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TRIBUNAL OF INQUIRY

(Into the Infection with HIV and Hepatitis C of Persons with Haemophilia and Related Matters)

PROCEEDINGS: Monday 16th July 2001 - Day 159

Today, Prof. Pier Mannucci gave evidence. Prof. Mannucci is Director of the Haemophilia and Thrombosis Centre at the University of Milan.

Background

Prof. Mannucci said that cryoprecipitate became available in Italy the 1960s. He said that when the first heat treated factor concentrates became available in or around 1983, it was accepted that they were not entirely safe with regard to transmission of NANB Hepatitis. He went on to say that dealing with the problem of HIV infection took priority over the problem of Hepatitis C infection.

Hepatitis

As early as 1975, it was realised that people being treated with blood products could become infected with Hepatitis. It was not known at that time that Hepatitis could lead to severe liver disease, cirrhosis or hepatocellular carcinoma. It was observed, however, that some patients became jaundiced and had increased transaminases following the use of blood products. With regard to the chances of infection with Hepatitis from cryoprecipitate, Prof. Mannucci said that repeated use of cryoprecipitate over a period of time would almost inevitably lead to transmission of Hepatitis. But compared with commercial factor concentrates, cryoprecipitate was safer. Prof. Mannucci said that there was a near certainty of Hepatitis infection following the use of factor concentrates.

Prof. Mannucci said that patients suffering with chronic NANB Hepatitis did not necessarily develop liver disease. He said it could be described as a non progressive disease.

Prof. Mannucci was asked about an article published in 1986 in the Lancet by Prof. Schimpf, which showed that of a group of patients studied who had NANB Hepatitis, about a third went on to develop liver disease. Prof. Mannucci accepted that approximately 10-15% of all people with NANB Hepatitis could go on to suffer from cirrhosis of the liver. He described how, when heat treated factor concentrates first became available, he realised very early on that they were not entirely safe with regard to the transmission of NANB Hepatitis. Prof. Mannucci described how patients' transaminase levels were examined in order to determine whether or not it was likely that they had contracted NANB Hepatitis. Prof. Mannucci said that by 1987 the epidemic of Hepatitis C infection among people with haemophilia had essentially stopped. This was because virally inactivated products were being used.

Factor IX

From 1988 onwards, only virally inactivated factor IX products were being used in Italy. The viral inactivation method used was either steam heat treatment or the solvent detergent method.

Montagnier

Prof. Mannucci described how in 1984 he had met Montagnier. At that time Montagnier had developed a test to identify HIV. Prof. Mannucci went to Paris and he described a meeting he had with Montagnier in

a café off the Grande Boulevard. He explained to Montagnier that he had a cohort of patients who had been treated with non heat treated products and patients who had been treated exclusively with heat treated products. Prof. Mannucci invited Montagnier to carry out a test on this cohort of patients and compare the results of those who had previously been treated and those treated with only heat treated product. None of those who had been treated with heat treated product had contracted HIV. Of those who had been treated with non heat treated product, many of them had been infected with HIV. The results of the study showed that sufficient heat treatment was capable of inactivating the HIV virus in factor concentrates.

Prof. Mannucci described how Harold Roberts of Chapel Hill, North Carolina Haemophilia Centre, had been advocating from an early time the use of heat treated products. He said that Harold Roberts accepted that heat treated products could still transmit NANB Hepatitis, but his policy was based on the fact that heat treated product was probably safer than non heat treated product with regard to the transmission of the causative agent of AIDS. Prof. Mannucci said at this time heat treated product were not widely available in Italy. He said that the heat treated product was more expensive. He said that this was outrageous because the heat treatment of the product should not cause any increase in cost.

Infections In Italy

In Italy approximately 29% of people with haemophilia A became infected with HIV. Approximately 44% of people with haemophilia B became infected. Only 4% of people with mild haemophilia A became infected with HIV, while 12% of people with mild haemophilia B became infected.

