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ABSTRACT INFO

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Development and comparative evaluation of cost-effective oil-adjuvanted avian influenza and Newcastle disease combo vaccine using Eolane and Ictyolane as oil adjuvants

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Newcastle disease virus and Avian Influenza (H9) viruses are causing predominant diseases in poultry birds which leads to substantial loss to poultry industry. A study was conducted to evaluate and compare four oil adjuvanted vaccines against Avian Influenza and Newcastle Disease in poultry by using four different oil adjuvants: (i) Eolane-150 (TOTAL, PARCO), (ii) Ictyolane -11 (IctyoDev, France), (iii) Montanide ISA-70 MVG (SEPPIC, France), (iv) Coralvac RZ 506 (Coral innovative solutions, Turkey). Avian Influenza virus H9 and New Castle Disease virus (Mukteswar) strains were used for combo vaccine preparation and adjuvants were used as per manufacturer's instructions. These vaccines were evaluated in commercial broiler and backyard desi poultry for immunogenicity by using Indirect ELISA. The antibody titer was measured in all groups prior to vaccination and then on fortnightly basis up to 54 days in broiler and on monthly basis up to 365 days in backyard poultry. The ELISA results indicated that the antibody titer induced by AI+ND Combo vaccine adjuvanted with Ictyolane-11 and Coralvac RZ 506 were higher than Eolane-150 and Montanide ISA-70 concluding that AI+ND combo vaccine prepared with Ictyolane-11 and Coralvac RZ 506 are cost-effective oil adjuvants for poultry.