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# **INFECTION CONTROL AND CLINICAL MICROBIOLOGY**

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### The resistance to antibiotics of *Staphylococcus aureus* strains isolated from hospitalized patients in Universities Hospitals from Cluj Napoca, Romania

**Background:** *Staphylococcus aureus* infections remain a serious medical problem and prompt initiation of appropriate antimicrobial chemotherapy is important to improve the prognosis of these infections.

**Methods:** All cultures were incubated into the BacT/alert (Biomérieux) blood culture system. Species identification was achieved by standard procedures and by the automated system Vitek 2 (Biomérieux). The susceptibility to antibiotics was performed using the disk diffusion method (Kirby-Bauer) according to the CLSI criteria and by Vitek 2 System, for a total of 1268 strains (855 in Greece and 248 in Romania).

**Results:** From 6494 blood cultures sets, positive cultures were 855 (13,2) and 51 of them (5,9%) yielded *Staphylococcus aureus*. 34.3% of *S. aureus* isolated strains were MRSA in Romania. 47.1% of the *S. aureus* tested strains were resistant to clindamycin in Ro. All the *S. aureus* strains tested to glycopeptides antibiotics and the second line antistaphylococcal antibiotics: linezolid, quinupristin/dalfopristin was found sensitive. 16.7% of all strains were resistant to gentamicin in Ro. Moderately increased percentages of resistance were found by testing the strains to ciprofloxacin in Ro (20.3%). Low levels of resistance were observed by testing the strains to trimethoprim/sulfamethoxazole (3.9%) in Ro. All the *S. aureus* strains tested were sensitive to all antibiotics in 2016.

**Conclusion:** The majorities of the isolated strains were MSSA and exhibited higher % susceptibility, in contrast to those that isolated in 2016. Therefore, the policy that was adapted to avoid the spread of resistant strains was effective and recommended the need to introduce the control program in Romania.

#### **Biography**

L M Junie is a Professor, Head Microbiology Department in Iuliu Hatieganu University of Medicine and Pharmacy, Cluj Napoca, Romania. She is a Coordinator of Resident Doctor's in the Laboratory Medicine specialty and Leadership PhD Doctor's thesis in Medicine field. She is a Board Member of European professional Societies ESCMID (ESGCP Study Groups), Society of Chemotherapy, Scientia Parasitologica Pro Vita and is a Reviewer of international reviews, Member of International organizations, Director/Coordinator in research projects. She has more than 63 papers published in full in international journals and is an Editorial Board Member of national reviews. She is an Organizer/President, Keynote, Invited Speaker and Chair of International and National Congresses.

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