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## Effect of edible fungal polysaccharides on improving influenza vaccine protection in mice

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Fungal polysaccharides have been shown broad spectrum of biological activities, including anti-inflammatory, ant-oxidative and improve immunity. However, oral administration of fungal polysaccharides for rendering the conventional vaccine against influenza virus has been reported rarely. Here, we investigated the potential of fungal polysaccharides enhancing the influenza vaccine efficacy in a mouse model. Mice were immunized with inactivated H1N1 (A/PR8/1934) influenza vaccine combined with oral polysaccharides lentinan, tremellan, pachymaran and a mixture of the three. The results showed that mice in the polysaccharides/vaccine groups had reduced morbidity, improved viral clearance and recovered faster than the mice receiving the conventional vaccine only after infection. This effect could be attributed to the increased levels of virus-specific serum antibody IgG and decreased levels of inflammatory cytokine IFN- $\gamma$  in the lung tissue. Our finding suggests that taking fungal polysaccharides orally might be useful for improving the efficacy of conventional inactive influenza vaccines.

### Biography

Minghua Hu is currently working as R&D Lead Engineer at Infinitus (China) Company Ltd. that is engaged in Chinese herbal plantations, R&D, production, sales and service of TCM health products. She is also one of the Principle Members of Joint Laboratory for the Research of Chinese Herbal Polysaccharides-Chinese Academy of Science Shanghai Institute of Materia Medica and Infinitus. She has published more than 20 papers in reputed journals.

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