Oct. 13, 1957

Dear Josh,

Because today I got some respectable results after a good deal of fuzzy and negative ones, I must share my news or pop (like a shocked O).

Remember the 18 or 20 "L"-mutants I wrote you about before? Well somehow, after a little subculturing, a few of them straightened out and are now fairly clean. I4, for instance, in L2 agar is predominately protoplastic with a few intermediates plus an occasional normal or deformed rod. In L2 + hydrolysate, the cells are mostly rods, but peculiar ones: etc., also some intermediates and O's. In L2 + DAP, they look like those in L2 alone (i.e., mainly protoplastic). Thus DAP has no restoration effect, but hydrolysate contains at least part of - or small amounts of - what is needed. Also, nothing grew at the 100 u penicillin level, in which the culture was first isolated! There are some others, as L31A+B and J2A, which behave similarly but contain fewer O's, perhaps 20%, without hydrolysate.

All observations are being made microscopically (high power) because it is impossible for me to tell what these mixed ones are in the dissecting scope or by low power microscope.

Now I'm trying things like amino acid mix and yeast extract as repairers. Am also trying a crazy idea: it would be nice to know if these are inherently unclean mutants or if L2 is feeding them a little of what they require for rod formation, so I'll try to force them into 100% O's by plating in depleted L2 (prepared by growing rods in L2 broth, spinning, adjusting pH, autoclaving, + using this with agar for plating) = also a backwards method for finding requirement(s). Perhaps waste products will be too overwhelming for growth. Will also try dilute L2. If either of these

(2) work – or the restorations – then some detective work begins. I got a note from Porter last week accepting the manuscript. The office girls are still typing the copy to be ditto'd. And the plastic petri plates are still grounded – no explanation as yet from the manufacturer.

Flu – maybe Asian – is approaching epidemic state in Madison. Among the locals, Alan and the Crow family have been hit. It's much worse in Milwaukee, where many thousands of kids are not in school.

Hershey is speaking (3) about virus structure in biochem Wednesday. Will go & keep an ear open for incomplete viruses.

Please tell Cathe that I took some colored pictures of the garden as promised. They haven't been developed yet, but my $3.98 brownie never misses! The flowers were most impressive.

Adios –

Jacky

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FIRST FOLD

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