I mean let me give you one example. The theory of how blood was produced and made its way around the body and was consumed in the body was proposed by Galen and it lasted 1500 years until 1628 when William Harvey worked out how the blood does actually get around the body, so I think 25 years for this is a short time, and I don't think time has got anything to do with it.

Q. The debate in relation to your views on HIV I suggest is well and truly over in the scientific community.

A. Sorry, well and truly over?

Q. Over. Finished. Done. The debate has been resolved, and your views have been rejected.

A. Well, they have been rejected by many. I don't think you can say they are over, though.

Q. Is what you are now attempting to do with your

colleague, Ms Eleopulos, having failed to convince your own peers of your views, is now taking it to a lay audience, taking it out to the public, to see if you can convince them of it instead.

A. Are you implying that we came to this court case for impure reasons?

Q. I'm suggesting that you, as a group, are now trying to take your views to the lay public to try and promote them that way.

A. Well, that is happening, but it is not our preferred option, and it was never our preferred option. We are here because we got a phone call out of the blue one day from Mr Kevin Borick asking whether we would help him in a case. I don't apologise - I mean you can get views out into the general public through various means. Galileo was famous for doing that - he wrote his book in Italian rather than in Latin, his first book - so I think sometimes scientists have to do that because the scientific community is too conservative. I don't apologise for the fact that we are here and people are getting to hear about our views. I would prefer to have it debated scientifically among scientists like we did in South Africa and like we had a resolution to do experiments to resolve it. That was the proper way to do it. Unfortunately for reasons one can only speculate, that did not happen.

Q. It's on the home page of your web site; one of the ways to get your views out there is to be involved in court cases.

A. That's true.

Q. Get yourself a bit of notoriety.

A. No, that's a value judgment on your part. We're not doing this for notoriety. I find that insulting.

Q. Why did you put your affidavit for this case on the Internet.

A. I did put it on the Internet and I have removed it from the Internet, and I did it probably because I'm naive about these matters. I understood from Mr Borick that

the matters before this court were public and that - and I had sent my affidavit to Mr Borick and, a few days later, it was found on a web site overseas, and I think subconsciously this reinforced the view that it is public and so I put it on our web site. It was an innocent mistake and I apologise if it was improper and I removed it. It was not done for any sinister reasons and that's how it came about.

Q. So are you saying that you saw your affidavit on an overseas web site, and you have no knowledge of how it came to be there.

A. None whatsoever.

Q. How long was it after you gave Mr Borick the affidavit did you see that.

A. Days. A week maybe.

Q. So what did you hope to achieve by putting your affidavit on the Internet.

A. Well, everything that we hope to achieve by putting things on the Internet: that people know what is going on, people know what we think. I mean there is nothing in that affidavit that isn't in our papers. If anything, it was an opportunity to summarise our views on our debate, if you like. In fact, you know, it forced us to try and do something which is really difficult in this business, which is actually put this in the language that ordinary people can understand what our point of view is.

Q. Going back to Professor Cooper's evidence yesterday, I now want to take you to his comments in relation to the tests that you gave evidence about. Just before I do, to make it plain, when you gave your evidence-in-chief, you were actually pretty much reading from a script all the time you were giving evidence. It was a presentation.

A. It was. I don't - I find it easier to prepare it like that.

Q. All written out, so you were pretty much reading out what was in front of you.

A. Yes, I had rehearsed it and I had printed it out and I basically spoke what I had written. I gave you a copy, eventually; I'm sorry it took so long to get to you. In fact, I have a copy of it with me.

Q. Going back to Professor Cooper, he was asked this question at 674 line 25 'The next proposition that I want to put to you is that the tests used for diagnosing are not reliable, particularly ELISA and the Western blot'. His response was this 'Right. Again that is absolutely wrong. Diagnostic tests in medicine are sometimes problematic and we say that diagnostic tests should be sensitive and specific and, you know, diagnostic medicine is sometimes not easy because we don't have the best tests for diagnosis to include a disease or to exclude a disease. In this case, we have one of the best tests ever. There is no diagnostic test in medicine that has the sensitivity and specificity of the HIV antibody test, whether it is done by ELISA or by the Western blot. The test is 99. - very close to 99.9% sensitive, abdomen 99.9% specific, so there is no better diagnostic test in medicine that I know of'. Do you disagree with that.

A. Sorry, do I disagree that that is what he said?

Q. I will ask the question: you agree that that was his evidence.

A. Yes.

Q. Do you disagree with what he said.

A. Yes, because there is no proof of that. You asked me that question before.

HIS HONOUR

Q. There is no proof of what.

A. Those tests, or those specificities and sensitivities of Professor Cooper. I can't remember the exact numbers.

Q. So you think he has just made this up.

A. I don't think he has made it up. I know how they derive these figures, but we don't agree with the method. What they do is they, in fact, use AIDS as a gold standard - I explain all of this in my evidence-in-chief - they use

AIDS as a gold standard and - sorry use AIDS as a gold standard for having HIV, and not having AIDS for not having HIV. They use healthy people and discrimination tests. They relate the test to having AIDS and not having AIDS, but it doesn't relate it to HIV.

CONTINUED

Q. But the whole basis of that proposition is that in order to be diagnosed with AIDS you've got to have HIV, they've got to test the history. That's what Professor Cooper said, that's what the literature says, that in order to be diagnosed as having AIDS a prerequisite - it's a horse and carriage - a prerequisite is that you be diagnosed positive for HIV, and positive diagnosis for HIV is determined by the ELIS test and the Western Blot test. Am I misunderstanding their evidence.

A. The misunderstanding is, as you said you've got to be positive for HIV, so they are appraising this test against AIDS, AIDS is not HIV. Of course if you say that you are going to have a positive test to be diagnosed AIDS then of course you'll have a positive test, you'll have a positive test by definition but that's not positive test by biology.

Q. That's not what they say, they say you can go into the hospital, they take your blood, there is a test called the ELISA test, and I won't go into the technical detail, but that test will determine whether a person is HIV positive or HIV negative. They don't have to have any disease.

A. No, I know, but when they appraise the tests, when they work out sensitivity and specificity of the test because you have to do that before you apply it generally, there has to be a period of working out these test parameters before you use it on patients, that's true of any test, and the test is for HIV, not for AIDS. But they use AIDS in place of HIV. Now you can't do that because AIDS is not caused just by HIV, the AIDS diseases have other causes and if you do that then you're left with a huge problem because you have to say 'Well if you haven't got AIDS then you haven't got HIV'. That's the rules, if your gold standard is AIDS, for having HIV, then automatically not having AIDS is your gold standard for not having HIV, which means that all the people who don't have AIDS who have a positive case must be false positives, this is the mess that you get into if you do

this sort of thing. This is crazy. If you want to have a test for HIV you've got to use HIV. That's the guts if you like - excuse the expression - of the argument about the sensitivity and specificity of the tests. You can read this in the inserts, this is what it says, I presented it to the court before and this is what they do. I mean Elizabeth Dax in her report - you are aware that I asked Elizabeth Dax in a letter - I presented this in evidence-in-chief, to tell me as a clinician, a clinician doing these tests, I want to know whether these antibiotics really are HIV antibodies or antibodies that come from somewhere else and I asked her to tell me how come three bands can be non-HIV and how come four bands are - sorry when there is a fourth band accompanying those three bands all of a sudden those three bands are HIV. This is what I wanted to know, she didn't tell me and in this latest report that she has presented for the court she still hasn't told me. She has said these tests are validated, they are specific but she doesn't give any evidence as to how this has been worked out. As I said maybe it's our fault for not being able to make this clear to people.

