STUDIES ON 3-HETEROARYL PYRAZOLINE DERIVATIVES WITH ANTIDEPRESSANT AND ANTICONVULSANT ACTIVITIES

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In our previous works we have synthesized several pyrazoline derivatives and tested them for their antidepressant and anticonvulsant activities [1-4]. In this study, we have synthesized twelve new 1-phenyl-, 1-thiocarbamoyl- and 1-N-substituted thiocarbamoyl-3-(2-furyl)-5-phenyl/(2-furyl)-2-pyrazoline derivatives by the reaction of appropriate chalcones (1-(2-furyl)-3-phenyl/(2-furyl)-2-propen-1-ons) with phenylhydrazine, thiosemicarbazide and hydrazine hydrate followed by thiosemicarbazides respectively.

The antidepressant (modified Porsolt's behavioral despair test, reference: tranylcypromine sulfate) and anticonvulsant (MES, ScMet. and rotorod toxicity tests) activities of compounds were screened. 1-N-Ethylthiocarbamoyl-3,5-di(2-furyl)-2-pyrazoline showed slight antidepressant activity. 1-Thiocarbamoyl-, 1-N-methylthiocarbamoyl-1-N-ethylthiocarbamoyl-3,5-di(2-furyl)-2-pyrazoline were found to have significantly high anticonvulsant activity against the ScMet. or MESS seizures.