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SYNTHESIS AND BIOLOGICAL EVALUATION OF 3-ARYLIDENE 2-OXINDOLE DERIVATIVES AS NEW AGENTS FOR TREATMENT OF DIABETES MELLITUS

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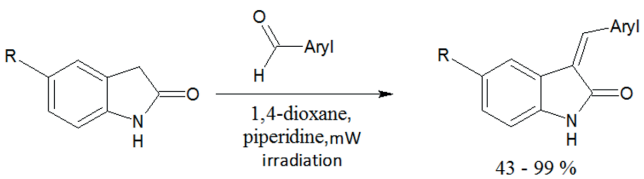
The application of microwave activation in the synthesis of a library of potential glycogen synthase kinase *3β (GSK-3β)* inhibitors with 3-arylidene-2-oxindole scaffold was examined. Microwave activation was shown to allow the condensation to be completed in 5 to10 minutes compared to several hours and for the reaction to result in a good yield. E/Z selectivity of the reaction was studied and the activity of obtained compounds against *GSK-3β* was assessed *in vitro.*



R = H, BzNH, (2-furoyl)NH, $CH_3C(O)NH$, MeOC(O)NH, Br, NO_2
Aryl = 2-pyridyl, 4-Br-Ph, 4-OH-Ph, 3,4,5-tri-MeO-Ph, 3-OH-Ph, 4-NO_2-Ph, 3-pyridyl, 4-pyridyl, 2-thienyl, 2-furyl, 3,5-dimethyl-pyrazol-4-yl, 2-ethoxycarbonyl-pyrazol-3-yl

Synthesized compounds can be used for further design of potential agents for treatment of diabetes mellitus.

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