

THE JOHNS HOPKINS UNIVERSITY
SCHOOL OF MEDICINE

DEPARTMENT OF MICROBIOLOGY

February 22, 1973

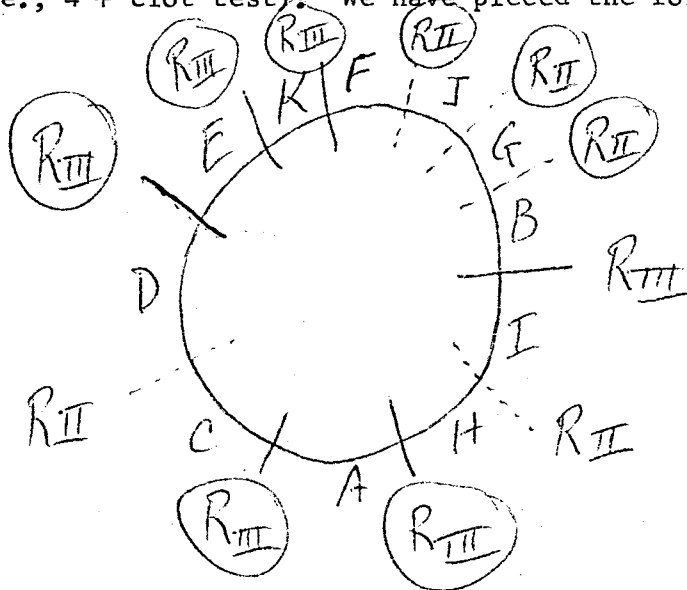
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Dr. Kathleen J. Danna
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Dear Kathy:

Congratulations on the Stone Award. I knew they couldn't resist a Texan.

In regard to H. influenzae Endo R we have purified R_{III} (A, E, K) enzyme by gradient elution from PC (it comes off late) followed by DEAE cellulose (it runs through at 0.01 M NaPO₄ pH 7.4). We are still looking for R_{II} (J, G) enzyme in what elutes from DEAE at about 0.05M NaCl (i.e., 4+ clot test). We have pieced the following together:



Circles indicate direct proof, others are deduced. All partials have effected NIU.

R_{II} (J, G) \pm Ham's Endo R
 R_{III} (A, E, K) corresponds to Methylase III (\rightarrow NA⁺A)

We think this corresponds to Murray's sequence $\begin{matrix} A \downarrow AGCTT \\ TTCGA \uparrow A \end{matrix}$ for Endo R on

lambda (?) DNA. Since Murray got 5' A's, this sequence suggests R_{III} makes a staggered break at arrows.

In regard to enzymes, we now have large amounts of E. coli with RTF2 or RTF1, and I am beginning to purify R_{II} and Tom Kelly will purify R_I. We have just gotten a new culture of H. aegyptius and I plan to grow a large batch soon.

Your work seems to be going very well. Detailed sequences should soon follow. In regard to your question about staying longer, I think you should stay another year since the work is reaching its peak, and go to Howard Green's laboratory thereafter. I wouldn't worry about the availability of jobs. With your accomplishments and background, you should not have trouble.

I have already sent the slides you asked for.

Best regard to Walter.

Sincerely,

Daniel Nathans

DN/js