E2-69 Antiviral activity and chemical constituents of *Bacopa monniera*

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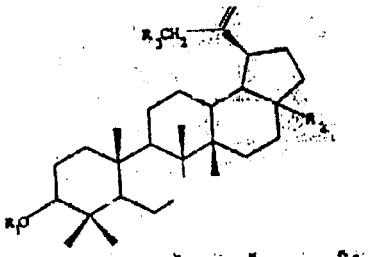
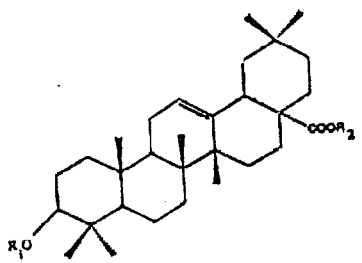
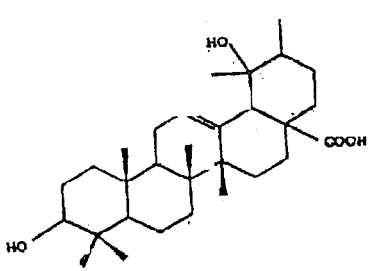
Twenty one extracts derived from 7 plant species of Sri Lanka, were examined for their antiviral activity against herpes simplex virus type 1, polio virus type 1 and measles virus by plaque reduction bioassay. Of these, cold dichloromethane extract of *Bacopa monniera* showed significant activity against the viruses used.



	R_1	R_2	R_3
1	H	COOH	H
2	Ac	COOH	H
3	H	COOMe	H
7	H	CHO	H
9	H	COOH	OH



	R_1	R_2
4	H	H
5	Ac	H
6	H	Me



Part of the CH_2Cl_2 extract was dissolved in cold CH_2Cl_2 and the insoluble mass that separated out was filtered. It was found to be active against polio virus at very low concentration. TLC examination of this insoluble mass indicated the presence of 1 major compound and 3 minor compounds. Chromatographic separation of it furnished 3-hydroxy lupen-28-oic acid (1) (major), oleonolic acid (4), 3,19-dihydroxy-12-ursen-28-oic acid (8) and 3,29-dihydroxy-20 (30) -lupen-28-oic acid (9). Chromatographic separation of the rest of the CH_2Cl_2 extract afforded 3-hydroxy-20 (29) -lupan-28-al (7) and further quantities of 1 and 4. Identity of these compounds were based on their spectral data.

Monoacetates (2 and 5) and methyl esters (3 and 6) of betulinic acid (1) and oleonolic acid (4) were prepared and bioassayed with other compounds. Although the insoluble mass showed higher activity against polio at very low concentration, the pure compounds (1, 4, 8 and 9) isolated from it showed low activity.

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