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Potential of *Phyllanthus* spp Cocktails as Anticancer Agents in its Natural State

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Cancer is a group of diseases that arise from uncontrolled growth, spread of an abnormal cell and can result in death. The inefficiency (Tong *et al.*, 1995) to treat several distinct classes of tumours led researchers to source for potential natural-based therapeutic compounds. Many Botanists (Etta, 2008) believed that the extract of *P. niruri*, (30 - 40 cm in height) *originated* from India by late of 1980s showed pharmacological, clinical efficacy against viral Hepatitis B (Padma *et al.*, 1999; Paranjpe, 2001; Blumberg *et al.*, 1990; Venkateswaran *et al.*, 1987) anti-bacterial activity (Mazumder *et al.*, 2006); Kloucek *et al.*, 2005), anti-hepatotoxic or liver-protecting activity (Houghton *et al.*, 1996; Rajeshkumar *et al.*, 2000; Jeena *et al.*, 1999), as well as anti-tumor and anti-carcinogenic properties (Rajeshkumar *et al.*, 2001). In addition, it also exhibits hypoglycaemia properties (Mazunder *et al.*, 2005; Raphael *et al.*, 2002).

The objective of the present study determines the cytotoxic effect of *Phyllanthus* extracts (aqueous and methanol) on growth inhibition against skin melanoma and prostate cancer cells in their cell cycle could partially explain its mode of activity and proliferation effect with apoptosis induction and cell cycle modulation. From the results, *Phyllanthus* plant appears to possess antiproliferative (cytotoxic) properties against breast, lung, melanoma and prostate cancer cells with IC_{50} values ranging between 150–400 $\mu\text{g/ml}$ for the aqueous extract and 50–150 $\mu\text{g/ml}$ for the methanolic extract which were determined using the MTS reduction assay. In comparison, the plant extracts did not show significant cytotoxicity on normal human cells (breast, lung, skin (CRL-2565) and prostate (RWPE-1) cells). This indicates that *Phyllanthus* is one step closer to being a suitable candidate for the development of effective anticancer drugs.