



ABSTRACT

Infectious Coryza is a world wide severe respiratory disease of chickens and caused by the bacterium *Avibacterium paragallinarum* (*A. Paragallinarum*) known as *Haemophilus paragallinarum*. Haemovax vaccine was used for the treatment of infectious coryza in poultry. Differently formulated inactivated infectious coryza vaccines were prepared by using different oils and administrated to 3 weeks old chickens. Oil adjuvants vaccines were prepared by adding up almost equivalent volume of olive, coconut, almond and Kalongi oil in inactivated bacterial suspension contained 2.2mg/3ml bacterial mass. Nanoparticles prepared from black tea and different vegetable oils used as adjuvant. To emulsify the oil based adjuvants 5% anhydrous lanolin was added into the mixture. Silver nanoparticles were prepared from black tea extract. The extract then treated with different concentration of silver nitrate solutions by different concentration. By using x-ray diffraction and transmission electron microscope technique characterization of silver nanoparticles was done. The standard mean size of silver nanoparticles was produced to be 18-20 nm. Silver nanoparticle vaccine was prepared by adding 5 g silver nanoparticles in 4 ml bacterial suspension which is prepared by centrifuging Haemovax vaccine. Haemagglutination test was used to check the antibodies titer and its response towards animals for each vaccine. Results indicates that Kalongi oil induce strong immune response as it gave high geometric mean titer of 203.18 after 48 days post vaccination. Whereas almond oil and olive oil based vaccine gave almost same results and show moderate immune response and gave GMT of 101.59. Coconut oil showed weak immune stimulator when used as an adjuvant and GMT of 25.39 was obtained after 48 days post vaccination. Silver nanoparticles induced average immune response and gave GMT of 80.63 respectively.