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(54) Title of the invention : A NOVEL SYNTHESIS, CHARACTERIZATION AND IN-SILICO STUDIES OF SOME N-SUBSTITUTED 1,3,4-THIADIZOLE ACETAMIDES DERIVATIVES AND THEIR PHARMACOLOGICAL SCREENING

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(57) Abstract :

Abstract The present invention related to a novel synthesis, characterization and in-silico studies of some n-substituted 1,3,4-thiadiazole acetamides derivatives and their pharmacological screening. More particularly present invention Series of N-substituted 1,3,4-thiadiazole acetamides derivative(3a-3t) were designed by reaction of different aryl acid and thiosemicarbazide then subsequent addition of prepared chloroactanilide and synthesized by conventional and microwave as green chemistry method. Synthesized compound were docked with receptor of hydrolase inhibitor for antiinflammatory activity (PDB Code-3NUO),crystal structure of the gamma-secretase complexed nicastrin (PDB Code-4r12) for anticancer activity, for antituberculosis activity(PDB Code-1m49),for antifungal activity(PDB Code-1eag),antibacterial activity(PDB Code-4FH2).Compound 3l shows potent activity against receptor hydrolase inhibitors (PDB Code-3NUO),compound 3i shows potent activity against crystal structure of the gamma-secretase component nicastrin ,compound 3h shows antituberculosis activity. These synthesized 3a-3t compound were confirmed through spectral characterization using IR,and 3i,3h confirmed by IR,NMR and MASS spectroscopy. Result indicated that these compound showed promising anticancer activity, antituberculosis activity, anti-inflammatory activity and antimicrobial activity in comparison to standard drug was used.

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