

Planta Med 2014; 80 - LP79
DOI: 10.1055/s-0034-1395113

Ethnobotanical and *in vitro* cytotoxicity studies of *Moringa oleifera*, *Andrographis paniculata* and *Asystasia vogeliana* extracts

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- [Congress Abstract](#)

Ethnobotanical and *in vitro* cytotoxicity studies were carried out on three different multi-purpose medicinal plants; *Moringa oleifera* (Lam) (Moringaceae), *Andrographis paniculata* (Burm. f) and *Asystasia vogeliana* (Benth) (Acanthaceae). The ethnobotanical information was collected by one to one interview and discussions using semi-structured questionnaires with indigenous people from selected locations in Nigeria. Plant samples collected were identified and authenticated in Forestry Research Institute of Nigeria (FRIN), Ibadan, Oyo State. Each of these three plant samples was extracted in 95% ethanol using a soxhlet extraction apparatus and concentrated to dryness at 45 °C. *M. oleifera* showed the highest incidence of occurrence (17.5%), fidelity level (74.9%) and multi-purpose usage. The ethnobotanical study revealed the medicinal relevance of the three plants in the treatment of myriads of diseases and ailments including malaria, fever, high blood pressure, cancer, diabetes among others in local herbal medicine. The *in vitro* cytotoxicity activities of ethanol extracts of the three plant species were screened in two cancer cell lines (BGC-823 and HeLa cells) using the sulphorhodamine B (SRB) assay. Cytotoxicity assay on the two cell lines BGC-823 and HeLa cells revealed that only the ethanolic extract of *A. paniculata* exhibited some level (moderate) cytotoxicity activity with IC₅₀ values of 24.7 and 23.1 µg/ml respectively. *M. oleifera* and *A. vogeliana* did not show any significant activity on the cell lines. The study highlights the importance of ethnobotanical information in finding cost effective, potent and safe herbs for people and screening of the plant species for their activities against cancer cell lines. Further studies on the isolation and characterization of bioactive compounds responsible for cytotoxic effects of *A. paniculata* is recommended.

Keywords: *Moringa oleifera*; *Andrographis paniculata*; *Asystasia vogeliana*; ethnobotany; cytotoxicity; BGC – 823; HeLa Cells