Novel 4 (3H)-Quinazolinone Analogs: Synthesis And Anti Convulsant Activity

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Abstract

A new series of quinazolinone analogs was designed, synthesized, and evaluated for their anti convulsant activity. Compounds 6, 12, 21, 36, 37, and 38 showed 70-100% protection against PTZ-induced seizures acting as GABA receptor agonists. Compound N-(3, 4, 5, 6-tetrachlorophthalimido)-2-{(3-phenyl 1-4-oxo-6-methyl1-3H-quinazolin-2-yl)-thio}acetamide (12) representing the moderate active compounds and 2-{6-iodo-4-oxo-2-(thiophen-2-yl)-qinazolin-3 (4H)-yl}-isoindoline-1.3-dione (38) representing the remarkably active compounds in this study, showed ED50 values of 457 and 251 mg/kg, TD50 values of 562 and 447 mg/kg, PI values of 1.22 and 1.78, LD50 values of 1,288 and 1,380 mg/kg, and TI values of 2.82 and 5.50 respectively. Compound 38 proved to be almost twofold more active than the standard drug sodium valproate.

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