XXN

Q. You keep referring to 'the test' or the Western Blot and ELISA test, there are many different tests, aren't there, that come under those names.

A. There are many different sorts of - there are many different western block brands and there are many ELISA's, yes.

Q. Manufactured by different manufacturers.

A. Yes, there is probably hundreds.

Q. Designed to meet the strains or claves of virus found in that particular part of the world.

A. Some are.

Q. With different thresholds if you like, for a diagnosis of HIV, by that what I'm referring to is what you talk about as the difference, the need for one man in one country, two in another, that's all related to the

particular sensitivity required from that particular test given the strains of virus in those areas.

A. Look, no, sorry I just disagree with that. I have read a lot of manufacturers' inserts about these tests and nowhere have I ever seen statements to say that in effect. Now they may choose different claves of HIV or strains, put these antigens in the tests and they can sell them and use them in many different parts of the world. In the end whatever band pattern on the Western Blot which you decide to have, you decide is positive and we - mind even the AIDS experts don't disagree that there aren't different patterns of interpretation over the world, around the world, I mean different in Australia, different in America, different in parts of America. Whatever they are you've still got to figure out the sensitivity and specificity against the virus. You can't figure it out in your head, it's not like that. Once you allow for the fact that an antigen can react with more than one antigen and that is what Gustav said, what many people have said. I have a paper here, in fact I would like to present this paper if I may. Is it permissible?

HIS HONOUR

Q. What is the paper you want to refer to.

A. It's just to show that a monoclonal antibody to the p24 HIV protein - that's the sort of antibody that's used to isolate HIV - can react with hundreds of different proteins. May I just read -

Q. What are you reading from.

A. I've got copies for you and Ms McDonald by the way.

MS MCDONALD: If it witness is going to read from it it may as well be tendered.

HIS HONOUR

Q. Can you produce it.

A. I have a copy for your Honour and I think Ms Pfeiffer has a copy with her, it's called 'Molecular Basis for Binding Promiscuity'.

EXHIBIT #A12 MOLECULAR BASIS FOR THE BINDING PROMISCUITY OF AN ANTI-P24 (HIV-1) MONOCLONAL ANTIBODY TENDERED BY MR BORICK.

A. On p.804, the second column, the last paragraph, about 10 lines up 'We were able to identify a huge number of peptide sequences recognised by CB4-1 that are present in completely unrelated proteins of different species. All of the corresponding proteins obtained so far were bound by CB4-1 in a solid-phase ELISA demonstrating that this antibody is able to recognise not only different peptides but also heterologous proteins' that means from different species and proteins. Over the page - there are only two quotes - on p.805, the second column, beginning of the last paragraph 'From these results it became obvious that the term molecular mimicry would not be an applicable description of the binding promiscuity of CB4-1, since the peptides do not mimic each other with respect to sequence, conformation and binding mode'. In other words, and they also tested - they managed to buy, published a table of 15 of the proteins that reacted most strongly and they actually tested some of them, because you can't buy all these proteins, and found that micras, which is the ubiquitous basic stellar protein, reacts with the antibody which is used to isolate HIV. I mean I think this sort of data should lead the HIV experts to reconsider if the test which they use to isolate HIV very commonly, is in fact valid. But I only presented this paper to show that antibodies can combine with more than one antigen and once you let that into the equation an antibody test, and we are talking about 10 proteins in a Western Blot test, you have what you can almost call analytical anarchy. How can you tell? You have to have an empirical measure for the, in this case, the virus. That is the substance of our argument.

XXN

Q. Isn't it the case that there is a p24 which has a unique

structure to HIV.

A. There is a protein called p24 whose structure, as far as I know, has not been determined by analysing aminoacid sequence of the proteins. The sequences are assumed to be certain aminoacids because of what they call the p24 genes. I have tried for many years to discover whether in fact there is any data which actually proves that the gene which is supposed to make that protein and other HIV proteins, actually correspond if you actually analyse them separately. In other words you analyse the gene and you can work out the sequence, analyse the protein aminoacids independently of that and see if they match up. I have correspondence, email correspondence with a lady who is responsible for the sequence databases of proteins and HIV sequences and other sequences, the PUBMED site, and she is unable - she has great difficulties knowing whether in fact the proteins sequences are actually derived or have actually been separately analysed.

HIS HONOUR

Q. So your answer to that question, qualified as you have, is no.

A. No. But, these proteins are identified using antibodies, I mean they are identified using this particular antibody, for example, and if you take - you can disassociate antibodies and antigens and you can use antigens to probate the parts of the body, and I mentioned in my evidence-in-chief that p24 had been found in the human placenta. The name of the paper that I quoted from is called 'HIV Proteins in Normal Human Placenta', I don't know what P number it is, in fact I don't even know if it's even been tabled, but it was in my presentation, and there were two other proteins in the normal human placenta, identified by antibodies, and if these antibodies are specific then you have to assume what the authors said in their paper that there are HIV proteins in the normal placenta which means that the genes to make these proteins must be present in the

normal human placenta. These proteins don't make themselves.

XXN

Q. I want to put a proposition to you and ask you if you agree with this. P24 antibodies in the semen of HIV patients -

A. P24 antibodies?

Q. P24 antibodies in the semen of HIV patients are not monoclonal they are polyclonal.

A. Most antibodies are polyclonal.

Q. Do you agree or disagree with that proposition.

A. If there is evidence somewhere for that then I accept that but -

Q. Is your evidence you don't know.

A. I don't know if they are monoclonal or polyclonal. You haven't presented evidence, I have to have evidence to agree or disagree with a statement like that. It would not surprise me if they were.

Q. You could agree, disagree or you don't know because there are limits to what expertise you have.

A. Your Honour you'll have to help me here, I'm sorry.

HIS HONOUR

Q. I can help you to this extent, that you have been presented to this court as an expert.

A. Yes.

Q. So questions are being put to you in respect of the areas in which you are presented to the court as an expert.

A. Right.

Q. If you know the answer, then say so, if you don't know the answer, equally say so. You can either say 'yes', 'no' or 'I don't know'.

A. So please ask the question again.

XXN

Q. P24 antibodies in the semen of HIV patients are not monoclonal, they are polyclonal.

A. I don't know.

Q. Sorry, that's my mistake I will put it again. What I

meant to put to you is, p24 antibodies in the serum of HIV patients are monoclonal, they are polyclonal.

A. Yes, I accept that.

Q. Can I turn to ask you some questions about some of the comments you made about some of the antibody tests and both in your presentation and Ms Papadopulos' presentation you talked about promiscuity, and there is reference to -

A. You mean promiscuity of people?

Q. No, well there was that as well, but in terms of this question of antigens and antibodies and so forth, that word was used. And Sir Gustav Nossal has also cited a presentation. Have you since had a chance to read Sir Nossal's statement.

A. I have, it's here somewhere if you will just bear with me for a moment.

EXHIBIT #P55 TWO PAGE COMMENTARY OF PROFESSOR GUSTAV NOSSAL PRODUCED AND TENDERED BY MS MCDONALD. ADMITTED.

