acidophils in the older group; but the supposed increase of basophils with advancing years is not corroborated. The coefficient of correlation *(r)* between age and percentage of basophils is —.022± .065.

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Experimental Tularemia in Muskrats.

R. G. GREEN, E. M. WADE AND E. T. DEWEY.

From the Cooperative Investigation of the University of Minnesota and the Bureau of Biological Survey.

As one phase of a study of disease in wild life, various animals and birds have been tested for susceptibility to tularemia. Included in the group tested is the muskrat. The muskrats utilized in this work were caught in the wild and kept in captivity for a period longer than 6 months. They were under observation in the laboratory for a period of 2 months previous to the inoculation and appeared to thrive.

Muskrat 1. Inoculated subcutaneously 4-20-28, with spleen of guinea pig dying the previous day from tularemia. Symptoms of illness were present 2 days later. The muskrat died on the fourth day. Necropsy showed enlargement of left inguinal nodes and marked infiltration at the site of inoculation. The liver was studded with fine nodules. The spleen did not show studding. There was no exudate in the pleural or peritoneal cavities.

Guinea pig 1. Inoculated with spleen of muskrat; died on the third day with both inguinal nodes enlarged; spleen and omentum full of nodules.

Guinea pig 2. Inoculated with liver of muskrat; died on the third day with both inguinal nodes enlarged; intensive infiltration over abdomen. Spleen and liver were thickly studded with nodules.

Control guinea pig. Died on the fourth day with findings typical of tularemia.

Muskrat 2. Inoculated subcutaneously 4-20-28, with infective guinea pig spleen. Developed symptoms of illness 2 days later and died on the fourth day. Necropsy showed enlargement of left inguinal nodes and infiltration at the site of inoculation. Spleen was very large and thickly studded with nodules. Pleural and peritoneal exudates were present.

Guinea pig 1. Inoculated with liver from muskrat; died on the

fourth day with enlarged lymph nodes. Spleen and liver thickly studded with nodules.

Guinea pig 2. Inoculated with peritoneal fluid of muskrat; died on the fourth day, showing enlarged inguinal nodes, with spleen and liver thickly studded with nodules.

Muskrat 3. Inoculated 5-29-28, subcutaneously, with spleen of guinea pig dying from tularemia; died on the sixth day. Necropsy showed inguinal nodes on both sides enlarged. Liver and spleen were studded with typical nodules of tularemia.

Muskrat 4. Inoculated 5-29-28 with spleen of guinea pig, dead from tularemia. Inoculation was made by scarifying the skin and rubbing an emulsion of the infective tissue into the abrasion. Died on the sixth day, showing inguinal nodes on both sides very much enlarged. Spleen and liver were thickly studded with nodules which were confluent to such an extent that there were large areas of necrosis in the liver.

Muskrat 5. Inoculated 5-29-28, by rubbing spleen of guinea pig into an abrasion of the skin. Died on the sixth day. Inguinal nodes enlarged; spleen and liver thickly studded with nodules.

It appears that the muskrat is very susceptible to an experimental infection with *B. tularense*. The pathology produced by the infection is similar to that seen in rabbits and guinea pigs, but the lesions in the muskrat are apt to be more marked. It is indicated that tularemia may occur in nature as a disease of muskrats.

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Fundamental Food Requirements for Growth of Rat. V. Influence of Fat in Diet.*

L. S. PALMER AND CORNELIA KENNEDY.

From the Section of Animal Nutrition, Division of Agricultural Biochemistry, University of Minnesota, St. Paul.

Evans and Burr[1] have postulated the existence of a new vitamin, (F), revealed in part by subnormal growth of rats fed synthetic diets extremely low in fat, and containing sucrose as the source of carbohydrate. Although the first report of their work indicates

* Published with the approval of the Director, as Paper No. 836, Journal Series, Minnesota Agricultural Experiment Station.

[1] Evans, H. M., and Burr, G. O., PROC. SOC. EXP. BIOL. AND MED., 1927, xxiv, 740; *ibid.*, 1928, xxv, 390.