their blood was crowded with trypanosomes. The number of the parasites diminished but they did not completely disappear from the blood of any of these animals; all died within 18 hours of the treatment and all died before the control rats which remained untreated.

2. Five rats (experiments X, G, XXIII, XXVIII, and GIII) received a dose of 0.2 grammes after they had been infected for some days and when their blood was crowded with trypanosomes. Although the parasites had disappeared from two rats and were diminished in the third, three of them died in from 12 hours to 4 days after the treatment and before the control rats which were untreated; two lived (experiments X and GIII), although the parasites recurred later in both.

3. Seven rats (experiments XIII, XVI, XVII, V, XIV, XXVI, and XXVII) received doses of 0.4, 0.3 or 0.2 grammes after they had been infected for some days, but while their blood contained small numbers of trypanosomes. The parasites immediately disappeared from the blood of six of them; in only one (experiment V) did they persist and cause the death of the rat. Trypanosomes reappeared after an interval in the blood of four of these rats,—experiments XIII, XIV, XVI and XVII. From the blood of the remaining rats—experiments XXVI and XXVII—the trypanosomes are still absent at (for experiments XXVI and XXVII) twenty-two weeks after receiving a single dose of the drug.

4. In six rats the parasites recurred; in experiment X in ten days; in GIII in four days; in XIV in two days; in XVI in one day; in XVII in two days, and in XIII after an interval of fifteen weeks after the first treatment. In every case, so soon as the recurrence of the parasites was perceived, an additional dose of from 0.2 to 0.4 grammes of the drug was given. The parasites were immediately driven from the blood of all of them; they have remained absent permanently from four of them. In two experiments, XVI and XVII, they have again recurred. In experiment XVII they have reappeared no less than five times at intervals of about ten days, although they have been immediately driven from the blood on each occasion by a dose of 0.3 grammes.

It has been known for some time that trypanosomes may acquire an immunity to any of the trypanocidal drugs: for example, if a trypanosome-infected rat is given insufficient doses of atoxyl, the trypanosomes will recur until, finally, they have become absolutely resistant to the drug and will survive the maximum dose which can be given to the animal without poisoning it. Strains resistant to *arseno-phenyl-glycin* can be produced in the same way, (8) and that is apparently what has occurred in experiment XVII.

The limits of the possibilities of atoxyl in the treatment of experimental trypanosomiasis are well known. It is rarely possible to cure