



Respiratory viruses are among the most common causes of hospitalisation and are a particular threat to vulnerable populations such as the elderly. In this study the Human Viral Challenge Model of infection was used to investigate the immune response to a GMP produced wild-type A/Perth/16/2009 (H3N2) Influenza virus in healthy adults of different age classes. After completion of the pre-clinical phase, a dose ranging titration clinical study was carried out in young healthy adults to select the most suitable safe titre of virus with a reproducible profile of pathogenicity. In the next phase the chosen dose was used to address the relationship between the age of infected subjects and the profile of influenza illness. Sero-suitable volunteers were inoculated with A/Perth/16/2009 virus in a quarantine facility and divided into two age groups: 18 to 45 and 46 to 64 years old. The development of symptoms and progression of infection were monitored for 8 days to assess parameters such as safety, clinical symptoms and virus shedding. Seroconversion was evaluated during a follow up visit at day 28 post infection. The progression of the influenza disease was found to be different between the younger and older subject groups in terms of the profile of infection and the time of onset, time to peak, intensity and resolution of symptoms either by self-assessment using a standardised diary card (which has been used for over 15 years and in approximately 2000

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