March 18, 57

Dear Arthur:

I am happy to say that the PRPP problem is now being concluded satisfactorily.

Problem 1 - The isolation of PRPP in a relatively pure state is accomplished by isolation of di salt at pH 7.5-8 at controlled temperature. Graph I shows in exchange analysis of d-enzyme of PRPP, prepared from middle labelled ATP. As you see a little degradation (in the desired direction) had already occurred during isolation.

Next, we hydrolyzes (degraded) same amount of PRPP (same sample) and put it in the same column (regenerated) and used identical eluents and elutions. We obtained Graph II. Details are on the Graph - since 4-50 counts are due to background, practically all counts appears in ribose dip fraction and coincides with the ribose peak.

The specific degradation of PRPP to ribose diphosphate + Pi causes a lot of anxiety but the solution was found in using Ba ion catalysis at room temperature at pH 10.5.

Thank you so much for the plentiful sample of "hot" ATP terminal labelled PRPP.
PKP from it the same day and have in fact been using it in recent experiments since I could afford to be liberal with that sample. It was the middle labelled ATP that has gone down really low by now but I am glad that the very last experiment (Graph E) worked. Although the counts are not very high, the picture proves the point quite clearly.

In a day or so I will forward the results of PKP from terminal labelled ATP. It does go as expected and ~90% of the counts appear in the Pi, but my pictures are not very pretty yet, because of the PKP sample having PiP and RSP contamination.

We just want to repeat isolation of PKP in at least as good a state as the sample in Graph E. If any degradation occurs during degradation then I like to have it in the desired direction rather than RSP+PiP direction) — in any case the whole thing will be over by the end of this week. The other experiments we want to do this week are to test RSP+PiP in the system and also to put degradation product of PKP on a paper chromatogram and identify the R-di phosphate and the cytidine 5'-diphosphate.

Now that at long last the end is in sight, it would be nice to write it up (The in-catalysis of degradation is of especial interest to you and we are studying such effects with other nucleotide compounds). I would like to hear from you whether you definitely want me to be in St. Louis before the meetings. I am going to be rather busy that week but will try to get there just the same.
I am planning to leave here on April 2 and will be finished with talks in Ontario by April 8. Then expect to be in Boston area for a couple of days. I like to visit Bob Chambers for a day after that but this may have to be omitted (we still have to write up a part of Bob's work which John has continued).

There is also the possibility of my staying over in the east after the meetings but and so, please just say when it is convenient to you.

Roy Marschall is expected to be here for the summer and we are looking forward to having him here. I am definitely planning to have done with writing before then so that I can work with Roy on O-thionucleotides.

This pretty well covers my end of the story. With best regards to greetings from all of us.

Yours - Goudsmit.

Ms. Van Potter is here for three days.