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Production of tissue culture anti rabies vaccine for human use in Nepal

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A trail batch of tissue culture inactivated anti rabies vaccine was produced at Rabies Vaccine production Laboratory in Kathmandu in 2010. Vero working cell line (164P) was used for propagation of cell that was infected with PV/RV at 100 MOI working rabies virus strain at 170 serial passages of cells. Virus cultures fluid was harvested and pooled sample of fluid was tested by using Anigen Rapid Test Kit for the detection of rabies virus. Pooled sample was found positive for rabies virus antigen where as the fluid collected from control cell was negative for rabies virus. The harvested virus was then centrifuged at 10,000 rpm and condensed for purification in pellicon machine (milli pore) under Pump Master flex speed 0.5, feed pressure 0.2 Kg/cm² and pellicon filter membrane 0.02 μ m pore size. The titer of virus before inactivation was 10 7.5 TCID₅₀/0.1ml. Finally this virus fluid was inactivated with beta propiolactone. The ED 50 of the titer of vaccine was 10 when challenged with CVS 50 LD₅₀ /0.03 ml in NIH test. The potency (IU/ml) of this vaccine was 4.6 when tested in Nancy Wild Life Laboratory in France. The result of other quality test such as inactivation, toxicity, safety, specificity, sterility and pH test were found satisfactory.

Biography

Dr. Ganesh Raj Pant is a Senior Veterinary Officer and Chief of Rabies Vaccine Production Laboratory in Kathmandu within the Department of Livestock Services, Government of Nepal. Dr. Pant has been working in Nepal since 1983 and involving in the laboratory diagnosis as well as field investigation of animal diseases. He has also been involved in the surveillance program of Rinderpest and Avian Influenza in his country. He passed his Bachelor degree in Veterinary Science from India and Master in Tropical Veterinary Science from UK. He is been in the research work and has published 15 research articles in national and international journals.