

UNIVERSITY OF CALIFORNIA

DEPARTMENT OF ZOÖLOGY  
BERKELEY 4, CALIFORNIA

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Dear Lederberg:

Thanks for the copy of the correspondence with Fredericks. It does interest me since one needs to know what people believe if one wants to be ready to answer their questions. I wish there were better evidence in regard ~~to~~ this problem. We are too inclined to doubt the possibility of a father's influence on a priori grounds. On the other hand only recently I saw a paper in J. E. Z. (4) where someone compared the frequency of embryonic abnormalities in chicks derived from artificial insemination with old vs. fresh sperm. There was a great increase from old sperm. The author interpreted this not as due to genetic changes but to toxic effect of old sperm on the egg.

since the same kind of abnormalities can be induced by toxic substances. May be S. Wright or the Bar Harbor people have data on abnormalities of young raised by mice, or <sup>reared</sup> rat or guinea pig males which were under different diets? I do not know of relevant data.

I do not know "Murphy's dictum". Murphy wrote a sound book on "Congenital Malformations" 127pp. 1947 Lippincott. I do not remember his "dictum" but Fredericks' formulation of it sounds O. K. if one interprets "influence the germplasm" as significant mutations.

Warkany is a worker in Cincinnati who has done important work on congenital malformations induced in rats by maternal nutritional deficiencies. He produces high frequencies of various, specific malformations by specific deficiencies (see J. Nutr.).

Yes, I shall be in Berkeley in August and am looking forward to getting together with you.

Sincerely yours,

Carl Stern