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# Synthesis of New 2-*N*-Substituted Amino-5-aryl-1,3-thiazoles as Antitumor Agents

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***SUMMARY.*** A new 5-aryl-2-*N*-substituted thiazole derivatives **3a, b** were synthesized via the cyclization of thiosemicarbazone **2** with viaries α-bromomethyl aryl ketones. Acetylation and alkylation of thiazole derivatives **3a, b** with acetic anhydride and ethyl chloroacetate gave the corresponding *N*-acetyl and *N*-alkyl derivatives **4** and **5**. The structures of the synthesized 1,3- thiazole derivatives **3, 4** and **5** were confirmed by IR, $^{1}$H, $^{13}$C-NMR, MS and elemental analysis. All the synthesized thiazole derivatives and carbazone were tested for their cytotoxicity against two different cancer cell lines MCF-7 and HepG-2. Some of these compounds showed good cytotoxicity.

*RESUMEN*. Se sintetizaron nuevos derivados de 3-aril-2-*N*-sustituidos tiazol **3a, b** mediante la ciclación de tiosemicarbazona 2 con alfa-bromometil aril cetonas. La acetilación y alquilación de derivados de tiazol **3a, b** con anhídrido acético y cloroacetato de etilo dieron los correspondientes derivados de *N*-acetilo y *N*-alquilo **4** y **5**. Las estructuras de los derivados de 1,3-tiazol sintetizados **3, 4** y **5** fueron confirmadas por IR, $^{1}$H, $^{13}$C-NMR, MS y análisis elemental. Todos los derivados de tiazol sintetizados y la carbazona se probaron para determinar su citotoxicidad frente a dos líneas celulares de cáncer diferentes: MCF-7 y HepG-2. Algunos de estos compuestos mostraron buena citotoxicidad.

*KEY WORDS:* cytotoxicity, HepG-2, MCF- 7, thiazole.

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