Pyrazine derivatives

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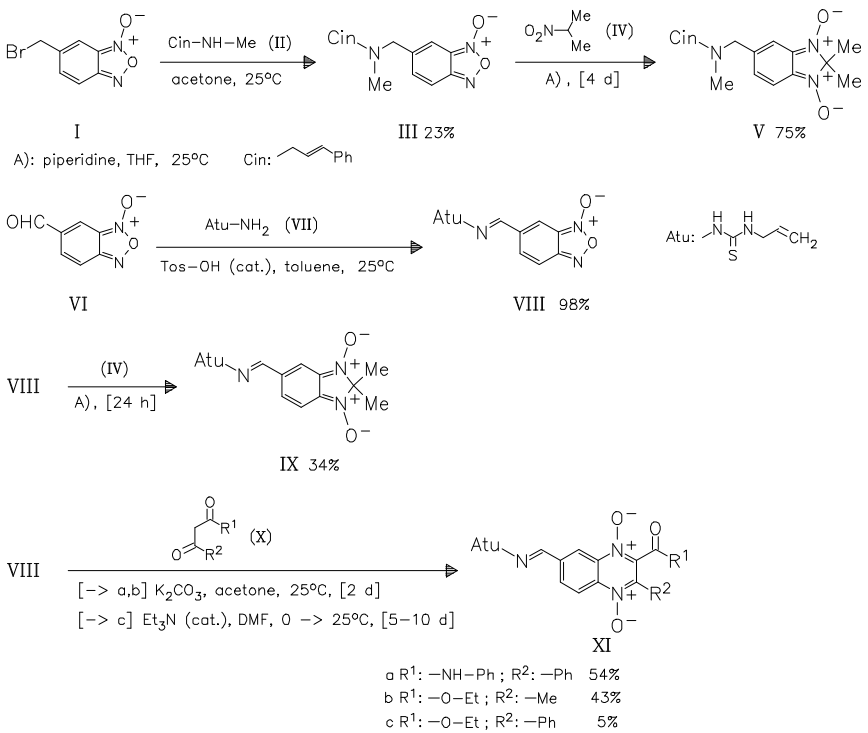
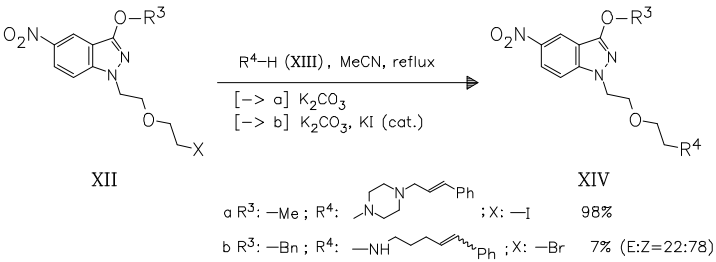
Naftifine-Analogues as anti-Trypanosoma cruzi Agents. — The naftifine analogues are designed as potential T.cruzi membrane sterol biosynthesis inhibitors. Combining the alkenylamino moiety present in naftifine, the N-allylthiosemicarbazone contained in the parent nitrofuran derivative, and a bioactive heterocycle afford 28 new hybrid compounds. The most interesting derivatives against T. cruzi and fungi is the nitroindazole derivative (XIVa). However, this compound is toxic against macrophages. Benzimidazole dioxides (V) and (IX) and quinoxaline dioxides (XIb) and (XIc) show excellent parasite/mammal selectivity indexes. It is shown that the anti-T. cruzi mechanism of action is not involved in the inhibition of sterol biosynthesis. — (GERPE, A.; BOIANI, L.; HERNANDEZ, P.; SORTINO, M.; ZACCHINO, S.; GONZALEZ, M.; CERECETTO*, H.; Eur. J. Med. Chem. 45 (2010) 6, 2154-2164, DOI:10.1016/j.ejmech.2010.01.052 ; Dep. Quim. Org., Fac. Cienc., Univ. Rep., 11400 Montevideo, Urug.; Eng.) — H. Hoennerscheid





XII XIV

a R^3: —Me ; R^4: ; X: —I 98%

b R^3: —Bn ; R^4: ; X: —Br 7% (E:Z=22:78)