

THE UNIVERSITY OF WISCONSIN
MADISON 6

Plant

DEPARTMENT OF ZOOLOGY
BIRGE HALL

6/November/1961

Dear Josh,

Please excuse the delay in acknowledging the chloroplast information. I've just returned from the Chicago Cell Biology meetings; the turmoil associated with getting two members of my lab ready to give papers there had taken up most of my energy.

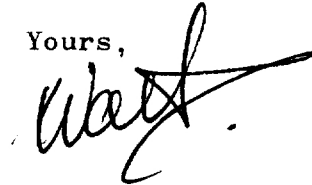
Hans and I have submitted a manuscript on the "DNA" in *Chlamydomonas* chloroplasts to the *Jour. Biophys. Biochem. Cytol.* about two months ago. Presumably it will appear there in due time. The evidence is simply Feulgen and Acridin Orange staining of a small chloroplast component which is sensitive to DNAase digestion. Hans adds the presence in presumably identical regions of small fibrillar elements which resemble, in EM preparations, the fibrillae seen in the nuclear area of bacteria and blue green algae, as further evidence for the DNA nature of this plastid component and proceeds to develop the idea of the chloroplast as the evolved ex-symbiont. I am still somewhat concerned with the critical identification of DNA and will probably try some labeling experiments in *Chlamydomonas*. The *Euglena* story, however, is even more ripe for a systematic study of the nucleic acid content of the plastid. The biochemical studies of Brawerman, the classical evidence for self-duplication of Lwoff, and an informal report from a former student of mine that there may be non-nuclear incorporation of thymidine in this beast all point to a need for an investigation combining all available tools. I hope to begin work on this within the next month together with a new and really first-rate student whom I've managed to trap. It is in this connection that I am especially interested in the fudr data you so kindly sent me. We hope to try this drug on bleached *Euglena* chloroplasts and observe the effects with cytochemical as well as biochemical methods. Needless to say, I shall keep you informed of the results and will also send a reprint of the *Chlamydomonas* paper to your student as soon as I have some. At the moment, I have but one copy of the MS and must retain this until the proofs are in.

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I am including a reprint of a paper given last September in Paris and mimeo copies of the two lab efforts towards making the just past Chicago meeting the mediocre mess that it turned out to be.

With best regards to you and Esther and again many thanks for the chloroplast information,

Yours,

A handwritten signature in cursive script, appearing to read 'Ward', with a long horizontal flourish extending to the right.