

## Synergy of Ganoderma lucidum Extract ReishiMax and Green Tea Polyphenols Tegreen in Anti-Cancer in a S180-inoculation model

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### ABSTRACT

Ganoderma lucidum (GL, or Reishi) and green tea have been used as folk medicines in China for cancer prevention and adjuvant therapy. Screening of commercial GL products showed that ReishiMax (RM) is superior to other commercial products in inhibiting cancer malignancy (Sliva, J Altern Compl Med 2003, 9:491). RM or Tegreen (TG; containing >98% tea polyphenols) inhibits the proliferation, colony formation, migration and invasive behaviors of human breast cancer cells (Sliva, Acta Pharmacol Sinica 2006, suppl.1:338). The inhibitory effects were enhanced profoundly by combining RM & TG. Chemical comparisons showed higher amounts of triterpenes and polysaccharides and more triterpene species in RM. Immune profiling demonstrated that RM enhances proliferations of macrophages, B, T and NK lymphocytes. It increases serum IgA, IgG & IgM, and IL2 secretion, but decreases IL5 secretion. In vivo studies were conducted to confirm the synergistic effects of the 2 anti-cancer herbs in cancer mice inoculated with S180 sarcoma cells. Treatment with RM+TG for 12 days delayed the death of S180-inoculated mice and reduced the death risk in this early malignant phase after S180-inoculation, compared to controls. The data demonstrates synergy in vivo of RM and TG in anti-sarcoma, suggesting potential therapeutic values for cancer prevention and adjuvant cancer treatment in humans.

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