



Iranian. J. Immunol. Volume 9, Supplement 1, April 2012

11<sup>th</sup> International Congress of Immunology & Allergy

• **The Cytotoxic Effects of *Cuscutae chinesis*, *organum vulgare*, *Allium sativum*, and *Aloe vera* Extracts on Raji Cell Line of Lymphoma**

Gomari H, Rahmati B, Jamali D, Ghazanfari T

Immunoregulation Research center, Shahed University, Tehran, Iran

**Background:** Besides their nutritional usage herbs have wide range of therapeutic properties and have been used as a traditional drug since ancient time. Recent studies have proved that the herbal extracts are potential agents for cancer therapy. In this study we examined the effects of 4 herbal extract, Oregano (*organum vulgare*), Garlic (*Allium sativum*), Cuscuta (*Cuscutae chinesis*) and Aloe (*Aleo vera*) on Raji lymphoma cell line. **Materials and Methods:** For preparation of Cuscuta and Oregano, 100 g of the aerial parts were put into boiling water, the solutions were filtrated and dried extracts were used. Aloe fresh leaves were cut and inside gel were taken. The gel was mixed with sterile stilled water and then refrigerated. Peeled garlic was mixed in ratio of 1 g of garlic to 1 mL of distilled water. To assess cells viability, MTT [3-(4, 5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazoliumbromide] reduction assay was used. **Results:** different herbal extracts cytotoxicity on Raji cell line was evaluated; garlic and Aleo vera extract had no significant effect in clinically appropriate dosages. In contrast, Oregano and Cuscuta in almost all concentrations had remarkable effect on Raji cell line. Oregano at 72h was the most efficient extract (average inhibitory effect: 83.7%) and the optimum suppressive effect was in 0.2 mg/ml with 88% cytotoxicity. likewise, it can considerably reduce the viability of Raji cells in all concentrations at 48h and the optimum inhibition was observed in 5 mg/ml (79.2%). Although, Cuscuta extract decreased cell viability in some concentrations at 24 h, 48h and 72h; the most reduction was detected in 5 mg/ml, 2 mg/ml and 1 mg/ml with 80.6%, 65.5% and 56.1% respectively. **Conclusion:** Oregano is a potential candidate for Raji lymphoma therapy. More evaluations on animal models and also biochemical isolations of the effective material is needed.

**Keywords:** Garlic, cytotoxicity, Raji cell line, lymphoma, herbal medicine