Dear Dr. Sabin:

The attached manuscript by: Gerald A. Logrippo

entitled: **ANTIGENICITY OF COMBINED BETA-PROPIONATE AND ULTRA-VIOLET INACTIVATED VIRUS VACCINES**

consists of 3 pages of text and references, 2 tables and 2 figures.

Would you be good enough to review it and return your comments in DUPLICATE as an anonymous memorandum to be transmitted to the author. (The third copy may be retained for your own files). Please use an additional sheet if necessary.

If you cannot referee the manuscript in the next 10-14 days, will you return it for referral to someone else?

Sincerely yours,

JOHN Y. SUGG
Editor-in-Chief

**COMMENT:** referee #1

The main points established by the data presented in this communication are well stated in Item No. 3 of the summary.

The statement in Item No. 2 of the summary that the "vaccines prepared with the combinations [BPL and UV] are superior to those prepared with either agent alone" does not appear to be warranted by the data. In the case of the EEE vaccine the "resistance index" of the vaccine prepared with 2000 mg of BPL/liter alone, the minimal concentration required to inactivate the virus, is $3.2 \times 10^7$ as compared with values of $5 \times 10^7$ for 1000 mg BPL and UV and $7.9 \times 10^8$ for 500 mg BPL and UV, and no values are given for vaccine inactivated by UV alone. If the author had shown that the value of $7.9 \times 10^8$ can be obtained with regularity and not just once, the conclusion might have had some validity for the EEE vaccine.

In the case of the rabies vaccine there are no data on vaccines completely inactivated by UV, and the "resistance index" of $3.1 \times 10^5$ and $1.9 \times 10^5$ of the vaccines inactivated by BPL and UV are not significantly different from that of $6.3 \times 10^4$ for the single vaccine completely inactivated by 800 mg BPL/liter or the $1.9 \times 10^5$ of the vaccine with slight residual infectivity treated with 400 mg BPL/liter. The rabies tests shown in Table II indicate clearly that the amount of residual living virus in the vaccine has no effect on its antigenic potency as measured by the test that was used. Since the untreated virus preparation with a million times more virus than the BPL-treated vaccine containing a trace of residual virus yielded the same "resistance indexes".
Since no data are given for the antigenic potency of live EEE virus (which could have been gotten in adult mice) and since the immunogenic potency of rabies vaccine was not shown to be affected by the amount of residual live virus, the statement in Item No. 4 of the summary would also appear to be unwarranted. Furthermore, quantitative comparisons of antigenic potency are not valid when the dose of antigen is not varied in the test, and since antigenic extinction tests were not used the author is not justified in making the comparisons.

I would recommend publication of this paper provided the author modifies his conclusions regarding antigenic potency. The statement that according to the qualitative tests used the combined treatment did not diminish the "resistance indexes" of the vaccines would be satisfactory. This modification would in no way detract from the significance of this contribution.

Should the expression "normal saline" read physiologic salt solution? I would also like to suggest that it would make for greater clarity if the virus concentrations were expressed as LD$_{50}$ per ml of 10% suspension.