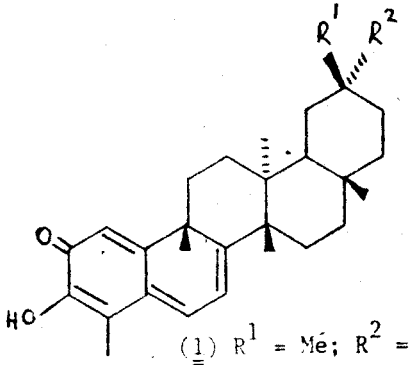
SPERMICIDAL ACTIVITY OF SOME QUINONE METHIDE-TRITERPENOIDS

A.A. Leslie Gunatilaka, Bhavani Dhanabalasingham
M. Nirmali Dias, H. Chandrasiri Fernando,
Veranja Karunaratne and W.D. Ratnasooriya *
Dept. of Chemistry, University of Peradeniya
* Dept. of Zoology, University of Colombo

Quinone methide triterpenoids are quite common in the plants of the family Celastraceae. We have investigated the spermicidal activity of five such compounds isolated from two plants of the family Celastraceae; 20-Hydroxytingenone (1) and balaenonol (2) isolated from Cassine balae[1] and isoiguesterin (3), pristimerin (4) and a new compound (5) isolated from Salacia reticulata. [2]

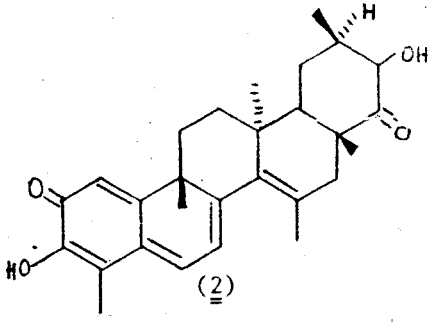


(1) R^1 = Me; R^2 = OH

(3) R^1 R^2 = CH_2

(4) R^1 = Me; R^2 = CO_2Me

(5) R^1 = H; R^2 = CH_2OH



(2)

Sanderst-Cramer test for total spermicidal activity[3] was performed on these compounds as follows, in order to determine their level of activity. At a concentration of 10 mg/ml of the compound, the immobilization of human sperms was examined at incubation intervals of 20 sec, 2,5,10 and 15 mins. at room temperature (30°C).

Immediate immobilization (20 sec.) was observed with 20-hydroxytingenone (1) while the time taken for compound (5) was 2 mins. The immobilization time for balaenonol (2), isoiguesterin (3) and pristimerin (4) were 5 mins, 10 mins and 10 mins respectively. 20-hydroxytingenone (1), the

most active compound showed immobilization even at a concentration of 1.25 mg/ml.

References:

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2. Dhanabalasingham, B., Gunatilaka, A.A.L. and Balasubramaniam, S. (1988) Proc. Sri Lanka Assoc. Advmt. Sci., 44(1), 177.

3. Blackshaw, A.W., Emmens, C.W. (1951) J.Physiol, 114, 16.