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12 May 1976

Dr. F. H. C. Crick, F.R.S.,
c/o Miss Clover Southwell,
3 Bulstrode Street,
London, W.1.

Dear Francis,

Thanks for your letter and the postscript from Tehran. I enclose some slides on the work here.

1. Slide of Len Lutter's showing the time-course of digestion on the kinase labelled material, alongside a DNA^{se}-1 digest unfortunately taken from a different experiment. It has been difficult to match up the prints at this short notice, but I don't think the calibration is in any doubt.

2. One or two slides from Ron Morris (I write this letter before they are ready) showing that erythrocytes and liver from the same animal, chick, have a different size repeat. It seems absolutely conclusive to me, since the same material has been spread over three different tracks on the slab gel so there is no question of gel artefacts. Moreover, the calibration shows that the monomer is of the size 200. The chick liver is indistinguishable from rat liver, and the chick erythrocyte is 5%, i.e. 10 base pairs, longer than chick liver.

3. A slide of the EM picture of the crystals (inter-particle spacing about 110 Å) and also an X-ray powder photograph of a pellet of crystals. The first strong line you can see is at about 55 Å. It is a bit surprising to me that there are not more lines, but the exposure is very weak, and presumably one is only seeing the lines which sample the strong parts of the transform. The crystals are birefringent so they are not simply close packed.

I accept the general point you make about "secrecy", but I am against presenting half-baked results. I had never intended that the fact that we had crystals should be kept quiet, but I didn't think there was any point in deliberately setting out to advertise the fact until we had got stronger and better X-ray pictures so that at least one could "prove" that the particles weren't in random orientation and one had some idea about the extent of the order.

As for solenoids, I had assumed that you would be talking about them in any case, and you already have the slides. Incidentally, there is no new news on this front, although we do have somewhat better X-ray and EM pictures, but not ones that really advance our knowledge.

Dr. F. H. C. Crick

- 2 -

12 May 1976

Thanks for the interesting information. Jean Thomas was only able to stay a few minutes so we haven't had much of a chance to talk about things, but I am asking here to talk to our meeting on Friday.

Yours ever,



Encs.

P.S. Please phone me at home on Saturday (48959).