CLAIMS

1. A *Lactobacillus plantarum* CJLP17 strain deposited under accession No. KCCM12249P, having acid resistance, bile resistance, and an immune-enhancing activity.

2. The strain of claim 1, wherein the strain has an antibacterial activity against pathogenic microorganisms.

3. The strain of claim 2, wherein the pathogenic microorganism is at least one selected from the group consisting of *E. coli, enterotoxigenic E. coli, Staphylococcus aureus, Salmonella typhimurium,* and *Vibrio parahaemolyticus*.

4. The strain of claim 1, wherein the strain increases secretion of cytokines by promoting activation of immune cells.

5. The strain of claim 4, wherein the cytokine is IL-12, IL-10, or TGF-beta.

6. The strain of claim 1, wherein the strain has an antiviral activity against porcine epidemic diarrhea virus (PEDV).

7. The strain of claim 1 for use in a method of promoting growth of livestock or reducing diarrhea incidence rate when administered to livestock via an oral route.

8. A composition comprising the *Lactobacillus plantarum* CJLP17 strain of claim 1 or a culture thereof.

9. The composition of claim 8, wherein the composition further comprises a cryoprotectant or an excipient.

10. The composition of claim 9, wherein the cryoprotectant is at least one selected from the group consisting of glycerol, trehalose, maltodextrin, skim milk powder, and starch, and the excipient is at least one selected from the group consisting of glucose, dextrin, and skim milk.

11. The composition of claim 8, wherein the composition has an antibacterial activity against pathogenic microorganisms.

12. The composition of claim 11, wherein the pathogenic microorganism is at least one selected from the group consisting of *E. coli, enterotoxigenic E. coli, Staphylococcus aureus, Salmonella typhimurium, and Vibrio parahaemolyticus*.

13. The composition of claim 8, wherein the composition enhances immunity.

14. A feed additive comprising the *Lactobacillus plantarum* CJLP17 strain of claim 1 or a culture thereof.

15. A functional food comprising the *Lactobacillus plantarum* CJLP17 strain of claim 1 or a culture thereof.