Dear Dr. Sabin:

The second vaccination trial has just been finished in 134 individuals. Although the results of laboratory examination have not yet been completed, you may be interested in the preliminary results.

As a whole, the results agree well with those obtained in the first trial. The type 1 vaccination had exactly the same results: 100 per cent alimentary infection and antibody response in individuals without pre-existing antibody. The results with type 2 were much better than in the first trial: demonstrable alimentary infection in 85 per cent and antibody response in 100 per cent of the individuals without pre-existing antibody. The results with type 3 were somewhat less than those in the first trial: demonstrable alimentary infection in 92 per cent, and antibody response in only 80 per cent of the individuals without pre-existing antibody. Since the latter is in disagreement with the first trial, the negative sera will be titrated again.

The periods and the titres of virus excretion agree with those found in the first trial. We have again made the observation, that there is in some individuals no demonstrable alimentary infection and antibody response when the preceding type is excreted for a considerable period, e.g. 4 to 6 weeks. It is striking, that in both trials no difficulties were observed as to the reaction of the individual to type 1 infection, but if either alimentary infection or antibody production were not demonstrable, this was always the case with either type 2 or type 3. Hence, I am really afraid of interference in such cases, and I would again propose to extend the interval from 3 to 4 weeks.

We have now in our series a few children that had received 2 injections of Salk vaccine, the second injection having received 1 to 1½ months prior to the first administration of the live virus vaccine. The period of virus excretion in these children varied from 1 to 6 weeks!

Also in agreement with the first trial is the fact, that we again found alimentary infection in some, and a rise in antibody titre in a relatively high percentage of individuals with pre-existing antibody (approximately in 70 per cent of the children and in 40 per cent of the adults). The period of virus excretion, however, was considerably shorter than in persons without pre-existing antibody.
As soon as the laboratory data are completed, I shall send you a more detailed report.

One of the adults in the second trial, who had pre-existing antibody to 2 types, showed on the second day following each of the 3 oral administrations of live virus vaccine with a transitory urticaria-like reaction. This individual had an allergic history. Recently, we made a monkey kidney culture passage of each of your 3 attenuated strains in order to use that passage for active immunization of Cynomolgus monkeys for the preparation of type-specific sera. Each of the 3 types was inoculated intramuscularly into two monkeys. To our great surprise, one of the monkeys that had received 2 intramuscular injections of 1 ml of undiluted tissue culture fluid of type 3, developed a progressive paralysis, and the virus could be recovered from the cord. I should very much appreciate if you would be kind enough to give any comment on this observation, which is, of course, bothering me.

A third trial is being planned on one of the small isles of the Dutch Antilles, which, because of its relatively isolated situation might provide a beautiful study on vaccination with live virus under tropical conditions and on the epidemiology of infection with attenuated polioviruses.

In the middle of April, the Regional Office for Europe of the W.H.O. has planned a meeting of a small group of European virologists as a study group on the control of neurotropic virus diseases. On invitation of the W.H.O. I have prepared introductory papers on the Coxsackie group and on vaccination with live attenuated polioviruses. We have a full week for discussing of 10 introductory papers comprising polio-vaccination, Coxsackie group, ECHO group, tick-borne encephalitis and other neurotropic viruses of importance for Europe.

With kindest regards.

Yours sincerely,

Prof. Dr. J.D. Verlinde.