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Insight into mechanism of action of anticancer bicyclic compounds

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Abstract

DNA topoisomerase II enzyme is one of the popular anticancer treatment approaches which this enzyme controls and modifies the topological states of DNA and plays key roles in DNA replication, transcription and chromosome segregation1. It is known that one class of topoisomerase II inhibitors, known as topo II poisons, bind to the transient enzyme-DNA complex and inhibit the religation of DNA generating single- and double-stranded breaks that cause the to apoptosis and cell death2.

Mechanism of action has been defined between DNA topoisomerase II and the series of bicyclic compounds3 which were examined in detail using molecular modeling studies such as molecular docking and pharmacophore analysis performed by using Discovery Studio4 and LigandScout5. This study also provides a model to design novel and more potent anticancer agents as human topoisomerase II poisons

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Biography

Esin aki yalcin has completed his phd at the age of 28 years from ankara university, faculty of pharmacy, department of pharmaceutical chemistry and she was 38 years old when she got the full professor degree. She had some administrative works such as chair of pharmaceutical chemistry department, chair of pharmaceutical sciences division, dean of faculty of paharmacy, rector's consultant of ankara university. She was the past president of asian federation of medicinal chemistry. She has published more than 100 papers in reputed journals and has been serving as an editorial board member of repute.

