

Phylogenetic Analysis of Gram Negative Organisms Using Bioinformatics Tools

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ABSTRACT

DNA gyrase (type II topoisomerase), the only topoisomerase able to introduce negative supercoils into DNA, is essential for bacterial transcription and replication; absent from humans, it is a successful target for antibacterials, DNA gyrase, made up of two subunits A and B, a part of the DNA gyrase is responsible for the ATP-dependent resealing process of the DNA during replication. Retrieving the protein sequences of DNA gyrase subunit B of various gram negative organisms and analyzing the similarity and the phylogenetic relationship of the same. It also involves the prediction of the structure of phylogenetic tree using bioinformatics software.