XXN

Q. You have had a chance to read this before today.

A. Yes, I have.

Q. Do you have a copy in front of you at the moment. Is that what you are looking at

A. Yes, I do.

Q. Before I take you to the specifics, isn't what is being conveyed in that report that in fact there are two stages when it comes to consider the antibodies that the body makes.

A. Yes, I'm aware of that. Ms McDonald I spent a year learning immunology when I was a youngster and wanted to be an immunologist so I am familiar with some of the stuff.

Q. For the benefit of his Honour who hasn't seen the statement yet, bear with me. So you accept that what is being put then is that there are two phases, there is the early phase, in terms of the body's reaction and production of antibodies, and then there is a second

more specific phase in terms of production of antibodies.

A. Yes, I realise that process.

Q. And what Sir Gustav Nossal is putting in this commentary is that when you are talking about sort of general response, that is where the antibodies aren't very specific to the antigen, that's that very early stage in the infection.

A. I don't think Sir Gustav means that. He talks about a immunity, doesn't he?

Q. Let's go to what he actually says, then, rather than try and quarrel with what he says. I'm reading from the second paragraph 'To put the matter in context, one needs to distinguish antibodies made very early after infection or immunisation from antibodies made following a prolonged infection or repeated immunisation'.

A. Yes.

Q. We might deal with it proposition by proposition. Do you agree with that.

A. Well I don't know what he means by 'very early' or 'following prolonged infection'. I don't know what time scale he is talking about. I have no idea.

Q. As a general proposition do you disagree with it. He hasn't put a time frame so we are not being specific here, but there are two phases that follow this pattern.

A. Yes, I accept that.

Q. 'Antibodies made early are accurate representations of the genes carried in the B cells'. Do you agree with that.

A. Yes.

Q. 'They are generally of low affinity, that is they do not bind very tightly to the antigen which evoked them'. Do you agree with that.

A. Yes.

Q. What do you understand that to mean.

A. Well it's like having a weak magnet and a strong magnet on your fridge, where one may barely hold its own weight and the strong one sticks like glue.

Q. So we move on to the next phase 'However, a very specialised and elaborate machinery exists whereby the B lymphocytes can markedly 'improve their performance', that is start to produce antibody of much higher affinity'. Do you agree with that.

A. I agree with that.

Q. 'This is because a structure exists in lymph tissues known as the germinal centre. The germinal centre represents an environment where antigens are stored for long periods'. Do you agree with that.

A. Yes.

Q. 'B lymphocytes multiply there and over a period of time mutations occur in the antibody genes of the B cell. Only those mutations which confer a high affinity to the antibody in question are selected for further multiplication'. Do you agree with that.

A. Yes.

Q. 'Mutation and selection of higher affinity variants are interative processes so that in repeated immunised individuals many mutations can accumulate and the resulting antibody can bind 10,000 or 100,000 more tightly than the original one'. Do you agree with that.

A. Yes.

CONTINUED

Q. I will go ahead over the next paragraph, the bottom paragraph, to the sentence commencing 'In the diagnostic test for HIV, only high affinity antibodies of the latter type are used'. Do you agree with that.
A. Could you just read that again?
Q. Bottom paragraph, first sentence.
A. Yes, I take his word for it.
Q. Do you know what sort of antibodies are used for these tests; whether it is some of the general ones, initially, or the specific ones later.
A. When he says 'diagnostic test for HIV', does he mean an antibody test or an antigen test? I'm not sure.
Q. Go on and read. He talks about the ELISA and the Western blot. You have read this report.
A. Yes. It is mixed up because if he's talking about the ELISA and Western blot, he's talking about detecting antibodies but if he's talking about using a high affinity test for HIV, that could be an antibody test or a P 24 test. He's saying high affinity antibodies of the latter type are used. That is probably what he means there - an antigen test, I assume. A diagnostic test for HIV can mean an antibody test or antigen test. There is no doubt about that.
Q. I suggest to you that what he means is that the ELISA and Western blot only detect high affinity antibodies.
A. Yes.
Q. Do you agree with that.
A. According to - I agree, it depends when you do the test. Gustav Nossal says himself that they're low affinity to begin with, so later on in the infection they are high affinity. It depends at what stage you do the test. You can't have it both ways. I don't understand - sorry you're asking the questions, so I'll keep quiet.
Q. What I am suggesting to you is that what Sir Gustav Nossal is saying here is there is two phrases: a generalised response by the body and a more specific attack at the antigens and it is this very specific attack that those tests are aimed at - I'm putting those

in lay terms but that is the gist of what he's saying.
A. With respect, I think that is not - that is confusing. What Sir Gustav is suggesting here - you're suggesting what Sir Gustav is suggesting here is that the antibodies aren't so specific at the beginning but they can be more specific as they develop. Is that what you're suggesting to me? I don't understand the question. Are you suggesting to me that the antibody response early on is not as specific as it is later on?
Q. Yes.
A. Because they're low affinity antibodies?
Q. Yes.
A. Affinity and specificity are not the same thing - in fact, in this paper that I quoted from in my evidence about antibodies being promiscuous - and, by the way, Professor McDonald said in his report that the word 'promiscuous' is our word. It is not our word. I have two papers in which promiscuity of antibodies is mentioned by the authors. It is not our word. I'd like to read from this paper, if I may? It is the paper that I referred to in my presentation and was referenced and Ms McDonald has a copy of this paper.
Q. Has it been put before the court yet.
A. What do you mean?
HIS HONOUR
Q. Have I seen it.
A. No, I only have one copy. I can read it to you and give you the paper.
Q. We better look at if before you read it.
HIS HONOUR: The witness wants to refer to a paper which is titled 'Exquisite specificity and peptide epitope recognition promiscuity, properties shared by antibodies from sharks to humans'. Do you have a copy of that, Ms McDonald?
MS MCDONALD: Not in my fingertips.
HIS HONOUR: It is published in the Journal of Molecular Recognition.
MR BORICK: Has it got a slide number on it?

A. I don't have the slide number but it will be in my presentation, the slide number. I do apologise that Ms McDonald doesn't have that presentation. I don't know what happened to it.

EXHIBIT #A13 PAPER TITLED 'EXQUISITE SPECIFICITY AND PEPTIDE EPITOPE RECOGNITION PROMISCUITY, PROPERTY SHARED BY ANTIBODIES FROM SHARKS TO HUMANS TENDERED BY MR BORICK. ADMITTED.

A. I just asked you and I had to ask you whether you were implying that low affinity antibodies were somehow less specific than high affinity antibodies and that is why, for some reason, you put that to me -

XXN

Q. We're not having a dialogue. You're responding to a question. If there is something you want to read out from that paper, please do so.

A. This is in regards to affinity and specificity. 'As pointed out by Van Regenmortel, there is no necessary correlation between affinity (e.g. of induced IgG Abs) -' which means antibodies '- and specificity because low affinity antibodies can show a better discrimination amongst antigens than the high affinity binders'.

Q. On this statement, on Sir Gustav Nossal, a couple of general questions. Do you understand all of what he says in that statement.

