ABSTRACT

A series of Triazolothiadiazole derivatives (AA1-AA10) were synthesized by the cyclization of various amino triazoles using different aromatic acids in the presence of phosphorous oxychloride. The structures of new synthesized compounds were confirmed by IR, 1H NMR and Mass spectral data. All title compounds were investigated for their in-vivo anticancer activity by using Ehrlich Ascites Carcinoma cells. Various parameters like, percentage increase in life span, increase in RBC, Hb, and lymphocytes and decrease in WBC count was noted to confirm the efficiency of the derivatives as anti-cancer agents. The synthesized compounds, AA5 and AA6 possessing electron withdrawing groups (-F, -Br) in phenyl ring attached to the triazolothiadiazole were found to be significantly potent anti-cancer agents when compared to other derivatives.

**Key words:** Triazolothiadiazole; Anti cancer; Ehrlich Ascites Carcinoma