It appears from these experiments that suitable immune serums cannot be produced in horses against the herpes virus. Due to a paucity of cases of epidemic encephalitis in the Philippines we have been unable to test either of these serums in patients having this disease. From these experimental data it would appear that there is little scientific basis upon which to base such clinical tests.

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Experimental Herpetic Encephalitis Produced by Feeding Herpes Virus to Guinea Pigs.

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Herpetic encephalitis may be produced in rabbits by inoculating such animals either subdurally, intravenously, subcutaneously, or intraperitoneally. The possibility of inducing herpetic encephalitis in guinea pigs by feeding occurred to us. While there is little evidence to support the view that epidemic encephalitis in man is caused by the herpes virus, any evidence regarding the portals of entry of this virus into the animal body is important. Nothing is known concerning the portal of entry of the true virus of epidemic encephalitis and epidemiological control of the disease is based largely upon speculation. It is known that paralysis follows the inoculation of the virus of poliomyelitis into the stomach and intestines of monkeys and it seemed probable to us that infection might be produced in this way with the herpes virus.

Four guinea pigs were fed by catheter 3 cc. of a freshly prepared emulsion of herpetic (Beckley) rabbit brain. One guinea pig received 4 cc. while a 6th received 5 cc. Of the 6 guinea pigs so treated 3 died. The animals which had received 4 cc. and 5 cc. of herpes emulsion respectively died on the 8th day following feeding. One of the guinea pigs which had received 3 cc. of the herpes emulsion by mouth died on the 10th day. The other 3 guinea pigs remained unaffected.

The brains of the 3 guinea pigs which died were removed and emulsions were prepared. Rabbits inoculated with these emulsions subdurally developed typical symptoms of herpetic encephalitis and

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died of the disease. Cultures prepared from the brains of the guinea pigs and inoculated rabbits were without growth. The herpes virus passed through guinea pigs by way of the gastro-intestinal tract and then passed back to rabbits appears to be somewhat attenuated at first but quickly regains its virulence. For example the virus recovered from the brain of the guinea pig which had received 5 cc. of herpes emulsion by mouth required 9 days to produce a fatal encephalitis in the first rabbit tested. When the virus from this rabbit was passed to 2 healthy rabbits subdurally both animals died with typical symptoms on the 5th day following the inoculation. Cultures prepared with the brains from both of these animals remained sterile.

It appears from these experiments that the herpes virus passes from the intestinal tract of guinea pigs to the central nervous system under these experimental conditions and that the virus may be recovered from the brains of guinea pigs following death of the animals and that the emulsions of such brains when inoculated into rabbits subdurally produces a typical herpetic encephalitis.

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Experimental Rinderpest in Goats.

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The study of the virus of rinderpest has been rendered difficult because of the lack of a suitable experimental animal. The virus of rinderpest is pathogenic for cattle, carabaos, hogs, boars, sheep, goats and camels. With the exception of goats and sheep the other susceptible animals are either too expensive to use for experimental purposes or are unobtainable. That goats are susceptible to the virus of rinderpest has been shown by Kolle and Turner[1] and by Topacio.[2] In the Philippines where rinderpest has a high incidence among cattle it is possible to obtain goats in large numbers and they are even less expensive than rabbits. As a rule the mortality in goats from this disease is very low. This animal, however, manifests very definite symptoms of the disease. These symptoms con-

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[1] Kolle and Turner, *Z. f. Hyg.*, 1898, xxvii, 45.

[2] Topacio, *Phil. Agr. Rev.*, 1922, xv, 229; *Ibid.*, 1926, xix.