Dudgeon[1] has called attention to a group of atypical colon bacilli that are characterized by their slow fermentation of lactose. In the above series 2 such cultures were encountered. Both belonged to the *B. coli communis* group and showed the presence of gas on lactose only after 4 days incubation.

All the *B. pyocyaneus* cultures were typical regarding their production of pigment and the liquefaction of gelatine. One of the 6 strains, however, deviated from the usual behavior of this organism in its acid production from the sugars. Glucose, lactose, and maltose were rapidly attacked by this strain, the Andrade's indicator of the medium showing a strong acid reaction in 24 hours. This is the first lactose fermenting *B. pyocyaneus* ever encountered in this laboratory. Sherwood[2] mentions one such strain.

B. pseudotetanicus is a large Gram negative aerobic bacillus with sub-terminal spores. It is generally credited with being of soil origin. The only other reference to this organism as a urinary tract infectant is in the paper of Caldwell[3] who found it 12 times in 112 cultures of Gram negative bacilli. In a subsequent examination of this case this organism was not found.

4365

Ephedrine-Epinephrine Antagonism.

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Antagonism of epinephrine action by high concentrations of ephedrine (1:9000-1:6000) has been described by several European workers,[1] using Magnus preparations of excised small intestine of rabbit and cat and of excised guinea pig uterus. In extending the study of the ephedrine-epinephrine antagonism to Magnus strip preparations of small intestine, colon and uterus of various species (cat, rabbit, dog, rat, guinea pig) I have found that it occurs with all these organs. Furthermore, not only did high concentrations of

[1] Dudgeon, L. S., and Pulvertoft, R. J. V., *J. Hyg.*, 1927, xxv, 285.

[2] Sherwood, N. D., Johnson, T. L., and Radotinsky, I., *Univ. Kansas Sci. Bull.*, 1926, xvi, 91.

[3] Caldwell, J. A., *J. Inf. Dis.*, 1928, xliii, 353.

[1] Nagel, A., *Arch. exp. Path. Pharm.*, 1925, cx, 128. Kreitmair, H., *Arch. exp. Path. Pharm.*, 1927, cxx, 189. Reinitz, N., *Compt. rend. soc. biol.*, 1928, xcviii, 809.

ephedrine antagonize epinephrine inhibition, but low concentrations as well (1:100,000-1:25,000), and often to a marked degree. Segments of uterus of the rabbit and of the pregnant cat, treated with ergot alkaloids, to produce an inhibitory response to epinephrine, exhibited the antagonism as completely as did the organs whose normal response to epinephrine is one of inhibition or relaxation. The "depressant" action of epinephrine (1:50,000,000-1:1,000,000) on all these organs was opposed by ephedrine, whether applied to the tissues before, or a few seconds after, the application of epinephrine.

"Depression" of segments of rabbit duodenum by a mixture of epinephrine and ephedrine occurred, although the same concentrations applied separately and in sequence, exhibited the usual antagonism. This indicates that there is no chemical action between the 2 drugs outside the tissues. Antagonism of epinephrine "depression" by ephedrine occurred whether ephedrine itself caused contraction, relaxation or no demonstrable effect on the activity of the muscle. This fact, and the fact that low concentrations as well as high concentrations of ephedrine were effective in antagonizing epinephrine do not support the opinion of Nagel[1] that the antagonism is due to a muscle stimulating action of ephedrine. It would seem rather that it is due to some as yet ill-defined action of ephedrine on the sympathetic nerve-muscle connections.

4366

Action of Ergot Alkaloids on Intestine and Uterus.

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That ergot alkaloids abolish the muscle contracting action of epinephrine has been known for many years.[1] It was only recently that an effect of the alkaloids was demonstrated on the inhibitory action of epinephrine[2] and proposed as a means of bio-assay of ergot preparations[3] by European workers. More recently still, Men-

[1] Dale, H. H., *J. Physiol.*, 1906, xxxiv, 163.

[2] Planelles, *Arch. exp. Path. Pharm.*, 1924-5, cv, 38.

[3] Issekutz, B. von, and Leinzinger, M. von, *Arch. exp. Path. Pharm.*, 1928, cxxviii, 165.