ments registered. It was found that the injection of iodothyrin, parathyroid, infundibulin, thymus and pineal caused a distinct fall in tonus and inhibition of rhythmic contractions, showing the presence of epinephrin beyond normal in the blood. Normal blood of the cat never produces this effect, but stimulates tonus and rhythmic contraction. We have been careful to exclude albumen in these glandular tests, as the foreign albumen in the antithyroid serum of Möbius and in the diphtheritic antitoxic serum in 2 drop doses increases the amount of epinephrin in the blood. As cholin also produces an epinephrin reaction we can only be certain that iodothyrin and infundibulin stimulate the adrenals.

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Standardization of the Wassermann reaction. Attempts to prepare a standard antigen and antibody.

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For some time past we have endeavored to determine more exactly the nature of the Wassermann reaction. This led us first to an investigation of the antigen. In this connection Noguchi, and we ourselves, have shown the importance of the substances contained in the acetone precipitate. Incidentally, we have found that an antigen containing these substances (lipoids) is available for use after a period of two years. The exact steps in the production of this antigen differ in certain details from methods heretofore published. The method will appear, shortly, elsewhere. The next step in the work was an effort to produce an antibody to this relatively stable antigen. Three attempts have been made and all were unsuccessful. No evidence of antibody formation could be shown by means of the reaction of fixation or the precipitin reaction. *These lipoid substances were found not to act as antigens.*

Had the production of an antibody been possible, the standardization of the Wassermann reaction could have been accomplished. This was the ultimate object of the work. No method

has been devised that permits of the "lipotropic" content of syphilitic sera being determined by quantitative methods by comparing them with such a standard serum as we have tried unsuccessfully to produce. Noguchi has shown that one can determine the absolute amount of a given syphilitic serum that will give complete fixation with a fixed amount of antigen, under certain conditions, at any given time.

In addition, for purposes of comparison at different times it would be necessary to have a standard antigen and a standard antibody (a "synthetic syphilitic" serum) both of relatively constant potency. These things are at present impossible. Quantitative standardization of the Wassermann reaction is, therefore, not feasible in the present state of our knowledge.