

*Amaranthus viridis* is an edible plant. In India, the stem is used as antidote for snake bites, scorpion stings, constipation, inflammation, eczema, bronchitis, anemia and leprosy. In Nepal, infusion of powdered seeds of flower are used for stomach problems and in pregnant women to lessen labour pains. Infusion of plant has been used as a diuretic and galactagogue. Decoction of the plant is used for dysentery, inflammation (Macharla *et al.*, 2011) and in the treatment of fever (Neamsuvan *et al.*, 2012). The plant improves digestion and is astringent (Hussain *et al.*, 2009). Traditional Chinese compositions (containing *Amaranthus viridis*) are used for the treatment of diabetes (Li, 2011), nephritis (Qi, 2011) and prostatitis (Qi, 2012). The plant is used as an emollient, anti-inflammatory, and to stop dysentery (Duke and Ayensu, 1985). The plant is cooling, digestible, alexteric, laxative, diuretic, stomachache, antipyretic, improves appetite and is useful in leucorrhoea and leprosy (Kirtikar and Basu, 1984), and for treatment of constipation, inflammation, eczema, bronchitis, anemia and leprosy (Kumar *et al.*, 2009b). It is also reported as beneficial for the bowels (Ayensu, 1981), and as antidote for stings and snake bites (Baquar and Tasnif, 1984). In Nepal, the tender leaves are cooked like vegetables and eaten regularly to relieve diarrhea (Bhattari, 1993; Rizk and El-Ghazaly, 1995). In Philippines, they apply the bruised leaves directly to eczema, psoriasis and rashes (Quisumbing, 1951). Other traditional uses are as an anti-inflammatory agent of the urinary tract, venereal diseases, vermifuge, diuretic, antirheumatic, antiulcer, analgesic, antiemetic, laxative, improvement of appetite, antileprotic, treatment of respiratory and eye problems (Kumar *et al.*, 2011c). The different extracts of *Amaranthus viridis*, possess the following activities: anti-inflammatory (El-Hossary *et al.*, 2000b; Macharla *et al.*, 2011), analgesic (Kumar *et al.*, 2009c), antipyretic (El-Hossary *et al.*, 2000b; Kumar *et al.*, 2009c), hepatoprotective (El-Hossary *et al.*, 2000b; Kumar *et al.*, 2011c), antinociceptive, antiproliferative (Kumar *et al.*, 2009c), antidiabetic, antihyperlipidemic (Kumar *et al.*, 2010f; Girija *et al.*, 2011b; Kumar *et al.*, 2012c; Pandhare *et al.*, 2012; Patel *et al.*, 2012), antioxidant (Kumar *et al.*, 2010f, 2011d, 2012c; Iqbal *et al.*, 2012), antibacterial (Iqbal *et al.*, 2012), antifungal (Carminate *et al.*, 2012; Iqbal *et al.*, 2012), antiviral (Kumar *et al.*, 2009c), cardioprotective (Saravanan and Ponmurugan, 2012a,b) and cytotoxic (Kumar *et al.*, 2011d). The plant is also used to remove kidney and gall bladder stones (Qureshi and Bhatti, 2009).

Hasnain *et al.* (2007) studied the prevalence of airborne allergenic *Amaranthus viridis* pollen in seven different regions of Saudi Arabia. It is one of the major components of outdoor airborne, constituting a maximum of 96% of total pollen counts in Hail, and a minimum of 61% in Jizan.

Kwon and Baek (1999) isolated an anti-viral protein amaranthin gene, which can be introduced into *Agrobacterium tumefaciens* strain LBA4404/pAVRIP19 (KCTC 8850P) by the expression vector pAVRIP19, and can be introduced into a plant body for producing a plant with virus resistance. It is used in seed breeding and pharmacy industry. The obtained antiviral recombinant protein can be used for treating AIDS. An antiviral protein (amaranthin with a molecular mass of 30 k Da) was purified from the leaves. Cytotoxicity of the amaranthin was similar to that of pokeweed antiviral protein (Kwon *et al.*, 1997).

Positive allelopathic interaction of *Amaranthus viridis* with *Triticum aestivum* was reported (Kumar *et al.*, 2011e).