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Protection of Bifidobacterial cells against antibiotics by a high molecular weight exopolysaccharide of a medicinal fungus Cs-HK1 through physical interactions

Yu-Heng MAO ^a, Ang-Xin SONG ^a, Zhao-Mei Wang ^b, Zhong-Ping YAO ^{a, *}, Jian-Yong WU ^{a,*}

^aDepartment of Applied Biology & Chemical Technology, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong

^bSchool of Food Science & Engineering, South China University of Technology, Guangzhou, China

* *Corresponding author:*

Tel: +852 3400 8671; fax: +852 2364 9932.

E-mail: jian-yong.wu@polyu.edu.hk (J.Y. Wu).

Abstract

This study was to assess the protective effect of exopolysaccharide (EPS) produced by a medicinal fungus *Cordyceps sinensis* Cs-HK1 on *Bifidobacteria* against antibiotic inhibition. The high-molecular weight EPS fractions showed significant protective effect on all five bifidobacterial strains against four common antibiotics, leading to a dramatic increase in the minimal inhibitory and minimal bactericidal concentrations. The protective effect of EPS on the bacteria was probably attributed to the formation of a viscous layer around the bacterial

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