SYNTHESIS OF SOME POTENTIALLY BIOLOGICAL ACTIVITES QUINOXALINES

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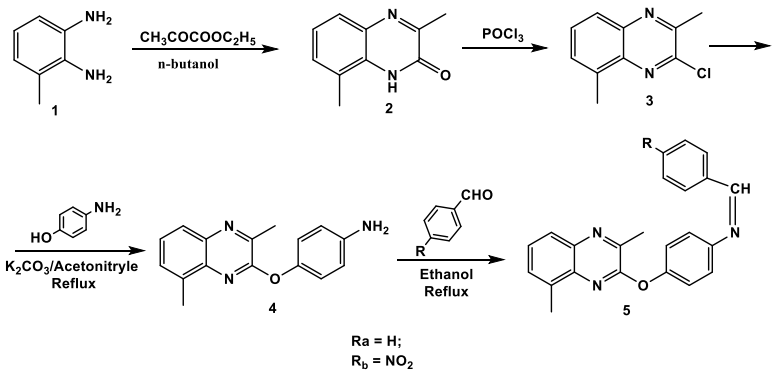
Quinoxaline derivatives have different pharmacological activities such as bactericides and insecticides [1], antibacterial [2,], antifungal, antitubercular, analgesic and anti-inflammatory [2,3]. In the light of these facts we decided to synthesize some new quinoxaline derivatives by replacing the C2 chlorine with an ether link attached to a benzene ring possessing a free amino group which can be further reacted with aromatic aldehydes, respectively, to yield new Schiff bases containing quinoxaline moieties.

The chemical synthesis (Scheme 1) was initiated with the reaction of 3-methylbenzene-1,2-diamine (1) with ethyl pyruvate in n-butanol to yield 3,8-dimethylquinoxalin-2(1H)-one (2), which on treatment with $POCl_3$ yielded 3-chloro-2,5-dimethylquinoxaline (3). A mixture of compound 3 and 4-aminophenol was next refluxed in acetonitrile for 20 hours to afford 4-((3,8-dimethylquinoxalin-2-yl)oxy)aniline (4) as an intermediate. The next step is the reaction of compound (4) with a various substituted aromatic aldehydes to synthesis N-(4-((3,8-dimethylquinoxaline-2-yl)oxy)phenyl)-1-methanimine 5a,b.

Scheme 1



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