

CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA

May 2, 1956

DIVISION OF BIOLOGY

Prof. Joshua Lederberg,
Department of Genetics,
University of Wisconsin,
Madison, Wisconsin

Dear Dr. Lederberg,

Enclosed you will find a reprint of the article you wanted, as well as one of a study we did on the effect of 'granules' and supernatant fluids on chorioallantoic membranes. A prior study on this sort of material was one I did with Brachet (*Experientia*, 5, 235, 1949) on the cytological effects of treating the membranes with granule suspensions. I unfortunately don't have any more reprints of this. One of Brachet's pupils has published a short note on the effects on glucose-6-phosphate in chorioallantoic membranes of treatment with liver microsomes (LeClerc, J., *Experientia*, 10, 251). All of this chorioallantoic membrane work stemmed from a study Brachet and I did on the effects of injecting embryonic microsomes into frog eggs and early embryos (*Experientia*, 5, 204, 1949), the results of which were somewhat inconclusive. I think it might be added that all these studies suffer from the somewhat drastic methods used in isolating the particulate fractions. The homogenates were made in dilute phosphate buffer, and, as you know, there is considerable evidence that particles sedimented from such homogenates may be, at least in part, artefacts.

Most recently, I have been interested in mitochondria during sea urchin development, especially with their localization and with fluctuations in mitochondrial populations during early development. I tried adapting a method used for counting mitochondria in liver homogenates, but with what success I'm still not too certain. However, I think the data give a rough notion of mitochondrial numbers during early development, and I enclose a copy of an MS I've sent off for publication. Unfortunately, I don't seem to have copies of all the graphs, so I can send only Figs. 5 & 6 (mentioned in the text). I would like to have the MS back, but there's no hurry about it.

Thank you for sending a copy of your review, which I shall read with great interest.

Yours sincerely,

John R. Shaver
John R. Shaver