

July 1, 1966

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Dear David:

This is in reply to your letter of June 22, 1966. I wholeheartedly agree that a determined effort must soon be mounted to get at the sequence of both MS-2 and Q $\beta$ . I was happy to learn that you had spent the time in Sanger's lab to familiarize yourself with his method.

In accordance with this intent, I would appreciate it if you would list with as much detail as possible all of the necessary software and hardware you think we should have available. In this connection I should like to note that we have learned how to split the Q $\beta$  molecule into a 1/3 and 2/3 piece, so that we can separate the two ends. This should provide a fairly easy way of determining a number of things, including the direction of replication. It might be advisable if you would send along the sample of your Zlk/1 RNA phage, so we can compare it with Q $\beta$ .

There is a corrected piece of information, which I should pass on to you. Although we failed to find methionine in the complete hydrolysate of the Q $\beta$  coat protein, we persistently found some evidence for trace amounts amounting to less than one residue per 20,000 daltons. However, we have since found a peptide fragment containing methionine, so there must be at least one residue of this amino acid in it.

I look forward to hearing from you with the details necessary to order the required equipment.

With kindest regards,

Sincerely yours,

S. Spiegelman

SS:bjw