Cite this as: Zhijing LIU, Cong XU, Ran TIAN, Wan WANG, Jiage MA, Liya GU, Fei LIU, Zhanmei JIANG, Juncai HOU. Screening beneficial bacteriostatic lactic acid bacteria in the intestine and studies of bacteriostatic substances[J]. Journal of Zhejiang University Science B, 2021, 22(7): 533-547.
http://doi.org/10.1631/jzus.B2000602

Screening beneficial bacteriostatic lactic acid bacteria in the intestine and studies of bacteriostatic substances

Key words: Intestinal lactic acid bacteria (LAB), Screening, Probiotic, Bacteriostatic substances

JZUSB

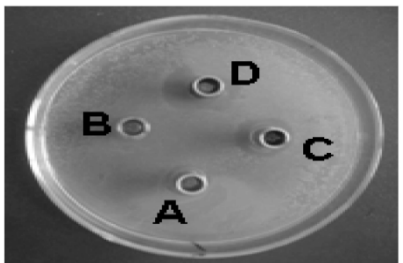
Research Summary

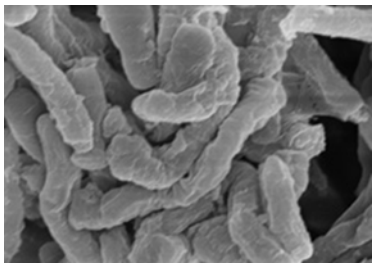
This review mainly focused on the screening of beneficial bacteriostatic LAB in the intestine, and the identification of bacteriostatic substances, and summarized their characteristics in the following aspects:

- **Isolated from the feces of healthy Chinese adults**
- **Acid resistance, bile salt resistance, epithelial cell adhesion and safety**
- **High antibacterial activity**
- **Main antibacterial substances of LAB are organic acids and bacteriocins with broad-spectrum antibacterial activity**







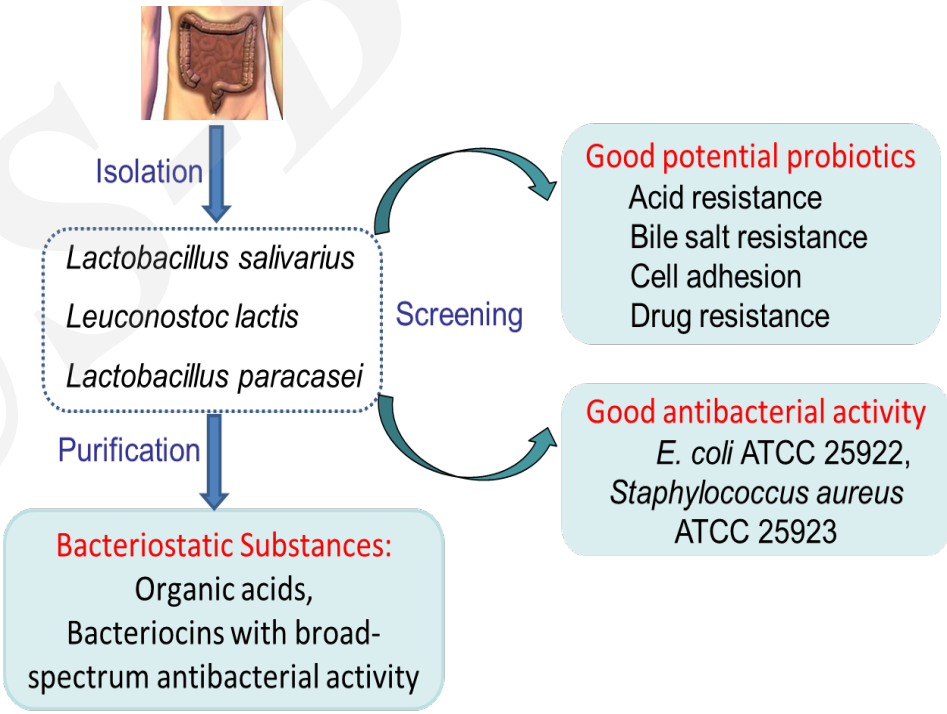


Innovation points

- **Introduction** of the good potential beneficial and safety of three strains of LAB isolated from the feces of healthy Chinese adults.

- **Summary** of the good antibacterial activity about these LAB against *E. coli* ATCC 25922 and *Staphylococcus aureus* ATCC 25923.

- **Emphasis** of the organic acids and bacteriocins were main antibacterial substances of newly discovered LAB.



Highlights

Several highlights of this research are listed to summarize important knowledge about LAB.

1. **Beneficial bacteriostatic LAB existed in healthy adults intestine.**
2. **LAB with good potential beneficial effects and safety were screened.**
3. **Antibacterial substances of LAB were organic acids and bacteriocins.**
4. **Bacteriocins produced by LAB had broad-spectrum antibacterial activity.**

JZUS-B