mals developing typical signs of encephalitis which could be prevented by neutralization with convalescent sera. It may be noted particularly that on one occasion all of the guinea pigs purchased on a certain day survived while the same material injected into others at a later time produced encephalitis in 3 out of 4 animals.

In another series of experiments, in the spring of 1938, the virus was successfully carried through 5 consecutive passages in guinea pigs with essentially similar results. In addition, sections of brains of several guinea pigs in this series, including one from the fifth passage, showed histopathological evidence of encephalitis. However, when we attempted to carry the experiments further in the fall of 1938, we were unable to infect guinea pigs either with the brain of guinea pigs (preserved in glycerin and from the previous experiment), or with freshly passaged brains of mice. Several variations in technic were employed without success; these included the use of more concentrated brain-suspensions, uncentrifuged suspensions, and normal guinea pig serum as diluent.

In a personal communication, Doctor Max Theiler reported a similar experience with yellow-fever virus and found that the susceptibility to this virus depends on the genetic strain of guinea pigs used. Likewise, Sonto and his associates[9] have found a difference in susceptibility of different strains of guinea pigs to tetanus toxin. Since such a factor may have operated in our experiments, we are planning further trials with different strains of guinea pigs.

We wish to express our indebtedness to the late Doctor H. A. McCordock for pathological examination of the tissue of the guinea pigs.

10664 P

Susceptibility of Wild Mice to the Virus of St. Louis Encephalitis.*

C. G. HARFORD, S. E. SULKIN AND J. BRONFENBRENNER.

From the Department of Bacteriology and Immunology, Washington University School of Medicine, St. Louis, Mo.

For the last 2 years we have been concerned with the question of the possibility of a reservoir in animals of the virus of St. Louis

[9] Sonto *et al.*, *Revue d'Immunologie*, 1939, **5**, 54.

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encephalitis. Since this has been an interepidemic period, our method of study has been to determine experimentally the susceptibility of various species. Among others, wild gray house-mice *(Mus musculus)* have been tried and found susceptible.

Up to the present, virus has been carried (by intracerebral inoculation) through 10 passages in wild mice and has retained its infective titer as tested on Swiss mice. Furthermore, a test with rabbit antiserum showed specific protection against passage virus. In addition to the intracerebral route we have also succeeded in transmitting the infection to wild mice by the intranasal route.

In another series of experiments we have found it possible to transmit infection to Swiss mice by feeding infected material but in a single experiment so far performed have failed to infect a wild mouse by this route. The investigation is still in progress and this fragmentary report is made at this time because of the possibility of human cases occurring again this summer, at which time it would be desirable to look for virus in wild mice trapped in the households where cases have occurred.

10665 P

Infection of Mice by Feeding of Tissues Containing the Virus of St. Louis Encephalitis.*

C. G. HARFORD, S. E. SULKIN AND J. BRONFENBRENNER.

From the Department of Bacteriology and Immunology, Washington University School of Medicine, St. Louis, Mo.

In attempts to determine whether the injection of young mice would serve as a method for the detection of smaller amounts of virus, newly born, unweaned Swiss mice have been inoculated intracerebrally or intranasally with tenfold dilutions of suspensions of infected adult mouse brains. These mice have been found susceptible and preliminary experiments suggest the possibility that newly born mice will succumb to one-tenth the dose necessary to kill grown mice by the respective routes.

In the course of these experiments it has been noted frequently that the mothers had devoured their dead or moribund offspring. In 3 of such cases the mothers were found dead after intervals of 5 to 7

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