Cherry

6/12/53

Dear Josh,

I cannot complete the Table which you enclosed since several of those cultures were tested for the first and only time on the plates which I started while you were here and the results were not recorded. However, by referring to earlier data I will give you a run down on the specificity, or lack of it, shown by these phages.

1. Phage - Para A 1015 (1A) - This Ø gives almost identical reactions c̄ Felix's O-1, i.e. lyses most strains of all O groups except XXXV (35). The percentage of resistant Salmonella is much greater (50) in group E than in any other than XXXV. We have never neutralized this Ø but it would not surprise me if it were identical c̄ Felix's O-1, 2, 3. The results I am giving you are based on testing c̄ undiluted or highly concentrated Ø's i.e. 10^{-1} or 10^{-2} dilutions of Ø's with titers of 10^8-10^9/ml. Therefore, you understand that by diluting

them farther you can narrow the range of action within the Salmonella group. How this may be correlated c̄ O groups, I cannot say.

2. Ø Typhimurium (Thomasville) 1b

Upon inspection of my notes on this phage I was surprised at its specificity for groups B & D. Almost everything lysed by a concentrated preparation belonged to these groups. However, many cultures of both these groups were resistant.

3. Ø schleissheim (3)
Col 9

Far less specific than Ø 1b. Lyses Group C_1-C_2, & E_1, E_2, E_3 and others as well as B and D. Active on many Shigella and alkalescens-dispar cultures.

4. Ø berlin 2988 (4)

activity ranges throughmost O groups c̄ many cultures resistant & many non-Salmonella susceptible

5. Ø oranienburg (5)
Wide range of activity on Salmonella & some paracolons

6. Ø enteritidis #64 (7)
Mostly groups D, B, & C. Not tested extensively

7. Ø panama 73 (8)
Wide range of activity on O groups and on non-Salmonella.

8. Ø anatum 1316-51 (9)
Wide range of activity both within & ~~out~~ outside of Salmonella group

9. Ø newington C114000 (10a)
Wide range of activity on Salmonella & non Salmonella. Many cultures not susceptible.

10. Ø luciana # (18)
Not tested very far but apparently very specific for group XI or perhaps for serotype.

11. Ø Virginia #189 (17)
Wide range of action on Salmonella & on many non-Salmonella.

In response to your question on the specificity of S. para B Ø's for S. para B, I am enclosing a copy of our manuscript which gives from data on this point. Please return the manuscript since it is the only copy still in my possession. The paper will be published in J.A.P.H.A. this fall. In addition, several para B typing phages (3a, 3a I, 3b) attack several strains of typhimurium; almost all pullorum and gallinarum strains are lysed by one or more of the phages 1, 2, 3a, 3a I, or 3b. 3b is particularly active on type pullorum. Gallinarum cultures look like S. para B Ø type 1 when tested c̄ these Ø's. Many panama strains are attacked although to a slight extent before adaptation. Many javiana strains are lysed; there is slight activity on some bligdam and dublin strains;

some Miami strains are very susceptible; some cultures of abortus equi, pensacola and para A are susceptible. I am sure that there are many others if one wishes to extend the search.

I did not know the Beccles & Jersey type cultures were monophasic but I don't see any significance attached to it since most of our Beccles cultures are diphasic and some of the Jersey's also, although there are only a few of these latter are available for study.

Hope this may be of some help. As you may have guessed this phage typing business is in a very unsatisfactory state from the standpoint of knowing what is going on and why. I have tried but, I just can't understand much of what Felix writes on BVi, AVi, etc.?

Am enclosing a procedure for Salmonella identification based on O-1 phage. You may keep this if you wish. We have a paper on this subject which we will submit for publication

if I can ever get the Camp Detroit hierachy to get their ~~butt~~ dirty lunch hooks off of it.

Cordially,

Bill Cherry

Pardon the scribbling; our secretary is on leave.