

Synthesis and Evaluation of a Novel Heterocycles Compound against Human Glioma Cells

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SUMMARY. A new heterocycles compound 4-chloro-7-tosyl-7H-pyrrolo[2,3-d]pyrimidine (**1**), designed using 3,7-dihydro-4H-pyrrolo[2,3-d]pyrimidin-4-one (**2**) as starting material, was successfully obtained via multiple synthesis route and finally characterized by IR, ¹H NMR, and single crystal X-ray crystallography. In addition, *in vitro* anticancer activity of compound **1** on three human glioma cell lines (U87-MG, U251 and SHG44) was further determined.

RESUMEN. Un nuevo compuesto heterocíclico 4-cloro-7-tosil-7H-pirrol[2,3-d]pirimidina (**1**), diseñado usando 3,7-dihidro-4H-pirrol[2,3-d]pirimidin-4-ona (**2**) como material de partida, se obtuvo con éxito por vía de síntesis múltiple y finalmente se caracterizó por IR, ¹H RMN y cristalografía de rayos X de cristal único. Además, se determinó adicionalmente la actividad anticancerígena *in vitro* del compuesto **1** en tres líneas celulares de glioma humano (U87-MG, U251 y SHG44).

KEY WORDS: anticancer activity, heterocycles, X-ray.

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