

## NEW HIPOTHETICAL GLYCOSYLTRANSFERASES IN COSMOMYCIN BIOSYNTHETIC PATHWAY FROM *Streptomyces olindensis*

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Glycosylation pattern in cosmomycins is a distinctive feature among anthracyclines. These antitumor compounds possess two trisaccharide chains attached at C-7 and C-10, each of them with structural variability, mainly at the distal deoxysugar moieties. Sugars play an important role in the biological activity of these drugs. Thus, modifications in glycoside composition, number of deoxysugar moieties or site of attachment to the aglycone could be interesting to obtain derivatives with novel pharmacological properties. Garrido and coworkers proposed that 4 glycosyltransferases are involved in cosmomycins biosynthesis. To confirm this hypothesis, degenerated primers were designed with conserved regions of the AknK, RhoG and Dnr S proteins. PCR conditions were optimized yielding different amplicons which were individually cloned in the vectors. The amplicons were analyzed by endonuclease restriction pattern and sequencing. Analysis by Search Gtr Program showed protein homology to L-daunosamine. This glycosyltransferase transfer daunosamine to E-rhodomyconone in the Daunomycin antibiotic produced by *Streptomyces* sp. Other sequences are being analyzed to identify new hypothetical glycosyltransferases.  
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