

(1998), resveratrol seems a very attractive molecule for the improvement of anticancer treatments and for inhibiting lymphocyte proliferation during immunosuppressive therapies.

2.3.10 GARLIC

Garlic is one of the earliest of cultivated spices and foods and the most widely quoted in the literature for its medicinal properties and health benefits. Few of the epidemiological studies conducted have shown that garlic consumption is correlated to decreased cancer risk. An ecological study reported that Shandong Province, China, an area with a larger amount of garlic consumption, had the lowest national mortality rate for stomach cancer (Mei et al. 1982). You et al. (1989) found that consumption of more than 1.5 kg/year of garlic resulted in a significantly lower stomach cancer risk. The Iowa Women's Health Study illustrated a decreased colon cancer risk by almost 50% in over 40,000 women who consumed garlic more than once a week (Steinmeitz et al. 1994). An experiment of 20 epidemiological studies by Ernst (1997) suggested that allium vegetables, like garlic, may provide a protective effect against cancer of the gastrointestinal tract. In a more recent meta-analysis, a constant inverse relation between raw and cooked garlic consumption and stomach and colorectal cancers was observed (Fleischauer et al. 2000). In contrary, garlic supplement consumption in one case-control study of prostate cancer and four other studies performed in Netherlands (cohort of colorectal, stomach, lung and breast cancers) did not appear to be connected with cancer risk.

Composition of garlic has been demonstrated to inhibit carcinogenesis in several experimental models. These studies have suggested that allyl sulphur compounds in garlic act primarily on the initiation stage of carcinogenesis, hindering the development of chemically-induced tumours in various sites through the initiation of phase II detoxification enzymes and inhibition of P450 E1, the enzyme responsible for the metabolic activation of carcinogens. The capability of garlic to inhibit the synthesis of *N*-nitroso compounds (Mei et al. 1989) and its antibacterial action against *Helicobacter pylori*, a risk factor in stomach cancer (Sivam et al. 1997), are two other possible mechanisms. Studies have shown that the anticancer activities related with garlic are not limited to a particular tissue. Both the lipid-soluble and water-soluble allyl sulphur compounds are effective, supporting the possibility of multiple mechanisms (Milner 2006).

Substantiation from several experimental studies shows that garlic protects against CVD by bringing about lipid normalization, improved fibrinolytic activity, subdued platelet aggregation and reduced blood pressure (Petesch and Sumiyoshi 1999). These experimental studies are defended by ecological observations of lowered cardiovascular incidence in populations like those in the Mediterranean region and some parts of Asia known for consuming high amounts of garlic, compared to populations who have a different diet and lifestyle (Lin 1994). Many clinical trials have been conducted to investigate the cardioprotective effects of garlic. A clinical study on the effect of garlic supplementation on the endpoint of cardiovascular events like myocardial infarction or death, was investigated in 432 cardiac patients (Bordia and Verma 1990). Supplementation reduced the mortality rate by 50% in