TITLE: PREVALENCE OF CIRCULATING SEROVARS OF *Salmonella* spp. ISOLATED FROM FOOD CHAIN IN THE NATIONAL TERRITORY

AUTHORS: PRIBUL, B. R.; COSTA, R. G; AMPARO, L. F. V.; RODRIGUES, E. C. P.; RODRIGUES, D.P.

INSTITUTION: INSTITUTO OSWALDO CRUZ, RIO DE JANEIRO, RJ (AVENIDA BRASIL, 4365, PAVILHAO ROCHA LIMA 3ºANDAR, CEP: 21040-260, RIO DE JANEIRO-RJ, BRAZIL)

ABSTRACT:
Salmonellosis is recognize as a common cause of foodborne disease in humans and represents a serious public health problem being one of the leading zoonoses worldwide. Its occurrence is due to its characteristics of endemicity, high morbidity and, mainly, due to the difficulty of adopting measures in its control. This study aims to present the casuistry of the most prevalent serovars of S*almonella* spp. associated to their respective source of isolation between 2017 and 2018 throughout the national territory. For serovar classification, the isolates were subjected to a rapid agglutination technique following the parameters stipulated by Le Minor and Popoff (2007) using somatic and flagellar monovalent and polyvalent antisera produced at the National Reference Laboratory of Bacterial Enteroinfections (NRLBE/IOC-FIOCRUZ). In the period in question were isolated 6.846 *Salmonella* spp. of which 2992 were in the year 2018 and 3854 were isolated in 2017. The five most prevalent serovars in 2018 were *S.* Heidelberg (345/2992) followed by *S.* Infantis (269/2992), *S.* Agona (199/2992), *S*. Anatum (197/2992) and *S.* Mbandaka (162/2992). In relation to the year 2017 the most prevalent serovar was *S.* Mbandaka (328/3854) followed by serovars *S.* Heidelberg (304/3854), *S.* Anatum (197/3854), *S.* Agona (192/3854) and S. Infantis (179/3854). In this period, *S.* Heidelberg was the most prevalent serovar (649/6846), and it was mainly isolated from food sources (244/649) and the animal production environment (222/649). The second serovar more prevalent, *S.* Mbandaka (490/6846), was isolated mainly in raw material used in animal production (306/490) followed by food source (80/490) like the third serovar, *S.* Infantis (448/6846), that was isolated mainly in raw material for animal production (207/448) followed by food sources (109/448). During the study period, the most prevalent serovars, even in different positions, remained the same. The presence of the three most prevalent serovars in food sources and in the animal production environment highlights the importance of the monitoring and control of *Salmonella* spp. in the environment of animals intended for human consumption. The more prevalent of the serovar *S.* Heidelberg is an important question of public health since this serovar can develop from a self-limiting diarrhea to a sever systemic infection.

Keywords: Serovars of *Salmonella* spp., Foodborne disease, Public health