

Isolation and Identification of *Lactobacillus kimchicus* sp.nov and Bioconversion of Ginseng Saponin

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Ginseng contained many different kinds of saponin which was the most valuable for people, but its yield cannot satisfy the demand using traditional extract methods. Enzyme transformation is a conformable and highly performed method which was fit for today. A β -glucosidase producing bacterium (DCY51^T) was isolated from Korean fermented-vegetable food kimchi. The 16S rRNA gene sequence analysis revealed that the strain DCY51^T belongs to the genus *Lactobacillus*. The highest sequence similarity was found with *Lactobacillus paracollinoides* LMG 22473^T and *Lactobacillus collinoides* LMG 9194^T with levels of 16S rDNA similarity of 97.4% and 97.3%, respectively. Based on the above results the strain DCY51^T placed in the genus *Lactobacillus* and proposed a new species, *Lactobacillus kimchicus* sp. nov. DCY51^T (= KCTC 12976^T = JCM 15530^T). It was culture solution reacted with Red Ginseng extract and Rb₁, respectively. The medium of bacteria was the liquid of MRS, the temperatures of growing and reacting between bacteria liquid and saponin were samely 37°C, there spective reacting time were 12 hours and 48 hours. Thus we got different saponins, and TLC and HPLC analysis showed that: enzyme respectively reacted with Rb₁ and Red Ginseng extract got the transformed saponin, respectively. The polarity position in TLC was a little higher than Rd; and the polarity position was the same as that of Compound K's, the saponin obtained from HPLC and other experimental results was not Compound K. The constitution of its saponin was hoped to be further confirmed.