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### Fluorescent *In Situ* Hybridization Analysis of Cecal Microflora in Rats Simultaneously Administrated *Lactobacillus rhamnosus* KY-3 and Cellobiose

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The cecal microflora of rats coadministered *Lactobacillus rhamnosus* KY-3 (*L. rhamnosus* KY-3) and cellobiose was analyzed by fluorescence *in situ* hybridization. When compared with *L. rhamnosus* KY-3 administration alone, simultaneous administration of *L. rhamnosus* KY-3 and cellobiose led to an increase in the number of lactic acid bacteria (LAB), particularly *L. rhamnosus*, and a significant decrease in the number of Gammaproteobacteria in the cecum. These results indicate that administration of *L. rhamnosus* KY-3 cells passed through the upper digestive tract to the cecum where it is likely that they proliferated through the assimilation of cellobiose.

**Keywords:** [Lactobacillus rhamnosus](#), [cellobiose](#), [microflora](#), [FISH](#), [cecum](#), [synbiotics](#)

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