

ABSTRACT

Cancer is a global health issues that can affect anyone. Cancer is treated conventionally with surgery, chemotherapy, radiotherapy, and hormone therapy. However, the high cost of conventional treatments is a burden for cancer patients. Therefore, many cancer patients seek for cheaper yet effective alternative treatments. *Typhonium flagelliforme* is a taro-like plant that can be found across Indonesia. Numerous researches on the anticancer effect of *T. flagelliforme* have been conducted. However, a systematic review on the anticancer property of *T. flagelliforme* is still lacking. Therefore, this review aimed to systematically evaluate the scientific evidence for the anticancer activities in *T. flagelliforme*. Five databases were used as the search engine using the designated search terms and studies were selected based on the inclusion criteria. The anticancer evaluation in 31 studies selected were conducted in leukemia, lymphoma, breast, oral, cervical, lung, liver, colon, and squamous cell carcinoma. The result showed that *T. flagelliforme* could inhibit cancer cell proliferation with the IC₅₀ of less than 100 µg/mL. *T. flagelliforme* induced an increase of caspase-3 and -9, as well as a decrease of the anti-apoptotic Bcl-2 protein expression. The expression of p21 protein was increased after treatment of *T. flagelliforme* extract while the tyrosine kinase, Ki67, HER2/neu, telomerase, and COX-2 expressions were decreased implying *T. flagelliforme* could inhibit tumor growth and development. Lastly, *T. flagelliforme* is also capable in reducing the possibility of cancer cell invasion. Findings suggest that *T. flagelliforme* is potential to further developed for cancer treatment.

Keywords: *Typhonium flagelliforme*, cancer, systematic review