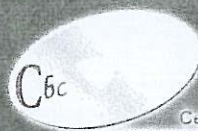


XII Jornadas de Biologia de Leveduras

Professor Nicolau Van Uden

Universidade de Aveiro

13 - 15 • May • 2004



Centro de Biologia Celular

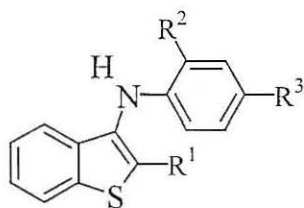
Antifungal activity of diarylamines in the benzo[*b*]thiophene series and SAR

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Several diarylamines 1a-f and 2 were prepared using palladium-catalyzed C-N coupling¹ of electron deficient or rich benzo[*b*]thienylbromides with aromatic amines. Using 2-aminopyridine a one pot C-N coupling and intramolecular cyclization involving the nitrogen of the pyridine, with loss of ethanol, occurred giving compound 3.



1a R¹=CO₂Et, R²=H, R³=OMe

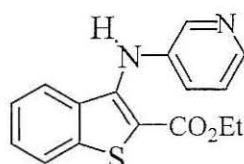
1b R¹=CO₂Et, R²=R³=OMe

1c R¹=CO₂Et, R²=H, R³=F

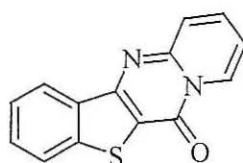
1d R¹=R²=H, R³=F

1e R¹=CO₂Et, R²=H, R³=OH

1f R¹=CO₂H, R²=R³=OMe



2



3

The new compounds obtained were submitted to a study of antifungal activity against *Candida albicans*. The minimal inhibitory concentration (MIC) by radial diffusion and structure-activity relationships (SAR) were evaluated.

Compounds 2 and 3 containing the pyridine ring, showed the lowest MICs (12.5 µg/mL) and are comparable to Cyclohexamide (antifungal control). The presence of the acid group in compound 1f lowers the MIC from 100 to 50 µg/mL when compared with the ester 1b. Compound 1c showed the highest MIC (200 µg/mL) but without the ester group the corresponding fluoro compound 1d lowers the MIC to 50 µg/mL.

1. Isabel C.F.R. Ferreira, Maria-João R.P. Queiroz, Gilbert Kirsch *Tetrahedron*, 2003, 59, 975-981.

Notes:

