

Antagonistic Potential against Pathogenic Microorganisms and Hydrogen Peroxide Production of Indigenous Lactobacilli Isolated from Vagina of Chinese Pregnant Women¹

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Objective To investigate the indigenous lactobacilli from the vagina of pregnant women and to screen the isolates with antagonistic potential against pathogenic microorganisms. **Methods** The strains were isolated from pregnant women's vagina and identified using the API50CH system. The ability of the isolates to produce hydrogen peroxide was analyzed semi-quantitatively using the TMB-HRP-MRS agar. The antagonistic effects of the isolates on pathogenic microorganisms were determined with a double layer agar plate. **Results** One hundred and three lactobacilli strains were isolated from 60 samples of vaginal secretion from healthy pregnant women. Among them, 78 strains could produce hydrogen peroxide, in which 68%, 80%, 80%, and 88% had antagonistic effects against *Candida albicans* CMCC98001, *Staphylococcus aureus* CMCC26003, *Escherichia coli* CMCC44113, and *Pseudomonas aeruginosa* CMCC10110, respectively. **Conclusion** The recovery of hydrogen peroxide-producing lactobacilli decreases with the increasing pregnant age and time. The most commonly isolated species from vagina of Chinese pregnant women are *Lactobacillus acidophilus* and *Lactobacillus crispatus*. Most of *L. acidophilus* and *L. crispatus* produce a high H₂O₂ level.

Key words: Lactobacilli; H₂O₂; Pregnant women; Antagonistic; Pathogen

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