

## ABSTRACT

In this study an attempt has been made to synthesize some novel substituted thiazoles containing 4-oxo-1,3-thiazolidine and azetidine 2-one derivatives in three schemes, where scheme 1 and 2 involves three steps each, while scheme 3 involves two steps. 2-Amino 4-substituted thiazoles on condensation with different aromatic aldehydes yielded the 2N-substituted benzalimino-4-substituted-1, 3 thiazoles [SC-01(A-J)] which on cyclization with thioglycollic acid in presence of anhydrous  $ZnCl_2$  as catalyst afforded 2-substituted phenyl -3-N-[4-substituted thiazolo] thiazolidine 4-ones [SC-02(A-I)]. The cyclization of the 2N-substituted benzalimino-4-substituted-1, 3 thiazoles [SC-01(A-J)] with chloroacetyl chloride in presence of triethylamine as catalyst furnished 4-substituted phenyl -3-N-[4-substituted thiazolo] azetidine-2-ones [SC-03(A-C)]. The structures of the newly synthesized compounds have been established by TLC and spectral data. These compounds have also been screened for their anticonvulsant activity by Pentylene tetrazole method (PTZ), amongst them the chloro substituted thiazoles show good activity.

**Keywords:** Substituted thiazoles, 4-oxo-1, 3 -thiazolidines, 2-azetidinones, Schiff bases, anticonvulsant activity.