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Synthesis of some novel 2-(substituted thio)-*N*-(5-methyl-4-phenylthiazol-2-yl)acetamide and anticancer activity evaluation

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During the last few decennium, anticancer therapy has made significant progress, extraordinarily after the approval of a few tiny-molecule inhibitors, but the control of malignancies which is caused by abnormalities in cells is still massive apprehension [1, 2]. The chemotherapeutic agents such as thiazole derivatives has great importance in anticancer drug research. Thiazole derivatives are one of the extensively studied heterocycles due to its pivotal role in the led identification and optimization [2,3]. Also diverse alteration of the thiazole ring at different positions has caused to a various of new compounds with a wide spectrum of pharmacological activities [4]. Because of the reasons above, we aimed to synthesize and investigate anticancer activity of some novel N-(5-methyl-4-phenylthiazol-2-yl)-2-(substituted mercapto)acetamide derivatives (**4a-i**). The structural elucidation of the compounds was performed by 1H-NMR, 13C-NMR and LC-MS/MS spectral data and elemental analyses. The title compounds (**4a-i**) were obtained by reacting 2-chloro-N-(5-methyl-4-phenylthiazol-2-yl) acetamide with some mercapto derivatives. Nine new campounds are evaluting for determining their cytotoxicities against A549 lung carcinoma cell line and NIH/3T3 mouse embryo fibroblast cell line. After that the selected compounds will be evaluated to identify apoptotic cell rates. Activity studies are still in progress.

Biography

Asaf Evrim Evren has completed his BD at the age of 24 years from Anadolu University and he is still postraduate student at Anadolu University, Department of Pharmaceutical Chemistry.

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