

## SYNTHESIS AND ANTIFUNGAL ACTIVITY OF SOME NEW 5-ETHYLSULPHONYL-2-SUBSTITUTEDBENZOXAZOLES

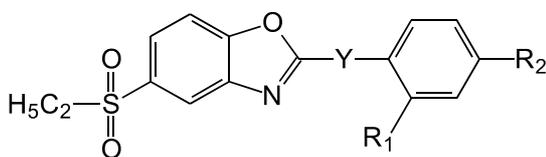
Özlem Temiz-Arpacı<sup>1</sup>, Betül Tekiner-Gülbaş<sup>1</sup>, İlkay Yıldız<sup>1</sup>, Esin Akı-Şener<sup>1</sup>, İsmail Yalçın<sup>1</sup> and Nurten Altanlar<sup>2</sup>

<sup>1</sup>Ankara University, Faculty of Pharmacy, Department of Pharmaceutical Chemistry

<sup>2</sup>Ankara University, Faculty of Pharmacy, Department of Microbiology  
06100, Tandoğan, Ankara TURKEY

The prevalence of systemic fungal infections has increased significantly during the past decade. This increase is due to greater use of broad-spectrum antibiotics, immunosuppressive agents. Therefore, the therapy with antifungal agents and the research of the new effective compounds are getting important [1-3].

Biologically active benzoxazoles have been known since long time and they were seen that position 2 is decisive for the biological activity, whereas position 5 determines the intensity of their activity [4-7]. So that we synthesized some novel 5-ethylsulphonyl-2-(substitutedphenyl-substitutedbenzyl-benzoxazole derivatives (Formula). The *in vitro* antifungal activity of the compounds was determined against *C. albicans* and *C. krusei* in comparison with standard drugs. Antifungal results indicated that the synthesized compounds possessed a broad spectrum of activity with a MIC values 50-12.5 µg/ml against the tested yeasts. Furthermore antifungal activity of the compounds not being more potent than the compared control drug miconazole.



R<sub>1</sub>= H, Cl, R<sub>2</sub>= H, Cl, Br, CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub>, C(CH<sub>3</sub>)<sub>3</sub>, NO<sub>2</sub> Y= CH<sub>2</sub>, -

### Formula

### References

- [1] T.C. Wu, *Clin. Infect. Dis.*, **19(1)**, 54-58, 1994.
- [2] P.A. Pizzo, L.S. Young, *Am. J. Med.*, **76**, 101-110, 1984.
- [3] J.R. Graybill, *Clin. Infect. Dis.*, **14(1)**, 170-181, 1992.
- [4] W. G. Bywater, W. R. Colemann, O. Kamm, H. H. Merritt, *J. Ame. Chem. Soc.*, **67**, 905-907, 1945.
- [5] D. W. Dunwell, D. Evans, *J. Med. Chem.*, **20**, 797-801, 1977.
- [6] M. Pedini, G. De Meo, A. Ricci, L. Bastianin, P. Jaquignon, *Il Farmaco*, **45(3)**, 303-312, 1990.
- [7] Ö. Temiz, İ. Ören, E. Şener, İ. Yalçın, N. Uçartürk, *Il Farmaco*, **53**, 337-341, 1998.