

عنوان مقاله:

Frequency of MRPA, PGP gene in drug resistance in Leishmania tropica and Leishmania major

محل انتشار:

کنفرانس بین المللی ژنتیک و ژنومیکس انسانی (سال: 1400)

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خلاصه مقاله:

Backgrounds: The aim of this study was to investigate the presence of two PGP and MRPA Efflux pumps related to ABC transporters and investigate the frequency and function of two MRPA (pgpa gene) and PGP (mdr1 gene) pumps in drug resistance in clinical strains of Leishmania tropica and Leishmania major in cutaneous leishmaniasis and study of Leishmania resistance to antimony compounds. **Materials and Methods:** In this study, 40 volunteers with leishmaniasis were randomly selected after Sampling of wound with a light microscope amastigotes examining, then inoculated into a specific two-phase NNN culture medium, Then DNA extraction was performed by phenol chloroform method and then primers were identified with specific primers in ITS region, and the frequency of these two pumps involved in drug resistance was determined by PCR and specific primers. **Results:** The results of the study of selected samples showed the frequency of mdr1 gene was higher than of mrpa gene. **Conclusion:** Probably the reason for the increase in the frequency of MDR pump compared to MRPA pump is the presence of MDR pump on the surface of plasma membrane, which transfers materials and drugs from the internal layers of the lipid bilayer membrane to the outer layers, reducing the concentration of the drug inside the cell and causing resistance. While the MRPA pump is in the cell organelle membrane.

کلمات کلیدی:

ABC transporter, Glucantim, Leishmaniasis, mdr1 gene, pgpa gene

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