Dear Dr. Sabin:

I have just finished reading your most interesting monograph in the World Health Organization series entitled "Immunity in Poliomyelitis, with Special Reference to Vaccination," and it occurs to me that perhaps you might be able, in a few sentences, to clear up a situation which has mystified me for some time. In 1952, while reviewing pertinent literature on the question of the mechanisms of acquired immunity in this disease, I came up with the tentative conclusion that vaccination experiments, as well as passive immunization experiments, carried out during the thirties and forties, on the whole gave such irregular evidence of the induction or transmittal of immunity as to leave the question of practical value of antibodies in protection against this disease very much in doubt. Coupled with this, the spinal cord transection experiments of Howe and Bodian and the experiences of the same investigators with respect to the frequent failure of antibody levels in the bloodstream to protect chimpanzees from intestinal infection while other animals which had recovered from infection, and with no higher humoral levels of antibody, were protected against intestinal reinfection, led me to believe that probably protection by antibodies was not the answer to prophylaxis for this disease. I was quite puzzled when the more recent findings by Bodian and others began to appear in which, in cynomolgus monkeys and chimpanzees, it seemed as if very small amounts of circulating antibodies could protect animals against paralytic poliomyelitis when the virus was administered by the oral route. In an effort to make all these different results come together on some common meeting ground, I have eventually come to the feeling that the older monkey work failed to show antibody protection perhaps because in the Macacus rhesus monkey virus put into the nose does progress to the central nervous system via axones, whereas in the cynomolgus monkeys and chimpanzees virus put into the oral cavity eventually finds its way to the central nervous system through the bloodstream, and this difference might account for the many failures of passive protection in the old days when Macacus rhesus monkeys were almost entirely used, and the startling successes in more recent years when cynomolgus monkeys and chimpanzees have been used to a large extent for these studies. The sentence or two which I ask of you has to do with this point: Does the difference in species of primates used in the 1930s and 1950s account for the difference in results observed?

Sincerely yours,

[Signature]
Dr. Albert B. Sabin:

June 9, 1955

In the late 1940s and up to the present time account for the differences afforded in protective value of humoral antibodies? I hoped to find an opinion on this point in this monograph of yours, but so far as I can determine this particular point is really not taken up. I think it is unfortunate that the Bodian school of workers has not, so far as I know, ever attempted in its writings to interpret the differences between their findings and those of the people who carried out extensive work of a similar nature twenty years ago.

It is entirely possible that I have misinterpreted either past work or current work and that my question is not a valid one. If so, then this also would require only a sentence.

My apologies for invading your time, but a very brief comment on your part may bring me a good deal of comfort, scientifically speaking.

Please accept my warm regards.

Sincerely yours,

Sidney Raffel, M.D.

SR:RB

P.S. Reading this over, it occurs to me that with my long, involved sentences you may not even know what I'm trying to find out. If so, please let me know and I'll try again.

Thanks.