Research program IZS VE 18/16

A geo-database for surveillance and control of zoonotic diseases related to wild carnivore species in north-eastern Italy

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Wild carnivores are the main reservoir hosts in the epidemiological cycle of potentially emerging or re-emerging zoonotic diseases, such as rabies (rabies virus - RV), trichinellosis (Trichinella spp. - Tr) and alveolar echinococcosis (Echinococcus multilocularis - AE). Carnivores, in particular the red fox (Vulpes vulpes), represent the recognized reservoirs of both RV and AE in Europe, and also play an important role in the sylvatic cycle of Tr.
In north-eastern Italy, the risk of RV re-introduction from wildlife is still acknowledged, while Tr and AE are known to circulate, although the eco-epidemiology and possible drivers of re-emergence of these two parasitic zoonoses remain poorly understood.
The aim of this project is to collect and collate relevant data and fill knowledge gaps in order to:

- harmonize information on main wild carnivore host species distribution and dynamics;
- collect baseline data on presence and distribution of additional species involved in the circulation of AE and Tr;
- assess the presence of known environmental factors influencing the cycle of AE and Tr (“risk factors”);
- build a geo-database to collate and analyze the above data, as a basis for future sampling strategies and as a prerequisite for risk analysis and/or risk-based surveillance.