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Synthesis and Characterization of Some New Oxadiazole,Triazoleand OxazepinCompounds Bearing A quinazoline-4(3H)-one

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Abstract: In the present study ,some new phenylquinazoline derivatives have been prepared starting from reaction of 2-aminobenzoic acid with benzoyl chloride in pyridine afforded the 2-phenyl-4H-benzo[d][1,3]oxazin-4-one(1).Treatment of the latter with glycine yielded 2-(4-oxo-2-phenylquinazoline-3(4H)yl)acetic acid (2).The reaction of compound (2) with thionyl chloride produced 2-(4-oxo-2-phenylquinazoline-3(4H)-yl)acetylchloride(3).Condensation of compound (3) with hydrazine hydrate afforded 2-(4-oxo-2-phenylquinazoline -3(4H)-yl)acetohydrized (4).The reaction of compound (4) with carbon disulfide and potassium hydroxide yielded 3-[(5-mercapto-1,3,4-oxadiazole-2-yl)methyl]-2-phenylquinazoline-4(3H)-one(5).The azomethines (6a-d)were synthesized from the reaction between corresponding aldehydesand acid hydrized(4).Moreover,N-(3-methyl-1,5-dioxobenzo[e][1,3]oxazepin-4(1H,3H,5H)-yl-2-(4-oxo-2-phenylquinazoline -3(4H)-yl)acetamide (7a,b) were synthesized from the cyclic condensationof Schiff bases compounds with phthalic anhydride. Moreover,2-(2-oxo-2-phenylquinazoline-3(4H)-yl)acetyl)-N-phenylhydrazincarbothioamide(8) was synthesized via reaction of compound (4) with phenylisothiocyanate.Thetreatment of compound (8) with $NaHCO_3$gave 3-((5-mercapto-4-phenyl-4H-1,2,4-triazol-3-yl)-2-phenylquinazoline -4(3H)-one(9). The structure of novel synthesized compounds were assured by physical properties and spectral (FT-IR,^{1}H-NMR and ^{13}C NMR).
Keywords: Oxazin,Oxazepin, Oxadiazole ,Triazole, Phenylquinazoline.

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