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1st June, 1981 2.167

Dr. J. D. Cash,
National Medical Director,
Scottish National Blood Transfusion Service,
Headquarters Building,
Ellen's Glen Road,
EDINBURGH.
EH17 7QT

Dear John,

## FACTOR VIII PRODUCTION : FREEZE DRYING

Further to my letter of 5th May and our more recent conversations I think it best to advise you of impending developments.

Dr. Foster and I have been concerned for some time that the use of Aluminium hydroxide to "clean" factor VIII may not be in the long-term interest of recipients and Dr. Foster has noted that factor VIII is more stable before this absorption than after. He prognosticated that it would be possible to delete this stage by inserting other manipulations and at the same time achieve enhanced factor VIII yield; "Possibly above 400 IU/litre".

Trials to achieve these changes are in progress and will take some time, possibly six months, to bring product to a clinical trial again. I would regard such a trial necessary to assess half-life times at least. However, early results show great promise and vindicate the prophesy which I regard as very significant because it is not easy to be a prophet in this difficult field.

The first trial has yielded 450 IU/litre at a concentration of 20 IU/ml in final product. Results of the second trial are not complete but omens lead to similar results.

This means that our freeze-drier limitations are almost certainly much more severe than I indicated in my letter of 5th May. I hinted at this possibility in that letter but could not be more definite at that time.

Mr. Lines has assessed the problems of installing additional freeze-drying and advises me that we should require also to increase our water-cooling capacity. He has an up-to-date quotation for a Usifroid drier, Model SMJ6000, which, at present currency value, is about £120,000 and which he believes could be installed, along with additional cooling for £135,000. He is seeking actively a comparative quotation from Edwards.

With kind regards.

Yours sincerely,

JOHN G. WATT

Scientific Director

Dictated by Mr. Watt and signed in his absence.