

April 23rd 1942.

My dear Fisher,

I got back here last night and have written to Professor Moir (Professor of Obstetrics and Gynaecology) to arrange a meeting to discuss our Hood-group problem. You may remember Prof. Le Gros Clark had seen him, as being in his judgement one of those most likely to be able to give practical help. Le Gros Clark asked me to get into touch with Moir on my return.

Yes, the existence of increased antibody content in certain pregnancies is a most important fact. I am so glad that it has been demonstrated when it was, as you say, to be anticipated. I do so strongly agree that all these polymorphisms, for such they must surely be (the A, B and M, N Series, the Rh factor and the Secretory factor and, no doubt, others), present a most complex picture. There may well be all sorts of inter-adjustments when such equilibria have long been maintained.

Considering The Secretory factor, I feel a

little suspicious of the very different quantities in which the antigens appear in the various secretions: in saliva, in digestive juices, and in semen, in much higher concentrations relatively than in the erythrocytes; in other secretions (e.g. tears and urine) in very small quantities only. It is perhaps worth wondering whether we see the evidence of selection here. Of course there may be some direct mechanical explanation, but I feel suspicious. One notices, in general, high concentrations in those fluids which must largely be reabsorbed or in which loss must be negligible through small quantity and rarity of production (e.g. semen). Even the loss of eye-moisture ("tears") through the nose (via the duct from the eye to the nose) may not be negligible. The complete absence of antigens in cerebrospinal fluid is quite another problem^{*}. For we are dealing with a secretion (by gland cells), which is not involved in the production of cerebrospinal fluid. However, I am just saying what crosses my mind: there may be nothing in

* or, rather, is not a problem.

this.

I find some people who have just begun to think of polymorphism as a balance of selective agencies, involving an equilibrium, are worried by the very different values of the A₁B series in different human Races. As I mentioned in that little book of mine, now in press, I don't see much difficulty myself. There must be a fair amount of genetic difference between the wider of the human races, and I cannot see it very remarkable that the 'internal environments' which they provide should maintain different optimum requirements.

I hope you can get away for a change after the year at the Zoo is settled. How nice it would have been if he could have gone and done a little work together somewhere! But I am kept here now, except for short visits, for the Oxford term begins this week-end. Mind you keep clear the time for a visit here in July to see Callimorpha, by the

way! I will let you know how I get on in
procuring the blood-group material which we do
much want. You can rely on me to do all I
can.

With best wishes to Ruth,

Ever yours,

Henry