March 18, 1957

Dear Josh,

On the enclosed sheet are a few series of shots taken with oil immersion, Micro-file film, low intensity of light, 4 second exposure. The prints are sloppy and unenlarged, but you can get the general idea from them. The cells sprouted so fast during certain periods that critical pictures are missing. Will try to focus attention upon fewer cells and telescope observations. A few of them are 400x and labelled High Dry.

Spent - rather wasted - a couple of days trying to follow cells that progressed no farther than # 1 on other sheet. Then theorized that perhaps combination of brighter light via oil condenser plus concentration of rays by immersion oil produced too much heat (or light ???), because preps prepared at same time and with same ingredients grew well either when left alone or observed with high dry. Longer exposure with less light (field poorly visible to eye) allows normal growth and also gives better pictures.

I believe that these pictures, at least when printed properly, are about as well as we can do with 35 mm setup. Perhaps we would not have to sacrifice depth of focus by using plates or larger film with 400x scope magnification.

Ran a large # of platings of Y10 c̄ 50 units of penicillin, and after 6 days of incubation there are a few suspicious looking colonies, but I refuse to become excited till the acid test. Also ran some reconstruction plates containing 1:1000 DAP; only a small % came through (assuming fully viable initial population), but they are detectable. New crosses are being run. Bessie stopped in last Friday and said the c̄ micrograph specimens look fine - plan to devote this week to them.

News Briefs: Alan won NSF Fellowship. Wolfram's daughter has measles. No news (that I know of) from Ørskova. 3" of snow so far today. Lab running smoothly.

Persistent Assistant

P.S. Hi, Esther.

Thanks for cards. We all envy you, especially at the moment, with the sudden reappearance of Jack Frost.