

Tentative Outline

Special Thematic Issue for the journal

Natural compounds as promising adjuvants in cancer therapy; sensitizer of cancer cells, and protector of normal cells

• **Scope of the Thematic Issue:** Cancer, a major cause of mortality and morbidity worldwide, can affect almost every organ in the body. Chemotherapy is widely used to treat various cancers with varying degrees of success. However, the high prescribed dose of anticancer drugs and their resulting side effects on healthy tissue are of significant drawbacks to conventional chemotherapy. Chemotherapeutic agents can induce oxidative stress and harmful free radicals, causing cell toxicity, macromolecules damages like DNA, which leads to mutagenesis, carcinogenesis, and cell death. So, the trend to the development of more effective chemoprotective with fewer side effects has been started many decades. Diverse uses of phytochemicals in recent years due to their unique properties such as lower toxicity, easy availability, and potent antioxidant activity are developed. Numerous plants contain a high amount of flavonoids and polyphenolic compounds and are known to have antioxidant, anti-inflammatory, and anticarcinogenic actions. Some experiments evidenced the use of plant and natural products as favorable protectors against side effects of chemotherapy mainly through its ability to stabilize the cell membrane and also by exerting anti-oxidative features and preventing the DNA damage. In addition, some compounds inhibit cancer cells growth and act as potent anticancer agents via different cellular and molecular mechanisms. Thus, these properties make them not only as an emerging supplement in patients undergoing chemotherapy to protect normal cells against deleterious effects of anticancer medicine, but also as a potent adjuvant anticancer. The different anticancer mechanisms may reduce the risk of tumor resistance that is occurred during chemotherapy. These unique properties maybe increase chemotherapy efficacy with lower side effects. Hence, some interesting reviews that focused on the novel and effective anticancer herbal medicines/natural products that protect normal cells against side effects of chemotherapy and may also sensitize the cancer chemotherapy will be published.

Keywords: Herbal medicine, Natural product, Anticancer, Cancer chemoprotective, Cancer chemosensitive

Sub-topics:

The sub-topics to be covered within the issue should be provided:

- **The novel and effective anticancer herbal medicines/natural products**
- **Protective effects of herbal medicines/natural products against side effects of chemotherapy**
- **Sensitive effects of herbal medicines/natural products on cancer therapy**
- **.Different cellular and molecular of anticancer effects of herbal medicines/natural products**

Tentative titles of the articles and list of contributors:

Calling for the papers

Schedule:

- ✧ Thematic issue submission deadline: **30 September 2020**

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