and in the treatment of blisters of mouth and gastro-enteritis. It also enhances the immune response, and is used as food ingredient for promoting health and has antifertility effect (Bishit *et al.*, 1993). It is also used for its immunomodulation, anti-inflammatory and antiaging activities (Li *et al*., 2007b). The aerial parts of *Achyranthes ferruginea* Roxb. are used against piles, boils, shigellosis and erosion of skin (Mukhlesur Rahman *et al*., 2007).

Notable biological activities reported from the various parts of *Achyranthes* species and its isolates are antispasmodic, diuretic, purgative, renal dropsy, antifungal, insect molting hormonal activity, cardiac stimulant, anticoagulant, hypertensive, abortifacient, antileprotic, antibiotic and anti-implentation (Aggarwal *et al*., 2002). The results obtained from the study of antifertility effect of *Achyranthes bidentata* saponins on rats and mice (Wu and Zhang, 1982; Zhu and Che, 1987) supported its use in folk medicine. The saponins also induced early abortion in pregnant mice (Wu and Zhang, 1982). *Achyranthes bidentata* extract was found to enhance nerve growth, prevent neuron apoptosis, and induced neuronal differentiation of PC12 cells (Chen *et al*., 2002; Ding *et al*., 2004). It also promoted the neurite growth of dorsal root gengelions (Zhang *et al*., 2006). The study of the repair effects of *Achyranthes bidentata* extract on the crushed common peroneal nerve of rabbits suggest that it could accelerate peripheral nerve regeneration (Ding *et al*., 2008).

The roots of *Achyranthes bidentata* possess antimicrobial activity (Bishit *et al*., 1990) and antirheumatic effect (Do Trung Dam, 1996). The water-soluble oligosaccharide (glucomannan), isolated from *Achyranthes bidentata* showed pronounced activity for enhancing the immune response (Hui *et al*., 1989). The high molecular polysaccharide (composed of xylose, mannose, fructose and so on) isolated from *Achyranthes bidentata* roots had cytotoxic effect against P388 leukemia cells *in vitro* (Chao *et al*., 1999b). The activating effect of the polysaccharide on thoracic cavity macrophages of human has been proved (Lu *et al*., 1999b). The immunopotentiating effects and antitumour / nercotic activity in animal trials of the polysaccharides of *Achyranthes bidentata* have been reported by others (e.g. Xiang and Li, 1993; Li and Li, 1997). *Achyraranthes bidentata* polysaccharide increased the immunobiological function of human monocytes *in vitro* (Wang *et al*., 2005). The polypeptides of the same species have been found to protect against NMDA-induced apoptosis in rat cultured hippocampal neurons (Shen *et al*., 2008). The five oleanolic acid glycosides, isolated by Li *et al*. (2005) from *Achyranthes bidentata* inhibited the formation of osteoclast-like multinucleated cells induced by $1\alpha,25(OH)_2D_3$ in co-culture assay system. Achyranthoside A (a saponin isolated from *Achyranthes fauriei* roots) had significant cytotoxic activity against human colon carcinoma and murine melanoma cells (Ida *et al*., 1994b). The cytotoxic activity of the saponins from *Achyranthes fauriei* roots has been also reported by others (e.g. Yoo *et al*., 2006, 2007).

Ecdysterone and daucosterol isolated from *Achyranthes bidentata* markedly stimulate proliferation of osteoblast-like UMR106 cells (bone formation) (Li *et al*., 2001). The leaf extract of *Achyranthes rubrofusca* possesses antidiabetic effect on alloxan induced diabetic rats (Geetha *et al*., 2011).