The European Agency for the Evaluation of Medicinal Products

EMEA/MRL/569/99-FINAL
March 1999

COMMITTEE FOR VETERINARY MEDICINAL PRODUCTS

RUSCUS ACULEATUS

SUMMARY REPORT

1. An extract of the rhizome of *Ruscus aculeatus* (butcher's broom) is used in a veterinary medicinal product. The rhizome contains steroid saponins (4 to 6%), of which the main components are ruscine, ruscoside, aglycones, neoruscogenin, ruscogenin, and additionally benzofuranes, such as euparone and ruscodibenzofurane are found together with flavonoids.

2. *Ruscus acculeatus* is used in cattle for local treatment of mastitis. A combination product containing a soft extract of *Ruscus aculeatus* and one more herbal fluid extract is available in the EU in an anticongestant and anti-inflammatory ointment. This product is indicated for mammary oedema in cattle, sheep, horses and swine for topical application 2 to 3 times a day. The product is usually applied for 2 to 3 days.

   The uses in humans include supportive therapy for discomforts of chronic venous insufficiency, such as pain and heaviness, cramps in the legs, as well as supportive therapy for ailments of haemorrhoids, such as itching and burning.

   Medicinal products for human use marketed in EU contain ruscugenines (0.8 g/100 g and 0.5 g/100 g ointment, and 8 mg and 10 mg suppositories). These products are used in local treatment of haemorrhoidal crises.

3. From public literature the following information on the pharmacology of *Ruscus aculeatus* is available. In animal tests *Ruscus aculeatus* induces increase in venous tone, has electrolyte-like reaction on the cell wall of capillaries, antiphlogistic and diuretic properties. From a pharmacodynamic viewpoint, ruscogenines are used in the symptomatic treatment of haemorrhoidal disorders, because of their venotonic and vascular protective properties.

4. The active substance in *Ruscus aculeatus*, ruscogenin, is absorbed (10 to 20%) after oral intake. The same absorption is seen after topical application. Ruscogenin is not bound to plasma proteins and is eliminated via kidney and bile. The elimination half-life is 16 to 24 hours.

5. No adequate information of the acute toxicity of *Ruscus aculeatus* was provided. Literature data show that the lowest lethal doses are 2 g/kg bw in Guinea pigs after intraperitoneal administration of an alcohol extract is and 830 mg/kg bw in dogs (not specified) after intravenous application. The LD_{50} values of ruscogenin in mice and rats after oral and intraperitoneal application are 1500 to 2500 mg/kg bw.

6. No information on repeated dose toxicity, reproductive toxicity, mutagenicity or carcinogenicity of *Ruscus aculeatus* was provided.

7. No side effects have been reported in conjunction with the proper administration of designated therapeutic dosages in humans. Stomach complaints and queasiness can occur in rare cases.

8. No information on residues of *Ruscus aculeatus* and their depletion following treatment of food producing animals was provided.

7 Westferry Circus, Canary Wharf, London, E14 4HB, UK
Switchboard: (+44-171) 418 8400 Fax: (+44-171) 418 8447
E_Mail: mail@emea.eudra.org http://www.eudra.org/emea.html

Conclusions and recommendation

Having considered the criteria laid down by the Committee for Veterinary Medicinal Products for the inclusion of substances in Annex II of Council Regulation (EEC) No. 2377/90 and in particular that:

- *Ruscus aculeatus* is used topically in a small number of individual animals, for infrequent or non-regular treatment only,
- the animals are unlikely to be sent for slaughter immediately after treatment,
- the available information on the active ingredient of *Ruscus aculeatus*, ruscogenin, indicates that it has limited oral availability and a low acute oral toxicity;

the Committee for Veterinary Medicinal Products concludes that there is no need to establish an MRL for *Ruscus aculeatus* and recommends its inclusion in Annex II of Council Regulation (EEC) No 2377/90 in accordance with the following table:

Pharmacologically active substance(s)	Animal species	Other provisions
Ruscus aculeatus	All food producing species	For topical use only