Heterocyclic bibenzimidazole derivatives as topoisomerase I inhibitors

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Abstract

A series of 2'-heterocyclic derivatives of 5-phenyl-2,5'-1H-bibenzimidazoles were evaluated for topoisomerase I poisoning activity and cytotoxicity. Topo I poisoning activity was associated with 2'-derivatives that possessed a hydrogen atom capable of hydrogen bond formation, suggesting that the interatomic distances between such hydrogen atoms and the heteroatoms on the adjacent benzimidazole influence activity.