Prof. Mannucci was examined by Mr. Bradley on behalf of the I.H.S. Prof. Mannucci reiterated that not all people infected with NANB Hepatitis would inevitably necessarily develop chronic liver disease. He said that the evidence showed that it was not necessarily a progressive disease. He described the difficulties in studying patients with Hepatitis who also had haemophilia; physicians were not willing to carry out liver biopsies. The only way to study the disease was to study the symptoms when they developed.

The Tribunal then adjourned to Tuesday 17th July at 10.30 am.

PROCEEDINGS: Tuesday 17th July 2001 - Day 160

The Tribunal convened this morning and Mr. Bradley, representing the I.H.S, continued his cross examination of Prof. Mannucci which had commenced on the previous day.

NANB Hepatitis

Mr. Bradley asked Prof. Mannucci questions about the development of knowledge about Non-A, Non-B Hepatitis. Prof. Mannucci said that generally there was a higher risk of transmission of NANB Hepatitis from products made using plasma collected from large pools of paid donors. However, he did say in the case the NANB Hepatitis, unlike other viruses, its prevalence in the population at large was so great that there was a very high risk of transmission from unpaid donors as well. Prof. Mannucci said that while approximately one fifth of patients with chronic hepatitis will develop cirrhosis, this fact was not appreciated in 1985. He said there was some conflict and debate in scientific circles as to the exact nature of the progression of NANB Hepatitis. He agreed that at the time people were concerned about NANB Hepatitis.

Self Sufficiency

When asked about self sufficiency, Prof. Mannucci said that it was easier in his opinion for small countries to become self sufficient. He gave the examples of Finland and The Netherlands. He said by comparison, it was much more difficult for larger countries to be entirely self sufficient in that most larger countries in the 1980s used a mixture of commercial concentrates imported from the US, and home made products. He said Italy had a population of approximately 60 million people. Prof. Mannucci said the infection of people with haemophilia in Italy with HIV was relatively low in comparison to other large countries. He said he couldn't explain why this had been the case, but it was a fortunate occurrence. In relation to the state of knowledge and awareness about the danger of infection of AIDS, Prof. Mannucci said that it was only really in 1985 that it was certain that HIV was a virus which was transmitted through blood products and which led inevitably to AIDS.

Prof. Mannucci said that he felt no personal guilt in relation to the way he or his colleagues reacted to the crisis of AIDS among people with haemophilia. He said that in retrospect it was easy to criticise; but the knowledge which was available then, he felt they had acted in a timely and responsible manner.

Mr. Bradley concluded his cross examination and the witness was subsequently examined by Mr. Butler on behalf of Prof. Temperley. Mr. Butler asked Prof. Mannucci about the choice of the cryoprecipitate over factor concentrates. Prof. Mannucci said that for acute bleeding, cryoprecipitate was probably inadequate as a treatment; factor concentrates were much more effective.

Prof. Mannucci was also examined by Mr. Aston on behalf of the Irish Medicines Board (formerly the National Drugs Advisory Board). Prof. Mannucci said in response to the question that acute Hepatitis was often asymptomatic and therefore difficult to detect, jaundice in patients was one way to diagnose Hepatitis. Prof. Mannucci said that it is now known that jaundice is only the tip of the iceberg, and that there are much more serious symptoms associated with Hepatitis. Prof. Mannucci said that at the World Federation of Hemophilia Congress in June 1983 in Stockholm, immunodeficiency in people with haemophilia was not on the agenda; there was an informal discussion in relation to it.

Mr. McGrath for the BTSB examined Prof. Mannucci. Prof. Mannucci said that Italian factor XI concentrate was first available at the end of 1984 or the beginning of 1985. This was factor IX

concentrate was heat treated. Factor IX concentrate virally inactivated by solvent detergent came on the market at the beginning of 1987.

