# Cucurbitane Glucosides from *Momordica charantia* Leaves as Oviposition Deterrents to the Leafminer, *Liriomyza trifolii*

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Z. Naturforsch. **61c**, 81–86 (2006); received June 20/July 19, 2005

The American serpentine leaf mining fly, *Liriomyza trifolii*, whose larva feeds on more than 120 plant species is well characterized by its high degree of polyphagy. Observations on the oviposition behavior by *L. trifolii* demonstrated that among cucurbitaceous plants, *Momordica charantia* is rarely attacked by *L. trifolii.* The methanol extract of *M. charantia* leaves strongly deterred the females from ovipositing on kidney bean leaves treated at a concentration of 1 g leaf equivalent extract/ml. Analysis of the polar fraction of the methanol extract of *M. charantia* leaves resulted in the isolation of a novel cucurbitane glucoside, 7-*O*-$\beta$-D-glucopyranosyl-3,23-dihydroxycucurbita-5,24-dien-19-al, named momordicine IV, along with another known compound, momordicine II. Momordicine II and IV deterred oviposition by *L. trifolii* significantly when bioassays were carried out on kidney bean leaves treated at 75.6 and 20.3 $\mu$g/cm$^2$ leaf surface, respectively. There was no synergistic effect on oviposition deterrent when the two compounds were combined in their natural abundance.

*Key words: Liriomyza trifolii*, *Momordica charantia*, Oviposition Deterrent, Momordicine IV