

January 15, 1951.

Dr. F. O. Holmes,
Rockefeller Institute for Medical Research,
65th Street and York Avenue,
New York 21, N.Y.

Dear Dr. Holmes:

First, let me tell you how much I appreciate the cordiality of your reply to my hasty letter to Dr. Breed concerning the nomenclature of *Phagus testabilis*.

It was the phrase "when heated in spores" which threw me off, because I therefore carelessly connected this description with Dr. Cowles' better known work on the heat resistance of lysogenic phage in *Bacillus subtilis* (*J. Bact.*, 22:119-123.) I hope that both Dr. Breed and yourself will accept my apologies for this careless confusion of references, a rather inauspicious introduction to a critique of nomenclature.

The phage reported by Cowles in his 1922 paper resembles the next described *P. indomitus*. In this organism, one finds that heating the phage in spores does not inactivate the lysogenic potentiality, whereas heating in the presence of spores does so. This, this experiment has been used [fallaciously, I think] to support the idea of intrinsic origin. On the other hand, the finding, in *B. megatherium* with *P. testabilis*, that the extrinsic phage is destroyed by heating seems to have little bearing on the question of intrinsic origin. Cowles does indeed remark that his spores were heated to remove phage, but this follows immediately upon a statement that filtrates of the bacterium showed no phage (unless, of course, the culture was experimentally infected) .

If I may summarize the source of my confusion, I could not follow the rationale of the attestation to which *P. testabilis* refers (C., 1920). On the other hand, a similar experiment (1922) with the opposite result, has been an important verification of the principle that a phage, introduced from without, could show the behavior argued for intrinsic origin, was of very considerable importance in clarifying this question. May I therefore withdraw my complaint to Dr. Breed that a false conclusion was drawn from false ~~premisses~~ with the rather weak excuse that I was referring to another syllogism.

Sincerely,

Joshua Lederberg
Associate Professor of Genetics