derivative show quite different ability to lower the blood uric acid in different individuals, the action being very pronounced in some cases and comparatively slight in others.

In their experiments Folin and Lyman noted the interesting fact (in two cases) that cinchophen not only brings about a dimunition of the uric acid in the blood but also seems to lead to a dimunition of the nonprotein nitrogen and urea whenever these are present in the blood in unusual amounts. Unfortunately these two experiments were not followed by a control after period.

Data are given in the table above on two cases in which we believe there is unmistakable evidence of a drop in the blood urea as well as in the uric acid. It will be noted that the action on the uric acid was very pronounced in both cases, the first case having a high and the second a normal initial uric acid.

100 (1560)

The purification and concentration of antigens by new methods of adsorption.

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The results of recent studies of complement fixation in tuberculosis suggest that the test might be of considerable diagnostic value if satisfactory antigens could be prepared.

Three strains of tubercle bacilli were selected: one a virulent, another a non-virulent, human strain and a third bovine strain. Immune serum sufficient for titration with all the antigens was obtained from inoculated horses.

The antigens were prepared from cultures by various methods of fractioning and extraction similar to those used by other observers. The culture filtrates were so anticomplementary that they could rarely be used. The glycerine and distilled water extracts gave the most active antigens. These active antigens and also the culture filtrates for comparison were selected for further study by methods of adsorption.

Animal charcoal and globulin (horse serum) were used to adsorb the substances possessing antigenic action from the filtrates. When animal charcoal was added, the antigenic properties were removed, and could not be recovered by extraction of the charcoal. The adsorption with globulin was a more complicated procedure. The technique was briefly as follows: The original antigen was dialyzed and horse serum, one part to twenty of antigen, was added and allowed to stand in the incubator half an hour. The globulin was then precipitated by passing purified CO_2 gas free from HCl through the mixture for one half an hour at 37° C. The globulin precipitate was collected and by shaking it with alcohol the antigenic substances were extracted. The alcoholic extract was concentrated in a vacuum.

The preliminary dialysis of the culture filtrate eliminated practically all of its anticomplementary action. The adsorption with globulin removed the antigenic substances from the culture filtrates and the aqueous extractions so that they were easily obtained in greatly purified and concentrated form.

In preliminary studies the antigens which are used in the diagnosis of syphilis by complement-fixation were also purified and concentrated by similar methods. This method thus allows more precise study of many phases of infection and immunity than has hitherto been possible.

101 (1561)

Observations on the immunization of rabbits with single strain and combined multiple strain vaccines.

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Previous to 1916, the Army and the National Guard were immunized with typhoid vaccine. During the late summer and early autumn of that year, numerous cases of paratyphoid fever developed among the troops along the Mexican border, and the Army medical authorities therefore felt it desirable to substitute a triple vaccine, of typhoid bacilli combined with the paraty-