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**Preliminary note on the pineal gland and the corpus luteum.**By **ISAAC OTT, M.D.**, and **JOHN C. SCOTT, M.D.**

In a series of experiments we have found the pineal gland to have a marked diuretic action, previously noted by Eyster. At the time of each injection per jugular the volume of the kidney increases considerably, whilst, after a temporary fall, the pressure in the carotid shows some increase. About one half of one per cent. of glucose appears in the urine after the injection of pineal extract and after the use of corpus luteum.

Corpus luteum does not markedly change the pulse rate, but lowers blood-pressure 20-40 millimeters of mercury, and then it rises above normal for a short time. The intestinal peristalsis is markedly increased by corpus luteum.

In the pregnant uterus, corpus luteum increased the contractions.

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**The spleen and chronic constipation.**By **ISAAC OTT, M.D.**, and **JOHN C. SCOTT, M.D.**

In the *Medical Bulletin*, 1897, one of us (Ott) stated, the spleen of all the animal extracts has the most marked effect on peristalsis. It produces the largest peristaltic waves. When the spleen was removed then peristalsis decreased. If now spleen extract was injected, then peristalsis was restored to a considerable extent above normal.

In 1908, Zuelzer (Dohrn, Marxer and Zuelzer, "Specifiche Aufregung der darm Peristaltik, etc.," *Berliner Klinische Wochenschrift*, 1908, No. 48) with others confirmed the preceding results. He prepared an extract of the spleen, called "hormonal," for intravenous and intramuscular injection in man for the cure of chronic constipation. He reports marked success in this condition. This statement has been confirmed by Saar, Henle, Unger and several others.

We have tried the action of the Zuelzer extract of the spleen by the Magnus method. This consists in immersion of an excised segment of the intestine from an etherized animal in Ringer's solution through which oxygen is bubbling. The intestine is attached to a heart-lever and the contractions registered. The spleen extract showed a marked action. In another method a balloon was inserted into the small intestine of an etherized animal and the contractions registered by Albrecht's piston recorder. This method also exhibited an increase of contractions in the intestine. But they are not so marked as when a watery filtered infusion of the spleen was used.

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**The sequence of the protozoan fauna of hay infusions.**By **LORANDE LOSS WOODRUFF.**[*Sheffield Biological Laboratory, Yale University.*]

1. In hay infusions, seeded with representative forms of the chief groups of Protozoa, there is a definite sequence of appearance of the dominant types at the surface of the infusion, *i. e.*, Monad, Colpoda, Hypotrichida, Paramœcium, Vorticella and Amœba.

2. The sequence of maximum numbers and of disappearance is identical with that of appearance, except that apparently the position of Amœba advances successively from the last (sixth) place to the fifth place and then to the fourth place.

3. A definite sequence of forms is not apparent at the middle or bottom of the infusions.

4. The middle of the infusions is tenanted chiefly by a free-swimming population brought there by an overcrowding at the top or bottom.

5. All of the protozoan forms considered (except Amœba) are chiefly surface dwellers and it is evident that when they pass their greatest development at the surface this maximum is seldom approached again, and their cycle is practically over.

6. The major rise and fall in numbers at the surface are usually about equally rapid, though the final disappearance of an organism may be long deferred.