Ferret as an animal model for investigating influenza antiviral: How far are we?

Dr. Ding Yuan OH
WHO Collaborating Centre for Reference and Research on Influenza, VIDRL, Peter Doherty Institute for Infection and Immunity, Australia

School of Applied and Biomedical Sciences, Federation University, Australia

Abstract
The concern of the emergence of a pandemic influenza virus has sparked an increased effort towards the development and testing of novel influenza antivirals. Central to this is the animal model of influenza infection, which has played an important role in understanding treatment effectiveness and mechanisms of action of influenza antivirals [1]. Among the different animal models of influenza, ferrets can be considered the most suitable for antiviral studies as they display similar symptoms as humans following influenza infections, they can be infected with human influenza virus without prior viral adaptation and have the ability to transmit influenza virus efficiently between one another. However, an accurate assessment of the effectiveness of an antiviral treatment in ferrets can be dependent on the type of viral inoculation, antiviral treatment and dosage, and the availability of robust tools to evaluate treatment effectiveness [2]. In this presentation, I will present the current progress and the various works that we have done to optimise the ferret model to evaluate the effectiveness of current and novel influenza antivirals [3, 4].

References

