RECOMMENDATION:

The Virus and Rickettsial Commission and its predecessor the Neurotropic Virus Commission of the Army Epidemiological Board has been concerned with the needs of developing a vaccine against Japanese B encephalitis since one of its earliest meetings in January 1942. Largely through the efforts of Dr. A.B. Sabin a vaccine has been devised and it has received experimental (1943) and field trials (1945, '46 and '47) which now cover an experience of four years. Members of our Commission and the group at the Army Medical School have carried forward the majority of work that has been done on this disease by American workers, and almost the entire vaccination program. We are, therefore, obliged to see this thing through to as nearly a proper conclusion as is possible. It has been a cause of chagrin to us that after 4 years the value of the vaccine is not yet apparent, and it is a challenge to us to try to devise means whereby sometime during the next few years a proper answer can be reached as to the value of the vaccine. Particularly is this true as the vaccine is being recommended each year apparently in Japan to be given to many of the troops and their dependents.

New experiments are urgently needed in order to give us more information as well as plans for an organization to carry them out. I propose this in the form of a Series of Recommendations:

1. There should be continued efforts to try to improve the present vaccine. Such improvements would be concerned with a) the possible substitution or addition of new strains of the virus of Japanese B encephalitis, for it is not clear that the strain now being used is the best possible one for vaccine production; and b) questions of dosage and intervals between dosage have not yet been fully answered.

2. In view of the fact that only 40% of individuals vaccinated have so
far developed demonstrable neutralizing antibodies by the intracerebral (ic) test. It is urgent that use of the intraperitoneal (ip) neutralization test in young mice be tried in an effort to compare its value with that of the (ic) neutralization test in measuring antibodies to this vaccine.

3. It is proposed that these studies be put on a long-term basis and be established in one laboratory so that a team can be organized which will hope to function for a period of at least three years, and that this team will be vitally concerned with laboratory experiments as well as field observations in Japan and elsewhere. An early decision should be reached as to where this team is to be located.

4. Over and above the laboratory work to be carried on by this team, there is no question that the administration of the vaccine should be carried out under the supervision of competent members of this team in the field, and that all possible means should be made to insure the fact that the vaccines and control groups should be carefully watched.

5. It is again proposed that prior to each season the local Army officers should be consulted as to whether or not it is conceivably possible to carry out a vaccination experiment in any military group in which 1 out of 2, or 1 out of 3 individuals is vaccinated and the others are left unvaccinated. It is obvious that this question has received previous consideration and has been repeatedly rejected but the time may eventually come in which it could be considered.

6. In view of events which happened on the island of Okinawa in 1945 and in 1947, it is proposed that this island be chosen as a focal point for investigations in the field of this disease; that vaccination experiments there be given special attention; that the individuals in charge of military
government on that island be informed of this fact well in advance; and that perhaps special personnel shall be delegated for these studies. It would seem feasible to cover the situation on Okinawa more easily than in the larger aspect of the American occupied area of Japan.

7. It is proposed that the experiment in which 20,000 children in the prefecture of Okayama were vaccinated in 1946 and 1947 be repeated, provided that proper personnel is available to follow up the results.*

8. It is finally proposed that every possible effort be made to inform the medical authorities in military government and the U. S. Army in Japan, that it would be most difficult to have the Japanese investigators as the senior authors of reports on these experiments; and that it should receive a high priority as a research measure to be carried out by the Commission's Encephalitis team with the cooperation of local personnel and in our own laboratories in Japan.

Respectfully submitted,

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Director

JRP/sm
cc: Dr. MacLeod
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* See accompanying map which indicates the reason for choosing Okayama as a potential site of epidemics.