

## Safety and immunogenicity of ethiorab rabies vaccine

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Worldwide rabies in dogs is the source of 99% of human infections. This makes dogs potential both as carriers and transmitters to human being. Pre and post-exposure prophylaxis are means of protection against the rabies virus. The main objective of this experiment was to determine the safety and immunogenicity of Vero cell culture based rabies vaccine “ethiorab” manufactured by Ethiopian Health and Nutrition Research Institute, Vaccine and Diagnostic Production Directorate. The obtained vaccine was tested on mice and satisfactory safety results were observed. Random Clinical Trial (RCT) design was used for this experiment. Twelve experimental dogs from local common breed were duly conditioned during a quarantine period and assigned to two groups randomly. Group I (cases) were vaccinated subcutaneously with 1 ml of ethiorab. Dogs in-group II served as non-vaccinated controls. To evaluate the titer of the rabies neutralizing antibody, sera were analyzed by fluorescent antibody virus neutralization (FAVN) test. Serum neutralizing antibody titers to rabies virus was determined at days 7, 15, 21, 30, 60 and 90. Mean titers were equal to 1.55, 1.73, 2.02, 3.45, 3.57 and 3.17 IU/ml respectively. All dogs showed rabies neutralizing antibody titer higher than the 0.5 IU/ml mandated WHO recommended threshold. This study indicated ethiorab rabies vaccine manufactured in Ethiopia is safe and immunogenic.

**Keywords:** Dogs, Ethiorab, Immunogenicity, Safety, Titer.

### Biography

Birhanu Hurisa is a young researcher at Ethiopian Health and Nutrition Research Institute. He has completed his M.Sc. in Biotechnology. He has published more than 5 papers in reputed journals.

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