Objective. The aim of this study was to characterize the symptomatology and anatomopathological lesions caused by 5 clinical isolated Leptospira spp. from Nicaragua in a Mesocricetus auratus biomodel. Materials and methods. 50 hamsters were inoculated via i.p with 1mL of the culture of each strain in exponential phase having a cellular concentration of 7.5 x 106 leptospira/mL, (10 animals per strain). Signs of the disease, mortality during 14 days, and macroscopic and microscopic anatomopathological lesions by haematoxylin-eosin and Warthyn Starryn stain technique were evaluated. Results. All the strains presented high mortality, showing clinical lesions of the experimental infection. Death to 100% of the animals was caused between the third and tenth day post-infection. In the anatomopathologic study, the strains of the Ballum and Pomona serogroup produced haemorrhaging specifically in the kidney and lungs. The animals manifested hepatic and renal congestion, while the renal haemorrhage was observed with more frequency in the strain of the Pomona serogroup, differing from the other strains, which presented this lesion less frequently. Conclusions. This work allowed a better characterization of these strains in order to use them as future vaccine candidates for future Leptospirosis epidemics in Nicaragua.

Keywords
Anatomopathological lesions, Leptospira, symptoms, Syrian hamster (Source: AIMS).