Evaluation of the effect of short-term treatment with the integrase inhibitor raltegravir (Isentress™) on the course of progressive feline leukemia virus infection

Summary / Zusammenfassung
Cats progressively infected with the gammaretrovirus feline leukemia virus (FeLV) are at high risk to die within a few months to years due to several disease symptoms that range from immune suppression, to anemia and lymphoma/leukemia. Up to now, there is no specific drug available to treat FeLV infection. In the present study an in vivo experiment was performed to investigate if a short-term treatment with the integrase inhibitor raltegravir can effectively suppress FeLV replication, allowing the immune system to overcome the infection and therefore progressively infected cats to turn to a latent status (regressive infection). After demonstrating the high tolerance of raltegravir in three healthy specified pathogen-free cats, seven progressively infected cats were treated during nine weeks (40 mg b.i.d. for 6.5 weeks and 80 mg b.i.d. for 2.5 weeks). A significant decrease in plasma viral RNA loads was observed, indicating the ability of raltegravir to reduce viral replication. However, a complete control of viremia was not achieved and only one cat showed a marginal antibody response against whole virus, which was probably insufficient to overcome the infection. Further investigations are needed to find an optimized treatment against FeLV, i.e. an ideal dosage, compound or combination of compounds has to be identified.

Publications / Publikationen
Meli, M L; Cattori, V; Martínez, F; López, G; Vargas, A; Simón, M A; Zorrilla, I; Muñoz, A; Palomares, F; López-Bao, J V; Pastor, J; Tandon, R; Willi, B; Hofmann-Lehmann, R; Lutz, H (2009). Feline leukemia virus and other pathogens as important threats to the survival of the critically endangered Iberian lynx (Lynx pardinus). PLoS ONE, 4(3):e4744.

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