MEDICAL RESEARCH COUNCIL
LABORATORY OF MOLECULAR BIOLOGY
UNIVERSITY POSTGRADUATE MEDICAL SCHOOL,
HILLS ROAD, CAMBRIDGE.

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Space

23rd February, 1966.

Dear Paul,

I believe you met Fred Sanger at a Gordon Conference last summer and that he would have told you of his doings with RNA. You may or may not know that I have been applying his two-dimensional separation technique to DNA digests. My interest in this stemmed from work on nucleoproteins from which I had removed certain histones, and the need for something approaching a fingerprinting method for polydeoxyribonucleotides: The nucleotide map of pan. DNase digests is quite complex, but very reproducible and I'm hopeful that it may be useful as a fingerprinting method. This work, of course, leads one very quickly into the realm of nucleotide sequences, and Fred and I would like to try separating (and identifying) the products of various digests of the mixed polymers that can be generated in the Berg experiment in which DNA polymerase + Mn^{2+} will accept one riboTP in lieu of a deoxyriboTP. Would your reaction be to encourage us in this, or would you prefer to do this sort of thing yourself (or are you, in fact, actively pursuing this sort of stuff at present)?

If you're inclined to utter a word of encouragement, I should hasten to add that my next sentence concerns the possibility of my coming to Stanford for a couple of months this summer, from about the end of June. I tentatively discussed this with Dale Kaiser last year, to learn something about λ, and have just written to ask him if this may still be possible. If you and Dale (and Dr. Kornberg, of course) would allow me to join you for a couple of months, I'd like to try and do a little with λ dg, and to make some mixed polymers which I would then send back to Fred to fingerprint (unless I could do this at Stanford). You see, we do not have the necessary enzymes to make either ^{32}P triphosphates or the polymers, and while I have no objection to getting involved in this

once I know that there is some point in doing so, I would like to see how the ionophoretic system will handle the digested mixed polymers before starting all the preparative work. I would, of course, be prepared and expect to make the labelled ribo and deoxyribo triphosphates, but I (and Fred) would be very grateful if I could come and do two or three mixed polymer preparations with the benefit of the collective experience, and enzymes, of Stanford's Biochemistry Dept.. For primer DNA, we are envisaging using λ, a λ dg, and some of the small phage DNA's.

I'm afraid this has been a necessarily brief indication of the type of expt that we'd like to turn some attention to. We'd welcome your comments on it, and would be particularly grateful if, even at this late date, it is possible for me to join you, Dale, and your colleagues for a short while this summer.

With best wishes and kind regards,

Sincerely,

Ken Murray.

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AIR LETTER
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Dr. P. Berg,
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Palo Alto,
California,
U.S.A.

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Sender's name and address:

K. Murray.
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