The Tribunal then adjourned to Wednesday 18th July at 10.30am.

PROCEEDINGS: Wednesday 18th July 2001 - Day 161

Today, Dr. Smith gave evidence. Dr. Smith had worked at the Blood Fractionation Centre in Scotland from 1968. In 1975 he moved to the Plasma Fractionation Laboratory at the Oxford Haemophilia Centre.

Contract Fractionation

Dr. Smith had practical knowledge of how to produce factor concentrate. He said that during his time in the Scottish fractionation centre, there was a lot of contact with the BTSB. He himself had had contact with John McCann, Sean Hanratty and Cecily Cunningham. He said that from his dealings with Dr. O'Riordan, it appeared to him that Dr. O'Riordan was determined that Ireland should be self sufficient in the supply of blood products. Dr. Smith said that discussions took place between the BTSB and the Scottish authorities with regard to contract fractionation of blood products, but he was not party to these discussions. In his view, it was possible for a small fractionation facility to produce factor VIII and factor IX. He said that technically it would have been possible for the Scottish authorities to fractionate Irish plasma. However, one difficulty was the desire of the Irish authorities to keep plasma supplied to Scotland from being mixed with Scottish plasma. In those circumstances, it was difficult for a small fractionation unit like the Scottish unit to manufacture separate sets of factor concentrates based on two separate lots of plasma. However, it would have been possible for Irish plasma to be mixed with Scottish plasma and for the resulting product to be returned to Ireland.

Fractionation Methods

Dr. Smith said that the Scottish method of manufacturing factor IX was adopted by the BTSB. Dr. Smith described how in the 1970s at the BPL in Oxford, they attempted to use the Gail Rock method of fractionation. It was claimed that the Gail Rock method would produce a higher yield of product. However, BPL did not pursue this method of fractionation successfully. In the mid 1970s, BPL was fractionating approximately 100 litres of plasma per week. In the mid 1980s, this had increased to 300 litres per week. By 1981, the BPL had abandoned the Gail Rock method, and Dr. Smith said that he was sure this information would have been made available to the BTSB.

Advising the BTSB

Dr. Smith then described his contact with Cecily Cunningham. He gave evidence of a telephone conversation which he had with Cecily Cunningham in late 1984 or early 1985. A note of the telephone conversation mentions the fact that BPL are about to bring on stream 8Y, a heat treated version of factor VIII concentrate. Dr. Smith descried how in the early 1980s, they had been attempting to develop a heat treatment for their products in order to inactivate NANB Hepatitis. He also went on to say that they were attempting to heat treat factor IX, but they had fears about the danger of thrombogenicity. Dr. Smith described how he discovered that by adding AT3 (Antithrombin 3) to factor VIII concentrate, they could reduce the risk of thrombogenicity. AT3 was manufactured by BPL.

Super Heat Treatment

In relation to the heat treatment method adopted by the BPL (80 degrees for 72 hours), Dr. Smith said that they called this super heat treatment. He said that it was accepted that the more severe the heat treatment, the more likely it was that problems would occur in the factor concentrate. Throughout 1985, tests were carried out on dogs in a laboratory with the new heat treated factor concentrate. Some treaters chose to use non heat treated British factor IX concentrates in the interim rather than heat treated factor IX

concentrate from US. Overall, Dr. Smith said that the risk of HIV infection was much greater than the risk of thrombogenicity.

By 1985 it was clear that the heat treatment regime adopted by BPL would inactivate HIV, but it was not clear what the position would be in relation to NANB Hepatitis since this virus was less heat labile than others. Dr. Smith said that the logic behind opting for the most severe heat treatment regime possible, was that it was more likely to kill NANB Hepatitis than other regimes, even though there was no hard evidence to support that view at the time.

