

Special Issue on
**Medicinal Plants and Natural Active Compounds for
 Cancer Chemoprevention/Chemotherapy**

CALL FOR PAPERS

Cancer is a cohort of diseases in which abnormal cells divide without control and are able to invade other tissues (through the blood and lymph systems). Cancer has devastating consequences for the patients' life and indeed is a leading cause of death worldwide. More than 100 different types of cancer are known and usually named by the organ or type of cell where they start; for example, a cancer that begins in the colon is called colon cancer. The growing incidence of these diseases due to the rising age of the population poses a considerable burden on the public health system. Statistical studies indicate that cancer strikes more than one-third of the population and it is the cause of more than 20% of all deaths. Cancer is caused usually due to abnormalities in the DNA of the affected cells leading to an extra mass of tissue called a tumor. Tumors may be benign (not cancer) or malignant (cancer).

The incidence of cancer might increase in many tissues because of chronic inflammation (e.g., all gastrointestinal). Cancer may develop in cells that are selected for resistance to inflammatory products by virtue of overexpressing antiapoptotic proteins. Current treatments for cancer, besides surgery are heavily based on cytotoxic regimens of compounds and radiation that interfere with the cellular replication system and thus aim to primarily target rapidly dividing cells. However, due to low selectivity, these treatments show many side effects and are more importantly becoming ineffective due to the development of resistance. A promising and new approach to fight cancer is to develop agents that abrogate the cancer's capability to become resistant. Herbal derived drugs (e.g., polyphenols, brassinosteroids, and taxols) are desired for anticancer treatment, as they are natural and readily available. Currently, a few plant products are being used to treat cancer. However, the molecular mechanism of the anticancer effect of some of those plants products as well as dissecting new products from those plants awaits further studies.

We invite investigators to contribute overview and original research articles dealing with the physiological as well as molecular and biochemical efficacy of medicinal plants and natural active compounds in cancer and tumorigenesis treatment and prevention *in vitro* and *in vivo*.

Potential topics include but are not limited to the following:

- ▶ Natural substances as lead compounds for the development of active compounds for cancer chemoprevention/chemotherapy from traditional phototherapy to the development of new anticancer drugs
- ▶ Isolation and characterization of novel medicinal plant active compounds that decrease resistance to anticancer drugs or reduce inflammation
- ▶ Screening the effect of diverse potential therapeutic plant extracts on apoptosis induction in several cancer cell lines (e.g., colon, leukemia, lymphoma, gastrointestinal, genitourinary, breast, ovarian, lung, and melanoma)
- ▶ Recent advances in drug discovery from medicinal plants with anticancer/tumorigenesis potentials
- ▶ Identification and validation of novel targets of anticancer medicinal plants and active compounds
- ▶ Identification of the cellular target of the effective antitumor plant extract(s), for example, proteins involved in cell cycle arrest and apoptosis
- ▶ Medicinal plants with proven anti-inflammatory and anticancer properties in human and animal models

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ecam/mpna/>.

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