A. Do I understand it?

Q. Yes.

A. Yes.

Q. Do you agree with that statement or is there any part that you disagree with.

A. Do you mean the whole document or that particular statement?

Q. The two-page statement headed 'Parenzee appeal antibody test of HIV'. The first question is: do you understand the contents of that statement and the second question is: if you do, is there anything that you disagree with.

A. Yes, there are things that I disagree with.
Q. Can you indicate those to the court please.
A. Can I have a moment to see what they are? I disagree that low affinity antibodies necessarily means low specificity and that was the substance I just read.
Q. On what do you base your opinion on that topic.
A. On the opinion of Van Regenmortel that I just read out.
Q. Is your opinion based on anything other than that.
A. No, I just learnt that from that paper.
Q. From that one paper you form an opinion that that statement is incorrect, by Sir Nossal.
A. I am questioning whether low affinity means low specificity and I accept the evidence in that paper that it is not necessarily so, but I haven't researched that as a topic myself, in minute detail.
Q. You're prepared to say you disagree with what is in Gustav Nossal's statement.
A. I don't know why he's bringing this up. I agree about the low affinity and high affinity in the primary immune response, I'm not disagreeing with that. I just don't see how it fits in with my thesis about the test of unproven specificity. The connection is not obvious to me from Sir Gustav's statement.
Q. The bottom line is you disagree with the passage you have indicated to us, based on that article.
A. I disagree about the - if he is implying - he doesn't say this, he doesn't make it clear why he's bringing this up, but if he is implying that, I disagree with it, based on that statement.
Q. Is there anything else you disagree with in that statement.
A. Yes. He says 'There are a number of studies which delineate -'
Q. Can you indicate where you're reading from.
A. The second page, in the second paragraph: 'There is now a very large literature on anti-HIV antibodies, both polyclonal and monoclonal, both neutralising and non-neutralising. There are any number of studies which

delineate to exactly which portion of the HIV viral surface these antibodies bind'. To be consistent with that point of view, I would question whether there is a viral surface for the antibodies to bind.

ADJOURNED 11.58 A.M.

RESUMING 12.12 P.M.

Q. I want to ask you some questions now about the statement that has been provided to the court by Elizabeth Dax.

A. Excused me I haven't finished saying what I -

Q. Sorry, I had forgotten.

A. The third paragraph of the second page - just trying to work out the best place to read from - second sentence 'It is then usual to look for nucleic acid from the virus in such people's blood, representing the ultimate proof of infection. Such tests are now very sensitive - they can detect as few as 50 viral particles per millilitre of blood'. I think Sir Gustav is referring to the viral load test - I am assuming that that is what he is referring to - and I disagree with his interpretation that the RNA is viral RNA. I also disagree that it can detect 50 viral particles per millilitre of blood. I would like to point out that in all of the reading that we have done in our group, we have been unable to find one picture of a viral-like particle in the blood of even one AIDS patient published, and we have communicated with Hans Gelderblom at the Koch Institute in Berlin, who has almost made this his life's work, and he has not been successful in this either, so I reject that there is any proven correlation between the RNA which is said to be HIV RNA, and HIV particles in blood which is what - so that's the part that I object to in that paragraph. I also object to the second last - I will just read it, is that okay 'If one were to deny HIV is the causative agent in AIDS, it would be very difficult to explain why antiviral therapy works so spectacularly well - by now lifesaving in many millions of people'. I object to the notion that the action of a drug can prove a viral theory of AIDS. That is the not the same as saying that the drugs may not be beneficial, I want to make that clear as well. I draw the analogy with, say, giving people with heart failure digitalis, which comes from the foxglove plant, or people with rheumatoid arthritis with gold

injections which sometimes helps them. The action of the drug doesn't always enable to you prove a particular theory of causation; drugs have so many effects, so many unknown. You can't prove an aetiology from that. It can be suggested, but it's not proved.

HIS HONOUR

Q. It depends, doesn't it, on the number of cases. If it helps just one or two, that is a question of weight, but if it's proved to assist hundreds of thousands of millions of people, can't you draw some conclusions from that.

A. You can draw some conclusions, but I disagree with you, your Honour, I'm sorry, that that proves that the virus is the cause of the disease.

Q. You disagree with Professor Nossal's view that that is a methodology of proving cause.

A. It certainly is a methodology that people adopt, yes. I disagree with this particular instance.

Q. With that methodology.

A. Yes.

Q. So if I were to accept that methodology as valid, would you accept that I could draw a conclusion.

A. Yes.

Q. But you just say that the methodology is wrong.

A. I'm not sure what you mean by 'methodology'.

Q. I mean Professor Nossal says 'If one were to deny HIV is the causative agent in AIDS, it would be very difficult to explain why antiviral therapy works so spectacularly well'.

A. Well, I disagree with that statement. I mean I can elaborate, I was just trying to generalise; the notion that if you give substance X to somebody and they improve, that somehow tells you that you can figure out the cause of the disease, and I gave those two examples. I mean one of the reasons that, for example, just digging a bit deeper about antiretrovirals, because antiretrovirals clinically help people, you know, save their lives and help them live longer or whatever claims

are made may well be true, as I said, Professor Cooper didn't make up the fact that the hospitals were emptied, but the fact that they don't influence HIV DNA levels in cells to me suggests that they are not working as antiretrovirals, so I'm being a bit more specific about my general statement now in regard to antiretrovirals. Maybe Professor Nossal is not aware of that fact, I don't know. I also say that, just in general in relation to this document - this is called 'Antibody Tests For HIV' - 'Parenzee Appeal - Antibody Tests' - I can't accept this document as being proof that the antibody test is specific.

XXN

Q. Did you just say that antiretrovirals don't influence the DNA HIV levels.

A. Yes.

Q. What did you mean by that.

A. Well, if you recall the explanation from the evidence-in-chief of Mrs Papadopulos, the retrovirus enters the cell and a DNA copy is inserted into the cell nucleus, and that is what drives HIV expression, that is where new HIV comes from.

Q. Do you believe antiviral drugs effect someone's viral load, it reduces it.

A. It reduces the number of RNA molecules in the serum, yes, quite markedly, sometimes to small or zero levels, but it doesn't turn off the site where they come from, which is the only way that you can actually reduce the levels, so it doesn't make sense that they act as antiretrovirals.

Q. Do you accept that antiretrovirals cause an increase in a person's CD4 count.

A. Yes, when you give them, they do, and in fact one antiviral, AZT, given to people who are not HIV positive, increases their CD4 count as well, sometimes markedly and sometimes for weeks, which means that it is impossible, it is difficult, to attribute the increase in CD4 count to some specific effect on HIV by that

particular drug. That's well-known.

Q. You have never had any involvement in working with someone with HIV, watching how they respond to treatment, how they respond when they go off the treatment, what illnesses they might get along the way, depending on their CD4 levels or their viral loads. You have done nothing like that, have you.

A. No, I just read about it.

HIS HONOUR

Q. It may be because I'm missing something, I'm not sure that I understood what you were saying in respect of the fact that antiretrovirals have the effect of decreasing viral loads, the taking of them.

A. Yes.

Q. And increasing CD4 counts, but you do not accept that there are antiretrovirals, am I accurate in that.

A. There is two separate things in there.

Q. Yes, I'd just like you to explain it to me because I'm not sure that I understood your evidence, that's all.

A. Okay. The way that - this is according to the HIV experts.

Q. Yes.

A. Okay.

Q. You put the proposition as you understand it coming from the HIV experts, and then could you indicate to me why you say that that proposition is false.

