

A branching model for virus survival

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Abstract:

Quasispecies theory predicts that there is a critical mutation probability above which a viral population will go extinct. Above this threshold the virus loses the ability to replicate the best adapted genotype, leading to a population composed of low replicating mutants that is eventually doomed. We propose a new branching model that shows that this is not necessarily so. That is, a population composed of ever changing mutants may survive.