

The arseno-phenyl-glycin employed was sent to us by Ehrlich; we take this opportunity of thanking him for making it possible for us to perform these experiments. A freshly prepared 5 per cent. aqueous solution of the drug was always used and it was always given subcutaneously. Former work on the experimental treatment of trypanosomiasis makes it certain that the largest possible dose of the drug under trial should be employed. In order to determine the minimum lethal dose of arseno-phenyl-glycin, a number of rats were inoculated with varying doses of the solution of the drug, which were equivalent to from 0.1 grammes to 0.8 grammes *per* kilogramme of the body weight of the animal treated. Rats which received poisonous doses died within one to two days, according to the size of the dose received; none which lived for more than three days died from the effects of the drug.

It was found that a dose equivalent to 0.4 grammes, or more, of the drug *per* kilogramme of animal produced symptoms of poisoning in rats of 60 to 70 grammes weight; larger rats seemed to bear the drug better (one, weighing 104 grammes, survived a dose equivalent to 0.8 grammes *per* kilogramme of animal). The therapeutic dose for rats of about 70 grammes weight was fixed therefore at from 0.2 to 0.3 grammes *per* kilogramme of body weight of animal. In the paragraph which describes our observations whenever the amount of drug given is referred to, it is mentioned as the equivalent of so many grammes *per* kilogramme of body weight of the rat treated.

A trypanocidal drug, to be of any practical value, must be able to destroy the parasites in an animal already severely affected by them; for that reason the rats were not treated until they had been infected for some days and their blood contained considerable numbers of trypanosomes.

The treated rats were frequently examined until the parasites had disappeared from their blood. After the parasites had once disappeared, they were examined daily. If the trypanosomes recurred, the treatment was then repeated; in no instance was a second dose of the drug given unless the parasites had recurred.

As far as possible, rats of about the same size were used for all of the experiments. Most of the rats experimented with were young and small; consequently, those which survived the infection and treatment have grown and increased in weight rapidly.

III.

OBSERVATIONS.

1. Six rats (experiments IX, I, II, IV, XIX and XX) received a dose of 0.3 grammes after they had been infected for some days and while