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EXPERIMENTAL INFECTION OF FELINE IMMUNODEFICIENCY VIRUS

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In order to provide information on the factors that might accelerate the development of the clinical signs of feline immunodeficiency virus (FIV) infection, normal cats were experimentally infected with FIV and feline leukemia virus (FeLV).

The cats inoculated intravenously with FIV / A-7 and feline leukemia virus FeLV / FL-74 did not show any clinical signs. Giant cell formation and reverse transcriptase (RT) activities, dependent on both Mg^{2+} and Mn^{2+} , were demonstrated in the cocultures of the peripheral blood lymphocytes (PBL) of these cats and normal lymphocytes. Cats inoculated with the blood taken from the experimentally infected cats at the asymptomatic carrier stage or the blood from a cat showing clinical signs of the disease, developed severe clinical signs leading to death in some cases.

Surviving cats were undersized. Giant cell formation and RT activities were demonstrated in the cocultures of the PBL samples from these cats \geq 30 days post infection. In the bone marrow cell cultures from these cats, high RT activities, dependent on both Mg^{2+} and Mn^{2+} , were demonstrated. The cats inoculated with the blood samples from the above cats at the asymptomatic carrier stage did not show clinical signs. Only transient rises of Mg^{2+} dependent RT activities were detected at 30 days post-infection. In the bone marrow culture from the cats intravenously inoculated with FeLV / FL-74, transient Mn^{2+} dependent RT activities were detected. These cats did not show clinical signs.

The acute phase symptoms of the immunodeficiency syndrome, thus developed in the cats inoculated with blood taken from those at a specific stage of co-infection with FIV and FeLV.