

Efficacy of TAK-003 (Qdenga) Recombinant Chimeric Attenuated Vaccine Collated With Gross Environmental Reverberation of Bangladeshi Preventative Efforts

Brogdon, Adler Isabella (School: St. Patrick Catholic High School)

Dengue virus (DENV-III) has been declared an epidemic in many Southeastern Asian and Eastern African nations; its highest incidence rate is in Bangladesh. Bangladesh set the precedent for environmental reverberation efforts, but the efficacy of such efforts was proven to be clinically insignificant. This study is designed to determine if the TAK-003 (Qdenga) vaccine's efficacy shows a positive correlation, modelled on a dose-potency chart, compared on this baseline of environmental reverberation (henceforth set as <0.0095 , clinically insignificant). The evidence collected during this study, which represents the most current literature and collected data reported on this specific virus and therapy, supports the providence that the TAK-003 (Qdenga) vaccine maintains its immunocompetency for at least four years following the initial subcutaneous therapy; it can be estimated that a booster therapy may need to be administered no sooner than, but surrounding, a period of five years. Though there is an annual loss of vaccine efficacy, said efficacy is still proven more clinically significant than environmental reverberation or partner vaccine efficacy rates. The results of this study indicate a need for TAK-003 (Qdenga) FDA approval in the United States of America in Dengue-positive, Dengue-negative, and Dengue-naive persons under its superintendence.