

7 Jan. 1945 2100. Satday.

I had the eve...

Direct demonstration of the multiplication of TFC as well as its polysaccharide products!

or the synthetic enzyme for it EH maybe TF itself.
Dual function - reproduction & production.
Is the spatial specificity different??

Demonstration of absence of TF

ning all to myself, and particularly the excruciating pleasure of reading Avery '43 on the deoxyribo-nucleic acid responsible for type transformation in Pneumococcus. Terrific & unlimited in its implications. Viruses are gene-type compounds, but they cannot grow on synthetic or even dead media, and their capacity for production is limited to reproduction. The TF of Pneumococcus has very characteristic of a mutation. The obvious questions still to be considered are the fraction of serum that is involved in the reaction system; the reduction of mutation in the TF by the use of X-Ray and more controllable methods; the problems of its antigenic specificity & relations to the specific polysaccharide whose manufacture it regulates or initiates. Also the possibility of activity of TF in vitro or in killed systems must be investigated, although the presence of phosphatases & deoxyribonucleases present a difficult problem. I can see real cause for excitement in this stuff though.

20 Jan 1945 2100 Saturday

I had the evening all to myself, and particularly the excruciating pleasure of reading Avery '43 on the deoxyribose nucleic acid responsible for type transformation in Pneumococcus. Terrific and unlimited in its implications. Viruses are gene-type compounds, but they cannot grow on synthetic or even dead media, and their capacity for production is limited to reproduction. The TF of Pneumococcus has every characteristic of a mutation. The obvious questions still to be considered are the fraction of serum that is involved in the reaction system; the induction of mutation in the TF by use of x-ray and more controllable methods; the problems of its antigenic specificity and relations to the specific polysaccharide whose manufacture it regulates or initiates. Also the possibility of activity of TF in vitro or in killed systems must be investigated, although the presence of phosphatases and desoxyribonucleases present a difficult problem. I can see real cause for excitement in this stuff though.

[marginal notes]:

Direct demonstration of the multiplication of TF as well as its polysaccharide products!

or the synthetic enzyme for it which may be TF itself.

Dual function - reproduction
 - production

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Demonstration of absence of TF

[a near-contemporary reaction to Avery et al. 1944 from Joshua Lederberg diary.

This has some garbled thinking, as well as dates (1943 for 1944), but there is no doubting the enthusiasm generated by the publication. As recounted elsewhere (P269) it set me on the path of looking for DNA transformation in Neurospora, and eventually to my studies of genetic recombination in E. coli (1946).