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Abstract
Our present study aimed at evaluating putative possibility of using xenograft carcinoma as a model system to monitor effect of chemotherapy regiment of lung cancer. A series of novel synthesized, eg. 5-substituted 2-cyanoimino-4-imidazodinone and 2-cyanoimino-4-pyrimidinone derivative of compounds have been synthesized as anticancer agents.

The derivatives exhibited cytotoxicity against a variety of lung cancer cell lines (LL2 and A549) were evaluated in MTS assay and the cell cycle population using flow cytometry assay. In addition, xenograft nude mice model was determined to evaluate the ex vivo activity of anticancer agents with MTT while treated with these derivatives for 24-96 hr in a concentration range of 0.01-100μM. The MTT assay showed that the derivatives can effectively against tumor growth of human LL2 (IC50 = 2.39μM) while the derivatives cause G1 phase reset (100μM), but no apoptosis was detected via cell cycle assay. In histoculture model, the derivatives exhibited cytotoxicity and decreased the medium level of CEA in a concentration -dependent manner by means of on MTT assay. Our results suggest that the histoculture system may be further used for evaluation of anti-cancer agents for anti proliferation and cell death induction in tumor cells of the histocultured lung carcinoma.
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