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## Antibiotic resistance in lactic acid bacteria isolated from human dental plaque

S Nouri Gharajalar  
Tabriz University, Iran

Dental caries is a significant public health problem which results in destruction of the calcified tissues of tooth. *Lactobacillus* has been reported to occur in high numbers in dental caries. The aim of this study was to screen for the incidence of *Lactobacillus* from cases of dental caries and to determine the antibiotic resistance profile of them. Specimens from dental plaque were collected from 30 patients. Phenotypic and molecular methods were used for identification of *Lactobacillus*. The antimicrobial sensitivity test was performed to determine their resistance to 7 antibiotics. Then molecular detection of antibiotic resistance genes was carried out using Multiplex PCR method. Out of

30 dental plaque samples, *Lactobacillus* was isolated from 14 (46/6%) of them. *mecA* gene was the most important determinant responsible for penicillin resistance. Also bla TEM gene had greater role in Cefazolin and Cefixime resistance than *bla SHV*. *bla SHV* and *bla OXA-1* genes had the same part in Amoxicillin-Clavulanic acid resistance. Also tetracycline resistance caused by both *tetK* and *tetM* genes identically. In conclusion *Lactobacillus* have important role in the formation of dental plaque which usually shows multidrug resistant patterns to commonly used antibiotics.

e: saharounori@hahoo.com