Sixteenth meeting.[1]

Rockefeller Institute for Medical Research. April 18, 1906. President Flexner in the chair.

35 (127). **"On the digestion of gelatin": P. A. LEVENE and W. A. BEATTY.**

A complete separation of all aminoacids arising on hydrolysis of proteins was effected with the aid of phosphotungstic acid. On hydrolysis of gelatin by means of strong hydrochloric acid, glycocol, alanin, leucin, aspartic and glutamic acids, phenylalanin, prolin and oxyprolin, and a few substances of undefined nature, were obtained. On tryptic digestion a substance of the composition $C_7H_{10}N_2O_2$ was isolated. On further hydrolysis this substance yielded prolin and glycocol. The substance was evidently prolinglycyl anhydrid.

36 (128). **"The reactions of amphioxus to light": G. H. PARKER.**

When strong light was thrown into a basin of sea-water containing many amphioxus, the whole assembly swam about in wild confusion. This has been taken to indicate that amphioxus is very sensitive to light. But when 20 individuals were illuminated singly only 12 responded. The wild confusion in the first experiment is due quite as much to tactile stimulation as to light. When a strong, well-circumscribed beam of light was thrown on the tail of amphioxus the animal almost always reacted by a slight forward spring. When the light was thrown on the middle of the body there was usually no reaction, though sometimes a backward movement. When the light was applied to the head end, there was always a backward spring. This sensitiveness was not lost or impaired by cutting off the anterior end, including the so-called eye-spot. When cut into halves amphioxus retained sensitiveness to light in the anterior half, but not in the posterior half, though the latter was normally reactive to stimulation from very weak acid. This indicates that though amphioxus is without a brain proper, the anterior portion of its medullary tube is related to the posterior portion somewhat as the brain and cord are in the higher vertebrates. The distribution of the sensitiveness of amphioxus to light

[1] *Science*, 1906, xxiii, p. 846; *American Medicine*, 1906, i (N. S.), p. 152.

corresponds to the distribution of the "light" cells (Hesse) in its medullary tube and is probably not connected with the skin. Specimens of amphioxus tend to collect in the darker parts of an aquarium. They also swim away from a source of light. Amphioxus is therefore negatively photodynamic and negatively phototropic.

37 (129). **"The relation of blood platelets to thrombus formation": J. H. PRATT.**

In the frog, rabbit and dog experimental thrombi three to ten minutes old were studied. In the youngest thrombi there was agglutination of blood platelets or spindle cells and agglutination of erythrocytes without evidence of fibrin formation. The fusing and distortion of the erythrocytes were marked. The erythrocytes were sometimes broken up into small granular masses which simulated blood plates. By the use of a sodium metaphosphate solution it was possible to distinguish the blood platelets from the degeneration products of the erythrocytes.

38 (130). **"Conditions of bacterial activity in the intestine in cases of advanced, apparently primary, anemias": C. A. HERTER.**

The author reported results of the coördinated studies of 15 cases of apparently primary advanced anemias, in ten of which the blood picture was that of pernicious anemia. The studies related to the occurrence of phenol in the urine and in the feces; of indol in the feces and indican in the urine; of skatol in the feces; to the Ehrlich aldehyde reaction of the urine; to the Ehrlich aldehyde reaction of the feces; and to the hydrobilirubin reaction of Schmidt. In the case of indol, phenol and skatol, quantitative studies were made. The observations established the fact that in so-called primary, pernicious and allied anemias the indications of excessive putrefactive decomposition are almost regularly pronounced. These changes are associated with definite and characteristic departures in the bacterial activity of the intestinal flora studied in fermentation tube experiments. A careful study of the microscopic fecal fields, of the sedimentary fields in fermentation tubes, of the anerobic plates from the sterilized feces, and of the results of a modification of Welch's incubation test for the gas-bacillus, indicates that