SYNTHESIS OF NEW PHARMACOLOGICALLY ORIENTED NO-DONOR FUROXAN-BASED HETEROCYCLIC ENSEMBLES

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The design of potential drugs with improved pharmacokinetic profile has been focused in recent years on the molecular hybridization of diverse compounds with known pharmacological activity [1]. Special efforts were directed to the synthesis of pharmacologically oriented structures comprising a framework capable of nitric oxide (NO) release, including 1,2,5-oxadiazole 2-oxides (furoxans) [2]. In this work simple, effective and regioselective methods for the synthesis of pharmacologically oriented polyheterocyclic ensembles containing furoxan motif as NO-donor fragment linked to various pharmacophoric nitrogen-containing heterocycles and their annulated derivatives (thiazoles [3], 1,3,4-thiadiazines [4], thiazolo[2,3-c][1,2,4]triazoles [3], 1,2,4-triazolo[3,4-b][1,3,4]thiadiazines [5], tetrazolo[5,1-b][1,3,4]thiadiazines [4], pyrazolylthiazoles [6]) have been presented.