A. Yes, okay. HIV is a retrovirus which infects - which is passed from human to human by various means and infects a specific type of cell known as a CD4 lymphocyte. When it gets into the cell, it reproduces itself by copying its RNA genome, its genetic instructions, into DNA - it's called reverse transcription - which it does by having an enzyme in it which enables this process to take place. This DNA which is, if you like, a photocopy or a Xerox copy, contains the equivalent message as the RNA, and is inserted into the cell nucleus inside the DNA and becomes part of the cellular DNA. That's where it sits, that's where it lives. Now then, when the

virus is made, when the cell is activated to make virus, the DNA of the virus produces the proteins which make up the virus, because it contains the same gene which makes a virus, and it also makes more RNA, which is the genome of the virus, and these assemble in the cytoplasm, that is the material outside the nucleus of the cell. Somehow they all come together in the right architecture and then they are released as particles into the cell, into the bloodstream, or into the lymph nodes or wherever they are, and something during this process, viruses are always being made and destroyed, it's like a bank balance, and there's a level, which is the dynamic level, and you can count the - and the left over, if you like, RNA molecules from the virus, which are supposed to somehow reflect the amount of virus in the body, get into the bloodstream where they can be measured using biochemical techniques. Now when you give antiviral drugs, they prevent - they don't kill off existing viruses, that's not how they work, they just prevent new viruses being formed. So what happens is that as the cells - so the viruses die, they die and are replaced normally in the absence of antiviral drugs, and cells that are infected die and are replaced. Without the antiretrovirals they are infected again. You can measure the amount of the DNA in the cells, which is the proviral form in the body, as well as measuring the plasma RNA, which is the spill over from dead viruses, if you like. Now when you give these drugs, since the cells - since the viruses are - I've just got to make sure I get it right, I know it's a bit tedious - when you give the drugs, the thing that drives it is the DNA, okay, so because you're not making any new viruses, and because all the other viruses are dying and the cells are dying, the DNA levels should decrease because you're not reinfecting any new cells because of the actions of the antiretrovirals. So they should both decrease: the DNA should decrease because the cells are not being reinfected and old cells die within a few days, but that

doesn't happen; the DNA level in the cell stays the same, in fact it may even go up - there was a study in Italy where it actually goes up - but somehow the RNA drops, and it does drop, I mean I accept that. So there is a total paradox here, and I don't have an explanation for this, except to say they can't be acting as antiretrovirals because the DNA level is not decreasing and maybe the assay just interferes with the measurement of the RNA. I don't know, I honestly don't know, but that's the data. I mean the data - the experts would not question the data. The DNA stays the same and the RNA drops. If I may add, that still doesn't mean that the antiretrovirals may not have some beneficial effect apart from all that; you know, they contain drugs called proteose inhibiters, chop up proteins, and there are - you know, these drugs may affect other pathological processes which are associated with development of AIDS. I mean this is speculation on my part but it's, you know, reasonable speculation. AZT, I don't know about the modern drugs, the combination drugs, the HAART drugs, I mean do they increase the T4 cells, but for sure there is data that if you give AZT to people, people given AZT are people who have been needle stuck, who turn out not to seroconvert, are not HIV infected, and the T cells go up and stay up and it's been documented in the literature. So, you know, this may be true of the other drugs but, to do that, you have to be giving these drugs to people who are not HIV infected to find out, and I'm not aware of any studies or instances of that in the literature.

XXN

Q. The statement of Elizabeth Dax.

A. Yes.

Q. You have had a chance to read that.

A. I have. It's a very long document and I may have to beg your permission to study bits of it which you refer to me.

EXHIBIT #P56 STATEMENT OF ELIZABETH DAX TENDERED BY MS MCDONALD. ADMITTED.

Q. What is your understanding of who Elizabeth Dax is.
A. She is the head, I think, of the National Reference Laboratory in Melbourne, and she is an opera lover.
Q. And a.
A. Opera lover.
Q. Could I take you to p.2 of her statement.
A. Yes.
Q. Para.2 starting with the words 'HIV testing'.
A. Yes.
Q. Do you see that.
A. Yes.
Q. 'HIV testing is performed by using tests in particular sequences. Highly sensitive immunoassay distinguish negative tests from those that are reactive'. Do you disagree with that proposition.
A. I disagree with the term 'HIV testing', but for the purposes of having this - for the question, I will agree with the statement, yes.
Q. She goes on to say 'They are designed to do just this. Negative responses can be definitively diagnosed as not containing antibody or as anti-HIV negative'. Do you agree with that.
A. Yes.
Q. So if you get a negative on the test, that shows that there is no antibody.
A. It shows as no antibody to whatever protein you're testing for in the antibody test case.
Q. Is it the situation that the only circumstances in which false negatives might occur is in those very early days when someone is first infected; there is a window of opportunity for a false negative to happen.
A. The window period you mean?
Q. Yes.
A. That's the explanation that the experts give, yes.
Q. You disagree with that, do you.

A. No, I don't - well, I disagree; I don't want you to misconstrue that I am throwing out the whole notion, questions about the existence of HIV and antibody tests, by disagreeing that there is a window period for HIV, I mean it completely weakens my position in regards to our general thesis. I don't want you to say to me 'Okay, you believe that there is a window period for HIV, there must be HIV'.

HIS HONOUR

Q. No, you don't need to concern yourself with that.

A. Am I getting too paranoid?

Q. If one thing is very clear to me in this case, it's that your position, and that of your colleague, Ms Eleopulos, is that it has not been established that there is any identifiable virus called HIV.

A. Thank you.

Q. So any answers that you give based upon questions that are put to you, I will not interpret it as you conceding that there is any such virus.

A. Okay, I agree.

XXN

Q. So you agree with that proposition now.

A. Yes.

Q. In terms of false positives, you'd agree that they are very rare, would you.

A. I agree when they do the tests they say they don't get many false positives, but you know a false positive is a test that is positive when you do not have the condition that you are testing for. That's the definition of a false positive.

Q. I mean you would accept that HIV, HIV research, all very topical and controversial and scrutinised both by the professionals and the media.

A. Yes.

Q. Isn't it the case that if it was a regular problem - people being diagnosed as HIV positive and then continued to be very healthy and not have HIV after all, or test negative on a subsequent test - we would be

hearing about it.

A. Sorry?

Q. I will put it very simply. There are lots of false positives happening out there in the community.

A. There are lots of false positives.

HIS HONOUR

Q. Not related to HIV, Ms McDonald is talking about.

A. Sorry. I'm sorry to be so silly about it, or pedantic, or thick, but I don't actually understand the question.

XXN

Q. Let me put it this way: if we assume for the moment that there were many people out there in the community who were tested with the ELISA and the Western blot, and those tests showed that were HIV positive and they didn't go on to get any symptoms.

A. Did or didn't.

Q. Did not - they did not become sick, they did not require medication, there were no problems with their CD4 count - that we would be hearing about that. That's something that we would all be aware of.

