Investigating the Effect of Lactobacillus casei and Lactobacillus rhamnosus on the Pattern of Gene Expression of Esophageal Squamous Carcinoma Cell Line (Kyse-30)

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Abstract:

The aim of this study was to investigate the effect of Lactobacillus casei and Lactobacillus rhamnosus on the pattern of gene expression of esophageal squamous carcinoma cell line (Kyse-30). The cell line was induced with or without probiotics for 48 hours, and then gene expression was measured using reverse transcription-quantitative polymerase chain reaction (RT-qPCR).

Results:

The results showed that Lactobacillus casei and Lactobacillus rhamnosus had a significant effect on the pattern of gene expression of the esophageal squamous carcinoma cell line (Kyse-30). The expression of genes related to cell proliferation and cell survival was reduced in the presence of probiotics.

Conclusion:

Lactobacillus casei and Lactobacillus rhamnosus have a beneficial effect on the pattern of gene expression of esophageal squamous carcinoma cell line (Kyse-30) and could be used as a potential therapeutic agent for the treatment of esophageal squamous carcinoma.

Keywords:

Lactobacillus casei, Lactobacillus rhamnosus, esophageal squamous carcinoma, gene expression, probiotics.