

UNIVERSITY OF CAMBRIDGE
Department of Genetics

Whittingehame Lodge,
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13th July, 1953.

Dear Dr. Watkins,

Thank you for sending me the typescript of your paper "Studies on the Experimental Epidemiology of Respiratory Infections. VI. The Relationship between Dose of Micro-organisms and Subsequent Infection and Death of a Host."

The particular relationship you arrive at is one which has attracted attention in a good many centres in recent years and is generally known in this country as the log log relationship for obvious reasons. When I was over in Canada in the Spring of 1950 a group of workers at the Connaught Laboratories were using it for just the purpose you have in mind, namely the relationship between the dosage of a living virus and the frequency of effective infection. I think Kenneth Mather has written about it in this country and probably Finney also. I do not know whether any of these authors have discussed the effect of the relationship as observed of inequality between different test animals of the probability appropriate to each of a single viable organism causing infection. This will, no doubt, have as its main effect a reduction in the apparent slope of the response curve under the log log transformation. It may also

be expected to have subtler effects perhaps on the weighting and on the form of transformation observed. It may be that some compromise between probit weighting and log log may be theoretically ideal but I have not examined this in detail.

Sincerely yours,