

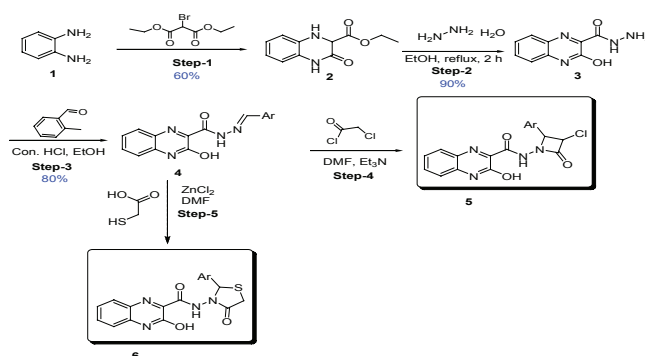
A facile synthesis of 3-hydroxy-N-(4-oxo-2-arylthiazolidin-3-yl) quinoxaline-2-carboxamides and N-(3-chloro-2-oxo-4-arylazetididin-1-yl)-3-hydroxyquinoxaline-2-carboxamides

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Quinoxaline derivatives are an important class of nitrogen containing heterocyclic compounds in medicinal chemistry. Quinoxaline is a part of various antibiotics such as Echinomycin, Levomycin, and Actinoleutin which are active against various transplantable tumors. Numerous methods are available for the synthesis of quinoxaline derivatives, which involve condensation of 1, 2-diamines with α -diketones, 1,4-addition of 1,2-diamines to diazenylbutenes, cyclization-oxidation of phenacyl bromides and oxidative coupling of epoxides with ene-1, 2-diamines. Condensation of o-phenylenediamines with 1, 2-dicarbonyl compounds in MeOH/AcOH under microwave irradiation, and iodine catalyzed cyclocondensation of 1, 2-dicarbonyl compounds with substituted o-phenylenediamines in DMSO or CH₃CN. In addition, O-phenylenediamines reacts with diethylbromo malonate to form Ethyl 1, 2, 3, 4-tetrahydro-3-oxoquinoxaline-2-carboxylate (2), which is reacted with hydrazinehydrate to produce 3-hydroxyquinoxaline-2-carbohydrazide (3). Compound 3 on condensation with different aromatic aldehydes give (E)-N'-arylidene-3-hydroxyquinoxaline-2-carbohydrazides (4) and the compound 4 on cyclization with chloroacetyl chloride acid and thioglycolic acid, produces N-(3-chloro-2-oxo-4-arylazetididin-1-yl)-3-hydroxyquinoxaline-2-carboxamides(5) and 3-hydroxy-N-(4-oxo-2-phenylthiazolidin-3-yl)quinoxaline-2-carboxamides(6) respectively.



Biography

V. HariPriya has obtained her master's in Organic Chemistry and presently pursuing her doctoral studies in heterocyclic compounds. Her research area is synthesis of di substituted quinoxalines involves in developing anti carcinogenic drug. She has secured a funding for her project on synthesis and anti-microbial assay of some new derivatives of quinoxalines. This project is fully funded by Government of India under the sponsorship of Department of science and Technology. She is a young scientist with a passion for research and teaching. She has published two articles in leading science journals and other is communicated.

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