Leptospirosis is an infectious disease caused by *Leptospira icterohaemorragiae*. Transmitted by the urine of the sewer rat, *Rattus rattus norvegicus* (Berkenhout), leptospirosis occurs in our Country either in isolated way or in seasonal epidemic outbreaks. Being a cosmopolitan disease, leptospirosis may occur either in urban or in rural areas, displaying several symptoms as fever, hemorrhage, jaundice and uremia with high degrees of lethality caused by liver and renal insufficiencies. The present research work was undertaken in order to analyze the canine population from the Curitiba urban community of Vila das Torres, considering the dog possible epidemiological role as bearer and potential transmitter of leptospirosis. A total of 178 of blood samples were collected during the years of 1997 (n = 82) and 2000 (n = 96) from dogs living at Vila das Torres. By means of microscopic serum agglutination, 32.9% of the blood samples collected during 1997 and 31.25% of the ones collected during 2000 showed to be reactive mainly towards the Canicola, Copenhageni, Icterohaemorrhagiae and Grippotyphosa among 23 sorovares studied, displaying titles from 1/200 in blood samples from the year 2000 up to 1/600 in blood samples from the year 1997. According to these results, it has to be consider the fact that the population from the Community of Vila das Torres is living in a possible situation of epidemic risk by being in cohabitation with leptospirosis bearing dogs, certainly a combination of factors that favors an outbreak of this infectious disease.

**Key Word:** leptospirosis, sorovar, *Rattus rattus norvegicus*. 