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20th March, 1958.

Dear Mr. Bawden,

Many thanks for your letter, and for taking so much trouble with the manuscript. I agree entirely with the more important of your amendments and with almost all the minor suggestions as well.

I should very much like to look at some potato X, and could start work on it the day I receive it. I like to work with pellets of about 10 mg; so if I were successful at the first attempt, which is rather unlikely with a new virus, 10 mg would be all I should need. It would be nice to have enough for several attempts if you can spare it.

The major problem, from my point of view, is to find from what solvent (pH and salt concentration) a pellet with good mechanical and optical properties can be obtained. With TMV we use 0.02 M phosphate buffer, pH 7.0. About 2 years ago Jim Watson had a small amount of potato X, and our experience with this was that the pellet formed a rather rigid gel and could not be re-dispersed in distilled water. Possibly the trouble was due to the virus not being adequately purified. What we need is a pellet which (after some dilution, if necessary) can be made to flow while the virus concentration is still high. (We have a refrigerated centrifuge). So it would be a great help if you would make some recommendations as to desirable buffers and concentrations.

One further point. The capillary tubes which we normally use are of a borosilicate glass (transparent to X-rays). They have a slight alkaline reaction. This is not enough to harm TMV, but causes TMV protein to depolymerise. If it is likely to be harmful to potato X I could use Pyrex tubes instead.

Yours sincerely,

Rosalind Franklin.