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.

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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

have had ample opportunity to study the finer pathological changes in three guinea pigs which died in five, six and seven days under the influence of the toxin of parturient paresis. We have also observed these changes in another guinea pig, which received a smaller dose of the toxin, the dose not being sufficient to cause death in ten days and therefore he was chloroformed. The pathological findings in these guinea pigs correspond in every way to the characteristic lesions of eclampsia, namely, there was hemorrhagic necrosis of the liver, acute parenchymatous nephritis with interstitial hemorrhages, degeneration of the cells of the adrenal cortex, with interstitial hemorrhages, and destruction of the medullary portion. These experiments were fully controlled in every detail by means of guinea pigs injected with normal salt solution, fresh milk, fresh normal colostrum and fresh, normal, cow's urine. The control pigs all remaining alive and well at the present time, with the exception of the normal urine pig, which was chloroformed at the end of seven days and on post mortem found normal.

The modern treatment of parturient paresis is most remarkable in its result. The mortality has been reduced from 60 per cent. to less than 1 per cent. It was introduced by J. Schmidt, of Kolding, Denmark, and was based upon the theory that the disease was due to bacterial invasion of the udder. The treatment consists of acute dilatation of the udder by means of oxygen or sterile air.

That the disease is due to a toxin elaborated in the udder as the result of its own metabolism preceding normal milk production, there can be no reasonable doubt, and that the success of the modern treatment is due to preventing, by means of pressure, the absorption of this toxin, seems most highly probable.

We are of the opinion that eclampsia is due to a similar toxin, elaborated by the breast in a similar manner, and would strongly recommend, as the most promising treatment, dilatation of the breasts with oxygen or sterile air, or forcible compression of them by means of a properly applied bandage, after they have been emptied by means of the breast pump, and at the same time using whatever medical measures may be indicated.

We, ourselves, shall thoroughly test this method of treatment as soon as the opportunity occurs.