Avelós possui substâncias anticâncer e substâncias que podem promover o câncer

O avelós, uma Euphorbiaceae usada como cerca no nordeste do Brasil é empregada na medicina popular como antireumático, antibacteriano, antiparasitário e anticâncer. Coloca-se 6 gotas do látex da planta em 1 litro de água e toma-se 10 gotas 3 vezes ao dia. O látex desta planta já cegou muitas pessoas. Existem muitos trabalhos na literatura mostrando que o avelós possui diterpenos do tipo inganen (éster do ingenol) e do tipo tigliane (éster do forbol) que provocam recrudescimento do Vírus Epstein-Barr e o aparecimento de linfoma de Burkitt. Países da África onde cresce a Euphorbia tirucalli (avelós) é frequente o aparecimento deste tipo de linfoma. O inganen prejudica a polymerização de proteínas citoplasmáticas que formam os micro-túbulos constituintes do citoesqueleto e assim lesando a célula neoplásica diminui a sua sobrevivência. Agira como as drogas quimioterápicas no sentido de aniquilação. Cremos que as células neoplásicas devam ser tratadas como células doentes que necessitam de cuidados e não aniquilação.

José de Felippe Junior

Activation of the Epstein-Barr virus lytic cycle by the latex of the plant Euphorbia tirucalli.

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Abstract
Exposure to the plant Euphorbia tirucalli has been proposed to be a cofactor in the genesis of endemic Burkitt’s lymphoma (eBL). The purpose of this study was to examine the effects of unpurified E. tirucalli latex on Epstein-Barr virus (EBV) gene expression. A Burkitt lymphoma cell line was treated with varying dilutions of the latex and the effects on EBV gene expression were measured. We observed that the latex was capable of reactivating the EBV lytic cycle in a dose-dependent manner and at dilutions as low as 10^-6. Simultaneous treatment of cells with E. tirucalli latex and the protein kinase C inhibitor 1-(5-isquinolinesulphonyl)-2-methylpiperazine dihydrochloride blocked lytic cycle activation. These data suggest that environmental exposure to the latex of E. tirucalli could directly activate the EBV lytic cycle and provide further evidence of a role for E. tirucalli in the aetiology of eBL.

PMID: 12771923

Effect of inganen anticancer properties on microtubule organization.

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Abstract
Euphorbia tirucalli (Euphorbiaceae family) an environmental risk factor for Burkitt’s lymphoma also has pharmacological activities. In the northeast of region in Brazil its latex is used as an antimicrobial, antiparasitic in the treatment of coughs, rheumatism, cancer and other disease as folk treatment. The prevalent constituents of this plant latex are diterpenes from the Inganen types (ingenol esters) as well as the tigliane (phorbol esters). Scientifically, there is not any data till now about anticancer effects of the Euphorbia tirucalli Linn., since the Ingenol esters have already presented tumor-promoting ability. Microtubules (MTs), and cytoskeletal proteins are essential in eukaryotic cells for a variety of functions, such as cellular transport, cell motility and mitosis. Single Inganen in cytoplasm can interact with these proteins and affect on their crucial functions. In this study, we showed the effects of Inganen on MT organization using ultraviolet spectrophotometer and fluorometry. The fluorescent spectroscopy showed a significant tubulin conformational change at the presence of Inganen which decrease polymerization of tubulin as well as the ultraviolet spectroscopy results. The aim of this study is to find the potential function of Inganen for treatment of cancer in cells and human organs.

PMID: 20566439


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Abstract
Endemicity of Burkitt’s lymphoma (BL) coincides with profusion of a plant Euphorbia tirucalli in tropical Africa. E. tirucalli contains 4-deoxyphorbol ester that enhances Epstein-Barr virus (EBV) infection of B lymphocytes. In this study, we found that 4-deoxyphorbol ester reduced EBV-specific cytotoxic T-cell function. Furthermore, the B lymphocytes dually exposed to EBV and 4-deoxyphorbol ester were resistant to EBV-specific T cell cytotoxicity, through down-regulation of latent membrane protein 1 (LMP1), the major target to EBV-specific cytotoxic T-cells. These immunologic findings strengthen the notion that E. tirucalli may be an important environmental risk factor for the genesis of African BL.

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