

The study of the biological activity of amino-substituted benzofuroxans

Chugunova E., Voloshina A., Mukhamatdinova R., Serkov I., Proshin A., Gibadullina E., Burilov A., Kulik N., Zobov V., Krivolapov D., Dobrynin A., Goumont R.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

As a part of our ongoing studies in developing new derivatives as dual antibacterial/antifungal agents, we describe the synthesis of novel amino substituted benzofuroxan derivatives. These compounds were tested for their antifungal activity against various strains. It is shown that their antimicrobial and antifungal activities depend on the structure of the amino moiety, on the position and on the nature of the substituents of the benzofuroxan ring. They displayed good bacteriostatic and fungistatic activities comparable to those of reference drugs. The more active benzofuroxan derivatives have been studied intraperitoneally in mice to get a first estimation of their toxicity. Preliminary results have also shown that some derivatives are able to inhibit enzymes such as GDH (glucose dehydrogenase). © 2014 Bentham Science Publishers.

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Keywords

Amine substitution, Bacteriostatic activity, Benzofuroxan, Fungistatic activity, Intraperitoneal introduction