KICC, Nairobi, Kenya 27th - 31st August 2001

OP-38 FURTHER DITERPENES FROM THE LEAF EXUDATE OF *PSIADIA PUNCTULATA*.

Benard F. Juma, Jacob O. Midiwo, Abiy Yenesew and Peter G. Waterman

Department of Chemistry, University of Nairobi, P. O. Box 30197, Nairobi,

The leaves of Psiadia punctulata (Compositae), an East African species, are extensively covered by an exudate (up to 25% w/w of dry material), especially when young. The exudate is most likely responsible for the unpalatability (to herbivores) and drought resistance, which is exhibited by this shrub. The chemistry of the exudate could also explain the use of the species for relief of fever and abdominal pains as well as its use for expunging ectoparasites from cattle [1]. Five new trachyloban diterpenoids, trachyloban-2β,6β,18,19-tetraol (1), trachyloban-2, 18, 19-triol (2), trachyloban-6, 18, 19-triol (3), 2-oxotrachyloban-6ß,18-diol, 17-hydroxy-18-trachylobanoic acid, and one kaurene diterpene, 17-kaurenoic acid, have been isolated from the exudate of P. punctulata. These new compounds add to the five diterpenoids already reported previously [2], showing that the leaf exudate of this plant is a rich source of diterpenoids. The Middle Eastern species, P. arabica, with which P. punctulata is confused, exhibits kaurene [3,4] but not trachyloban diterpenes which confirms a distinction between the two. In this presentation, the results of our findings will be discussed.







REFERENCES

- Kokwaro, J. O. (1976); Medicinal plants of East Africa; East. African literature Bureaux Nairobi. pp 69 –73.
- Midiwo, J. O.; Owuor, F. A. O.; Juma, B. F. and Waterman, G.W. (1997); Diterpenes from the leaf exudate of *Psiadia* punctulata. *Phytochem* 45 1: 117 –8.
 - El-Dominty, M. M.; El-Feraly, F.S.; Mossa, J.S.; McPhail, A.T. (1993); Diterpenes and a flavone from *Psiadia*. Arabica; *Phytochem.* 31 8: 2863 – 6.
- Mossa, J. S.; El-Domiaty, M. M.; Al-Mashal I. A; El-Feraly F. S.; Hufford C. D.; McPhail D. R.; McPhail A. T. (1992); A flavone and a diterpene from *Psiadia arabica Phytochem* 34 2: 467 – 9.