

ultraviolet light

as a result of exposure to ^{UV} and had thus become sensitive to reinfection.

(Prophages, especially noninducible or defective ones, often turn up in well-known strains of bacteria.)

Owing to the work of Lwoff and Bertani (Chapter 6), temperate phages were already subjects of renewed interest in 1951. When Lederberg and Lederberg (1953) found that λ prophage segregates with certain bacterial genes (gal) in crosses between lysogenic and nonlysogenic bacteria, interest quickened. Here was the first clue to what had always seemed a contradiction in terms: hereditary transmission of a virus from cell to cell. Ten years of intensive work were needed before bacterial crosses in general, and λ -gal linkage in particular, could be understood. Eventually it was shown that λ prophage is inserted into the bacterial chromosome between gal and bio by a locus-specific and phage-specific mechanism of genetic recombination (Chapter 6). The prophage location, together with another novel kind of genetic recombination, also account for the propensity of λ to form transducing phages that disseminate gal and bio genes among bacteria (Chapter 8).

Historical matters are dealt with by Stent (1963) and Campbell (1969), and in the various chapters of this book. In the bibliography of this chapter we list as a separate ^{section} ~~chapter~~ some unselected early publications concerning λ . *The untouched record* Their titles present ~~an unfiltered history~~ of how it all started.

Taxonomy

Lambda is one of a number of naturally occurring phages that have three properties in common: they recombine when crossed with one another, their DNA molecules terminate in similar or identical nucleotide sequences (Chapter 5), and their prophages are inducible by ultraviolet irradiation. The known members

Memo from To: Al H.

JOSHUA LEDERBERG

JUL 15 1971

Lambda history

I have nothing to criticize (or I would doubtless have answered sooner.)

I should say that it was BURNET's work, above all, that had sensitized me to the genetic interest inherent in lysogenicity.

Note, for example, the inclusion of Burnet & Lush (Austral J Exp Biol 14:27 1936) in, my 1951 collection of 'Papers in Microbial Genetics' and the passing remarks thereon in the introduction.

Perhaps your Chap. 6 makes all necessary (if any) allusions to the incunabula.

of note re May's spell.

Hershey

\bar{x}

PROFESSOR JOSHUA LEDERBERG
Department of Genetics
School of Medicine
Stanford University
Stanford, California 94305