

Abstract

This work is summarizing actual knowledge about sanguinarine and quaternary benzo[c]fenanthridine alkaloids. The quaternary benzo[c]fenanthridine alkaloids were found in roots plants *Sanguinaria canadensis* and *Macleaya cordata*. This plants are used in traditional Chinese medicine for its antimycotic, antibacterial and anti-inflammatory activities since antiquity. Regarding to possibility quaternary benzo[c]fenanthridine alkaloids to induce apoptosis these investigated such as possible agents for cancer treatment. The quaternary benzo[c]fenanthridine alkaloids interact with DNA and proteins. They are able to intercalate to the DNA. The alkaloids can be used like fluorescence DNA probe. Metabolism by sanguinarine and next quaternary benzo[c]fenanthridine alkaloids has not yet completely determined. The first step sanguinarine detoxication is its conversion to less toxic dihydrosanguinarine. Sanguinarine oxidation is mediated by cytochrome P450 1A1.

Key words:

Quaternary benzo[c]fenanthridine alkaloids, sanguinarine, apoptosis, intercalate, heterogenous substances, enzymes, cytochrom P450