to antigens has also been shown by the procedure being adopted by such experienced workers as Sachs, McIntosh and Fildes, and Walker and Swift. With regard to the other observations of Dr. Thiele and Dr. Embleton on the effect of autolysis, the action of cholesterin by itself, &c., it may be remarked that the greater part of these results had been previously published by others, and a full account of our own work on these points and also of that done elsewhere is recorded in Browning and McKenzie's "Recent Advances in the Diagnosis and Treatment of Syphilis." I hope to have an opportunity of dealing more fully with the questions raised by Dr. Thiele and Dr. Embleton in an early issue of your journal.

I am, Sir, yours faithfully,

CARL H. BROWNING.

Laboratory of Clinical Pathology of the University and Western Infirmary, Glasgow, March 3rd, 1914.

To the Editor of THE LANCET.

SIR,—In your issue of Feb. 28th Dr. J. McIntosh and Dr. P. Fildes have criticised our paper on the "Wassermann Reaction" published in THE LANCET of Feb. 21st, 1914.

Dr. McIntosh and Dr. Fildes have entirely missed the purport of our paper and so have expressed their absolute dissent from our conclusions on a subject which they themselves have never investigated. We fully agree that the addition of cholesterin greatly increases the apparent antigenic value of an antigen and are fully cognisant of the work of Browning and Mackenzie, Sachs, and themselves. We maintain, however, that the action of cholesterin is not specific. We have shown¹ that it enhances the pre-existing anticomplementary property of some non-syphilitic sera just as it enhances the anticomplementary power which develops when a syphilitic serum is exposed to an antigen. This is the point that Dr. McIntosh and Dr. Fildes have failed to deal with in their papers. We do not deny that the use of cholesterin with an alcoholic heart antigen, or a weak lecithin antigen, greatly increases the sharpness of the reading, and has shown up cases which would otherwise have been missed, but this addition is only necessary when the true antigenic power of the antigen is weak—in fact, the addition of cholesterin is the confession of a weak antigen.

By the method of Dr. McIntosh and Dr. Fildes the true antigenic value of the antigen is never ascertained.² It is taken for granted. It does not necessarily follow that the different samples of antigens obtained by their method are of constant value; in fact, it has been shown by Noguchi and ourselves that even with a uniform technique the antigenic value of the extracts from the same type of organ is not constant. By our method³ we can always rely on getting an antigen which is so powerfully antigenic that it requires no aid from cholesterin to show the complement fixation that has occurred; it is not anticomplementary, so that large amounts can be used, and it is not hæmolytic.

With regard to our statement that the Wassermann reaction as ordinarily performed is apt to give erroneous results with corpse sera, &c., we should just like to draw attention to the latest communication appearing in connexion with this by Boas and Eiken.⁴ These observers examined

540 corpse sera, and using 200 c.mm. of the sera they obtained so many positive results that they regarded the test as useless; using 100 c.mm. of serum they obtained negative results in 17 per cent. of cases where there was active untreated syphilis.

Lubarsch⁵ out of 109 corpse sera which gave a positive Wassermann reaction had 41 which were from non-syphilitic cases, these latter forming 7·3 per cent. of the total number of sera examined. M. Rabinowitch,⁶ examining 3000 normal sera found that when stored all would give a positive Wassermann reaction, thus showing that all sera when they become anticomplementary can give a positive reaction with an anticomplementary antigen. Fildes⁷ also reported 15 per cent. of positive reactions in corpse sera.

In conclusion, we have brought forward a powerful antigenic substance, so powerful that three-millionths of a gramme will give complete fixation in the Wassermann reaction. This antigen is easily obtainable and quite stable, and has no interfering anticomplementary or hæmolytic factors. We hold that it is absolutely unnecessary to use cholesterin antigens when such a powerful non-anticomplementary antigen can be obtained. These cholesterin antigens may give rise to a source of error in that occasionally a normal person may be diagnosed as syphilitic.

We are, Sir, yours faithfully,

FRANCIS H. THIELE.

DENNIS EMBLETON.

Bacteriological Laboratory, University College Hospital Medical School, London, March 2nd, 1914.

ASSOCIATION OF ASSISTANT MEDICAL OFFICERS OF ASYLUMS, ENGLAND AND WALES.

To the Editor of THE LANCET.

SIR,—I shall be much obliged if you can find space in your next issue to publish the fact that the first annual general meeting of the above association will be held at the Westminster Palace Hotel, London, on Saturday, March 14th, 1914, at 3.15 P.M.

I am, Sir, yours faithfully,

F. J. STUART,

Berry Wood, Northampton, March 1st, 1914. Honorary Secretary.

THE TREATMENT OF COLI-CYSTITIS BY FLUID ELECTROLYSIS.

To the Editor of THE LANCET.

SIR,—Since the appearance of my paper in THE LANCET of Feb. 14th I have been informed of the work of Professor E. W. Ainley Walker and Dr. Murray¹ on the lengthening and other characters induced in typhoid and colon bacilli by their cultivation in media containing aniline dyes. There is also another work, by G. Dreyer, S. G. Scott, and E. W. A. Walker, dealing with an induced change to Gram's stain of various bacteria after treating them with different chemical substances.² These researches are of great interest and value. They would have been included in my paper if the means of altering bacterial characters had been its subject. Nevertheless, priority of observation that such new characters can be induced in bacteria is

¹ Zeitschrift für Immunitäts-Forschung, vol. xvi., Heft 4, p. 430 &c., 1913.

² Zeitschrift für Chemo-Therapy, 1912, vol. i., p. 79.

³ THE LANCET, Feb. 21st, 1914, p. 527.

⁴ Boas and Eiken: Hospitalstidende, No. 32, 1913.

⁵ Lubarsch: Jahresberichte für aertzliche Fortbildung, 1911.

⁶ Rabinowitch: Centralblatt für Bakteriologie, Nov. 26th, 1913.

⁷ Fildes: Brit. Med. Jour., Dec. 13th, 1913, p. 1557.

¹ Brit. Med. Jour., July 2nd, 1904.

² Journal of Pathology, vol. xvi., 1911.