

Singer



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Dr. Paul Berg
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Stanford University
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Palo Alto, California

Dear Paul:

Thanks very much for the two manuscripts. I'll pass them on to interested parties as soon as I have had a chance to digest them. Jack was either incorrect in what you told him or else you misunderstood but I am not one of the authors on the new Cantoni papers on S-RNA. Giulio, myself and several others have a paper in press in B. & B. Acta that has a lot of our older material in it, but unfortunately there are no preprints available. I had a hard time getting a copy of the manuscript for myself and it's such a miserable carbon that it does not reproduce well. The really elegant stuff on rare base distribution and sequence distribution is the work of McCully and Cantoni and I think it best that you write to Giulio for a preprint of that.

With regard to your polynucleotide phosphorylase questions--I have no idea about relative affinities of different homopolymers. Further more, at this point I don't think one could get any meaningful information. First of all, one would want to determine this with preparations of similar molecular weight. Second of all, the secondary structure of each of the homopolymers is slightly different at the relevant pH and this certainly has an effect. I can tell you that poly U is generally phosphorylated most rapidly when the polymers are tested at the same concentration.

In the depolymerization 0.01 M phosphate gives optimal rates while at least 0.05 M arsenate is required. At those two concentrations, however, the depolymerization rate is about the same regardless of whether arsenate or phosphate is used.

I have just begun writing up the arsenolysis work. I was saving it, and some other things, so that I could sit down for the next two months. As soon as something is ready you shall have a copy.

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We certainly enjoyed our visit with you and Dan says to tell you that you have a standing invitation for at least one evening for all future study section meetings.

Very best regards,

Maxine

Maxine Singer

MS:meg