



STOCHASTIC MODELLING OF SEVEN STAGES VIRAL LIFE CYCLE AND ESTIMATION OF VIRAL REPLICATION USING MODIFIED EXPONENTIAL POWER DISTRIBUTION-A BAYESIAN APPROACH

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ABSTRACT

Presently available viral dynamic research models are of the non-linear mixed effect models. Most of the non-linear models developed by using the differential equations. Finding the solution of parameters are difficult if it is non-linear model. So, In this paper an attempt has been made to derive expected time of new viral budding considering Kolmogorov in the life cycle of viral dynamics. Predictive distribution of viral replication using modified Exponential power distribution through the Bayesian methodology has been derived.

KEYWORDS: CD_4^+T Count, Exponential Power Distribution, Viral Load, Bayesian Approach

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