

**P-103: INHIBITION OF HL-60 CELL PROLIFERATION BY A CASEARIN ISOLATED FROM THE LEAVES OF CASEARIA SYLVESTRIS**

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*Casearia sylvestris* (Flacourtiaceae) is used in folk Brazilian medicine as a cicatrizant and anti-ulcer drug. The aim of the present study was to examine the antiproliferative effect of a casearin (0.4, 0.8 and 1.6 µg/mL) isolated from the leaves of *C. sylvestris* using HL-60 human leukemia cells. The antiproliferative effect was determined by inhibition of DNA synthesis based on BrdU incorporation. Cell viability was performed by the trypan blue dye exclusion. To morphological assessment, cells were observed under fluorescence microscope (acridine orange/ethidium bromide-AO/BE) and also examined by light microscopy (stained with hematoxylin-eosin). The casearin showed a dose-dependent inhibition of BrdU incorporation ranging from 47% to 64% resulting in a lower number of cell divisions confirmed by trypan blue test ( $p < 0.05$ ). Morphological analysis of treated cells using hemathoxilin/eosin dyes indicated the presence of apoptotic and necrotic cells for all tested compounds, confirmed by the use of AO/BE dyes. The occurrence of necrosis was more evident at the highest tested concentration (1.6 µg/mL,  $p < 0.05$ ). These findings highlighted the antitumor potential of casearins.