

## *In Vitro* Antitumor Evaluation of Some 3,7-Disubstituted Coumarin Derivatives

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**SUMMARY.** A new series of 3,7-disubstituted coumarin derivatives were synthesized. Where treatment of 7-hydroxy-3-substituted coumarins (**1a,b**) with *p*-chlorophenacyl bromide afforded (E)-3-acetyl-7-(2-(4-chlorophenyl)-2-hydroxyvinyl)-2H-chromen-2-one (**2**) and ethyl 7-(2-(4-chlorophenyl)-2-oxoethoxy)-2-oxo-2H-chromene-3-carboxylate (**3**). The acetylation of compounds **2** and **3** with acetic anhydride in diverse conditions yielded acetyl derivatives (**4** and **5**). 7-hydroxy-2-oxo-N-*p*-tolyl-2H-chromene-3-carboxamide (**6**) and 7-(2-(4-chlorophenyl)-2-oxoethoxy)-2-oxo-N-*p*-tolyl-2H-chromene-3-carboxamide (**7**) was obtained via condensation of compound **1b** or **3** with *p*-toluidine. Antitumor activities of the synthesized compounds were evaluated on human Hepatocellular cancer cell line (HePG2) and colon carcinoma (HCT-116) cell line. Among the synthesized compounds **2** and **4** have the highest activity against the tested cell lines.

**RESUMEN.** Se sintetizó una nueva serie de derivados de cumarina 3,7-disustituidos. El tratamiento de cumarinas 7-hidroxi-3-sustituidas (**1a, b**) con bromuro de *p*-clorofenacilo proporcionó (E)-3-acetil-7-(2-(4-clorofenil)-2-hidroxivinilo)-2H-cromen-2-ona (**2**) y 7-(2-(4-clorofenil)-2-oxoetoxi)-2-oxo-2H-cromeno-3-carboxilato de etilo (**3**). La acetilación de los compuestos **2** y **3** con anhídrido acético en diversas condiciones produjo derivados de acetilo (**4** y **5**). 7-hidroxi-2-oxo-N-*p*-toluil-2H-cromeno-3-carboxamida (**6**) y 7-(2 (4-clorofenil)-2-oxoetoxi)-2-oxo-N-*p*-tolil-2H-cromeno-3-carboxamida (**7**) se obtuvieron a través de la condensación de los compuestos **1b** o **3** con *p*-toluidina. Las actividades antitumorales de los compuestos sintetizados se evaluaron en una línea celular de cáncer hepatocelular humano (HePG2) y otra de carcinoma de colon (HCT-116). Entre los compuestos sintetizados, **2** y **4** tienen la mayor actividad contra las líneas celulares probadas.

**KEY WORDS:** anticancer evaluation, coumarin, HCT-116 cell line, HePG2 cell line.

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