power was seen in the aqueous leaf extracts of *S. stellata* and *S. racemosa*. The aqueous extracts of *S. venulosa* flower and *S. wallichiana* leaf showed potent antioxidant activity (Deepa and Nalimi 2013).

The *S. racemosa* plant extract was found to exhibit excellent antioxidant property for the DPPH, ABTS and FRAP assays (Malar Selvi et al. 2015). The DPPH radical scavenging ability of ethanol leaf extract of *S. leucantha* suggested that the leaves as a source of antioxidants might be effective in diseases caused by overproduction of radicals (Potduang et al. 2007). The leaf extract of *S. odorata* experimentally proved that it could quench hydroxyl free radicals suggesting its antioxidant activity (Gloria and Cristina 2001).

10.4.1.7 Toxicity Studies

Witthawaskul et al. (2003) studied the acute toxicity of water extracts and saponin mixtures, and the subacute toxicity of the saponin mixture of *S. leucantha*. Acute toxicity experiments show that a single oral dose of 5000 mg kg-1 of extract in rats did not produce any mortality and abnormal behaviour. In subacute toxicity experiments, rats were orally given a saponin mixture of 1000 mg/kg-1 for 14 d and no rats died or showed other symptoms of poisoning. After weighing the organs, researchers found the saponin mixture in rats increased liver weight and reduced testicular weight, suggesting that the plant saponin mixture may affect liver and kidney function.

The acute toxicity study on *S. barteri* showed no mortality at a dose limit of 16000 mg/kg b.w. by oral administration. Subacute treatment significantly ($p < 0.05$) increased the level of serum transaminase, proteins and HDL cholesterol. Therefore, the methylene chloride/methanol mixture stem bark extract of *S. barteri* is considered relatively harmless. On the other hand, the extract significantly ($p < 0.05$) reduced the level of leucocytes as well as neutrophils, basophils and monocytes in females. No significant variation of serum creatinine, LDL cholesterol, serum triglycerides, as well as liver, spleen, testicle and ovary proteins was noted. Hence subacute administration is associated with side effects on the central nervous system, immune system, liver and testis. The acute administration of the stem bark extract of *S. barteri* is associated with signs of toxicity; administration over a long duration provokes hepatotoxicity and testis and lung toxicity (Atsafack et al. 2015).

10.4.1.8 Miscellaneous

Zhu et al. (1999) and Chen et al. (2002) found that the ethanol extracts of the leaves and roots of *S. bodinieri* show a strong binding affinity to α1- and α2-adrenergic, sulphonylureas, GABAA and GABB receptors; and also three separate compounds, namely bodinone, bodinone glycoside; and D-sorbitol, which showed selective binding affinity to muscarine receptors, a trisaccharide bound to Ca2+ channel and 5HT-2 receptors, stigmasterol 3-O-glucoside bound to 5HT-2 receptors and bodirin A bound to dopamine-2 receptors. Matsui et al. (2010) reported that *S. leucantha* ethanol extract significantly inhibited the production of the eosinophil chemo attractant CCL5 and the type 2 T helper (TH_2) associated chemokine CCL17 from PEG stimulated from *Staphylococcus aureus* and histamine release from mast cells and