

**Eblast for Wu immunity research:**

**Email Subject line: Study results suggest white button mushrooms may enhance immune function in mice (Ren abstract, title and sentence #11)**

Mushrooms may help maintain a healthy immune system (approved key messages, pg. 1, line 15). This property of mushrooms was supported recently in a study published January 2008 in *The Journal of Nutrition* ([view the abstract](#)). The study, "White button mushroom enhances maturation of bone marrow-derived dendritic cells and their antigen presenting function in mice," was conducted by researchers at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University.

**Key points:**

- Mushrooms have been shown to enhance the body's immune response, an action that may be related to mushrooms' antitumor actions (Ren abstract, sentence #1).
- Dendritic cells (DC) play a key role in immune response by linking innate and adaptive immune responses (Ren abstract, sentence #4).
- This study examined the effect of cellular supplementation of white button mushrooms at varying doses (50, 100, or 200 mg/L) on the maturation of bone marrow-derived dendritic cells in mice (Ren abstract, sentences #5-6).
- Results showed that mushrooms supplementation increased the expression of maturation markers in a dose-dependent manner and enhanced their antigen-presenting function (Ren abstract, sentences #7-10).
- This in vitro research suggests that white button mushrooms may promote both innate and T cell-mediated immunity against microbial invasion and tumor development (Ren abstract, sentence #11).

The current study builds on other research by Wu's team on white button mushrooms, the variety that makes up 90% of total mushrooms consumed in the United States (Ren abstract, sentence #2). In 2007, Dr. Wu's team found that supplementation of mice with white button mushrooms enhanced natural killer cell activity ([view the abstract](#)) (Wu abstract, title). Those in vivo results suggested that increased intake of white button mushrooms may increase innate immunity to tumors and viruses through this mechanism (Wu abstract, second-to-last sentence).

Visit [www.mushroominfo.com](http://www.mushroominfo.com) for more links to published research on mushrooms and health.

Best,  
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**References:**

Ren Z, Guo Z, Meydani SN, Wu D. White button mushroom enhances maturation of bone marrow-derived dendritic cells and their antigen presenting function in mice. *The Journal of Nutrition*. 2008;138:544-550.

Wu, D, Pae M, Ren Z, Guo Z, et al. Dietary Supplementation with White Button Mushroom Enhances Natural Killer Cell Activity. *The Journal of Nutrition*. 2007;137:1472-1477.