Dr. Smith said that it was understood that any person who used factor IX concentrate, even for a limited period of time, was liable to be infected with NANB Hepatitis. Dr. Smith said that by mid 1984 it was recognised that AIDS was probably caused by the HIV virus, that the virus was heat labile and that heat treatment of factor concentrates made in the UK would probably render those products safe. When heat treated factor VIII became available in the beginning of 1985 and heat treated factor IX became available towards the summer of 1985, Dr. Smith said that there was no effort to withdraw non heat treated British product which had already been issued. The main reason for this was that there would be insufficient product available to treat patients.

Contact with BTSB

Dr. Smith was then examined by Mr. McCullough for the I.H.S. Dr. Smith said that Cecily Cunningham had visited BPL and had had contact with staff there. He said that the method of manufacturing factor IX concentrate in the BTSB would have been very similar to that used in Scotland. He said when he discussed viral inactivation with Cecily Cunningham in 1983, the discussion would have been a general one and would have related to NANB Hepatitis only. He said he could not recall any discussion about AIDS or about the use of Hepatitis B as a surrogate marker for the HIV. He said that he would have discussed with Ms. Cunningham the dangers of thrombogenicity in heat treated factor IX, but that he wouldn't necessarily have been able to offer a solution to that problem at that time.

When the clinical trials were carried out with factor IX in October 1985, the product was distributed on a named patient basis only. At this stage they had laboratory evidence that factor IX which was heat treated would not cause thrombogenicity. However, the product would not go on general release until clinical trials had proved the safety of the product. Mr. McCullough asked Dr. Smith, was it a difficult thing to solve the thrombogenicity problem with factor IX. Dr. Smith said, no, once they discovered that they could add Antithrombin 3 to the product, they realised that it was an effective way of preventing thrombogenicity. Dr. Smith said that the heat treatment process was quite technical, not as simple as might be suggested. Mr. McCullough asked Dr. Smith whether it was necessary for them to carry out any new experiments on a product once they decided to change the heat treatment regime. Dr. Smith said that in normal times it would be necessary to evaluate a product once you changed each regime. However, he said 1984 and 1985 were unusual times and the procedures for pre-clinical and clinical testing were sometimes accelerated. Dr. Smith agreed with Mr. McCullough that in 1986, the BPL were probably confident that their heat treated products were safe, and that they did not transmit NANB Hepatitis or HIV. Mr. McCullough asked him, at this stage did he have any contact with the BTSB to tell them that the heat treatment regime that they were using was safe and efficacious. Dr. Smith said he could not consciously remember doing that. Dr. Smith said that he didn't think it was his position as a fractionator to try to convince other parties of the safety of their product.

Dr. Smith was then examined by Mr. McGovern for Prof. Temperley and Dr. Daly. Mr. McGovern asked Dr. Smith about a comment he had made earlier in his evidence, to the effect that in 1985 he would not have liked to have been treating patients. Dr. Smith said the reason he had said that was because treating

clinicians were caught between two stools: efficacy versus safety. He said the state of knowledge was extremely fluid, and that clinicians were dealing with terrible issues of life and death.

Dr. Smith was then examined by Mr. Tony Aston for the IMB. Dr. Smith said that the super heat treated method would have been available to other fractionators from 1985 onwards.

The Tribunal then adjourned to Thursday 19th July at 10.30am.

PROCEEDINGS: Thursday 19th July 2001 - Day 162

The Tribunal continued with its examination of expert evidence. Today, Dr. Peter Foster gave evidence. He was the manager at SNBTS (Scottish National Blood Transfusion Service) protein fractionation centre (PFC) in Edinburgh. Dr. Foster is an expert in biochemical engineering. He joined PFC in 1973. He had been involved in the practical and scientific work in connection with the fractionation of factor VIII and factor IX concentrate.

