SYNTHESIS OF NOVEL QUINOXALINYL-1,5-BENZODIAZEPINES BY RING TRANSFORMATIONS

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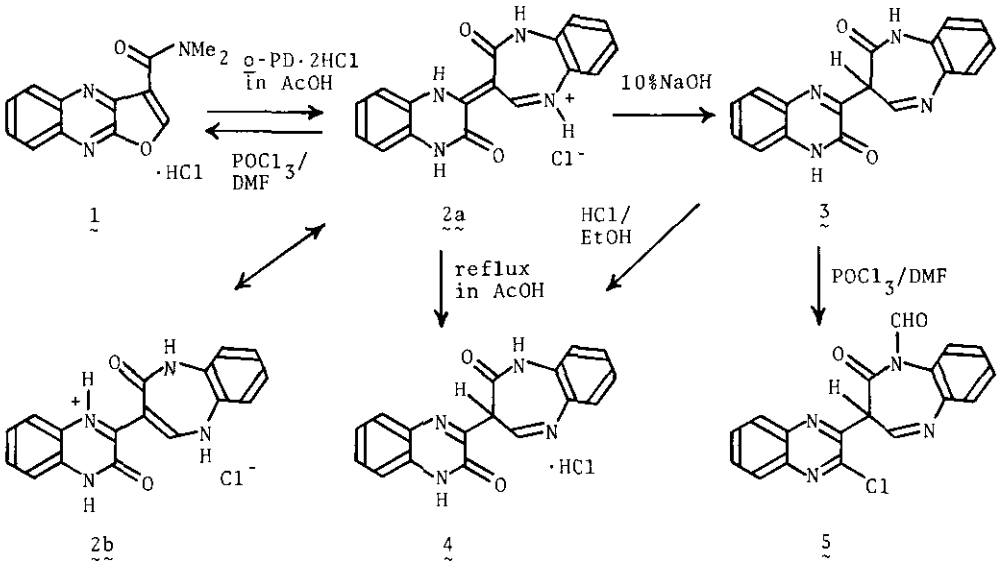
The reaction of 3-(N,N-dimethylcarbamoyl)furo[2,3-b]quinoxaline hydrochloride (1) with o-phenylenediamine dihydrochloride in AcOH resulted in ring transformation to give the N-H form of quinoxalinyl-1,5-benzodiazepine hydrochloride (2), whose treatment with 10% NaOH afforded the C^3-H form of free quinoxalinyl-1,5-benzodiazepine (3). Treatment of 3 with ethanolic HCl provided the C^3-H form of hydrochloride (4), but not 2, and 4 was also obtained by refluxing of 2 in AcOH. The reactions of 2 and 3 with $POCl_3$/DMF produced 1 and the compound (5), respectively.

Scheme (o-PD=o-phenylenediamine, Py=pyridine)



1 2a 3 2b 4 5