indicated to determine whether this may provide a method for distinguishing between neutralizing antibodies in people and animals which are the result of exposure to the virus, and "antibodies" which are occasionally found in animals and human beings under conditions where exposure to the specific virus is most unlikely. As an example, may be cited the American, reported in the preceding communication,[1] whose serum, prior to vaccination, neutralized the Japanese B encephalitis virus, but who did not develop complement-fixing antibodies following vaccination.

The results of the present investigation emphasize the importance of controlling the antigenic potency of Japanese B encephalitis vaccine by proper assay in mice, and indicate that the minimal requirement of 0.01 cc for the $ID_{50}$ should be retained until vaccines of greater potency can be prepared. It would also appear that some vaccines lose their potency more quickly than others (this seemed to be especially true for the vaccines prepared by one commercial company), and checks on the residual amounts of formalin and study of certain other factors which may be involved are indicated to insure minimal acceptable potency for the preparations finally used in the field.

*Summary.* Japanese children, 3 to 5 years old, and people, over 60 years of age, living in the endemic region of Okayama, Japan, were given commercial Japanese B encephalitis mouse brain vaccine—2 doses of 1 cc each, 6 days apart, and a 3rd dose of 1 cc one month after the first dose in advance of the season when outbreaks of the disease may be expected. None of the children had antibodies before vaccination, and of the 10, who were inoculated with a vaccine having a 50% immunogenic dose ($ID_{50}$) of 0.013 cc by mouse assay, all had neutralizing antibodies 10 days after the 3rd dose, while only 1 of the 10, who received a vaccine with an $ID_{50}$ of 0.077 cc, developed a significant neutralization index. However, in a group of 7 old people, without antibodies before inoculation, who received the same dosage of the better vaccine ($ID_{50}$ of 0.013 cc) none developed neutralizing or complement-fixing antibodies. Complement-fixing antibodies for the mouse brain component appeared as well as for the Japanese B virus contained in the vaccine, but in 5 of the 10 children, inoculated with the better vaccine, the titers were significantly higher with the Japanese B antigen. Complement-fixing antibodies, specific for the Japanese B virus, appeared rapidly in all of the 10 old people who had neutralizing antibodies (evidence of previous inapparent infection) prior to inoculation, but in none of the 9 old people who were without such antibodies.

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## Ragweed Reagins in Nasal Secretion.*

MAX SAMTER AND ELMER L. BECKER. (Introduced by W. H. Welker.)

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Although nasal secretion has been suspected by numerous observers to be an important factor in the mechanism of respiratory allergies, its mode of action is as yet unknown. The present study attempts to determine whether nasal secretion contains reagins in ragweed sensitive patients.

*Experimental Procedure.* Four normal subjects and 10 ragweed sensitive patients with marked skin reactivity and demonstrable circulating reagins were selected for the experi-

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ments, 2 months after the end of the ragweed season.

Nasal secretion was obtained by insertion into each nostril of cotton plugs saturated with 10% sodium chloride solution; satisfactory secretory response was usually obtained without appreciable irritation within 10 minutes. The material obtained was transferred immediately into 2 micro-Seitz filters each of 2.0 ml capacity, and pressed through the filters by centrifuging for 40 minutes at moderate speed. The filtrates were clear, slightly viscous and represented approximately one-fifth of the original volumes.

The cell free liquid thus prepared was used for passive transfer studies. 0.1 ml was injected into each of 4 sites (left arm) of normal individuals who gave negative skin tests to ragweed and alder 15 minutes before the experiment. Injection of the filtrate was painless and was usually followed by a triple response (Lewis) which subsided within 30 minutes—one patient developed an erythema at the site of injection which persisted for 3 days leaving a faint pigmentation.

Twenty-four hours later the sites were reinjected with 0.02 ml of ragweed extract (0.01 mg N/ml), alder extract (0.01 mg N/ml) and diluent respectively; at the same time, another test for ragweed sensitivity was made on unprepared skin.

*Results.* Nasal secretion of 7 (out of 10) ragweed sensitive patients contained ragweed reagins. Alder extract and diluent were negative in all cases; the reagins demonstrated were specific for ragweed. Nasal secretion obtained from normal persons gave negative results. The behavior of reagins other than to ragweed in this particular medium is under investigation. It is felt that these observations might be of significance for a better understanding of the clinical course of pollinosis.