

عنوان مقاله:

Anti-cancer effects of the extracts of broad and spirale cultivars of *Codiaeum variegatum* (L.) Blume on MCF-7, HepG2, and HeLa cell lines

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خلاصه مقاله:

**Introduction:** *Codiaeum variegatum* (L.) Blume is a well-known ornamental foliage plant used as a vegetable in northern Thailand, and it is the source of numerous bioactive substances. This work explored the effects of leaf extracts of broad (BCE) and spirale (SCE) cultivars of *C. variegatum* on three cancer cells, including human breast, human liver, and human cervical cancer cells. **Methods:** Ethanolic plant extracts were prepared, and then, ۲,۲-diphenyl-۱-picrylhydrazyl (DPPH), ferrous iron chelating, and lipid peroxidation assays were used to examine the flavonoid and phenolic compounds. The proliferative inhibition, growth, and migration of MCF-7, HepG2, and HeLa cancer cells, as a result of exposure to the extracts, were investigated. The extracts were investigated for their anti-cancer activities using sulforhodamine B (SRB), clonogenic, and wound-healing methods. **Results:** The data demonstrated that BCE and SCE contained high phenolic compounds. However, both extracts showed inactive anti-oxidant activities. Both extracts had high cytotoxicity on three types of cancer cells in a dose- and time-dependent manner after ۲۴-۷۲ hours of incubation with IC<sub>50</sub> values in a range of ۲۰۸-۸۳۰ μg/mL. Moreover, the prepared extracts of *C. variegatum* significantly inhibited colony-forming ability and cell migration on all types of cancer cells. Compared with BCE, SCE showed more potent anti-cancer activities. **Conclusion:** These findings revealed that SCE had higher anti-cancer activities on MCF-7, HepG2, and HeLa cancer cells than BCE. Consequently, the SCE might be used as an effective chemotherapeutic compound for the prevention and treatment of cancer.

کلمات کلیدی:

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