So far only one has been successfuly inoculated. A relatively large dose was injected and the incubation period was twelve days. Three other mice were observed for six, ten and twelve days, respectively, after inoculation without showing a parasite.

Similar spirochetes have been described by Carter (in rat), Lingard (in bandicoot, *Mus giganteus*), by Nicolle and Comte (in bat), by Wenyon and by Breinl and Kinghorn (in house mouse); all these in the circulating blood. Borrel and Gaylord have described spiral organisms in mouse carcinomata, and one of the forms found by Borrel has been shown by Wenyon to be identical with his *Spirochæta muris* found in the blood of mice. Morphologically the parasite found here in the rat is apparently identical with this one of Borrel and Wenyon. Its behavior in animals is somewhat different. Therefore, I tentatively suggest for it the name *Spirochæta muris*, var. *Virginiana*, following the principle suggested by Calkins.[1] Its specific relation to that organism must be left for further work to determine.

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Experimental ligation of splenic and portal veins, with the aim of producing a form of splenic anemia.

By **ALDRED S. WARTHIN.**

[*From the Pathological Laboratory, University of Michigan.*]

From the pathological study of four cases of splenic anemia showing partial or complete obstruction of splenic or portal veins due to old thrombophlebitis, the writer was led to believe that the splenic enlargement (fibrosis) and the clinical picture of splenic anemia might be produced experimentally in animals. During the last two years he has carried on a series of observations upon dogs whose splenic veins had been ligated at varying distances from that organ. Briefly, the results have been as follows:

In dogs examined from one week to three months after the operation the spleen was found greatly enlarged, firm and dark in color. This enlargement reached its extreme about four weeks after the ligation.

[1] Calkins: *Journal of Infectious Diseases*, April, 10, 1907.

In dogs examined after three months the spleen was found to be diminished in size, paler and firmer. In those examined one year after ligation of the splenic veins the organ was found to be greatly atrophic and fibroid, in two cases completely separated into small islands or lobes of splenic tissue, each lobe having a separate vein running into the gastro-splenic omentum, and anastomosing with veins from the stomach. Such a collateral circulation was found established in all cases.

All animals with splenic atrophy become very fat. Hyperplasia of the prevertebral hemolymph nodes was noted. There was a slight anemia, the hemoglobin being reduced to a greater degree than the red blood cells. No lasting changes in the white cells were observed. Microscopically the spleen showed a lymphoid atrophy, relative increase of stroma and excessive pigmentation.

These experiments would indicate that obstruction of the splenic veins of dogs by ligation is not followed by a fibroid hyperplasia of the spleen but by a partial atrophy. A more or less complete venous collateral circulation is always produced. The picture of splenic anemia as seen in man can not, therefore, be reproduced in the dog, by an obstruction to the venous outflow from the spleen.

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An experimental control of Fischer's attraxin-theory.

By **C. SNOW.** (Communicated by **ALDRED S. WARTHIN.**)

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Fischer recently reported from Ribbert's laboratory[1] that by injecting a solution of Scharlach R, Sudan III or Indo-phenol in olive oil under the skin of the ears of rabbits he was able to get an epithelial proliferation which was not to be distinguished histologically from a squamous-celled carcinoma in man. He was not able to get this result with other substances acting as irritants, and therefore assumed the existence of specific bodies — attraxins — in the injected solution, which exerted a chemotactic influence on the epithelial cells.

[1] Fischer: *Münch. Med. Wochenschrift*, Oct. 16, 1906.