

## Synthesis, DNA Binding and *In Vitro* Cytotoxicity Study of Bisnaphthalene Derivative

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**SUMMARY.** A bisnaphthalene derivative was synthesized and characterized by NMR and MS. The DNA binding ability was studied by fluorescence titration, DNA thermal denaturation and viscosity measurement experiments, and the *in vitro* cytotoxicity was tested by MTT assay on human gastric carcinoma cell line BGC823. According to the results, the binding mode of the bisnaphthalene derivative 5 with DNA was partial intercalation binding mode and the cytotoxicity of bisnaphthalene derivative 5 was better than the monomer 1.

**RESUMEN.** Se sintetizó un derivado de bisnaftaleno y se caracterizó por NMR y MS. La capacidad de unión al ADN se estudió mediante la titulación de fluorescencia, la desnaturalización térmica del ADN y los experimentos de medición de la viscosidad, y la citotoxicidad *in vitro* se analizó mediante un ensayo MTT sobre la línea celular de carcinoma gástrico humano BGC823. De acuerdo con los resultados, el modo de unión del derivado de bisnaftaleno 5 con ADN fue el modo de unión de intercalación parcial y la citotoxicidad del derivado de bisnaftaleno 5 fue mejor que la del monómero 1.

**KEY WORDS:** anticancer activity, bisnaphthalene derivative, DNA binding.

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