INTER-OFFICE CORRESPONDENCE

TO: H. H. McDade cc: A. B. Bessler Dr. M. Rodell	FROM: L. S. Lucas GRO-C CO.: Armour Pharmaceutical Company CITY: Blue Bell, PA
THIS IS IN REPLY TO YOUR LETTER DATED	DATE 10/13/86
SUBJECT: Edinburg Hemophilia Center Directors Meeting	

Attached is a copy of the questions asked and our responses. In addition the following five significant statements were made:

1. Dr. A. R. Giles said that Cutler RDNA clinical trials would start in 1987.

2. He also said that Genenteck had developed a "mutation" of the "wild FVIII" which would be superior. Will this fall within our patent umbrella?

3. Dr. Charles Forbes told me that there were many other seroconversions. That the DHSS had been informed and that he would be willing to speak to the FDA.

4. Dr. Forbes also said that their group had documented an eleven month lag between exposure and seroconversion.

5. Dr. Levine said that he was sure that there were at least two other seroconversions on heat-treated FVIII, but not Armour.

Dr. Levine was very supportive and made an excellent presentation on Monoclate. He foresees antigenicity problems with RDNA FVIII.

L. S. Lucas

LSL:rl

EXHIBIT 107

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1. What specific information caused the withdrawal?

   - On 29 September 1986 we received a telephone report of two seroconversions potentially associated with Armour I.P. Factorate product.
   - On the same day we contacted the DHSS. Subsequently, we met them on 3 October and 6 October.
   - The conclusion reached at the 6 October meeting was that Armour would relinquish our product licenses for Factorate I.P. and H.P. products.
   - Other factors in addition to the two seroconversions reported on 29 September were as follows:

     1. Armour previously reported three seroconversions possibly related to Factorate I.P.
     2. Neither the DHSS nor the U.S.FDA had any other reports of seroconversion associated with heat treated product.
     3. Armour's heat treating cycle uses a low temperature and shorter time than other U.K. FVIII products.
     4. Other supplies were available and it was the DHSS responsibility to assure sufficient quantities to meet needs.

2. Please inform us if any of these cases are inter-related by batch number?

   - All cases were multiply treated, but
   - Apparently the only batch relationship is a single common batch used by each of the most recently reported cases.
   - We have no indication that there is a batch relationship to the potential problem.

3. Was there donor testing of the batch or batches?

   - o In all cases, the product associated was manufactured from plasma collected prior to the availability of HIV antibody screening procedures.
   - o These procedures were implemented by Armour in April 1985.
   - o All five patients involved have been treated previously with unscreened and unheated plasma.

4. Please inform us if in any case of seroconversion a donor or donors with AIDS, AIDS-related disease or HIV antibody positivity has subsequently been traced?

   - o In two of the five previously described cases, a single plasma pool is known to have contained donations from one individual who subsequently developed AIDS. These two cases were not the two most recently reported.
   - o ARC has not been related to any donor or batch.
   - o With regard to HIV positivity, we have yet to complete the review. It is not possible to follow up donors who voluntarily leave the panel and although we can trace by donor, it is an enormously time consuming exercise.
   - o Because the material was unscreened, we assume that a small number of donors were positive. Initial positive tests were 0.25%. Currently donors testing positive represent 0.05%.

5. Are the two cases of seroconversion associated with batches of Factorate withdrawn in earlier communication from Armour this year?

   - o Yes, the Factorate was manufactured prior to HIV antibody screening of donors.

6. If so, why are current donor-tested batches being withdrawn?

   - o I believe that we answered this question via question number 1. The DHSS recommended and we agreed to relinquish our product licenses.

7. Alternatively, why weren't all batches withdrawn at the time of the previous communication?

   - o We examined the data at that time. Our experts, independent authorities, the DHSS and the U.S.FDA unanimously concluded that the data was insufficient to warrant product withdrawal.
   - o No case of seroconversion has been associated with screened plasma.
   - o Yesterday,(October 10, 1986) the FDA took the same position again.
   - o We will go through a rapid but exhaustive review and if we were to determine that the product were unsafe, we would remove it world-wide.

Did they?

8. Please give full clinical and laboratory data on each of the cases known to have seroconverted on Armour material, in this and other countries.

   - o First, we do not know that patients seroconverted as a result of Armour product but they were being treated with Armour product when they seroconverted.
   - o Two of the cases have been described in the Lancet. Those are the cases of Van Den Burg, et al and White et al. We can provide references upon request.
   - o The three remaining cases from the U.K. are yet to be completely documented and are privileged information from the physicians involved. Under these circumstances we can disclose no more than what has been said.

9. Have cases of HIV seroconversion or NANB occurred due to administration of current donor-tested heat treated material, anywhere in the world?

   - o None has been reported to our knowledge.

10. Please would the company comment on the implied suggestion in its statements that the product might only have been unsafe because donors who had not been HIV antibody tested were implicated?

    Surely, this has little relevance because the method of viral inactivation used must have failed, and the failure will not be affected by testing.

    - o Again, we accept the association between Armour heat-treated Factorate and these two seroconversions, although this is still a step removed from allowing us to

No NANB conversions!

demonstrate causation.

- Secondly we believe that the initial viral load in any plasma pool is of particular relevance.

- In laboratory conditions, it is possible to spike plasma to such high titers that no currently available process will totally inactivate the challenge.

- Virology experts have calculated what amount of Aids virus could exist in the pooled plasma donations for each batch of our product. Our laboratory experiments demonstrate that our manufacturing process destroys in excess of that amount.

11. What method of heat-treatment, what temperature?

- Armour heat-treats in a dry state at 60 degree C for 30 hours without the addition of stabilizing agents to support the heat treating process.

12. Is there any laboratory data which suggests that heat treatment as used by Armour may not be effective in removing HIV?

- No, on the contrary these studies have demonstrated that our manufacturing process inactivates virus in amounts in excess of the theoretical maximum expected challenge.

- I emphasize that I am referring to the entire manufacturing process. Recently completed work in our Meloy's laboratories indicates for example that additional purification steps inactivate additional virus.

13. Why was no statement made by the company after the first reports earlier in the year?

- Dr. Peter Harris, our Medical and Technical Director in the U.K. issued a letter to all users in March 1986.

- In that letter, he invited contact should anyone be concerned about Armour products as a result of reports in the literature concerning seroconversion after using heat-treated product.

- He also included viral inactivation data and information on donor screening.

14. Is there any laboratory data which suggests that heat-treatment as used for viral inactivation by Armour may not be effective in removing HIV?

- o No, on the contrary, three studies have indicated that the Armour process inactivates virus in excess of the five theoretical logs.

- o Our work indicates that viral inactivation is a function of the entire manufacturing process, not merely the heat-treatment. For example, recent data indicate that additional purification results in additional viral elimination before heating.