August 12, 1960

Dr. Dorothy L. Clemmer
Department of Tropical Medicine and
Public Health
Tulane University School of Medicine
1430 Tulane Avenue
New Orleans 12, Louisiana

Dear Dr. Clemmer:

I have only just returned from Europe and regret the delay in replying to your letter of early July, 1960. First of all, to begin with, you are undoubtedly aware that a great deal of work has already been done in human beings on so-called intestinal immunity and its relation to circulating antibody, and it would be important that any work that you do should be an extension rather than mere repetition of what has already been done.

Your proposal to carry out studies in cynomolgus monkeys is not a good one because even slightly attenuated polioviruses have lost most of their capacity to infect monkeys by the oral route, as I have reported in a number of publications. I would particularly like to refer you to a paper of mine in the Journal of Experimental Medicine, 1954, 99, 551, in which such experiments are reported in some detail. Even if you were to use fully virulent strains which produce paralysis on feeding to cynomolgus monkeys, the results obtained in the cynomolgus monkey would have little bearing on what happens in human beings because in the monkey most of the infection occurs in the posterior pharyngeal wall and very little multiplication occurs in the intestinal tract. This is also the explanation why after proper immunization with killed virus vaccine cynomolgus monkeys may show very little virus in the stools because antibody which may be present in pharyngeal secretions can prevent multiplication of the virus in the pharyngeal wall. With regard to your question as to whether or not we have done oral challenges in monkeys, I again should like to refer
you to the article in the Journal of Experimental Medicine as well as to a review publication of 1955, which I am enclosing herewith.

With regard to the tests for antiviral activity of stools that we have carried out in this laboratory, but not yet published in detail, our procedure consisted of mixing equal parts of 10% stool extract with different amounts of virus ranging from less than 1 to about 100 TCD\textsubscript{50} , incubating the mixtures at 37\textdegree{}C for 2 hours and overnight in a refrigerator at about 40\textdegree{}C. Each mixture was inoculated into 4 tubes with 0.2 ml. per tube. By this technique we occasionally found a difference of about 1 log and sometimes a little more between the control and the stool-virus mixtures but these were nonspecific effects that had no relationship to the immune status of the individual from whom the stool was obtained.

I should be glad to answer any other questions that you may have along these lines.

With best wishes,

Sincerely yours,

Albert B. Sabin, M. D.

ABS: meh

Enclosure.