

<http://dx.doi.org/10.1016/j.ijid.2016.02.312>**Type: Poster Presentation**

Final Abstract Number: 41.119

Session: Poster Session I

Date: Thursday, March 3, 2016

Time: 12:45-14:15

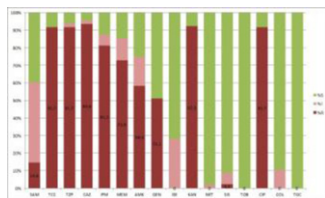
Room: Hall 3 (Posters & Exhibition)

The sensitivity to antibiotics of nosocomial strains of acinetobacter baumannii isolated in the tertiary hospitals in the Central KazakhstanI. Azizov^{1,*}, A. Lavrinenko², D. Babenko¹, N. Bisenova², Y. Zakharova³, A. Cheska⁴, S. Kolesnichenko¹¹ Karaganda State Medical University, Karaganda, Kazakhstan² National Scientific Medical Center, Astana, Kazakhstan³ Diagnostic Lab, Almaty, Kazakhstan⁴ Transilvania University, Brasov, Romania

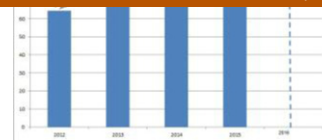
Background: Acinetobacter baumannii are one of main bacterial pathogen caused nosocomial infection according International Guidelines of Infection Control (2015). Last 4 years the part of nosocomial infection caused by Acinetobacter baumannii are dramatically grows.

Methods & Materials: In the multicenter study 200 strains of Acinetobacter baumannii were collected in period 2012–2015yy. Strains were collected in 3 tertiary hospitals in the Central Kazakhstan. All strains were identified by MALDI-TOF mass-spectrometry and typed by PCR detection of OXA-51 carbapenemase as A.baumannii specific label. The sensitivity testing were by micro dilution methods with CLSI criteria using. The OXA-23 and OXA-40 carbapenemases genes detection made by PCR with commercial kits (Interlab Service, Russia). The statistical analysis (MIC90, average MIC, 95% Confidential Interval) was made by WhoNet 6.2 database.

Results: All isolated strains are resistance to main part of antimicrobial drug (pic. 1). During fourth years period the resistance to carbapenems were increased: to imipenem 64,5%; 95%CI 45,5–80,2 (2012 year) to 81,2; 95%CI 66,8–90,5 (2015 year). The resistance growth by logarithmic dependence ($y = 12,257 \ln(x) + 65,537$; $R^2 = 0,9612$). The testing of general linear hypothesis in regression situation for logarithmic model can predict level of resistance in 2016 at over 85% (pic.2). The dynamic of increasing to meropenem was the same and changed from 61.3% (2012) to 84,5% (2015y). In all cases of resistance to carbapenems the gene blaOXA-23 carbapenemase was detected. The quantitative characteristics of



Pic 1. The resistance to antibiotics of nosocomial strains A.baumannii isolated in the Central Kazakhstan's tertiary hospitals (2015).



Pic 2. The dynamic of the resistance to imipenem of nosocomial strains A.baumannii isolated in Central Kazakhstan's tertiary hospitals (2012–2015yy).

Table 1

The sensitivity to antimicrobials of nosocomial strains A.baumannii isolated in fourth tertiary hospitals in the Central Kazakhstan (2012–2015yy).

Antimicrobials	2012	2013	2014	2015
Imipenem	64,5	66,8	80,2	81,2
Meropenem	61,3	63,5	78,9	84,5
Tobramycin	100	100	100	100
Netilmycin	97,9	97,9	97,9	97,9
Sisomicin	91,3	91,3	91,3	91,3
Colistin	89,6	89,6	89,6	89,6
Tigecycline	100	100	100	100

sensitivity to antimicrobials are present in table 1. The high part of studied strains were sensitivity to aminoglycosides: netilmycin (97,9%), sisomicin (91,3%), tobramycin (100%) and colistin (89,6%) and tigecycline (100%). However all preparations mentioned above are not registered in Kazakhstan so can't using for treatment infections caused A.baumannii.

Conclusion: The resistance to carbapenems in the fourth tertiary hospitals in the Central Kazakhstan are increased during 2012–2015yy. The major cases of resistance to beta-lactams were linked with OXA-23 carbapenemase production. Some part of antibiotics (netilmycin, sisomicin, tobramycin, colistin and tigecycline) has high activity against studied nosocomial strain of A.baumannii but this drug not registered in Kazakhstan.

<http://dx.doi.org/10.1016/j.ijid.2016.02.313>**Type: Poster Presentation**

Final Abstract Number: 41.120

Session: Poster Session I

Date: Thursday, March 3, 2016

Time: 12:45-14:15

Room: Hall 3 (Posters & Exhibition)

Computer assisted rational design and synthesis of some novel 2,4-di-substituted thiazole derivatives and their metal complexes (copper, cobalt, and nickel) as inhibitor of bacterial metabolic enzymesD. Kar Mahapatra^{1,*}, S.K. Bharti²¹ Guru Ghasidas Vishwavidyalaya (A Central University of India), Bilaspur, Chhattisgarh, India² Guru Ghasidas Vishwavidyalaya (A Central University of India), Bilaspur, India

Background: Recent clinical reports have highlighted the increasing occurrence of methicillin-resistant Staphylococcus aureus (MRSA), vancomycin-resistant enterococci (VRE) and other antibiotic-resistant human pathogenic microorganisms. Transition metal complexes of heterocyclic moieties or/with Schiff's base components have been reported to show promising nucleolytic activity. In an effort to develop newer generation low molecular