PROGRESS IN EUROPE

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BIOGRAPHY

Dr Thomas Müller is a veterinarian and has worked for the Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Germany, for 25 years as an epidemiologist and virologist in the field of rabies. He is in charge of the national and OIE Reference Laboratory for Rabies and head of the WHO Collaborating Centre for Rabies Surveillance and Research. Areas of research are laboratory diagnosis of rabies, rabies epidemiology including in new carnivore host species & bats as well as oral vaccination of wild carnivores & domestic dogs.

SUMMARY

Rabies in Europe has a long history dating back to antiquity. For millennia, the disease had been considered a scourge for its prevalence. There is ample evidence that both domestic and wild carnivores played an important role in the epidemiology of the disease resulting in frequent spill-overs into livestock and other animal populations with devastating effects on human health. While until the Early Modern Times ancient sources do not allow any conclusions as to whether the disease was independently circulating both in dogs and wildlife, dog-mediated rabies was predominant in the 19th and 20th Centuries. While rabies had already been successfully controlled in a few countries at the beginning of the last century by implementation of strict sanitary measures, tremendous progress was only achieved with parenteral mass vaccination and registration of dogs. In the 1970s, widespread elimination of dog-mediated rabies was achieved in Europe. Although at present there are still rabies cases reported in dogs in Eastern Europe, apart from in Turkey there is currently no evidence of independent circulation of rabies virus strains in dogs.

At about the same time when canine rabies elimination approached its final phase, the emergence of fox rabies posed a new public health challenge. The establishment of an optional supra-regional rabies database in the 1970s was a prerequisite for transparency and monitoring of the unfolding fox epidemic. Unfortunately, attempts to drastically decimate the reservoir population to control fox rabies completely failed requiring fundamental changes in control strategies. It was only with the advent of oral rabies vaccination (ORV) of foxes that the problem could be successfully tackled. The pioneering spirit and strong political commitment of affected European countries to control the disease using this novel and innovative strategy was remunerated by a substantial co-financing policy of the European Union (EU). The EU set itself a target to become free of rabies by 2020. To reach this goal, the EU provides enormous support even for neighbouring third countries with the aim of establishing cordons sanitaires along common borders and stimulating implementation of ORV programmes.

The significant achievement of rabies disappearance from large parts of Europe is unprecedented in history and a result of a successful stepwise approach. To accomplish this, it was essential to stay focused on dog rabies elimination at first followed by extermination of fox-mediated rabies.