A. If there were people who were not reacting in these tests?

Q. People who had been diagnosed as HIV positive when, in fact, they were not.

A. Sorry, you're saying that if there were people out there who had a positive test -

Q. Yes.

A. - but who were not going on to get all of these diseases.

Q. Weren't going on to get sick or requiring medication.

A. Yes.

Q. Wouldn't we be hearing a lot about it.

A. I think we would.

Q. Can you point me to one single case in which that has been reported as occurring, one report, one journal entry where they say 'Look at this case. This person, positive ELISA, positive Western blot and then, lo and behold, three years later when they were tested again,

no HIV and they never got sick'.

A. The incidence - you see, you're saying they are false positives. You say it's a false positive. You've got to know that HIV is absent. If HIV was absent then, according to the theory of HIV AIDS, you wouldn't expect them to get sick if HIV causes AIDS. What you're saying, I think, is you're assuming that because they are positive, they must be a false positive - sorry, that they are not infected. I honestly don't understand this proposition. I'm trying to, believe me. I'm conscious of my role in this court.

CONTINUED

HIS HONOUR

Q. I don't know if I can help. Maybe I'm understanding it simplistically and please say if I am. From time to time you see programs or read of people who, for example, are diagnosed with cancer.

A. Yes.

Q. And subsequently it's found that they don't have cancer.

A. That does happen.

Q. So a misdiagnosis.

A. That certainly does happen.

Q. I think what Ms McDonald is asking you is do you know of any cases where people have undergone tests for HIV who have subsequently been diagnosed as not having HIV because subsequent tests revealed that they are not positive. Do you know of any cases. I think that's the first proposition.

MS MCDONALD: Yes.

A. You said 'false positives', you mean you are assuming they are false positives?

HIS HONOUR

Q. Well, a false positive means - let's get the definitions right. I think false positive means someone who has a positive - they are tested, they are told that they have got HIV because the ELISA and Western Blot says positive, they do nothing about it and a year later they are tested again and the test is negative. That's what I think was meant by a false positive.

A. I still don't quite understand the question, I mean when you -

Q. The question is do you know any cases where that has occurred or have you read anything in the literature where that has occurred.

OBJECTION: MR BORICK OBJECTS

MR BORICK: I'm not sure that the witness understood what you were saying. You were putting your definition of a false positive; is that right?

HIS HONOUR: Well, not my definition -

MR BORICK: What you understood on the evidence.

HIS HONOUR: - what I understood Ms McDonald was trying to put.

MR BORICK: That is why I interrupted. I think it is a bit confusing, as I understood you to be saying a false positive is a situation where you get a positive result in the first test and then later a negative test.

HIS HONOUR: A year later and there is subsequently a negative test. That is a first step for what I'm calling a false positive. There may be other steps, that is the first one.

MR BORICK: And that is what the witness should answer.

A. If you are saying are there people who have positive tests who nothing happens and they stay well and they don't have drugs and don't disappear off the system, years later they turn up and have an antibody test, do I know of any cases of that?

HIS HONOUR

Q. Yes, or read any.

A. Yes, I presented some in chief, Drug Addicts of the United States; yes, Dax. And there is a case my colleague presented yesterday, case history where the wife was haemophiliac. And may I add that a false positive test is a positive test in someone who does not have HIV infection proved by some independent means.

XXN

Q. And your colleagues have been very keen to keep asking for proof of various things, proof that HIV exists, proof that medication exists; where is the proof that there are all these false positives happening out there.

A. You can only have proof of false positives if you in fact appraise the antibody test in terms of HIV infection using a gold standard. We are asking for proof. Is it unreasonable to ask for proof, isn't that what scientists want, isn't that what proof is all about?

Q. Let's go to what happens these days because it's the case that we now have developments in molecular biology

and there is nucleic acid testing that's done regularly in relation to people's HIV.

A. They do nucleic acid testing, viral load testing, they do DNA testing, yes, I admit that.

Q. You see when you gave your evidence before you used an analogy and you talked about the patients who you have seen who look like they have fractures, it's only when you open them up you see they don't actually have a fracture and you used that as a simple analogy for a point you were making.

A. Yes, that was the gold standard.

Q. Well isn't that what happens here, that the initial examination or the visual examination, the X-ray and the ELISA and the Western Blot, but then it's opened up and that can be confirmed with nucleic acid tests.

A. No, that's just not true. That's not true at all. I obviously have not got the message across - our message across. It's not - no, that's not true.

Q. Can I take you to Elizabeth Dax's statement, p.3, para.2 it begins with the words 'It is important '.

A. Yes.

Q. 'It is important to realise that in all immunological tests there is a very small proportion of false positives or false negatives, false negative results usually occur early in index before the infected person mounts a full immunological response. If infection is suspected tests to identify viral antigen or nucleic acid are used. False positive results are rare, less than 0.5% and have been shown in the past occasionally to occur with allied infections or where a person is subject to repeated infections, such as malaria or after immunisation. Over the years, the specificities of the tests have been increased by manufacturers to extraordinary levels. False positive results have become rarer and rarer'. I pause there. Do you disagree with any of that.

A. Yes, I disagree because no one has established the specificity of these antibody tests using HIV as a gold

standard. So these statements have no basis in my view.

Q. Do you agree that false positives have become rarer and rarer.

A. I agree that what they call false positives has become rarer and rarer.

Q. Let me put this to you. You've been in court during the evidence and you've heard others talk about one of the great successes of the developments in this area being the prevention of transmission of HIV through blood transfusions, that we had a big problem in the early days and that now we have almost eradicated that. Isn't that because we now have the ability to properly test for the presence of HIV by using not only the screening test but the nucleic acid test so we cover even that window of opportunity.

A. You can only interpret that statement of yours screening using antibody tests, nucleic acid tests. It's only possible to make if you have proof of the specificity of these tests for a retro virus HIV and you do not have it.

Q. Do you accept that we have gone from a situation in which many many people tested HIV positive immediately after or shortly after a blood transfusion to one in which it never occurs in Australia any longer.

A. In my view the definitive study on associating HIV antibody tests - sorry HIV positive blood and development of AIDS has never been done and cannot be done. I agree with your expert John Callor, if it's to prove anything in this regard you need randomised trials, that is you need to give HIV positive blood to people, to two groups of people, chosen at random, and test them all - sorry and give them HIV positive, HIV negative blood and to test them before you give them the blood and to test both groups, including the HIV negative group, afterwards, probably for years see what happens to them before you can actually establish a relationship between the antibody positive blood and the development of untoward sequelae.

Q. They would be queuing up to do that test, wouldn't they.

A. This has been another ethical dilemma, seems to plague my whole existence, but the fact that you have an ethical dilemma and that you can't do these sorts of things doesn't mean that you can actually say that you've got the evidence. The fact that you can't get the evidence doesn't mean that you don't need the evidence and I don't know the answer to this question any more than any other people do. This is also complicated by the fact that blood itself is immuno-suppressive, contains antigens which can cause antibodies. We know blood is immuno-suppressive because it was discovered that if you had a kidney graft the more blood, more units you had the more your kidney graft lasted, in fact it used to be routine before the more potent drugs to give kidney patients blood, anyhow most of them didn't need it. Blood has been shown to decrease your D cells - blood transfusion to reduce the post-operative bowel cancers after orthopaedic surgery. I also presented a paper where patients in hospital at no risk of AIDS can develop antibodies and some of them may have had blood and they may be associated, so even - I'm prepared to accept that probably there is a relationship between being given HIV positive blood and developing illnesses but I don't accept that it's caused by a virus.

