

عنوان مقاله:

Antimicrobial effect study of carbon nanotubes on acinetobacter baumannii in order to prevent nosocomial infections

محل انتشار:

سومین کنگره بین المللی و پانزدهمین کنگره ملی ژنتیک ایران (سال: 1397)

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خلاصه مقاله:

Background: Acinetobacter baumannii (AB) is critical for healthcare-associated infections (HAI) with significant regional differences in the resistance rate, but its risk factors and infection trends has not been well studied. Carbon nanotubes (CNTs) are essentially cylindrical molecules made entirely of carbon atoms and can be used as nanocarriers. Multi-wall carbon nanotubes (MWCNTs) through their unique properties hold great promise in the fight against multidrug-resistant bacterial infections. Aim: In this study Antimicrobial effects study of carbon nanotubes on Acinetobacter baumannii in order to prevent nosocomial infections was done. Methods: Multi-wall carbon nanotubes were provided from US Research and Cell viability assay was carried out after incubation of Acinetobacter baumannii with the CNTs suspensions (100 μ g ml⁻¹) for 24 h by Microplate Alamarblue Assay (MABA) method. Results: Antimicrobial potential of carbon nanotubes on Acinetobacter baumannii was found based on the color change associated with the specified concentration range on the bacterial growth rate. Conclusion: This study showed that carbon nanotubes can have antimicrobial effects on Acinetobacter baumannii although to get more accurate results, we are doing more specialized cellular and molecular investigation

کلمات کلیدی:

(Antimicrobial activity, Acinetobacter baumannii (AB), Carbon nano tubes (CNTs)

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