

Can Bioactive Polysaccharides and Proteo-Polysaccharides from Medicinal Mushrooms Benefit Women with Malignant Breast Tumors?

Alice W. Chen¹ & John Seleen²

¹1730 Penfield Rd. #41, Penfield, NY 14526, USA, email: alicewchen@msn.com; ²JHS Natural Products, P.O. Box 50398, Eugene, OR 97405, USA, email: www.jhsnp.com

In view of the staggering statistics of women, especially menopausal women, who are afflicted with malignant breast tumors, there is an urgent need to seek effective measures to combat such sweeping health problems. The World Health Organization (WHO) predicts that more than 1.2 million women worldwide may develop breast cancer this year. In the United States of America alone, 1,370,910 new cases of breast cancer may be documented in 2005, estimated by the American Cancer Society. One in eight women may experience breast cancer in her lifetime.

Prominent species of medicinal mushrooms have a long-standing history of being used for health benefits, including antitumor effects, particularly in China, Japan, and Russia. We are examining bioactive polysaccharides and proteo-polysaccharides from selected species of medicinal mushrooms, in adjunct use with conventional cancer treatment. Our interest is in center therapy with immunoceuticals, imunomodulating components from medicinal mushrooms, which are effective by oral intake. Bioactive polysaccharides and proteo-polysaccharides in the category of imunoceuticals from *Ganoderma lucidum* (W.Curt.:Fr.) Lloyd, *Grifola frondosa* (Dicks.:Fr.) S.F.Gray, and *Trametes versicolor* (L.:Fr.)Pilát will be examined for their potential to alleviate the devastating side effects of conventional cancer

treatments, such as presurgery hormonal therapy or chemotherapy to shrink the size of tumor, surgery, as well as postsurgery radiation therapy, chemotherapy, or hormonal therapy. Exciting initial results of a case study of a stage II breast cancer patient who uses bioactive polysaccharides from medicinal mushrooms during chemotherapy will be reported.

The project is designed as a forum to raise questions, evoke discussions, and seek evidence-based information. The intended audience is laymen at large and medical professionals, who are currently in practice. Sample questions in brainstorming include cell-receptor for glucans, autoimmune diseases, antioxidants, use of vitamin C, potential cross-drug interaction, toxicity, safety in use, contraindications, who should avoid using such components, and how can breast cancer patients benefit.

To provide bioactive mushroom polysaccharide and proteo-polysaccharide in adjunct use to conventional cancer treatment is a vitally important area, to which medicinal mushroom science and industry can contribute. More quality large-scale longitudinal clinical studies as well as case studies with specific information are encouraged. Attention is called to mushroom growers to produce high-standard, organically grown mushrooms as a source of effective polysaccharides and proteo-polysaccharides with efficacy for cancer and other uses.