

July 26, 1965

Dr. Roy H. Doi
University of California
Department of Biochemistry and Biophysics
Davis, California 95616

Dear Roy:

This is a somewhat belated reply to your letter of July 1st.

Things have been very hectic around here, the RNA problem having broken wide open and things are going along fantastically well.

Yank observed cross reactions amongst the bacteria from the very beginning. That is why we used viral and mammalian DNA to check for specificity. Subsequently, we carried out a fairly extensive examination over the past few years of this cross hybridization. This was started by Yankofsky and has been continued by David Gillespie in the bacteria and by Ritossa in higher forms. The central issue is to check whether a heterologous hybrid with ribosomal RNA actually involves the "ribosomal cistrons" of the challenging DNA. We have been using the *Drosophila* material as well as various strains of *E. coli* which we have found contain different doses of the ribosomal RNA to control this. Without this sort of information, no certain conclusions can be drawn. We will probably be writing much of this material in the near future. The trouble is we have so much because we waited until we were certain. The amount of ribosomal homology is amazing (e.g. 30% between chicken and *drosophila*).

I am sending you a copy of a paper which is to appear in the JMB which describes our new method of hybrid detection which is extremely accurate, sensitive, and convenient. I am also including a preprint on our RNA synthesizing system. I am just in the process of finishing up three more papers on this system. The reason why this work has suddenly blossomed forth is that we have finally been able to make infectious RNA in the test-tube in massive quantities. This gives us confidence that we are really studying the right reaction. Also, under separate cover, you will receive some more reprints of a paper given at Marseilles.

I do hope to be out on the West coast in late October since I will be attending a meeting of the Academy in Seattle. It is more than likely that I will be in and around the Bay area the week of October 18.

With kindest regards,

Sincerely yours,

S. Spiegelman
Professor of Microbiology

SS:rn