TOPIC:
2) Mosquito-borne diseases (dengue, malaria, fiebre amarilla, zika, chikungunya)

APPROACH:
2. Vector biology and eco-epidemiology

Determination of antibodies to Flavivirus in wild birds from Buenos Aires City

Keywords: mosquito-borne diseases; vector biology; eco-epidemiology; determination; antibodies; Flavivirus; wild birds.

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Saint Louis encephalitis virus (SLEV), West Nile virus (WNV) and Ilheus virus (ILHV) are flaviviruses maintained in nature by enzootic transmission networks between mosquitoes and birds. These viruses have been detected in South America and identified as a cause of neurological diseases in humans. There is a record of activity in monkeys and birds for ILHV in Chaco, Corrientes and Misiones; of WNV in horses and birds in the center and east of the country, while SLEV is widely distributed in Argentina and there is virological and serological evidence in birds, humans and various mammals. In order to detect viral circulation in free-living birds in the Autonomous City of Buenos Aires (CABA), seasonal sampling was carried out in the Costanera Sur Ecological Reserve. The birds were captured by means of mist nets, 0.1-0.2 ml of blood was collected from the jugular or brachial vein of 100 birds during 2016-2017. The serum obtained was analyzed for the detection of neutralizing antibodies using the technique of 80% plaque-reduction neutralization tests under agarose in monolayers of VERO cells.
The highest seroprevalence was found for ILHV, which was 7% (n= 7/100), followed by SLEV whose prevalence was 4% (n= 4/100), and no positives for WNV. All reactions were verified as monotypic. The positive samples for ILHV correspond to *Zenaida auriculata* (n=3), *Saltator aurantiirostris* (n=1), *Leptotila verreauxi* (n=1), *Turdus amaurochalinus* (n=1) and *Turdus rufiventris* (n=1); for SLEV corresponded to *Turdus rufiventris* (n=2), *Mimus saturninus* (n=1) y *Turdus amaurochalinus* (n=1). These findings constitute the first evidence of circulation of ILHV in birds from CABA, considering that antibodies to SLEV were detected in *Zenaida auriculata* species, in 2015 with a prevalence of 7.2%. WNV has been detected in nearby towns, but not in CABA. In the future, it would be interesting to inquire broader ecological studies to deepen our knowledge of these pathogens present in our region.