

One-Pot Synthesis of Novel Xanthene Derivatives as Anti-Prostatic Cancer Agents

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SUMMARY. Four novel xanthene derivatives (**1-4**) were designed, synthesized and characterized by IR, ¹H NMR, HRMS, and single crystal X-ray crystallography. These compounds were evaluated for their *in vitro* anti-cancer activity against four representative human prostatic cancer cell lines (LNCap, PC3, DU145 and VCaP). Results reveal that compounds **3** and **4** with electron-withdrawing groups in the phenyl ring exhibit good growth inhibitory potency against the four cancer cell lines with MIC values of 25-40 μ M, which is even better than that of the reference drug carboplatin.

RESUMEN. Se diseñaron, sintetizaron y caracterizaron cuatro nuevos derivados de xanteno (**1-4**) mediante IR, ¹H RMN, HRMS y cristalografía de rayos X de cristal único. Estos compuestos se evaluaron para determinar su actividad anticancerosa *in vitro* frente a cuatro líneas celulares representativas de cáncer de próstata humano (LNCap, PC3, DU145 y VCaP). Los resultados revelan que los compuestos **3** y **4** con grupos atrayentes de electrones en el anillo de fenilo exhiben una buena potencia inhibidora del crecimiento contra las cuatro líneas celulares cancerosas con valores MIC de 25-40 μ M, que es incluso mejor que el fármaco de referencia carboplatino.

KEY WORDS: crystal, prostatic cancer, xanthene.

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