especially—one on the eyebrow of a rabbit infected by the intravenous inoculation of syphilitic blood and the other deriving from the condyloma on the vagina of a rabbit infected by coitus from a male rabbit having specific lesion on the prepuce. The bacterial contamination in each case was so abundant, that numerous attempts at purification using original Noguchi method failed for months. Having noticed earlier[1] that certain antiseptics in proper quantities exert a marked accelerating action upon the growth of spirochetes, I prepared media containing salvarsan in very small amounts and finally after 10 passages succeeded in isolating both strains of spirochetes, which apparently have remained pure for the last five months. In another series of experiments I tried to make use of the fact that anilin dyes, which exert marked sterilizing action on bacteria even in dilutions of 1 : 5,000 and 1 : 10,000, seem not to inhibit the growth of certain spirochetes in much greater concentrations.[2] The experiments in this direction are still not completed, as so far it was impossible to find a dye which would uniformly inhibit the growth of all the bacteria occurring in contaminated syphilitic material in a concentration which would allow the life of all the different strains of spirochetes.

83 (1015)

The demonstration of tryptic digestion by an activated serum.

By J. BRONFENBRENNER and K. M. SCOTT.

[*From the Pathological and Research Laboratories of the Western Pennsylvania Hospital, Pittsburgh, Pa.*]

In the earlier publications it was shown, that the placenta in the Abderhalden reaction is not digested.[3] It was assumed then that the dialyzable split products of protein appearing during the test originate from the serum as the result of its autodigestion.[4] It was shown also that although the normal serum shows no digestive power, such tryptic activity may be demonstrated in

[1] *Journal of Pharmacology and Exp. Therap.*, 1913, Vol. IV, p. 333.

[2] *Ibidem.*

[3] J. Bronfenbrenner, *J. of Exp. Med.*, 1915, Vol. XXI.

[4] J. Bronfenbrenner, PROC. SOC. EXP. BIOL. AND MED., 1914, Vol. XII, p. 7.

any fresh serum if it is rendered active by the removal of its antitrypsin.[1] In the recent experiments we have succeeded in demonstrating the proteolytic activity of the serum of pregnant individuals after the removal of its antitrypsin with boiled placenta, by allowing such a serum to act upon the standard suspension of fresh placenta cells. The number of cells were counted on a Fuchs-Rosenthal counting chamber at intervals during the experiment, and it was noticed that the cells underwent disintegration, only when mixed with the serum previously exhausted of its antitrypsin, whereas the control mixtures containing the whole male or female serum or salt solution remained practically unchanged. Such a digestion of placenta cells is not specific, as we have also observed it with the male serum, deprived of its antitrypsin by a non-specific mechanism, such as adsorption by kaolin or starch, as well as by the extraction with chloroform.

84 (1016)

The effect of adrenalin on the pupil after removal of the ciliary ganglion.

By DON R. JOSEPH.

[*From the Department of Physiology, St. Louis University.*]

Cats were used exclusively in these experiments. One ciliary ganglion was removed under ether anesthesia. The comparative irritability of the two irises to minimal doses of adrenalin was tested soon after the operation (1 to 4 hours) and again later (22 to 55 or more hours). In a few cases tests were made as long as 60 to 77 days after the operation. The adrenalin was injected into a saphenous vein. No ether was required.

Stated briefly the results are these: Removal of the ciliary ganglion renders the corresponding iris hypersensitive to adrenalin. Some increase in sensitiveness is occasionally seen within an hour after removal of the ciliary ganglion, but in most cases the maximal increase does not appear under 4 hours. The heightened irritability to adrenalin was still present after 60 to 77 days. The

[1] J. Bronfenbrenner, PROC. SOC. EXP. BIOL. AND MED., 1914, Vol. XII, p. 3. J. Bronfenbrenner, W. J. Mitchel and P. Titus (in press).