Q. I might go back to the question I asked you because you haven't answered it yet. do you accept that in Australia previously there were many, many reported cases of people being tested as HIV positive shortly after blood transfusions and we have almost eradicated that situation now.

A. Yes, I accept that.

Q. Do you accept the figure given by Professor Dax that the chance of HIV by blood transfusion is now less than one in a million in Australia.

A. I accept the fact that whatever tests that she is using to make that claim is true.

Q. And isn't that because we now have excellent methods to detect HIV in a person's system.

A. We do not have methods to detect HIV, we have methods to detect antibodies and nucleic acids whose origin has not been defined.

+RE-EXAMINATION BY MR BORICK

Q. His Honour asked you a question about the specificity of the ELIZA tests being 99.9; do you remember the question from his Honour. He was quoting what Professor Cooper said.

A. Yes, that's right.

Q. Remember that.

A. Yes, certainly, sorry.

Q. Professor Cooper had said that it's 99.9% specific. You remember him putting those questions to you.

A. Yes, I think so.

MR BORICK: I'm reading from p.701 your Honour -

Q. And subsequently when Professor Cooper was talking or being asked further questions about the ELIZA test he was asked 'How was the specificity of the test for those pathogens, how was that determined for each of the tests' that is ELISA and Western Blot. He said 'I think you need to question Professor Dax about it. I mean she's basically spent her life and done an enormous amount of work nationally and internationally in documenting that the diagnostic tests for HIV in this country and around the world are the most sensitive and specific they can be, so I'd have to say, you know, consistent with the licensed tests'. Leaving out a bit 'These are licence tests that guarantee a certain level of sensitivity and specificity'. When he gave that answer was he saying that first you've got to ask professor Dax about it, about specificity.

A. I do recall Dr Cooper saying that, yes.

Q. And the second thing is that as far as he was concerned, once it's licensed well then that's the end of it.

OBJECTION: MS MCDONALD OBJECTS

MS MCDONALD: It depends as to what interpretation you

make of Dr Cooper's evidence.

REXN

Q. What interpretation did you put on his answer.

A. That he didn't know the answer.

Q. Later on he was, at p.705, this occurred, this question was put to him 'You said earlier today that once the virus is purified then your sequenced the genes; do you remember saying that. A. Yes. Q. Would you be able to provide us with any papers or studies which demonstrate the purification of HIV particles. A. So again I'm not, you know, a card-carrying laboratory virologist. It's something you should ask one of the other expert witnesses, Dr Dominic Dwyer. You purify viruses by gradient centrifugation - by splitting very hygiene - I would defer this to the expert witnesses like Dr Dominic Dwyer for that'. What did you interpret that answer to mean.

OBJECTION: MS MCDONALD OBJECTS.

MS MCDONALD: I object to this process.

HIS HONOUR: I'm not sure that this witness's interpretation of that answer is going to help me very much. I won't stop you asking the question but I just indicate that what he interprets the answer as being really isn't going to help me, it's what I interpret the answer as being, but I'm happy for you to ask him the question.

MR BORICK: I'd like to have his help.

HIS HONOUR: As I said, I'll allow you to answer the question.

REXN

Q. Would you answer it.

A. It indicated to me that Professor Cooper was unable to answer the question or wasn't sure of the answer or was not able to provide evidence for the assertion. Your Honour sorry, I was asked a previous question about referral to Dr Dax, I'm not sure whether it's appropriate or not but I mean I was asked, Ms McDonald asked me about this document.

HIS HONOUR

Q. Which document.

A. Dr Dax's report, questioned me on it and Professor Nossal's document I was asked, you know, if I disagreed or agreed with some parts of it but Ms McDonald didn't ask me the same question about this document. I know you asked questions but is that an omission?

HIS HONOUR: Mr Borick, do you want to ask any questions about that?

REXN

Q. Well, would you like to clarify that matter you were just talking about.

A. Yes, I would, I'd just like to say -

Q. I'm sure that his Honour will allow you to clarify it.

A. I just don't know protocol.

HIS HONOUR

Q. You go ahead.

A. It's just that this document, I don't want to harp on this for ages -

Q. That's professor Dax's statement.

A. Professor Dax's statement is about the antibody test and then consists largely of extra-theory statements which don't provide any evidence at all of proof of specificity of the antibody tests. It also contains two mistakes in her definition of positive and negative predictive values. So this document reminds me - it also says that I drew analogy between HIV and the pregnancy tests, which she goes at great pains to talk about how these are different tests. I did not draw an analogy between HIV and pregnancy tests, I used pregnancy tests to illustrate how one determines the sensitivity and specificity of any test, it just happened to be an antibody test, I could have been using a test for heart disease, I just chose that particular test.

This document reminds me very much of the letter that I wrote to her in 1994 which was published in the Medical Journal of Australia, where, as I clinician, I wanted to know how she could determine that certain Western blot bands were proof of HIV infection and others weren't. On that occasion, like this occasion, Dr Dax has not answered the question. This is a very fundamental question because she runs the National Reference Laboratory. What she says decides - what her laboratory comes out with determines whether people are told they are infected with what is considered to be a lethal retrovirus or not. I object - I am disappointed that this information is still not forthcoming.

Q. In this answer you said there are two mistakes made in this paper.

A. There are two mistakes.

Q. Could you identify those.

A. Predictive values.

Q. Just refer to the page, would you.

A. P.8, there are mistakes. Maybe I should explain that.

HIS HONOUR

Q. You should explain why you say it is a mistake.

A. She says the positive - when you do tests, there are true positives and false positives. True positives are the ones where you have the disease and false positives are where you are positive and you haven't got the disease. When you go and find someone with a positive test, it could be either, you don't know. It depends on how specific the test is and what the prevalence of the number of the disease in the community is as to what odds you could place on a positive test. If there's lots and lots of people who have got the disease, but the degree in specificity is quite high, then most of the tests will be true positives or they will be infected and have the disease in question. It is just a numbers game. Dr Dax refers to and that is called - what you do is you put the true positives, plus the false positives. It is a proportion of the two. She

defines 'The likelihood of a sample identified as a reactive by a test being truly positive'. This is for the positive predictive value for the analyte. That means the antibody. The definition of a false positive is when you have the disease. It is not about analytes or antibodies, it is about the disease you're trying to use the test for. All she's doing is she's actually defining - she's just assuming that the antibodies are HIV and substituting that. She should be saying it is the disease - it is HIV infection, not antibodies. That is my point.

REXN

Q. The second mistake.

A. It is the same mistake but it is for the negative predictive value.

HIS HONOUR

Q. The same statement.

A. Yes.

REXN

Q. On the second page, the paragraph starting 'The Perth group'; have you got that.

A. Sorry - one other thing about this report. On the first page, second paragraph, Dr Dax says that she had many telephone conversations with us and they were taken out of context. Have you read this?

HIS HONOUR: I haven't, it has just been handed to me.

A. I would like to read this in terms of the information and sayings that have been attributed to me by the witnesses. I would comment that many of these things were said in telephone conversations. They have been taken out of context - 'I have not met either Mrs Eleopulos or Dr Turner'. The speech that was used in conversation by me on a number of occasions was quoted and given emphasis that was not given during the casual conversations. 'Had I known these conversations were being taken, as they appear to have been, I would not have persisted in having conversations with the Perth group.' I have had one telephone conversation with

Dr Dax in my life, in 1990, where she rang me up. Mrs Papadopulos has never had a telephone conversation with Dr Dax. This is a complete mistake. I would like to make that point clear to the court.

