**The synthesis of some new 4-chloro-pyrimidine-5-carbonitriles (3b–d), 4-substituted-amino-pyrimidine-**

**5-carbonitriles (4a–g), trioxo and dioxo-thiazolo[3,2-*a*]pyrimidine-6-carbonitriles (5a–c and 6a–h)**

**have been described. The obtained compounds were evaluated for their *in-vitro* antitumor activity. A single**

**dose (10 *μ*M) of the test compounds was used in the National Cancer Institute (NCI) 60 cell lines panel assay.**

**Compounds 3c and 4f showed high inhibitory activity against leukemia, whereas, compounds 3b and 4d, g**

**displayed moderate activity. On the other hand, all compounds were screened for their *in-vitro* antibacterial**

**and antifungal activities. Compounds 3d and 4b exhibited significant antibacterial activity against *Staphylococcus***

***aureus*. Compound 4e showed two folds inhibitory activity against *Entrobacter aerogener* compared**

**with the reference drug Tobramycin.**