

МІНІСТЕРСТВО ОСВІТИ ТА НАУКИ УКРАЇНИ  
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ  
МЕДИЧНИЙ ІНСТИТУТ



**АКТУАЛЬНІ ПИТАННЯ**  
**ТЕОРЕТИЧНОЇ ТА КЛІНІЧНОЇ МЕДИЦИНИ**  
**Topical Issues of Theoretical and Clinical Medicine**

**ЗБІРНИК ТЕЗ ДОПОВІДЕЙ**  
V Міжнародної науково-практичної конференції студентів та молодих вчених  
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Each respondent eat dairy everyday, but 33% of 18 y.o. 30.5% of 19 y.o. 14% of 20 y.o. and 20% of 21 y.o. don't eat the fish at all.

It is noticed, that 60% of students have in their ration a fast-food such as snacks, porridges and soups of instant preparation and street food. There are 44.4% of 18 years old, 66.7% - 19 y.o., 52.7% of 20 y.o., 70% of 21 y.o. It is defined, that the females eat more fast-food (33% of 60%), herewith the maximal using is among 19 y.o. girls.

## THE PROBLEM OF PROLIFERATION METHICILLIN-RESISTANT *S. AUREUS*

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Staphylococci are natural inhabitant of human and animal skin but sometimes they can cause infections affecting many organs (endocarditis, toxic shock syndrome, sepsis, pneumonia and arthritis). Most staphylococci are responsible for skin infections such as boil, carbuncle, and furuncle and some cause food poisoning resulting in severe vomiting and diarrhea. Staphylococci also cause mastitis in cow and also cause joint infection leading to edema and arthritis. An emerging problem in treating *S. aureus* infections is the increasing resistance against antibiotics.

**The aim of this study was** to characterize problem of *S. aureus* antimicrobial resistance.

Some staphylococci and in particular *S. aureus* is methicillin-resistant (MRSA): hospital associated (HA-MRSA) or community associated (CA-MRSA), livestock associated (LA-MRSA). Infections caused by these resistant strains may be fatal because of lack of alternative antibiotics. MRSA are also frequently resistant to most of the commonly used antimicrobial agents, including the aminoglycosides, macrolides, chloramphenicol, tetracycline, and fluoroquinolones. MRSA strains should be considered to be resistant to all cephalosporins, cepheems, and other beta-lactams (such as ampicillin-sulbactam, amoxicillin-clavulanic acid, ticarcillin-clavulanic acid, piperacillin-tazobactam, and the carbapenems).

MRSA produces large numbers of extracellular proteins and toxins. The most important toxins are called Staphylococcal enterotoxins (SEs). There are 17 major serologically distinct SEs (SEA through SER with no SEF). In addition, the SEC has three antigenically distinct subtypes: SEC1, SEC2, SEC3, and SEG have a variant form called, SEGv. Many SEs are responsible for food poisoning, acute illness, fever, erythematous lesions, and hypotension. Enterotoxins are called superantigens, because they form a complex with MHC Class II molecules, activating T-cells to produce excess amounts of cytokines that contribute to diarrhea and fatal toxic shock syndrome.

*S. aureus* and MRSA evolve and adapt the changing environment. Therefore, dissemination of MRSA should be continuously monitored for the antibiotic susceptibility pattern and molecular epidemiology comprising hospital, community, and livestock settings.

## PECULIARITIES OF CHITOSAN MODIFICATION IN ORDER TO USE AS ANTIDOTE-THERAPEUTIC AGENT

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Perspective of chitosan' use as antidote-therapeutic agent at acute intoxications by epoxide compounds is high interest, because different xenobiotics containing epoxy groups can interact with functional groups of proteins with their inactivation.