History

In 1975 a specific fractionation centre was opened up in Edinburgh. It was designed to handle a minimum of 1500 litres of plasma per week, and hoped to increase to a capacity of 3000 litres per week. Dr. Foster described how the Scottish fractionation centre had received plasma from Northern Ireland. For some time this plasma was processed separately to make factor VIII concentrate. It was in the mid 1980s that they stopped fractionating the plasma separately because it was more efficient to mix the plasma. But Dr. Foster said that it wasn't enormously difficult to fractionate the plasma separately. He said it required more careful scheduling, but that it wasn't impossible to do. The fractionation method was based on the American Johnson method. It was similar to the method which was being used at Elstree and Oxford.

Cryoprecipitation

Dr. Foster described the cryoprecipitation process: the principle is that after freezing the plasma and then thawing it slowly, the insoluble residue which remains is collected, and that residue is called cryoprecipitate and it contains factor VIII. He said that the procedure they were using in the late 1970s and early 1980s would involve processing a batch of about 150 litres of plasma that had been crushed into a kind of snowy consistency, and then melted in a vessel. The melting of the substance in the vessel would take about an hour to an hour and a half, but at the end of that process the melted material could be passed through a centrifuge in which solids could be checked and separated from the supernatant.

Dr. Foster said that one of the difficulties with manufacturing cryoprecipitate and factor concentrates was the loss of yield. He said that in the late 1970s and early 1980s, people were looking at means to preserve or increase the yield from the fractionation process. Dr. Foster said that in Scotland they had examined and experimented with the Gail Rock method (intended to increase yield) up until about 1981, but had realised that it wasn't efficacious and had abandoned it after that date.

Viral Inactivation

Dr. Foster said that when heat treatment was first considered, it was thought to be quite an astonishing thing. This was so, he said, because factor VIII was regarded as a very labile protein. He said even at room temperature it didn't survive for long periods of time. The idea that you could take a protein that seemed to be the most sensitive and labile of all, and heat treat it, was quite a revolutionary one.

Dr. Foster described how he had become aware of the process of pasteurisation suggested by Behringwerke in Germany. The difficulty with this process was that it resulted in an extremely low yield. He said that this clashed with the Scottish policy of attempting to become self sufficient. He said research was aimed at trying to apply pasteurisation methods which would still achieve a higher yield.

In 1983, Dr. Foster said they produced a small batch of pasteurised factor VIII for trial. They were also still experimenting with heat treatment of factor concentrates at this time. He said that the pasteurised

product went on clinical trial with one patient, but the patient suffered three adverse reactions and this was considered serious enough to abandon the rest of the clinical trial.

HIV in Scotland

Dr. Foster said that around 1984, they discovered that there had been a number of seroconversions in patients in Edinburgh. He said it was alarming because these patients had only been treated with products manufactured in Scotland. This information was available in October. Dr. Foster said that in November of 1984 they became aware of the efficacy of heat treating factor concentrates in order to eliminate the HIV virus. Dr. Foster said it was known in 1985 that, while heat treatment processes were effective against HIV, that they didn't inactivate NANB Hepatitis. He said that they immediately began to develop a heat treatment method for their own products as quickly as possible. In January 1985 they used a process of heat treatment at 68 degrees for 24 hours. Later in 1985 they discovered that they were able to heat products to 80 degrees for 72 hours. In order to do that they had to make a change to the product formation. There was also some evidence that heat treatment at this level might cause thrombogenicity. They carried out extensive studies on animals before releasing this super heat treated product. He said they also added Antithrombin 3 (as had been done in BPL in England) to the product to act against the threat of thrombogenicity. Once heat treated product became available, there was no immediate recall of the non heat treated product. However, once they were confident that they could supply enough material, they began to recall product.

Dr. Foster said they continued to issue non heat treated Scottish factor IX up until May 1985. Heat treated factor VIII which was issued in Scotland up until April 1987 was heat treated at 68 degrees Centigrade. One of the first batches which had been issued contained plasma donated by an HIV positive donor. They subsequently discovered this and followed up patients who had been given product from this plasma. Their study showed that none of the patients who had been treated with product from that plasma subsequently seroconverted; this proved that heat treatment at 68 degrees was effective to inactivate HIV.

