SUMMARY

Two *S*-substituted derivatives of 5-{1-[(4-methoxyphenyl)sulfonyl]-4-piperidinyl}-4-methyl-4*H*-1,2,4-triazole-3-thiol (**G1, G2**) were synthesized in a multistep scheme. The reaction of 4-methoxy-benzenesulfonyl chloride (**A**) with ethyl isonipecotate (**B**) produced ethyl 1-[(4-methoxyphenyl)sulfonyl]-4-piperidinecarboxylate (**C**), which was further converted into its hydrazide using hydrazine hydrated and methanol (Me-OH) as a solvent. Further, ethyl 1-[(4-methoxyphenyl)sulfonyl]-4-piperidine carbohydrazide (**D**) yielded *N*-methyl-2-{1-(4-methoxyphenylsulfonylpiperidine-4-carbonyl)} hydrazinecarbothioamide (**E**), on treatment with methyl isothiocyanate (CH_3NCO) in methanol, which further in the presence of base (KOH) and methanol produced 5-{1-[(4-methoxyphenyl)sulfonyl]-4-piperidinyl}-4-methyl-4*H*-1,2,4-triazole-3-thiol (**F**) Finally the target compounds (**G1, G2**) were obtained by stirring 5-{1-[(4-methoxyphenyl)sulfonyl]-4-piperidinyl}-4-methyl-4*H*-1,2,4-triazole-3-thiol with different electrophiles in the presence of lithium hydride (LiH) and dimethyl formamide (DMF). The structures of the synthesized compounds were elucidated through ^{1}H-NMR, C^{13}-NMR, IR and EIMS spectral data. All the synthesized compounds were assayed for activities against enzymes. The compounds showed moderate activities.