its derivatives have been for some time the most efficacious drugs known for the treatment of trypanosomiasis; but they fail, not infrequently, to kill all the parasites in the animal treated and, consequently, recurrences of the disease are apt to occur after their use. Therefore, they do not afford a satisfactory means of treating diseases caused by trypanosomes.

Ehrlich, during his endeavours to ascertain the reason of the trypanocidal properties of various drugs used in the treatment of trypanosomiasis, came to the conclusion that a more reduced organic arsenical compound would have heightened trypanocidal properties; in *arseno-phenyl-glycin* he prepared such a substance.(5)

It is a yellowish powder, which must be prepared and kept *in vacuo* because it is so easily oxidisable. In his own laboratory Ehrlich found that this drug was more efficacious in the treatment of experimental trypanosomiasis in rats than any other substance with which he had worked previously.

Schilling,(6) Wendelstadt,(7) and Roehl,(8) in recently published papers have confirmed Ehrlich's statements by using arseno-phenyl-glycin in the treatment of the diseases produced by various trypanosomes in some laboratory animals.

The experiments reported in this paper were undertaken to determine the action of arseno-phenyl-glycin upon the disease produced in white rats by *Trypanosoma brucei*.

II.

Technique.

Trypanosoma brucei was chosen for use in these experiments because the disease produced by it runs an acute course; consequently, the result of observations on its experimental treatment can be obtained more quickly and with greater certainty than is possible with experiments made with parasites producing a more chronic disease. The strain of *Trypanosoma brucei* employed is one which has been maintained in small laboratory animals for some years. It is not a very virulent strain and only small quantities, one or two drops, of infected blood were injected in inoculating the rats; consequently, the disease produced was rather less acute than is ordinarily the case in rats infected by *Trypanosoma brucei*. It killed the six untreated control rats in from 8 to 14 days.

The existence of infection in the experimental animals was determined by examining microscopically, with a magnification of about 400 diameters, a fresh, unstained specimen of blood mounted between a slide and a coverslip.