has not proved to be a differential stain at all since even the freshest fibrin takes a bluish hue. The difference between the coarser and finer fibrils appears to be one of intensity of stain. On the other hand the original Mallory stain as well as the modification made by Mallory himself in 1905[1] differentiates sharply between fibrin and connective tissue. The coarse fibrils as well as the fine fibrin strand taking a rich orange red in contrast to the deep blue of the connective tissue fibrils. I have used still a third connective tissue stain, the Bielschowsky silver method, which is regarded as a more delicate stain even than Mallory's. This method gives the same results as the others, that is, the fibrils react as fibrin and not as fibrous tissue (fibrin, dirty brown; connective tissue fibers, deep black).

My results with chemical tests—digestion with weak acid and pancreatin—agree with those of Baitsell. The coarse fibrils under question are readily dissolved, indicating their fibrinous character.

It has therefore been concluded that the only support for Baitsell's transformation idea consists of results obtained with a modified stain which does not differentiate fibrin and fibrous tissue. Chemical tests and reactions with all three of the differential connective tissue stains in general use show that no such transformation takes place.

5 (1183)

A comparative study of different methods of performing the Wassermann test for syphilis.

By J. WHEELER SMITH, JR., and W. J. MACNEAL.

[*From the Laboratories of the New York Post-Graduate Medical School and Hospital.*]

Wassermann tests were performed by three methods upon 496 identical specimens from 477 patients. In the first method a cholesterin-reinforced antigen was employed and the first incubation was carried out at 37° C. In the second method a simple alcoholic extract was used as antigen, with incubation also at 37° C. In the third method this latter antigen was again employed, but the first incubation was carried out in the refrigerator for a period of four to twenty-four hours.

[1] Mallory, *Jour. Med. Research*, 1905, XIII, 113.

The last method proved more sensitive in the group of known syphilitics than the other procedures tested. Furthermore, a positive result thus obtained proved to be more trustworthy evidence of syphilis than did positive results obtained with the cholesterinized antigen and first incubation at 37° C.

6 (1184)

The influence of alkali upon the glycosuria, hyperglycemia and carbon dioxide combining power in human diabetes.

By **J. R. MURLIN** and **L. F. CRAVER** with the Clinical Co-operation of **W. L. NILES** and **WARREN COLEMAN.**

[*From the Physiological Laboratory of Cornell University Medical College and the Second Medical Division of Bellevue Hospital, New York.*]

Murlin and Kramer[1] have shown that alkali administered to depancreatized dogs reduces the glycosuria, often lowers the blood sugar, and, especially in partially depancreatized animals, assists in the combustion of glucose. It has been held generally that alkali administered to diabetic patients does not influence the glycosuria[2] or hyperglycemia. A critical study of several cases kept under perfect dietary control in the metabolism ward of the Sage Institute of Pathology in Bellevue Hospital during the past summer seems to show, however, that alkali (1 per cent. Na_2CO_3) administered by duodenal tube often reduces the glycosuria very materially and may likewise affect the hyperglycemia.

A preliminary study of the blood sugar and carbon dioxide combining power of the whole blood in six patients with diabetes and several normal persons exhibits a striking inverse relationship which is almost proportional.

Two patients among the eight studied exhibited features of special interest. One (Frank B.) had a normal blood sugar throughout but excreted from 25 to 39 gm. of sugar, regardless of the amount eaten. He is probably a case of renal glycosuria. The

[1] Murlin and Kramer, *Journal of Biological Chemistry*, 1916, *Proceedings of American Society of Biological Chemists*, XXIV, March No., p. i; Full report, *Ibid.*, 1916, XXVII, Nov. No.

[2] Von Noorden, Handbuch der Pathologie des Stoffwechsels, II, Berlin, 1907, p. 576.