Supply of Product to other Countries

Dr. Foster said he had not been aware of any requests by treaters outside Scotland for the supply of heat treated factor IX. He said that if such a request had been made, it would have been considered sympathetically.

With regard to factor VIII, Dr. Foster said they would not have had a lot of spare factor VIII to supply. However, if a request had been made for a limited quantity of factor VIII for treating previously untreated patients, he said that request would have been looked upon sympathetically. He said he thought it would have been feasible at that time to supply a limited quantity of factor VIII for that purpose.

Dr. Foster was then examined by Mr. Bradley for the I.H.S. Dr. Foster said that the initial motivation prior to 1983 to undertake research on viral inactivation in factor concentrate products, was a fear of the transmission of NANB Hepatitis. Dr. Foster said that this was a very serious concern and there was also a belief that commercial products carried a higher risk of NANB transmission than products manufactured in Scotland. However, Dr. Foster said they didn't have evidence in the late 1970s that the consequences of contracting NANB Hepatitis included the development of cirrhosis and possible chronic active Hepatitis. Dr. Foster said that the decision in 1985 to stop issuing Scottish factor IX non heat treated product was made by both the Scottish Blood Transfusion Service and haemophilia treaters. They were aware that heat treated product was available commercially, and that HIV was a risk in the Scottish blood supply, so therefore they felt that it was preferable to have patients treated with heat treated product rather than non heat treated product, as soon as possible.

Dr. Foster said it was in about 1988 that they became aware that solvent detergent treatment was effective in deactivating HIV and NANB Hepatitis in factor concentrate.

Mr. McGrath then examined Dr. Foster on behalf of the BTSB. Dr. Foster said because the moisture content in factor VIII and factor IX differed, exactly the same heat treatment process could not be applied to both.

The Tribunal then adjourned to Friday 20th July at 10.30am.

PROCEEDINGS: Friday 20th July 2001 - Day 163

Today, an application was made by the I.H.S. to the Chairperson of the Tribunal requesting:

1. That the Tribunal should investigate the role and the state of knowledge of the pharmaceutical companies who supplied products which infected or probably caused the infection of people with haemophilia within the State;

2. That certain internal documents from Armour Pharmaceutical Company be admitted into evidence.

Mr. Nesbitt made the application on behalf of the I.H.S. He said that the Tribunal was required to inquire into what considerations influenced the decisions of the BTSB and other relevant persons in the State, in the selection and manufacture of products. Mr. Nesbitt said that documentation held by Dr. Peter Jones showed that Armour Pharmaceutical Company knew in 1985 and 1986 that the product they were exporting into the State could infect patients with HIV. He also said that the Tribunal had heard evidence that at least one person had been infected with HIV having used this product. Mr. Nesbitt said that it was now not rational to pull up the drawbridge of the investigation when evidence was clearly available about how Armour Pharmaceuticals had behaved. He said that the state of knowledge of Armour Pharmceuticals was relevant with regard to the considerations that the BTSB had in selecting a product because, at the very least, they weren't told about the state of knowledge of Armour. He said that the work of the Tribunal would be diminished to a material extent unless the evidence that Dr. Jones was in possession of was received. Mr. Nesbitt said the fact that there may be more investigation to do was not a reason under the Terms of Reference for the Tribunal to refuse to investigate the Pharmaceutical Companies. Dr. Jones was now in a position to produce to the Tribunal information which would allow the Tribunal to understand that Armour knew for a couple of years that the product they were selling was not suitable and was infective. It is difficult to see, Mr Nesbitt said, how this was not relevant to the investigation of the Tribunal.

