EVALUATING A FELINE TUMOR NECROSIS FACTOR INHIBITOR FOR FIP IN CATS

PROJECT STUDY: Expression and bioevaluation of a feline tumor necrosis factor inhibitor for feline infectious peritonitis in cats.

Dr. Yunjeong Kim; Kansas State University

Final report summary, W15-013

Feline infectious peritonitis (FIP) is one of the most important infectious diseases in cats for which no effective vaccine or drug is available. The pathogenesis of FIP is still not fully understood but inadequate host immunity is considered an important factor in the development of FIP. TNF-α is a multi-functional cytokine involved in regulation of immune cells and inflammatory response. TNF-α is also implicated in a spectrum of disorders including asthma, rheumatoid arthritis and inflammatory bowel disease and TNF-α antagonists have been used widely in humans. Several reports suggest that TNF-α is involved in the progression of FIP by contributing to the death of lymphocytes, immune cells important for controlling virus infection.

In this study, the investigators generated the antagonists of TNF-α and examined their function and expression in different protein expression systems. The generated recombinant protein incorporates proteins from a feline origin to reduce the potential side effects. Recombinant TNF-α antagonists may prove beneficial when used in conjunction with other developing FIP treatments.

A manuscript is in preparation.

Summary prepared © 2016