

**Anti-angiogenic effects of *Mangifera indica* L. stem bark extract and its natural glucoxilxanthone, mangiferin.**

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The *angiogenesis* processes are essential for tumor growth and proliferation. *Mangifera indica* L stem bark extract (MISBE) is used in Cuba for the ethnomedical treatment of cancer. Its main chemical ingredient, Mangiferin (M), is a glucosilxanthone which has been known for its immunomodulatory, antitumoral and anti-inflammatory actions. MISBE and Mangiferin were assessed in two endothelial cells anti-proliferative assay and in three "*in vitro*" models for human angiogenesis: human placental blood vessel explants assay, the gel-over-gel and the matrigel assays. In addition, an experimental *in vivo* model was performed using Matrigel. MISBE and Mangiferin, present in the culture medium, significantly exhibited an inhibitory effect on capillary tubes formation in the first two assays. On the other hand, Mangiferin abolished the neovascularization in the sandwich assay. These products were capable for reducing the TNF $\alpha$ - or B16F10 cells-induced angiogenesis into matrigel in mice model of experimental angiogenesis. These results show that mangiferin demonstrated antiangiogenic activities ad these properties could be pharmacological relevant for its use of treatment of some tumors where neovascularization result essentially for the development of the malignance process.