That the motility of trypanosomes is preserved longer in serum than in salt solution was noted years ago and has recently been emphasized by Schern,[1] but the writer is not aware that anyone has previously recommended suspending trypanosomes in serum for experiments *in vitro*.

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The action of atoxyl.

By **B. T. TERRY.**

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The action of atoxyl is paradoxical. *In vivo* it is effective against certain parasites, *in vitro* it has little or no action. Ehrlich believes that the medicament must be reduced in the body before it becomes active. This view has been strengthened by Levaditi and Yamanouchi who have shown that emulsions of liver, muscle, and lung, when incubated with atoxyl, transform this medicament into a toxic substance. Levaditi apparently believes that the transforming agent is in the liver and other organs, while Yamanouchi concludes that it is in the red blood cells only. My results confirm much of the experimental work of Levaditi and Yamanouchi, but lead to a conclusion that, in its entirety, is apparently held by neither of these investigators.

In my experiments, both liver and blood when incubated with atoxyl (10 per cent.) at 37 degrees for 3 hours, transformed this medicament into a toxic substance.

The transforming agent in liver had characteristics, however, which in some respects were quite different from those of the active agent in blood.

The active agent in liver was soluble in salt solution, was filterable through collodium, and was quite resistant. Liver emulsion ground with sand in a mortar, or heated to 100 degrees for 10 m., lost little or none of its activity. The addition of blood to liver emulsion before incubation with atoxyl increased its activity, but liver emulsion washed *thoroughly* to free it of red blood corpuscles was inactive, probably because of the solubility of the transforming agent.

From the blood the active agent was apparently not extract-

[1] "Arbeiten aus dem kaiserlichen Gesundheitsamte," Berlin, 1911, xxxviii, 338.

able by salt solution. Moreover, it was very easily destroyed, soon losing all or nearly all of its activity if the blood was laked (*e. g.*, by the addition of distilled water or saponin, by prolonged shaking at 37 degrees, or by grinding in a mortar with sand and salt solution, or with sand and serum). It was almost completely destroyed by heating to 100 degrees for 10 minutes.

Conclusion.—Atoxyl is probably transformed into a trypanocidal substance in the living body both by the blood and by the liver (other organs were not tested). In tests *in vitro* the transforming agent in liver may be readily distinguished from the active agent in blood.

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Parturient paresis and eclampsia. Similarities between these two diseases.

By **DANIEL J. HEALY** and **JOSEPH H. KASTLE.**

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In June, 1907, the attention of one of us (Healy) was called by Dr. M. A. Scovell, Director of the Kentucky Agricultural Experiment Station, to parturient paresis in the dairy cow. Dr. Scovell's intention was to have, if possible, the etiology cleared up.

It proved impossible to take up the problem until one year ago, and as our studies progressed, the similarity between parturient paresis and eclampsia became more and more evident. They are both intoxications which occur suddenly just before, during or immediately after labor. They are characterized by the same clinical features, namely, suddenness of onset, loss of consciousness, coma and similar febrile conditions. In both, the urinalyses are the most important clinical features, and the urinalyses in these two conditions are similar, namely, a disturbance of the nitrogen distribution among the compounds containing nitrogen, an increase of the ammonia excreted, the presence of albumen, and microscopically the presence of hyaline, granular and epithelial casts and blood cells.

The finer pathological changes occurring in parturient paresis have not been established, and as none of our cases died, we have not had the opportunity of studying these changes. However, we