ABSTRACT

Organic chemists have found in the development of known and new multicomponent reactions (MCRs) an inspiration to quickly design straightforward entrances to large families of novel compounds, especially when these syntheses are coupled with combinatorial strategies. Among them, the venerable 3-MCR Biginelli reaction has recently attracted a renewed interest based, primarily, on the discovery of many different catalysts that allow the preparation of the resultant dihydropyrimidines (DHPMs) with excellent results, as opposed to the limited success encountered in the original reports. In addition, the finding of therapeutic and pharmacological properties as channel blockers, antihypertensive agents, α_1a antagonists and neuropeptide Y (NPY) antagonists explains the widespread. The derivatives have been developed by three component condensation of aromatic aldehydes, ethyl acetoacetate and thiourea/urea in presence of *N*-acetyl glycine. The protocol has key features such as catalyst used is inexpensive, environmentally benign and affords desired products readily in good to moderate yields. These products were characterized by IR, ^{1}H NMR, and by relating melting points with those mentioned in literature. Moreover, the crystallographic data of **4d** also confirms the synthesis of desired compounds. Products **(4b, 4e and 4f)** revealed promising antibacterial, and antioxidant activity.