



The 3rd International Conference on Food Factors

# The 3rd International Conference on Food Factors: Physiologic Functions and Disease Risk Reduction

**[ICOFF-3]**



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ABSTRACTS

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## **P167** Effects of an Exopolysaccharide (Kefiran) on Lipids, Blood Pressure, Blood Glucose, and Constipation

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Kefir is a popular fermented milk in the Caucasian regions that uses kefir grains as a starter. *Lactobacillus kefiranofaciens* isolated from kefir grains was reported to produce an exopolysaccharide named kefiran. In the present study, we developed a new medium, rice hydrolyzate (RH) medium, for the culture of *L. kefiranofaciens*. Compositional analysis, methylation analysis, specific rotation and <sup>1</sup>H and <sup>13</sup>C NMR spectroscopy revealed that the exopolysaccharide produced by *L. kefiranofaciens* from RH medium was composed of a hexasaccharide repeating unit, and essentially identical to kefiran reported in previous works. A study on the effects of kefiran in animals demonstrated that kefiran significantly suppressed the increase of blood pressure and reduced the serum cholesterol levels in SHRSP/Hos rats when subjects consumed excessive dietary cholesterol. Kefiran supplementation showed a significant influence on lowering blood glucose in KKAY mice. In addition, the administration of kefiran in constipated SD rats caused an obvious improvement of the fecal moisture and wet weights of feces. These results suggest that kefiran could be used as a functional food to prevent some diseases that occur very frequently these days.