Anticancer Activity of Some Bisbenzimidazoles

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Z. Naturforsch. **66 c**, 465–470 (2011); received December 4, 2010/May 13, 2011

The discovery of DNA topoisomerases has added a new dimension to the study of anticancer drugs. Bisbenzimidazole derivatives are important compounds known as DNA topoisomerase I inhibitors. In the present study, some symmetrical bisbenzimidazole derivatives were synthesized and investigated for their anticancer activity. Anticancer activity screening was applied on HT-29 (colon carcinoma) and MCF-7 (breast carcinoma) cell lines by investigation of cytotoxicity, analysis of DNA synthesis, and DNA fragmentation assays. One of the seven compounds tested showed significant cytotoxicity in both cell lines and caused DNA degradation in the HT-29 cell line.

Key words: Bisbenzimidazole, Anticancer, DNA Topoisomerase