

May 11, 1939

Dear Dr O'Brien,

I hope you will excuse the delay. I am now enclosing

1) Memorandum on the work on human genetics carried out by the Serological Department in my Laboratory.

2) List of serological workers and assistants, with their rate of pay for the current year.

3) List of papers published and in the press, on blood groups

The position with respect to possible work at Cambridge is the same as when I last discussed it with you, namely, that I have been approached in most pressing terms to apply for the Professorship of Genetics, when applications are invited, and that I have reason to think that provision may be made in the Department of Genetics for the existing unit devoted to human genetics.

Yours sincerely,

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WORK IN HUMAN GENETICS.

The Laboratory has now gained extensive experience of the well-known serological factors in man under routine conditions. These include the spontaneous antigens A_1 A_2 B and O, the immune antigens M and N, several immune sera showing positive reactions with O, other immune sera, in particular one from pigs, showing a strong reaction, independent of those previously known, with about 20% of human blood samples, and intermediate reactions with a large number of others. In addition to these, members of the Serological Department have made themselves familiar, by extensive practice, with the technique of classifying other unifactorial traits, such as taste-testing, eye colour, and ear lobes.

The publications enclosed, in the nature of survey reports, cover preliminary researches in these fields. Studies of hereditary anomalies, semi-dominant and recessive, acholuric jaundice, Huntington's chorea, and Friedreich's ataxia have been carried out by testing all available members,

normal and abnormal, of affected families, in the whole series of tests at the Laboratory's command. These three special researches are already far advanced and will, it is thought, fulfil two useful functions, 1) the commencement of a foundation of objective data, fit to detect the linkage of these anomalies with any other factors we possess, or linkage of these test factors among themselves, and 2) published examples of pedigree collection by methods which permit of the accumulation of such knowledge.

In addition the laboratory is cooperating in making blood tests of numbers of pedigrees collected by other workers, among which may be mentioned

- a) Investigation of Phenylketonuria by Penrose at Colchester
- b) Blue sclerotics and brittle bones by Riddell at Glasgow
- c) Corneal dystrophy by Mutch of Aberdeen

During the fall of 1938 a survey was carried out of the variation in anti-body content of a number of A and B donors, such variation being, in fact, exceedingly wide. At the same time a store of testing fluid was made available for the use of the Medical Research Council. During recent weeks the danger of the exhaustion of the supply of testing fluids in the contingency of a national emergency has been realised, and the Laboratory has undertaken a considerable amount of work to ensure an adequate supply.

It is not at present known whether the Laboratory will be asked to act officially in the event of compulsory blood tests being adopted in disputed cases of affiliation. Any such work, however, if accepted, will be self-supporting.

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Offprints: Blood groups in England I, II and III
by G.L.Taylor and A.M.Prior
also Estimation of blood-group gene frequencies
by W.L.Stevens.