

89 Aceteoside

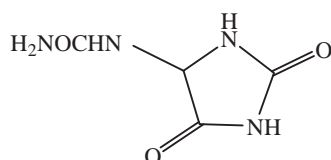
1.1.2. *Barleria hochstetteri* Nees in A. DC., Prodr. 11: 231 (1847); Boulos, Fl. Egypt 3: 100 (2002).

Alimasieb (Ar) أليماسيب

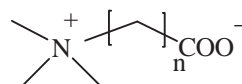
Nothing has been reported about the constituents and/or biological activities of this species.

## 1.2. BLEPHARIS Juss.

The constituents of few *Blepharis* species have been studied. 9-Hydroxydodecanoic acid has been isolated from the seed oil of *Blepharis sindica* (Ahmad *et al.*, 1983). The seeds of *Blepharis sindica* contained allantoin (90), betaine (91),  $\beta$ -sitosterol, oleanolic acid, apigenin, terniflorin (92), purine-6"-*O*-coumarate (93) and blepharin (54) (Ahmad *et al.*, 1984). Allantoin was also identified in *Blepharis sindica* stalks (Khatri *et al.*, 1989). Daniel and Sabnis (1987) identified luteolin and apignin 7-*O*-methyl ether from *Blepharis madaraspatensis* (L.) Heyne, in addition to apigenin 7-*O*-methyl ether and apigenin-4'-*O*-methyl ether from *Blepharis repens* Roth. Phenolic acids have been identified in some *Blepharis* species e.g. *p*-hydroxybenzoic,  $\alpha$ -resorcylic and vanillic acids from *Blepharis asperima* Nees; *p*-hydroxybenzoic, 2-hydroxy-4-methoxybenzoic, vanillic and syringic acids from *Blepharis madaraspatensis*, and genistic, protocatechuic and syringic acids from *Blepharis repens* Roth (Daniel and Sabnis, 1987).



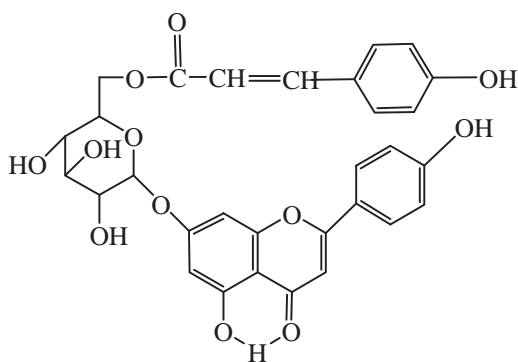
90 Allantoin



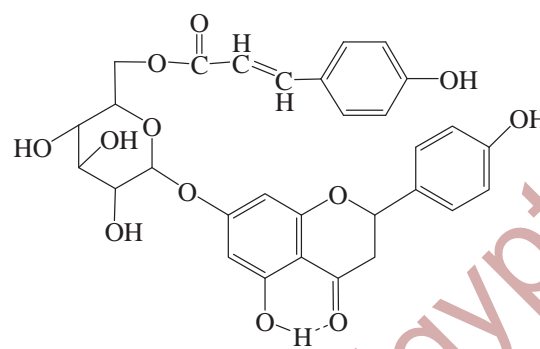
91 Betaine

### Folk Medicine

Some *Blepharis* species are used ethnomedically. *Blepharis boerhaviaefolia* is used traditionally for wounds, ulcers, nasal hemorrhage, asthma, throat inflammation, ascites, liver and spleen disorders (Devi and Meera, 2010). *Blepharis capensis* Pers. is much used as an anthrax remedy. The Xhosa apply the leaf as a toothache remedy. The plant is also used as an



92 Terniflorin



93 Purine-6''-O-coumarate

application to wounds. The Southern Sotho take an infusion of *Blepharis espinosa* to relieve coryza. *Blepharis integrifolia* E. Mey. is an African remedy for anthrax (Watt and Breyer-Brandwijk, 1962). *Blepharis maderaspatensis* (L.) Heyne ex Roth is used for treatment of a number of ailments like dysuria, headache, diseases of nervous system, diuretic and aphrodisiac (Mohan *et al.*, 2010). In India it is also used as a traditional healer for cuts and wounds (Pandikumar *et al.*, 2011). *Blepharis molluginifolia* is used to treat bone fractures, skin diseases, urinary discharges, and allergies (Pattar *et al.*, 2011). In Africa *Blepharis procumbens* is used as a toothache remedy, and *Blepharis capensis* and *Blepharis spinosa* are used by the Xhosa and Sotho against anthrax and coryza respectively (Mmatli *et al.*, 2007). The seeds of *Blepharis sindica* are used in Pakistan in the treatment of earache (Ahmad *et al.*, 1983). *Blepharis repens* is used in India to treat toothache (Hebbar *et al.*, 2004). In the Transvaal the African rubs the root of *Blepharis stainbankiae* C. B. Cl. on the skin to relieve itching (Watt and Breyer-Brandwijk, 1962).

The genus *Blepharis* is represented in Egypt by 3 species.

1.2.1. *Blepharis attenuata* Napper, Israel J. Bot. 21: 164 (1972); Boulos, Fl. Egypt 3: 100 (2002).

Shawk El-Dabb (Ar) شوك الضب

Nothing has been reported about the constituents and/or biological activities of this species.

1.2.2. *Blepharis edulis* (Forssk.) Pers., Syn. Pl. 2: 180 (1806); Boulos, Fl. Egypt 3: 99 (2002).

Syns. *Acanthus edulis* Forssk., Fl. Aegypt.-Arab 114 (1775).

*Blepharis ciliaris* auct. mult.

Shawk El-Dabb (Ar) شوك الضب

Proximate analysis of *Blepharis ciliaris* (L.) B.L. Burtt. revealed that it contains lipids (1.40%), ash (27.00%) and the following minerals: Na (0.047%), Fe (0.115%), Ni (0.014%), Mn (0.544%), Co (0.045%), Cu (0.009%), Mg (1.25%), Si (7.09%) and Cr (0.20%) (Al-Easa *et al.*, 2003).

The seeds of *Blepharis edulis* yielded 3.8% oil which consisted of about 84% oleic and 16% linoleic acids. The saturated portion is a mixture of palmitic 4.93, stearic 6.20 and arachidic 0.015% acids. The unsaturated acids are 0.175%. A phytosterol (C<sub>27</sub>H<sub>42</sub>O<sub>3</sub>) and