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The anti-proliferative effect of *Nyctanthes arbor-tristis* L. flower extract
on human primary and cancer cell lines

Flowers of *Nyctanthes arbor-tristis* (Common name; night jasmine; family; Oleaceae) is used in traditional medicine for the treatment of various diseases. This study evaluated the potential of the flower extracts for the treatment of cancers in humans. Fresh flowers were shade dried and extracted with distilled water. The crude extract was subjected to sequential fractionation series; hexane, chloroform, ethyl acetate and methanol using liquid-liquid partition method. Fractionated and residue compounds were tested for anti-proliferative action against primary peripheral blood mononuclear cells (PBMCs) from healthy and adult acute myeloid (AML) and chronic lymphocytic leukemia (CLL) patients, recombinant cells Jurkat (T cells) and MCF7 (breast cancer cell line), using CellTiter-Glo luminescent assay. The highest anti-proliferation was recorded in PBMCs prepared from CLL patients: crude ($IC_{50} = 9.01 \mu M$), ethyl acetate ($IC_{50} = 6.03 \mu M$), chloroform ($IC_{50} = 9.86 \mu M$). The crude extract showed cell anti-proliferation at higher concentrations in PBMC from AML patients, MFC7 and Jurkat cells. Other extracts were deficient in the capability of extirpating the said cell lines. As a control doxorubicin eliminated the cells at the expected potency This study suggests that the *N. arbor-tristis* flower extract has the anti-proliferative activity on human cancer cells and may have potential beneficial effects against CLL. Hence, isolation of active compounds is warranted.