



## Anticancer Activities of a Novel Series of Polysubstituted Pyrazole Derivatives linked to Nitrogenous Heterocyclic Ring Systems

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**SUMMARY.** In an effort to develop potent anti-cancer agents, we have synthesized some functionally substituted pyrazole compounds linked to nitrogenous heterocyclic ring systems and evaluated *in vitro* for their anti-cancer effects on a panel of 60 cellular lines, according to the National Cancer Institute screening protocol. Some of the tested compounds showed significantly cytotoxic effect, four of them being chosen for the 5-dose assay and the most active compound **2** has pronounced activity with (GI<sub>50</sub> MG-MID = 2.38  $\mu$ M) against all subpanel tumor cell lines, comparable to that of sorafenib (GI<sub>50</sub> MG-MID = 1.90  $\mu$ M).

**RESUMEN.** En un esfuerzo para desarrollar agentes anticancerígenos potentes, se han sintetizado algunos compuestos de pirazol funcionalmente sustituidos vinculados a sistemas de anillo heterocíclico nitrogenados y evaluados *in vitro* por sus efectos contra el cáncer en un panel de 60 líneas celulares, de acuerdo con el protocolo del National Cancer Institute. Algunos de los compuestos ensayados mostraron efecto significativamente citotóxico, cuatro de ellos siendo elegidos para el ensayo de 5 dosis y la actividad de compuesto **2**, el más activo, se ha pronunciado con (GI<sub>50</sub> MG-MID = 2,38  $\mu$ M) contra todas las líneas celulares tumorales del subpanel, comparable a la de sorafenib (GI<sub>50</sub> MG-MID = 1,90  $\mu$ M).

**KEY WORDS:** Anti-cancer activities, polysubstituted pyrazole derivatives.

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