Mr. Nesbitt referred to a letter the Tribunal wrote to Armour Pharmaceuticals asking them if any information was ever given by Armour to the BTSB or any other relevant person within the State, about the danger that the product they were selling could be infective. Mr. Nesbitt said no adequate response had been received to this question to date. Mr. Nesbitt said that it was important for the Chairperson of the Tribunal to understand that in making the application , the IHS were trying to be of assistance. He did not wish to be confrontational and there was no need to be. Mr. Nesbitt said the failure of pharmaceutical companies to fully inform bodies within the State as to the full extent of their knowledge about the danger of their products was an issue. This, he said, went to the centre of the human tragedy which was being investigated.

Mr. Nesbitt then outlined the manner in which the investigation of the pharmaceutical companies could be undertaken. He said the Freedom of Information legislation in the United States could be exploited. There would be no difficulty in doing this, he said. Further, he said, it was possible for the Tribunal to order pharmaceutical companies to co-operate with it. It may be, he said, that pharmaceutical companies would claim that they could not be subjected to any order of the Tribunal for jurisdictional reasons. However, there was nothing to lose by ordering them and, in any event, t would cause them considerable embarrassment if they attempted not to comply. Finally, he said the Tribunal could seek access to the Pensacola Document Depository. This is a depository within the United States which contains all documents which have been discovered in the course of litigation by people with haemophilia against the pharmaceutical companies in the US. United States Law includes the Judicial Assistance statute, which entitles foreign nationals to apply to the court for judicial assistance. Access to the Pensacola Depository could be granted under the Judicial Assistance Statute. Any plans to make an application for Judicial Assistance to gain access to Pensacola would have to be put in place very quickly since the Pensacola

Depository is due to close in January 2002 and all applications for access must come before 1st November 2001.

Mr. Nesbitt then examined in particular one of the documents relating to Armour which the I.H.S. sought to have submitted to the Tribunal. This document was a minute from an internal Armour meeting. The background to the minute was that in 1985, Armour were treating their Factorate product at 60 degrees for 30 hours. Dr. Prince, a virologist from New York, had been retained by Armour to carry out experiments on the efficacy of the heat treatment of Factorate. Dr. Prince quickly discovered that the heat treatment was ineffective against the HIV virus. The temperature and the length of heating time were insufficient to inactivate the virus. Armour, aware of the results submitted by Dr. Prince, were therefore aware of the fact that the product was dangerous. At the meeting held in Armour on 15th October 1985, executives of the company decided to place market share and profit above safety. They considered that withdrawing the product from the market would have disastrous effects on their profit and market share. They decided to leave the product on the market and continued to ship it up until the end of 1986 when it had to be withdrawn following seroconversions associated with it. Dr. Prince had sought to publish the findings of the experiment, but Armour had prevented him from doing so by invoking a privacy clause in his contract. Armour had subsequently maintained that the reason the product was associated with seroconversions, was because the plasma used in the manufacture of the product was taken from unscreened donors. They have never admitted that they knew as early as 1985 that the product was dangerous, or that they knew the product was dangerous because the heat treatment regime applied to it was ineffective.

Mr. Nesbitt said that the action the Tribunal could take in investigating drug companies would be confined, limited and would not unduly delay the work of the Tribunal. It was an appropriate investigation for the Tribunal to undertake, and the I.H.S. was suggesting the reasonable means by which the investigation could be taken. The pharmaceutical companies were in possession of information which ought to have been communicated to relevant persons within the State. The steps the relevant persons took to protect themselves and the public from pharmaceutical companies failing to communicate either in a timely manner or at all the information they had was central to the inquiry, Mr. Nesbitt said. If this investigation was not undertaken, the resolution of the Oireachtas establishing the Tribunal would not be satisfied.

