

**Synergistic Anticancer Activities by Combined Treatment of
Red Ginseng Acidic Polysaccharide (RGAP) and *Lentinus edodes***

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Abstract

Red ginseng acidic polysaccharide (RGAP) from Korean red ginseng (*Panax ginseng* C.A. Meyer) has been reported to have immunomodulatory and anticancer activities (1). And also, a synergistic effect of RGAP and paclitaxel was found to effect an increased tumoricidal activity of macrophages, showing the usefulness of RGAP as an adjuvant in cancer chemotherapy of paclitaxel (2). Among mushrooms, *Lentinus edodes* was also reported to have immunostimulating activities in animal tumor model system (3). This study was carried out to evaluate synergistic anticancer activity of *Lentinus edodes* water extract (LEWE) combined with RGAP by examining survival rates and tumor weights in tumor-bearing mice. The combined treatment of RGAP (50 mg/kg) and LEWE (50 mg/kg) exhibited 70% of survival rate in life span of sarcoma 180-bearing mice, while single treatment of RGAP (50 mg/kg) and LEWE (50 mg/kg) exhibited 30 and 30% of survival rates, respectively. In addition, when RGAP (50 mg/kg) was administered in combination with LEWE (50 mg/kg) to B16 melanoma-bearing mice, the tumor weights was obviously decreased when compared RGAP or LEWE treatment alone. These results suggest that clinical trials of a composition comprising RGAP and LEWE as an adjuvant in cancer chemotherapy can be highly feasible.

References

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