

## Pathology.

### VEGETABLE MICRO-ORGANISMS IN CARCINOMA.

The necessity of full (strict) compliance with the postulates of Koch in proving the pathogenic character of any micro-organism has, within the last two years, received a notable illustration in the failure of Scheueilen's work on the so-called cancer bacillus to stand the test when called strictly in question. Van Ermengem has shown that the so-called "bacillus of cancer" is no other than the "bacille rose," a common non-pathogenic form, which is frequently found in air, dust, soil, etc., and sometimes occurs as an accidental impurity in cultivations of bacillus tuberculosis. Repeated inoculations with pure cultures of this organism into dogs, guinea pigs, and rats, failed to affect their health in the least. This signal failure, however, has not frightened other investigators from the field. In the *Centralblatt für Bakter u. Parasiten* of Feb. 28th, 1890, is a condensed report of the recent work of Koubassoff on the "micro-organisms of cancerous new-growths." Koubassoff's investigations were made upon 6 cancers of the uterus, 1 of the breast, and 5 of the stomach. The report is of work done on the stomach cancers only. In all cases he met with a peculiar bacillus, of which he made pure cultivations, and afterwards performed inoculatory experiments therewith in order to determine the presence or absence of pathogenic qualities in it. Other varieties of bacteria were to be found, and often in great numbers, but this particular sort was constantly present, and attracted attention by its peculiarities. Koch describes the organism as being a rodlet from  $\frac{1}{2}$  to  $\frac{1}{3}$  as long as the bacillus tuberculosis, and three or four times as thick. In the tissues it is found to have one end pointed, the other wedge-shaped; whereas in cultures both ends become rounded. It is mobile—movements taking place in but one direction, and takes up anilin colors lightly. Endospores are formed centrally under certain conditions, and cultures grow upon almost any of the nutrient media used in bacteriological study. Growth is slow and aerobic, and takes place best at a temperature of 20°C. In all cases animals inoculated with pure cultures died,

as did also those fed with the germ, the illness in the latter case being shorter than in the former. Guinea pigs died in one to two weeks, rabbits in one to two months, cats and dogs after two months. *Post mortem* examinations always showed the same results, viz., formation of nodules of greater or less size, sometimes ulcerated, sometimes not, occurring on the gastric and intestinal mucous membrane; sometimes in the liver, ovary, uterus, and spleen. The lymph glands in the abdominal cavity were also notably swollen, and were, at times, knotted together, at others, remaining separate. Histologically, these nodules are said by Koubassoff to resemble carcinomatous tissue. Symptoms of constitutional disturbance were also present, the most noteworthy being general emaciation, together with paralysis of the sphincters of the bladder and rectum. Whilst Koubassoff himself is evidently of the opinion that this bacillus which he has described is the cause of cancerous or, at any rate, some cancerous growths, the evidence is yet far from complete. Whatever the result of further investigation may be, certainly some very interesting additions have been made to our knowledge of mycology in connection with epithelial new-growths.

J. CAVEN.

### PASSAGE OF MICRO-ORGANISMS FROM MOTHER TO FÆTUS.

Speaking with reference to the virulence of foetal blood in cases where the pregnant mother suffers from anthrax, Sternberg (Backria, 1885) quotes Branell, Davaine, and Bollinger, as authorities for the statement that there are no bacilli to be found in the blood of the foetus in such cases, and that it is non-virulent. He also says that Strauss and Chamberland have shown that occasionally an exception occurs, and the bacilli are found in the foetal blood. Further, in speaking of symptomatic anthrax (Rauschbrand), the same author affirms that it is to be distinguished from true anthrax (Milzbrand) by the fact that the foetal blood is virulent in it (Rauschbrand), and contains bacilli. Recently Simon (*Zeitschrift für Geburts u. Gynäk.*), by microscopic observations, has found that the placenta does not form a "filtering apparatus" for the exclusion of micro-organisms from the