Tracking viral infections in a 110-years old mummified domestic cat

Summary / Zusammenfassung

Background:
The knowledge of the evolutionary history of viruses is especially important to assess their potential virulence and for vaccine design (1-4). However, evolutionary data on pathogenic viruses do not usually span more than a few decades, especially with respect to companion animals like the domestic cat. The finding of a mummified cat in the walls of a 110-year old house in Northern Switzerland provides us with the unique opportunity to study the presence of viral pathogens that may have been endemic in the late XIXth century.

Aim:
The aim of the project is, after extraction of DNA/RNA from several tissues of the mummified cat, to detect the remains of viral infections usually affecting wild felids (e.g. Feline leukemia virus, Feline immunodeficiency virus, Feline herpes virus, Feline coronavirus, Feline calicivirus, Feline parvovirus) by real-time PCR (5). Positive identification of viruses will be followed by amplification, cloning and sequencing of relevant genes to determine their phylogenetic relationship to contemporary viruses. In a follow-up project the most interesting sequences may be inserted in viral expression cassettes to determine their in vitro infection potential.

Publications / Publikationen


Project Leadership and Contacts / Projektleitung und Kontakte

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