

Міністерство охорони здоров'я України
Харківська міська рада Харківської області
Департамент охорони здоров'я
Національний фармацевтичний університет
Навчально-науковий інститут прикладної фармації



V Міжнародна
науково-практична
конференція

«ЛІКИ – ЛЮДИНІ. СУЧАСНІ ПРОБЛЕМИ ФАРМАКОТЕРАПІЇ ТА ПРИЗНАЧЕННЯ ЛІКАРСЬКИХ ЗАСОБІВ»

(Реєстраційне посвідчення УкрІНТЕІ № 352
від 31 серпня 2020 р.)

11-12
БЕРЕЗНЯ

2021

ХАРКІВ

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ХАРКІВСЬКА МІСЬКА РАДА ХАРКІВСЬКОЇ ОБЛАСТІ
ДЕПАРТАМЕНТ ОХОРОНИ ЗДОРОВ'Я
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ
НАВЧАЛЬНО-НАУКОВИЙ ІНСТИТУТ ПРИКЛАДНОЇ ФАРМАЦІЇ

**«Ліки – людині. Сучасні проблеми
фармакотерапії та призначення лікарських
засобів»**

Матеріали V Міжнародної
науково-практичної конференції

11-12 березня 2021 року
м. Харків

*Реєстраційне посвідчення УкрІНТЕІ
№352 від 31 серпня 2020 року*

Харків
НФаУ
2021

MINISTRY OF HEALTH OF UKRAINE
KHARKIV CITY COUNCIL OF KHARKIV REGION
DEPARTMENT OF HEALTHCARE
NATIONAL UNIVERSITY OF PHARMACY
EDUCATIONAL AND SCIENTIFIC INSTITUTE OF APPLIED PHARMACY

**«Medical drugs for humans. Modern issues of
pharmacotherapy and prescription of medicine»**

Materials of the V International
Scientific and Practical Conference

11-12 March 2021
Kharkiv

*registration certificate UkrISTEI
№ 352 dated August 31, 2020*

Kharkiv
NUPh
2021

SELECTION OF ACTIVE INGREDIENTS FOR CREATING A NEW DOSAGE FORM BASED ON DECAMETHOXIN AND THIOTRIAZOLINE

Kucherenko L.I., Cherkovskaya L.G. Chonka E.O. Gura E.Y.

Zaporozhye, Ukraine

Introduction. The problem of oral candidiasis is relevant both among the adult population and in children due to frequent recurrence, the presence of a large number of predisposing factors, and lack of compliance with hygienic measures for the care of the oral cavity. The most common causative agent of oral candidiasis is *C. albicans*.

According to the World Health Organization (2005), up to 20% of the world's population at least once in a lifetime suffer various forms of candida infection. The number of patients is constantly growing. The inclusion of antibiotics in the complex therapy of bacterial infections without accompanying antimycotic therapy leads to the development of the disease. At a young age, acute forms of infection are more common, in the elderly, chronic.

Decamethoxin is one of the most famous drugs that has a bactericidal effect, which is used in medicine; its high toxicity in relation to flora is also known. Therefore, in order to neutralize the toxic effect of decamethoxin, it was decided to add an antioxidant-thiotriazoline.

According to this in the Zaporozhye State University at the Department of Pharmaceutical Chemistry has been asked to develop a new formulation containing decamethoxin and thiotriazolin.

Therefore, the aim of our work is the selection of active substances for the creation of a new dosage form based on decamethoxin and thiotriazoline.

Materials and methods. For this, model mixtures were made with decamethoxin content 0.5 mg; 1 mg; 1.5 mg; 2 mg; 2.5 mg; 3 mg and 5 mg at the same dose of thiotriazoline-200 mg. The study of the antimicrobial and fungicidal activity of the studied combinations was carried out by the method of diffusion in agar (well method) as a test of the strains of the diploid fungus (thrush)-*Candida albicans* ATCC 885-653, from which a microbial suspension was prepared with a concentration of colony-forming units (CFU) – 10⁷ CFU / ml and 10⁶ CFU / ml. The results were calculated by measuring the growth inhibition zones.

Results and discussion. As a result of studies, it was found that the investigated combinations exhibit antimicrobial and fungicidal activity at content decamethoxine from 0.5 to 5 mg tablets decamethoxine and thiotriazoline more intensely suppress the growth of the clinical strain *C. albicans*, sensitive to nystatin and nizoral, but 2 times resistant to fluconazole.

However, the maximum activity against the test strains of microorganisms the *C. albicans* is observed at a dose of 2 mg decamethoxin, both at a dilution of 10⁷ CFU / ml of medium and at a dilution of 10⁶ CFU / ml of medium. A further increase in the content of decamethoxin in the combination did not lead to a significant increase in antimicrobial and antifungicidal activity.

Conclusions. It was found that the combination of decamethoxin with thiotriazoline, at a dose of 2 mg decamethoxin, exhibits much more antimicrobial activity, thereby reducing the risk of resistance in pathologies caused by candida. This dosage form is successful for further research as a potential new drug for the treatment of diseases of the oral mucosa.