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Synthesis of nitro substituted benzoxazole linked thiazolidine derivatives: Biological evaluation and molecular docking studies

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The 3-[(6-nitro-1,3-benzoxazol-2-yl) amino]-2-phenyl-1,3-thiazolidin-4-one derivatives 7(a-j) have been synthesized by reacting compounds 2-[2-benzylidenehydrazinyl]-6-nitro-1,3-benzoxazole derivatives (a-j) with thioacetic acid in dioxane using $ZnCl_2$ as catalyst. The chemical structures of the compounds were elucidated by IR, ^1H NMR, ^{13}C NMR and mass spectral studies. The organisms such as Escherichia coli (ATTC-8739), *Staphylococcus aureus* (ATTC-6538), *Vibrio cholera* (ATTC-9027), *Bacillus subtilis* (ATTC-6633), *Staphylococcus epidermidis* (ATTC-12228) and *Salmonella typhimurium* (ATTC-23564) have been used to study the antimicrobial activity of synthesized compounds. MIC was done with effective result. The antioxidant activity has been carried out to know the scavenging effect of targeted molecules and the results were supported by the in silico molecular docking studies.

Biography

Kotehol latha is an Assistant Professor in Sahyadri Science College, Kuvempu University, India. She has compelted her Master of Science degree in Organic Chemistry.

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