cc. Mr Dunn
Dr Smithies
Copy to Dr Shum.
Reference.....
Dr Libellos.

CONFIDENTIAL

4669

Dr HARRIS
D803 AFH

FACTOR VIII AND HEAT TREATMENT - CURRENT POSITION

1. Following our telephone conversation yesterday, Dr Rotblat has been in contact with the companies manufacturing Factor VIII and has prepared the attached paper. For ease of reference I have tabulated the relevant information.

2. It is apparent from this that only one company (Alpha) uses a wet heat treatment process and Dr Rotblat regards this as the most satisfactory. The dry heat treatment process varies from 10 hours at 60° to 72 hours at 80°.

3. All material is now being processed from screened donors and virtually all in current use is from screened donors and this should reach 100% in the very near future. (BPL Elstree will be processing only material from screened donors by the end of February). The only exceptions are Autoplex (Hyland) which is available on a named patient basis only and Hoechst who have no plans for marketing their product in the UK.

4. Three companies have shown that their process inactivates HTLVIII and investigations are under way or soon to start elsewhere. Dr Rotblat will carry out follow-up enquiries at Hyland.

5. I hope this information will be adequate for CMO's purposes but please let me know if there are any points you would like clarified.

GRO-C

DR A J ISAACS
1602 MT Ext GRO-C

18 February 1986

cc Dr Rotblat - plus enclosure

FACTOR VIII - HEAT TREATMENT - CURRENT POSITION (FEBRUARY 1986)

Company	Wet/dry	Temperature	Duration	Screened donors	Viral inactivation	
Licensed						
Armour	Dry	60°	30 hours	Yes	Yes (data in post)	
Alpha	Wet	60°	20 hours	95%	Yes (data received)	
Immuno Factor VIII	Dry	60°	10 hours	Yes	Yes (data in post)	
FEIBA	Dry	80°	10 hours	Yes	Yes (data in post)	
Cutter/ Miles	Dry	68°	72 hours	Yes	Under investigation	
Hyland	Dry	60°	72 hours	Yes	?	
Hoechst	?	?	?	?	?	No plans for marketing in UK
Unlicensed						
Scottish S Factor VIII	Dry	68°	24 hours	)100% in a few) weeks)	Investigation to start soon	
Factor IX	Dry	80°	72 hours	) "		
Elstree BPL	Dry	80°	?	No	"	

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CURRENT STATUS OF LICENSED FACTOR VIII PREPARATIONS

There are currently six licensed commercial preparations and Factor VIII from the Scottish and Elstree fractionation centres.

1. Armour

Armour Factor VIII is heat treated at 60° for 30 hours dry. All supplies since May 1985 have been from individually tested donors. They have done viral inactivation studies using HTLVIII and shown good inactivation and the data is being sent. Mr Christiefrom Armour has disclosed that there are two cases in Holland under the care of Dr TenCate who has been doing a 2 year study on 15 patients treated with Armour heat treated Factor VIII, two of whom have sero converted. One patient is known to have received non-heat treated concentrate. The second patient who is the one that the current publication by Dr Ten Cate and Dr Breedevelt is concerned with, sero converted 8 months ago which would be about 16 months into treatment with heat treated concentrate. He also had persistent lymphadenopathy but they have not been able to grow virus from his blood and he has now apparently got better. Armour are at present confirming that all the batch numbers he received were heat treated. This patient is receiving treatment at 40-60 bottles a month of Factor VIII and apparently the publication gives no details of his previous treatment although it seems unlikely that he had not received treatment previous to 1983 when he started on the heat treated material. One of the batches which this patient received was a batch which was known to be contaminated by a patient with AIDS and which was withdrawn last year by Armour. Armour in this country have been following up the patients treated with this batch and there is one patient at Lewisham Hospital under the care of Dr Whitmore who has had minimal treatment with Factor VIII before and has now sero converted (confirmed) since receiving this batch. No other patients who were not already HTLVIII positive and who received this batch have sero converted. This information is really confidential until Armour get permission from the Dutch to release it. They are at present compiling a case study on these patients and will be sending me the information as soon as possible.

2. Alpha Therapeutic

Alpha Factor VIII is wet heat treated at 60°C for 20 hours. They have done an in vitro study at the CDC in Atlanta which was submitted with their Product Licence showing that HTLVIII is inactivated by this method. There are a few bits of batches of Armour Profilate which are still from non-tested donors, but 95% of the material being issued at present is donor tested for HTLVIII and they are also testing their initial plasma for ALT. My own feeling is that there is a general feeling in haemophilia circles that this wet heat treated product is the safest of the commercial products.

3. Immuno

All batches of Factor VIII being issued by Immuno at present are from tested donors and some of these are tested for ALT as well at HTLVIII. Their current product is heat treated for 10 hours at 60°C dry, but they are about to put in a variation for a vapour heating process in the next few weeks. They have done studies to show that HTLVIII is inactivated by this process at 10^4 log steps per hour in the new vapour heat treated. FEIBA is heat treated at 80° for 10 hours and inactivates HTLVIII at 10^6 log steps per hour.

4. Cutter/Miles

I have not been able to get information today from Cutter, but I do know that all their current material is from individually tested donors. It is heat treated at 68° for 72 hours dry and I am sure that they are also doing viral inactivation studies as they are also doing them for immunoglobulins.

5. Hyland

All donations have been tested since April 1985 and all the present products except one high activity batch which is destined for Belfast is now from individually tested donors. Some of the Autoplex (this is a Factor VIII bypassing activity similar to FEIBA) which is imported into this country on a named patient basis is not from donor tested plasma. I am not sure how many units in this country use Autoplex as it is prohibitively expensive. I have not been able to find anyone at Hyland who can tell me about virus inactivation although I am certain that they are doing this.

6. Hoechst

Hoechst have a licence for Factor VIII but they are not marketing in the UK at present and have no plans to do so.

7. Scottish Blood Transfusion Service

The Scottish BTS is heat treating Factor VIII dry at 68°C for 24 hours and their Factor IX is treated at 80°C for 72 hours. The majority of the plasma going into fractionation at present is donor tested and in a few weeks it will be exclusively donor tested plasma. They are at present setting up a collaboration with Professor Weiss, Professor Collee and Dr Lane at Elstree to study virus inactivation of HTLVIII by their processes. I am hoping that subject to ratification by the Scottish Home and Health Department this work can start very soon. It will be to the great advantage of the Elstree unit who care collaborating with the Scottish since they do not have facilities to do this at present in England.

The Elstree material as you know is heat treated at 80° and it will be very interesting to see how their virus inactivation studies come out in relation to this.

DR F ROTBLAT

Re 4640

Have we got check over attached

presumably a draft of doc 3027 - try BCKI