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Dear Dr. Walford,

Thank you for seeing Dr. Mortimer and myself last week. I gather Dr. Catterall has already written to Dr. Graveney, I expect you like I have seen a copy of his letter. It is, I believe a reasonable statement of intent. However as a virologist I should like to make a number of comments on the whole problem of AIDS not merely related to a GUM framework.

This condition is likely to be caused by an infectious agent or agents. Its epidemiology bears a striking similarity to hepatitis B. Since hepatitis B became a growth industry we have gained a great deal of knowledge about the infection and about the illness by study of a small, epidemiologically easily identified patient group, the male homosexual. In the UK where hepatitis B is not a major health problem, it has still proved possible to examine the problem of this disease by examining this group of patients.

AIDS is essentially limited at present to the same, easily identified group. So although AIDS has many wider implications covering for example the fields of blood transfusion and risks to medical staff, it is only by detailed study of the homosexual patient that we will be likely to make a significant contribution to an understanding of its aetiology.

The work on AIDS covers three main aspects; to be successful I am certain that a multi-disciplinary approach is vital. Also since the evidence is that the disease is becoming established in the UK I think that it is necessary to set up this project now. I will try and outline the three areas:

1/ Patients The enrolment of patients (AIDS, so called pre-AIDS, sexual partners of AIDS) is vital. Scrupulous documentation of their contacts, illnesses and "modus vivendi" is necessary. This will require atleast one registrar/lecturer and clerical support.

2/ Immunology The natural history of the patient with AIDS or pre-AIDS is not known. We do not know the longterm outcome of patients with abnormal lymphocyte function. It seems important that functional assays of the immune competence of the patients is followed longitudinally. This will require one postdoctorate research assistant and one MLSO. Detailed analysis of the histology of lymphnode biopsies will also be necessary since this may also help the understanding of the damage to the immune system.

3/ Virology This falls into two categories A) There is little doubt that these patients have an increased microbiological load. CMV, EBV and HSV (all herpes viruses) shedding is common. It would seem sensible to continue to investigate the

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the microbiological load of the AIDS, pre-AIDS and promiscuous homosexual patients. This will require one MLSO.

B) If there is a single novel aetiological agent causing AIDS and if this agent is present as a viraemia (likely since Factor VIII is implicated) it may well be amenable to the sort of approach with identified hepatitis B and the human parvovirus. Interaction in gel-diffusion and in radioimmunoassay of AIDS, pre-AIDS and homosexual sera may identify a serologic marker. Examination of the same sera for morphological viruses (by electron microscopy), for nucleic acid polymerase, and for restricted species of nucleic acid might identify a causative agent in the same way as these techniques have been successful for hepatitis B. This will require one postdoctorate research assistant and one MLSO.

Two years support in the first instance would be necessary. If no progress had been made by the end of that time, the project could be reduced so that the epidemiology and patient description (1 over) becomes the central part. For staff the cost of 2 post doctorates (£12,000 p.a. each), 1 registrar (£15,000 p.a.), 1 nurse/clerk (£7,000 p.a.) and 3 MLSO (£9,000 p.a. each) is £73,000 p.a.. Running costs of consumables would be in the region of £10,000 p.a.. Some up-grading of laboratories will be necessary in view of the danger associated with handling AIDS material. This is likely to be less than £10,000 (safety cabinet, centrifuge, benching, CO₂ incubator and freezer).

I hope this is of use, I will clarify any points you wish.

Yours

Sincerely

GRO-C

Dr. Richard Tedder