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Editorial

Antimicrobial Resistance and Need for New Drugs

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During the past 50 years the significant efforts in the diagnosis and treatment of microbial diseases was achieved leading to impressive gains in the treatment of microbial diseases by introduction a range of therapeutic strategies in clinical practice. However, in spite of a large number of antibiotics and chemotherapeutics available for medical use the antimicrobial resistance continues to be a serious problem due to the emergence and wide spread of microbes, especially Gram-positive bacteria.

The newsletter of the World Health Organization (WHO) No. 194, mentioned that resistance to antibiotics is no longer a forecast for the future, and world are going to "post-antibiotic era" in which common infections and minor injuries, which were treatable for decades, can still be fatal.

The reasons why bacteria express high level of resistance are:

- They are multiplying extremely fast
    - Have the ability to exchange genes with each other
    - The development of new antimicrobial agents with a new mechanism of action is relatively slow.

Since the last 30 years only two such agents were approved by FDA. They are Linezolid and Daptomycine. Thus , the problem of resistance and development of new agents able to overcome it is still attract the interest of scientific community.

One way to avoid the resistance problem is the development of new agents with completely different mode of action, in order to escape from cross resistance with existing drugs. One example of such agent is already mentioned Linezolid, which is effective against Gram-positive bacteria.

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