

Salmonella biovars isolated from poultry farms in abia and imo states southeastern nigeria



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Biography

Nwiyi Paul has his expertise in bacteriology and antimicrobial studies. He is passionate on studies of different emerging bacterial strains and their resistance to antibiotics as well as detecting more susceptible drugs for the treatment. Microbial diagnosis is modeled via molecular method which gives more sensitive diagnosis than relying on only biochemical features. This molecular method makes use of gene extraction of either RNA or DNA via polymerase chain reaction which makes for specific and reliable diagnosis.

Abstract

The aim of this study was to evaluate the biovars of Salmonella that are found in poultry farms in Abia and Imo States, southeastern Nigeria. Forty Salmonella isolates obtained from previous study were subjected to molecular identification using the polymerase chain reaction (PCR) with Salmonella universal and species specific primers. Six different Salmonella serotypes were screened to determine the biovars that is present in the study. The serotypes are Salmonella Infantis, Salmonella Typhimurum, Salmonella Weltevreden, Salmonella Enteritidis, Salmonella Pullorum and Salmonella Gallinerum. The PCR products of the genomic DNA extracted from the 40 Salmonella isolates produced bands at 250bp following agarose gel electrophoresis. Amplification of the species specific primers is evidenced with detection of bands. Two Salmonella biovars were detected out of the 6 Salmonella serotypes used for the study, namely, Salmonella Pullorum and Salmonella Gallinerum. Sixteen Salmonella Gallinerum were isolated from Imo State while 24 Salmonella Pullorum was isolated from Abia State with bands ranging from 100bp to 250bp. The study shows that the predominant biovars present in the study area are two and this could have remarkable epidemiological implications in the control of disease. There is a need to monitor the movement of day old chicks for pathogenic Salmonella species to facilitate the control of these economically important zoonotic Salmonella disease.

Publications

1. Nwiyi P.O., Chah, K.F. and Soyinka, O.V. (2018). Detection of Resistance genes from salmonella isolated from poultry farms in Abia and Imo states, Southeast Nigeria. Nigerian Veterinary Journal.
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3. Obiorah S.O , Ezeifeke, G.O, Oguoma I.O, Nwiyi,P.O (2018). Inhibitory Effect of Extracts of Tetrapleura tetraptera on Newcastle Disease Virus. Futo Journal Series (FUTOJNLS) 2018 Volume-4,Issue-1,pp-437-443

