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## **Protective effects of natural and partially degraded konjac glucomannan on Bifidobacteria against antibiotic damage**

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### **Highlights**

- ◆ Konjac glucomannan (KGM) were partially degraded by ultrasound and further by acid.
- ◆ Native and degraded KGM were applied to bifidobacterial cultures exposed to antibiotics.
- ◆ US-degraded KGM most effectively protected Bifidobacteria against antibiotic inhibition.
- ◆ The protection was attributable to adsorption of antibiotics and formation of biofilm.

### **Abstract**

This study was to evaluate the protective effects of a dietary fiber, konjac glucomannan (KGM) from the plant tuber of *Amorphohallus konjac* on *Bifidobacteria* against antibiotic damage. KGM ( $\sim 8.8 \times 10^8$  Da) was partially degraded with high-intensity ultrasound to KGM-US ( $\sim 1.8 \times 10^6$  Da) and then hydrolyzed with trifluoroacetic acid (TFA) to KGM-AH (1369

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