## E2-08 Human immunodeficiency virus type 1 reverse transcriptase active compounds from *Calophyllum* species of Sri Lanka

H R W Dharmaratne[1], W M A P Wanigasekera[1], E Mata-Greenwood[2], J M Pezzuto[2]
[1] *Institute of Fundamental Studites, Kandy* [2] *College of Pharmacy, Chicago IL 60612, USA*

Recently *Calophyllum* species have been identified as potent inhibitors of HIV-1 RT, by screening assays, and pyranocoumarins calanolide A (1) and its derivatives, inophyllums (2) and soulattrolide (7) are claimed to be active principles. Prompted by these reports, and as a part of our continuing chemical investigation on *Calophyllun* species of Sri Lanka, we have undertaken antiviral/HIV studies of the extractives and pure compounds fron this species. Previously we had isolated and identified 2 pyranocoumarin derivatives, cordatolide A and B, from an endemic species *C.cortado-oblongum* Thw. They had structural features similar to those of anti-HIV active calanolides [A(1) and B (2)], and inophyllums [B(3) and P(4) except for the group $R_1$ on C-4 carbon, which is not essential for the said biological activity. Prompted by the observation, we have re-isolated these compounds from the same natural source and their biological activity was evaluated.

Both compounds were found to be active in the HIV-1 RT inhibitory assay. Cordatolide A (5) with 12 β-hydroxy configuration was more active than the 12 ∝ - analog cordatolide B (6) (IC50 values of 12.3 and 19 micromolar, respectively). This observation is consistent with the results that were reported for calanolides and inophyllums. Other than cordatolides, anti HIV 1 RT active soulattrolide has been isolated from *C. cordato oblongum* and *C. moonii*.