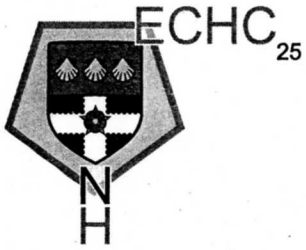
XXVth European Colloquium on Heterocyclic Chemistry



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SYNTHESIS AND ANTIOXIDATIVE ACTIVITY OF SOME 4-OXO-1,2-DIHYDROQUINAZOLINES

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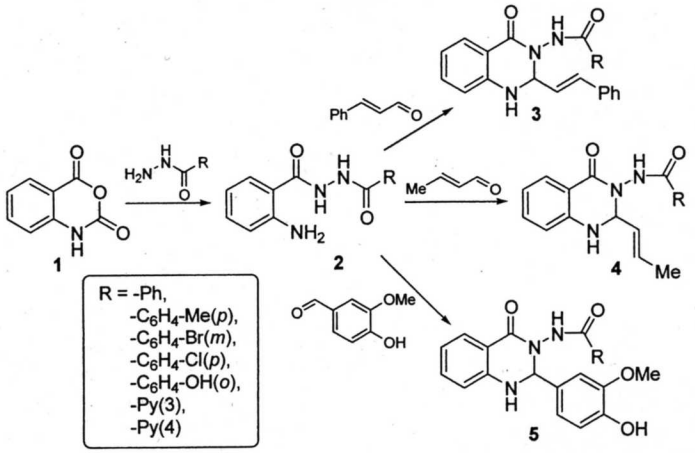
Recently, it has been reported that 4-hydrazinoquinazoline derivatives exhibit neuroprotective activity during cerebral thrombosis [1] due to their significant antioxidative action. On the other hand, C-2 and N-3 disubstituted 1,2-dihydroquinazolines with aryl and heteroaryl groups at N-3 position have shown enhanced anti-inflammatory activity as a result of their nitric oxide inhibitory activities [2,3]. This has prompted the synthesis of some 2,3-disubstituted derivatives of 4-oxo-1,2-dihydroquinazolines and evaluation of their antioxidative activity.

The starting compounds **2**, prepared in the reactions of aromatic acid hydrazides with isatoic anhydride (**1**), were condensed with cinnamic aldehyde, crotonaldehyde and vanillin in boiling ethanol to afford 4-oxo-1,2-dihydroquinazolines **3-5**.



All antioxidants can be classified as phenolic or CH antioxidants. We studied antiradical activity of newly obtained compounds in order to find out whether 1,2-dihydroquinazolinone **3-5** could act as CH antioxidants due to the H atom at C-2. It appeared that most of the compounds **3** and **4** did not demonstrate any antiradical activity according to 2,2-diphenyl-1-picrylhydrazyl test [4]. Compounds **5** with vanillyl side chain exhibited slight antiradical activity in the range of 16-25%. These latter compounds might act as phenolic antioxidants due to the presence of free HO-group in their structures.

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