

عنوان مقاله:

Providencia rettgeri (Proteobacteria: providencia) bacteria, proper candidate for paratransgenesis

محل انتشار:

دومین کنگره بین المللی بیماریهای منتقله بوسیله ناقلین و تغییرات آب و هوایی و چهارمین کنگره ملی حشره شناسی پزشکی ایران
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خلاصه مقاله:

Background: Malaria is an important mosquito-borne infectious disease that affects human s community. In 2017, an estimated 219 million cases of malaria occurred worldwide. The diseases is important in Iran and has a national goal to eliminate malaria by 2025. *Anopheles fluviatilis* known one of the main vector of disease in Iran. Parateransgenesis is new tools that introduced to vector control. Identification of microorganisms symbionts of mosquitoes, genetic manipulation and recombinant selected genes which are affecting, limiting and stopped the plasmodium life cycle. **Objectives:** The objective of the present study was to identify suitable parateransgenesis bacteria candidates to develop an effective strategy for malaria control in Iran. **Materials and Methods:** Standard dipping and Pyrethrum space spray sheet collection methods carried out in three selected villages, Sistan & Baluchistan Province. The microflora of the surface and gut of various stages of *Anopheles fluviatilis* James was studied using biochemical and molecular techniques. The biochemical techniques performed using diagnostic test kits, API 20E and BHI, and genomic DNA extraction by boiling techniques. **Results:** Twelve bacteria species were found including; *Providencia rettgeri*, *Morganella morganii*, *Enterobacter aerogenes*, *Pseudomonas oryzihabitans*, *Citrobacter braakii*, *Citrobacter freundii*, *Aeromonas hydrophila*, *Klebsiella oxytoca*, *Citrobacter koseri*, *Serratia fonticola*, *Enterobacter sakazakii*, *Yersinia pseudotuberculosis*. The species of *Alcaligenes faecalis*, *Providencia vermicola* and *Enterobacter hormaechei* were identified in various stages of the *An.fluviatilis* and confirmed by biochemical and molecular

techniques. Conclusion: It is the first formal report due to bacterial flora of the *Anopheles fluviatilis* in southeastern Iran. We suggested *Providencia rettgeri* proper candidate for paratransgenesis. Genetic manipulation and recombinant selected genes on this bacteria is recommended in the future

کلمات کلیدی:

Malaria, *Anopheles fluviatilis*, microflora, Paratransgenesis. Southeastern Iran

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