Mr. Finlay then replied on behalf of the Tribunal. He said that fundamentally, the investigation of the pharmaceutical companies did not fall within the Terms of Reference of the Tribunal. He looked at paragraph 2 of the Terms of Reference, which required the Tribunal to inquire into the adequacy of criteria and procedures applied by the BTSB in processing and manufacturing any of the products used by it. Clearly, Mr. Finlay said, this was a Term of Reference which applied only to the BTSB. Paragraph 3 of the Terms of Reference required the Tribunal to investigate the adequacy and timeliness of the decision of the BTSB and other persons within the State in the selection of any products found by the Tribunal to have caused, or probably caused, infection. Mr. Finlay said that this Term of Reference clearly did not include the pharmaceutical companies. Mr. Finlay said that similarly, clause 5 of the Terms of Reference did not include the pharmaceutical companies, since they were people outside the State. Mr. Finlay said it was entirely within the Chairperson's discretion as to whether an investigation should be undertaken into the pharmaceutical companies. It was entirely within the Chairperson's discretion as to how the Terms of Reference should be interpreted. The state of knowledge of the pharmaceutical companies was not relevant. It was the communications made by the pharmaceutical companies to other persons within the State which was relevant.

Mr. Finlay said that an application to American courts to assist the Tribunal in its investigation could not be considered until an American opinion of law was obtained. Mr. Finlay said that the arguments put forward by the I.H.S. in relation to the American application was insufficient. He suggested that the

research in relation to this application had been done on the internet, and that it was appropriate to get a properly qualified expert to give advice in relation to this. Mr. Finlay suggested that, in any event, from the case that he had seen, an American court wouldn't be inclined to give the Tribunal access to documents in the US because of the nature of the Tribunal – it was not an adjudicative tribunal, he said.

In relation to the documents proposed to be submitted by Dr. Jones, Mr. Finlay said that these were not documents which came within the Terms of Reference of the Tribunal, and he also said that Dr. Jones was not in a position to properly prove the documents. He said that simply because the documents had come into his possession did not mean that he could verify their source or the veracity of their contents.

In reply, Mr. Nesbitt made the following submissions.

First of all, he said, in relation to the provenance of the documents to be submitted by Dr. Jones, the contents of those documents proved that they were clearly relevant to the investigation of the Tribunal. In relation to the legal objections raised by Mr. Finlay, Mr. Nesbitt said that it was now crystal clear from recent Supreme Court decisions that use of documentation that has come into the public domain, irrespective of its provenance, is admissible before a tribunal if it is in the public interest. Mr. Nesbitt said clearly in this case, the documents should be admitted given their importance in relation to the public interest.

Secondly, Mr. Nesbitt said that paragraph 5 of the Terms of Reference clearly included manufacturers and an investigation of manufacturers.

Thirdly, in relation to clause 6, Mr. Nesbitt said this clause related to facts which the board or other relevant persons within the state ought to have become aware of at the time. It was clearly important to investigate what the pharmaceutical companies knew, because that would affect what people within the State ought reasonably to have known at a certain time.

Fourthly, Mr. Nesbitt said that the factual examples given in his submissions were all relevant to the investigation. With regard to the Armour product, Mr. Nesbitt said that Armour had been asked, and properly asked, about the circumstances surrounding the removal of the product from the market in 1986. Armour had responded that the product was removed, and said that its removal was related to the fact that plasma used to make the product had been taken from unscreened donors; no mention had been made about the fact that Armour knew that its heat treatment protocol was ineffective in rendering the product safe. The Tribunal had properly asked the question and an answer had been given. Mr. Nesbitt said the answer was not the correct answer, and evidence was now available to show that. In the circumstances, Armour were appropriately investigated, and that investigation should continue.

Mr. Nesbitt concluded by saying that in 1998, when it was intended to establish this Tribunal, the Minister for health had written to Brian O'Mahony of the I.H.S., saying that the source of infection, whether within or without the State, would be investigated, and fully investigated. Mr. Nesbitt suggested that the Terms of Reference should now be interpreted in accordance to the terms of that letter from the Minister for health.

The Chairperson then rose and said that she would give her judgement sometime in the following week.