Phytochemical Investigation of *Hemigraphis hirta* T. Anders and *Jussiaea repens* Linn.

K. S. MUKHERJEE*, S. LAHA and C. K. CHAKRABORTY

Department of Chemistry, Visva-Bharati, Santiniketan-731 235

Manuscript received 26 September 1991, accepted 27 November 1991

IN course of our studies on plant pigments systematic chemical investigations of *Hemigraphis hirta* T. Anders[1] (Acanthaceae) and *Jussiaea repens* Linn.[2] (Onagraceae) have been undertaken. Both these plants are abundant in Santiniketan and are locally used as folk medicines. Literature survey revealed that no phytochemical investigation has yet been reported on these plants so far.

The air-dried powdered whole plant of *H. hirta* was extracted with petroleum ether (b.p. 60–80°). The concentrated petrol extract was subjected to usual column chromatography over silica gel. The early fractions of the petroleum ether eluate furnished a solid which was crystallised from acetone to give a white solid, m.p. 84–85° ; ν_{max} (KBr) 3 400 cm^{-1} ; *m/z* 452 (M^+), 434 and 31. Its identity with n-hentriacontanol was established by direct comparison (co-tlc, co-ir and m.m.p.) with an authentic sample[3]. Further elution of the column with the same solvent afforded a white solid, m.p. 145–48° (acetone) which responded to Leibermann-Burchardt test for steroids. It exhibited ν_{max} (KBr) at 3 430 cm^{-1} and was characterised as stigmasterol from mixed m.p., co-ir and co-tlc with an authentic specimen[4].

The concentrated petroleum ether (b.p. 60–80°) extract of *J. repens* was subjected to chromatographic analysis over silica gel. Elution of the column with petroleum ether–benzene (1 : 1) mixture yielded a solid, m.p. 288–90°, which responded to Leibermann-Burchardt test for triterpenes ; ν_{max} (KBr) 3 450, 1 695 and 1 640 cm^{-1} ; *m/z* 456 (M^+), 438, 411, 410, 248, 207 and 189 ; methyl ester, m.p. 245°. The identity of this triterpene as ursolic acid has been confirmed by the usual comparison (m.m.p., co-tlc and co-ir) with an authentic sample of ursolic acid[5].

Acknowledgement

The authors are thankful to R.S.I.C., I.I.T., Madras and R.S.I.C., Bose Institute, Calcutta for spectral measurements and to U.G.C., New Delhi, for awarding a Senior Research Fellowship to one of them (C.K.C.).

References

1. J. D. HOOKER, "The Flora of British India", L. Reeve and Co., London, 1882, Vol. 4, p. 82.
2. "Wealth of India : Raw Materials ', C. S. I. R , New Delhi, 1962, Vol. V, p. 311.
3. K. S. MUKHERJEE and P. K. GHOSH, *J Indian Chem. Soc.*, 1978, **55**, 292.

4 K. S. MUKHERJEE and SHAH BADRUDDOZA, *J. Indian Chem. Soc.*, 1981, **58**, 97.
5. K S. MUKHERJEE, R. K. MUKHERJEE and P. K. GHOSH, *J. Indian Chem. Soc.*, 1985, **62**, 77.