Oral Rabies Vaccination multianual program, 2015-2017, in Romania

Authors: Vlad Vuta[1, 2], Cristian Siposean[3], Gheorghe Barboi[1], Dragos Boncea[1], Constantin Vlagioiu[2]

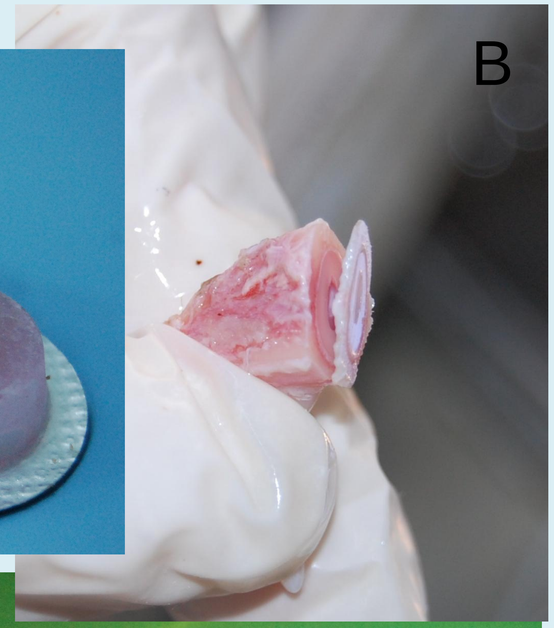
[1]-Institute for Diagnosis and Animal Health, Bucharest, Romania
[2]- University of Agronomic Sciences and Veterinary Medicine, Faculty of Veterinary Medicine, Bucharest, Romania
[3]-National Sanitary Veterinary and Food Safety Authority, Bucharest, Romania

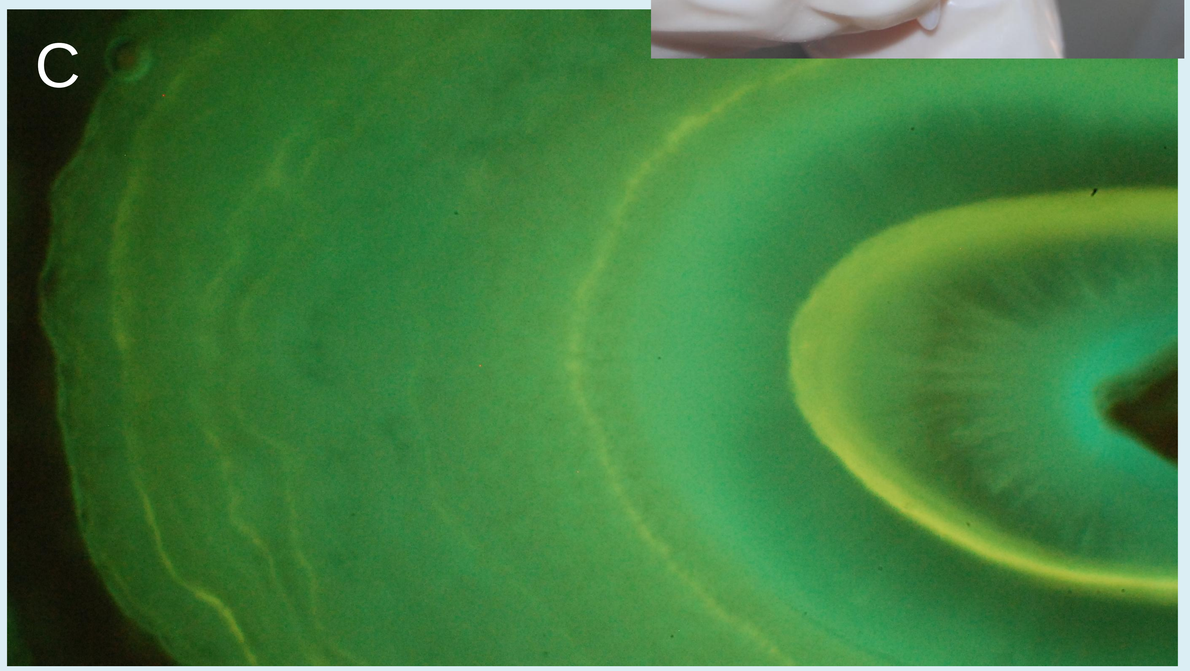
Background

Rabies is a fatal zoonotic viral disease produced by a Lyssavirus and is causing more than 70,000 human deaths each year (1,2). In Romania foxes are the main wildlife reservoir. Oral rabies vaccination (ORV) of this specie is the most effective method to control and eradicate rabies (3).

Oral Rabies Vaccination Program

Supported by co-financing program between Romania and European Union, successive ORV campaigns were conducted. From 2015 to 2017 a multianual program of ORV is performing. The vaccination area of this study involved of the entire Romanian territory (237.500 km2). The vaccination of foxes is carried out by air distribution of baits from 8 aircraft (number of 5325200 baits-A with an approx. 25 baits/km2), with a distance between flight lines of 500 meters and 150 meters altitude, by avoiding the territories of localities, water surfaces, highways, etc. Estimated surface suitable for aerial vaccination is approximated at 213.375 square kilometers. Around localities and areas difficult to reach by plane it is done a manual distribution (number of 75400 of baits, approximately 25 baits/km2). The data are recorded on Geographical Identification System (GIS) using Geographical Positioning System (GPS). At a 45 days following vaccination campaign, there shall be performed the hunting of foxes in order to assess the efficiency of vaccination; for this purpose, there shall be shot 4 foxes/year/100 km2. Samples of tooth and surrounding alveolar bone (B) are tested by specific fluorescence to detect tetracycline deposits (C). Immune response is assessed using the indirect enzyme-linked immunosorbent *assay (ELISA)* method. All positive samples to rabies antigen by FAT technique (Fluorescent Antibody Test) are tested in order to discriminate between wild and vaccinated strains using molecular biology techniques.





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