Abstract
Typhoid fever is a human disease caused by Salmonella typhi which produces an inflammatory response in the intestinal tract. In order to control the disease, Finlay Institute has developed a vaccine using Vi capsular polysaccharide. There is no animal model available that reproduces the symptoms and pathogenesis of the disease and may be used for experimental studies. The development of experimental models and histopathological studies contribute to the knowledge of the disease and to the interpretation of the immune processes. For this reason, the histopathological pattern present in C-57 BL/6 line female and male mice, weighing 18-22 g and used in the potency tests for the typhoid fever vaccine based on purified Vi capsular polysaccharide, was characterized. The protection conferred by subcutaneous and intraperitoneal administrations were evaluated and compared, as well as between the immunogen based on Vi polysaccharide, and the whole cell variant. Considerable efficacy in reproducing the Salmonella typhi lesions in liver and spleen, was achieved in C-57 BL/6 mice. Survival of mice vaccinated with the Vi polysaccharide vaccine ranged between 90-100% using both routes. In those mice vaccinated with whole cells it was of 50-100% for the subcutaneous route, and 60-100% for the intraperitoneal route. These data show that the capsular Vi polysaccharide vaccine is superior to the whole cell variant in the C-57 BL/6 line mice.

Keywords
Typhoid fever vaccine, histopathology, mouse