REXN

Q. The second page there, the paragraph beginning 'The Perth group'.

A. Yes.

Q. The third sentence 'Western blots are immunoassays where the antigens of the virus have been split electrophoretically so that the reactivity to specific areas of the viral genome can be defined'. Can you see that sentence.

A. Yes, I see that sentence.

Q. What do you understand that to mean, with particular reference to 'viral genome'.

A. It is a mistake. She probably made a mistake. She probably means 'viral gene'. She either means - she probably means 'viral proteins' but I don't know what she means because specific areas of the viral genome, would, in the HIV theory, be code for particular viral proteins. Maybe she means it has been split, so specific reactivities to viral proteins can be defined. It is not clear what she means by that.

ADJOURNED 1.02 P.M.

RESUMING 2.16 P.M.

REXN

Q. I think you have three further comments you want to make on Elizabeth Dax's paper.

A. Yes, I will try to be brief. The first is on p.4, the 'Specific comments on the evidence of Mrs Eleopulos and Dr V. Turner'. 'Dr Turner is explaining that there are two tests and there are differences between them. This testimony just demonstrates how out-of-date Dr Turner's comments are. First of all, ELISA is a particular format of immunological test. The ELISA format is no longer used widely. Immunological tests to identify the presence of antibody, are'. I have two points to make

in that regard; one is that the ELISA test is an immunological test. Yesterday, Professor Cooper referred to the ELISA on numerous occasions in his testimony and Dr Dax's book, which I just hold up to show, has numerous - probably hundreds of references to the ELISA test. Secondly; just the next paragraph down: 'Dr Turner's replies during cross-examination do not take into account probabilities or predictive values. It is also extraordinary that Mrs Eleopulos, reportedly a mathematician, has not mentioned probability in her discussions'.

HIS HONOUR

Q. I may be looking at the wrong page. What are you reading from.

A. Dr Dax's comments.

Q. The statement of Elizabeth Dax.

A. Yes, p.4.

MR BORICK: Would you read the first paragraph, to put the evidence into context, and then if you want further explanation from the witness.

HIS HONOUR: I understood it because he read out the point that he was critical of. Although I couldn't find it, I understood it.

REXN

Q. Perhaps you can move on to the second point.

A. Shall I read that again?

HIS HONOUR

Q. No, I have the paragraph that refers to Mrs Eleopulos.

A. So, I read down to 'in her discussions'; did I not?

Q. Yes.

A. My point there is that if you look at the last two pages, under 'predictive values', you will see the term 'specificity' on the left-hand column. You cannot determine the negative and positive predictive values unless you know the specificity of the test, and, in our view, the specificity of the test has not been determined. Thirdly; on the next page, p.5, down the bottom 'In answer to the long-winded treatise on Western

blot on pp.111-113, it should be noted that Western blots are manufactured by a number of different manufacturers. These manufacturers use different viral preparations so that proteins are in different concentrations on the blots. Therefore, the criteria for interpretation may differ somewhat between different commercial Western blots'. I regard this as a wrong statement, because it is not the concentration of the proteins in the bands for determining, but it is the actual patterns of the bands themselves. I also object to the phrase 'long-winded treatise'.

Q. Don't worry about that. I don't want to get involved in whether it is long-winded or not. If you want to comment on the specific material, that is fine, but any comment about whether she considers it long-winded is irrelevant to me.

A. I do want to comment on the part that was described in that manner. That particular part referred to trying to establish from Dr Dax why three bands were indeterminate and why four bands were positive. It was long.

Q. But not long-winded.

A. That is the end of that.

REXN

Q. You remember there was one point in the cross-examination when his Honour asked you some questions that related to the antiretroviral drugs and treatments, and his Honour put the view clearly that he wanted to know what is the mainstream view and then what is your answer to it; do you remember that part.

A. Yes, I do remember that.

Q. I don't think you answered it in the two blocks that his Honour wanted it. I want to ask you this: can you be HIV-positive but have no clinical signs - you don't need to see a doctor because you're not sick, you don't feel sick.

A. Well, you certainly could be HIV-positive and not feel sick or look sick. Whether you need to see a doctor or not would be dependent upon who you asked the question

of. Most HIV experts would say that you do need to see a doctor to keep a check on what's going on and have tests performed and have your HIV monitored.

Q. I think Professor Cooper touched on this topic too, didn't he; the figures in the United States.

A. The professor quoted a statistic that approximately 50% of gay men - untreated this is - from the era before the drug combinations - would develop AIDS within 10 years of being diagnosed HIV-positive. There is a period between becoming HIV-positive and developing AIDS and he also said that within two years or so of developing AIDS, you had a pretty good chance of dying.

HIS HONOUR

Q. If untreated.

A. I'm not sure whether he was referring - I don't know.

Q. I thought he said 'if untreated'.

A. I can't remember.

REXN

Q. Are there figures, that you know of, which indicate how many people, in the United States, who are HIV-positive but are unaware that that is the case.

A. I have read on the CDC website from time to time, which I keep abreast of - I suppose I will lament by the CDC - they estimate - I don't know how - a third of the people in the United States who are HIV-positive don't know they're HIV-positive.

Q. Did Professor Cooper give a statistic in relation to the number of patients that he has.

A. No, not that I'm aware of.

Q. I must have misunderstood. If you have AIDS, then you have one of 30 diseases.

A. Yes.

Q. If you are diagnosed positive with HIV, you may have no clinical signs whatsoever.

A. Yes.

Q. In that situation, where you have no disease or sickness or illness which you can see with AIDS, what have you got.

A. In the experts' point of view, you're infected with a retrovirus HIV, which they believe, in time, will lead to the development of immunodeficiency, low T4 cells, and the clinical syndrome, which is one of the 30 or so AIDS-indicated diseases.

Q. That could take 10 years or more.

A. It is certainly variable. About 5% of people are called long-term. The non-progressors, and there have been people who have been HIV-positive ever since the beginning of the AIDS era - we have people writing to us to tell us this. This is very variable, but the experts believe that 95% will eventually develop AIDS. That is not inconsistent with our view about the antibody tests being a general indicator of some problem in the body.

Q. You can't use the words 'AIDS' and 'HIV' interchangeably; they're not the same things. Is that correct.

A. No, they're not the same thing. AIDS is not HIV, HIV is a virus and AIDS is a clinical syndrome which you diagnose by examining a patient, diagnosing a disease one way or another, and aiding the presence of a test which you believe indicates infection with HIV.

MR BORICK: I meant to tender the Presidential AIDS Advisory but apparently I forgot to. I do so now.

HIS HONOUR: No objections, Ms McDonald?

MS MCDONALD: No.

MR BORICK: The conclusion which was referred to is at p.107 of this document.

EXHIBIT #A14 DOCUMENT TITLED 'PRESIDENTIAL AIDS ADVISORY PANEL REPORT' DATED MARCH 2001 TENDERED BY MR BORICK. ADMITTED.

NO FURTHER QUESTIONS

WITNESS RELEASED

+THE WITNESS WITHDREW