

SPERMICIDAL ACTIVITY OF
ZERUMBONE AND PLUMBAGIN

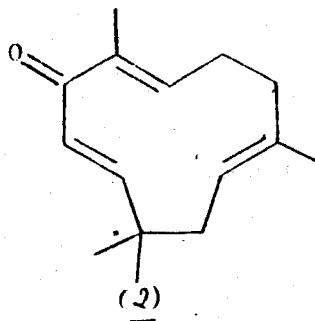
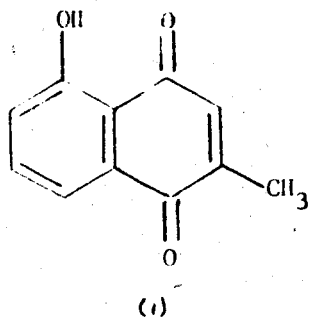
B.M.R. Bandara, Chandralal N. Hewage
Veranja Karunaratne and W.D. Ratnasooriya*
Dept. of Chemistry, University of Peradeniya
* Dept. of Zoology, University of Colombo

Plumbagin (1) antifungal active principle present in Plumbago zeylanica, has long been known for variety of medicinal/pharmacological applications.^{1,2} Zerumbone (2) was isolated from hexane extract of rhizome of Alpinia abundiflora.³ The structure of this compound was confirmed by comparison of reported spectral data with those obtained for the compound (¹H NMR, ¹³C NMR, IR). On the basis that both these compounds contain a dienone system, investigations were carried out to test their spermicidal activity.

At a concentrations of 10mg/ml of the compounds, the immobilization of ejaculated human sperms was examined at 20 sec., 2,5, 10 and 15 mins intervals of incubation at ambient temperature (30°C).

Plumbagin (1) and Zerumbone (2) showed immobilization times of 5 min and 10 min, respectively; thus showing their moderate spermicidal activity.

Financial support from NARESA is gratefully acknowledged.



References:

1. Ko, K. (1933) Jap. J. Med. Science and Pharmacol., 6:259
2. Tripathi, R.D.; Tripathi, S.C., Dixit, S.N. (1980)
Agric. Biol. Chem. 44(10):2483-5
3. Bandara, B.M.R., Hewage, C.M.; Karunaratne, V., (1989)
Planta Med. (submitted)