Dr. G. W. A. Dick  
The Queen's University of Belfast  
Department of Microbiology  
Institute of Pathology  
Grosvenor Road  
Belfast, North Ireland

Dear George:

I have only just recently returned from Europe and found your letter of 24 July. Many thanks for the information it contained, the enclosed tables and your very kind invitation to visit you in Belfast. My commitments in Europe this summer, unfortunately, were such that even if I had had your letter I would have been unable to arrange it. Nevertheless, I am still looking forward to a time when we may be able to get together on your home grounds.

First, about the multiple sclerosis business - I had been hoping to see Soloviev (Shubladze's husband) either in Stockholm or in Lisbon but he did not appear in any of these places presumably because of a chronic pancreatitis. However, I forwarded my two tables containing results of my tests to Dr. Shubladze via Doctors Chumakov and Voroshilova. I am sending you herewith copies of these tables. The neutralization tests with human sera were carried out by mixing equal quantities of undiluted serum with different 10 fold dilutions of the virus and incubating the mixtures for one hour at room temperature; at the end of this time serum-virus mixtures were put in an ice bath and kept there during the period of mouse inoculation - the control mixture always being inoculated last. One hour at room temperature was used because incubation for one hour at 37 did not yield significantly different results. I am rather inclined to publish these data because I think they bring out points which were not brought out in your communication. The main point in your communication was that Shubladze's virus was related to rabies, a point which she, herself, had already made in several publications. For some reason you failed to find any cause for the positive neutralization tests with human sera which they had reported. It
also seemed to me important to establish by quantitative tests whether or not her virus was merely related to rabies or whether it was antigenically identical to rabies. I think that the data that you will find in the enclosed two tables provide an answer for both of these questions. The factor in human serum is very unstable even at refrigerator and deep freeze temperatures and I have been wondering whether the sera that were supplied to you may have been stored under unfavorable conditions prior to the time that you stored them in dry ice. I would appreciate it very much if you could let me have any comments on this point and also if you would be good enough to send me a reprint of your communication as well as a copy of or reference to the letter by Shubladze and yourself.

Late in June two of the most influential people having to deal with such matters at the Ministry of Health in Moscow, were my house guests in Cincinnati - Professor Zhdanov, Deputy Minister of Health, whom you undoubtedly met, and Professor N. I. Grashchenkov, who is President of the Scientific Advisory Board of the Ministry of Health. They saw my data and we discussed the subject at some length and I gathered that they were quite anxious to put an end to the whole business and remove it from the field of controversy.

Thank you very much for the copies of Smorodintsev's tables that you sent me. As you may suspect I have had considerable correspondence with him and also saw him both in Stockholm and Lisbon at which time he gave me a paper containing a report of his work. Some of the things that you mentioned, however, were not brought out in discussions and I expect to check with him. I would certainly agree with you that only previously unused monkeys should be used for such tests although I doubt very much that monkeys that had been previously used with negative results would react very much differently. However, I shall ask Smorodintsev to indicate the tests in which previously used monkeys had been employed.

It may interest you to know that quite recently the Ministry of Health in Moscow granted Smorodintsev permission to carry out tests on 100,000 previously unvaccinated children in the Leningrad area using aliquots of my large lots of vaccine. Also as a result of
the decision of the Ministry of Health, Dr. Chumakov and his group in Moscow have also received permission to carry out a test on 100,000 children in the Novosibirsk area in the Soviet Union. Sufficient vaccine for these trials which are to begin in October this year have already been shipped to these investigators. In addition to these trials in the Soviet Union another trial has been arranged in Czechoslovakia in which 200,000 children under 12 years of age, who already had Salk vaccine before - and all children of this age in Czechoslovakia have now been so vaccinated - will receive aliquots of my large lots of attenuated poliovirus vaccine. This group of 200,000 children will be compared with another group of 200,000 in another region of Czechoslovakia who will receive a fourth dose of Salk vaccine and both of these groups will, in turn, be compared with the remainder of the child population who will receive no further vaccination - compared with reference to the incidence of poliomyelitis in the forthcoming years. They have an excellent virus laboratory in Prague which will also study the familial and school contacts of the children receiving the live poliovirus vaccine to determine the incidence of spread and spontaneous immunization.

The tests carried out this Winter in Mexico City on about 3,000 previously unvaccinated children yielded satisfactory results and I am informed that plans are now under consideration to vaccinate 200,000 children under 5 years of age in 2 large cities in Mexico.

You may also be interested to know that the strains used by the Lederle Laboratories in their early Minnesota studies which were published in the University of Minnesota Bulletin (Dec. 15, 1957) have now been discarded and they are not being used in the other trials that they are carrying on in certain parts of South America. There are no published data on the new strains that they are using which essentially are different plaque derivatives from those previously used in Minneapolis. The type 2 chick embryo passaged strain is no longer being used but rather a plaque derivative from it grown in monkey kidney tissue culture. As a result of a number of conferences with the Lederle group it was decided that their new strains be compared with the ones that I am using and that Melnick will carry out the comparative studies in his laboratory. It is expected that at the completion of those comparative tests the
Lederle Laboratories may reach a decision about whether they will continue independently with strains that they hope to patent or will decide to join forces by adopting a single set of strains with which extensive field trials for safety may be completed. Herald Cox told me only last week that he thought that the type 1 and type 2 strains that they are now using are not as good as the strains incorporated in the large lots that I had prepared. My own tests with the type 3 strain that Koprowski had prepared and which they are also using showed that it was initially more neurotropic than the Leon plaque that I had selected. At any rate it is hoped that by next Spring we shall have sufficient new information to warrant a special meeting on live poliovirus vaccine under the auspices of WHO.

I should very much like to hear from you about your own activities which you indicated in your letter you would tell me if I came to visit you.

I am also enclosing herewith a reprint of a paper that I wrote early this year. It does not contain the results of an extensive study that I completed recently on the results of feeding the attenuated poliovirus strains to children who had already had 4 doses of Salk vaccine. I sent copies of a detailed report and tables dealing with this study to Stuart-Harris. I regret that I have no other copies available at this time and if you are interested you may ask Stuart-Harris for his copy.

With all good wishes and kindest personal regards.

Sincerely yours,

Albert B. Sabin, M. D.

ABS:meh

Enclosures: