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Isolation of *Leptospira* spp. in Small Farm Populations in Nine States of Brazil.

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INTRODUCTION: Leptospirosis is a worldwide occurrence infectious zoonosis of bacterial etiology whose epidemiological chain is related to poor sanitary practices. The present study aimed to describe the epidemiology of leptospirosis in populations of small farms in several Brazilian states.

METHODS: Urine samples were randomly collected from wild and domestic mammals and humans that coexist in these rural areas. Of each urine sample, an aliquot was sown in Fletcher and Ellinghausen—McCullough—Johnson—Harris (EMJH) media. The samples in which there was growth of leptospires were forwarded to the Leptospirosis Laboratory of the Institute of Pathobiology in the National Institute of Agricultural Technology, Buenos Aires, Argentina and were genotyped using Multiple Locus Variable number tandem repeat Analysis (MLVA). MLVA strain typing procedure was performed using primers flanking the VNTRs: 4, 7, 9, 10, 19, 23, 31, Lb4 and Lb5 were used to discriminate strains of *L. interrogans* and *L. borgpetersenii*.

RESULTS: A total of 20 strains of *Leptospira* spp. in nine Brazilian States were isolated and genotyped. *Leptospira* spp. was found in wild mammals of the species *Cavea aperea*, *Cebus apella*, *Cerdocyon thous*, *Dasyus septemcinctus*, *Didelphis albiventris*, *Didelphis aurita*, *Leopardus tigrinus*, *Myocastor coypus* and *Nasua Nasua*. There were also isolation findings in one horse, one sheep, a cow, a dog and two humans. The MLVA profiles obtained were identical to the profiles of *Leptospira interrogans* Icterohaemorrhagiae Copenhageni Fiocruz L1-130, Icterohaemorrhagiae RGA and *Leptospira interrogans* Canicola Canicola Hond Utrecht IV. It is noteworthy that, inside one farm, the pathogenic *Leptospira interrogans* Canicola Canicola Hond Utrecht IV strain was identified from different sources including domestic animals, wildlife and humans.

CONCLUSIONS: These findings are very important because they draw attention to the participation of a large number of species of wild and domestic mammals in the transmission of pathogenic leptospires to human populations.