

Euphorbia

Species (Family)

Euphorbia hirta L. (Euphorbiaceae)

Synonym(s)

Euphorbia capitata Lam., *Euphorbia pilulifera* L., Pillbearing Spurge, Snakeweed

Part(s) Used

Herb

Pharmacopoeial and Other Monographs

BHP 1983^(G7)

Legal Category (Licensed Products)

GSL^(G37)

Constituents^(G41,G48,G64)

Flavonoids Leucocyanidin, quercetin, quercitrin and xanthorhamnin.

Terpenoids α - and β -Amyrin, taraxerol and esters, friedelin; campesterol, sitosterol and stigmasterol (sterols).

Other constituents Choline, alkanes, inositol, phenolic acids (e.g. ellagic, gallic, shikimic), sugars and resins.

Food Use

Euphorbia is not used in foods.

Herbal Use

Euphorbia is stated to be used for respiratory disorders, such as asthma, bronchitis, catarrh and laryngeal spasm. It has also been used for intestinal amoebiasis.^(G7,G64)

Dosage

Herb 120–300 mg or as an infusion.^(G7)

Liquid Extract of Euphorbia (BPC 1949) 0.12–0.3 mL.

Euphorbia Tincture (BPC 1923) 0.6–2.0 mL.

Pharmacological Actions

In vitro and animal studies

Euphorbia has been reported to have antispasmodic and histamine-potentiating properties.^(G41) Smooth muscle relaxing and contracting activities have been exhibited by euphorbia *in vitro* (guinea-pig ileum) and have been attributed to shikimic acid and to choline, respectively.⁽¹⁾

In vivo antitumour activities have been documented for euphorbia.^(G41)

Antibacterial activity *in vitro* versus both Gram-positive and Gram-negative bacteria has been documented for euphorbia.⁽²⁾ Stem extracts were slightly more active than leaf extracts. *In vitro* amoebicidal activity versus *Entamoeba histolytica* has been reported for a euphorbia decoction.⁽³⁾

Side-effects, Toxicity

None documented for euphorbia. Carcinogenic properties in mice have been reported for shikimic acid, although no mutagenic activity was observed in the Ames assay.^(G41)

Contra-indications, Warnings

None documented.

Pregnancy and lactation The safety of euphorbia has not been established. Euphorbia has been reported to cause both contraction and relaxation of smooth muscle. In view of the lack of pharmacological and toxicity data, the use of euphorbia during pregnancy and lactation should be avoided.

Pharmaceutical Comment

There is little published information concerning euphorbia, although documented actions observed in animals do support the traditional herbal uses. There is a lack of information concerning toxicity,

although the documented constituents of euphorbia do not indicate any obvious toxic component. Nevertheless, excessive or prolonged ingestion should be avoided.

References

See also General References G7, G10, G31, G37, G41, G44, G48 and G64.

- 1 El-Naggar L *et al.* A note on the isolation and identification of two pharmacologically active constituents of *Euphorbia pilulifera*. *Lloydia* 1978; 41: 73–75.
- 2 Ajao AO *et al.* Antibacterial activity of *Euphorbia hirta*. *Fitoterapia* 1985; 56: 165–167.
- 3 Basit N *et al.* In vitro effect of extracts of *Euphorbia hirta* Linn. on *Entamoeba histolytica*. *Riv Parasitol* 1977; 38: 259–262.