

Special Issue on Natural Products as a Source for New Leads in Cancer Research and Treatment

CALL FOR PAPERS

Despite recent advances in treatment modalities, cancer remains a major source of morbidity and mortality throughout the world. In the United States, cancer is the leading cause of death for individuals less than 85 years of age. Moreover, the incidence of many cancers, including cancers of the skin, prostate, breast, and kidney, continues to increase. A study, led by Cancer Research UK (CRUK), indicated that one in two individuals born after 1960 will be diagnosed with cancer at some point in their lifetime.

Cancer is a general term that refers to over 100 distinct pathologies affecting many different tissues and cell types. However, all forms of cancer are characterised by abnormal cell growth resulting from inherited or environmentally induced genomic instability and mutations. Cancer is a disorder that involves cellular transformation, dysregulation of apoptosis and other types of cell death, increased proliferation, angiogenesis, immune evasion, inflammatory responses, and, ultimately, metastatic spread.

Inflammation is a key hallmark of cancer and has a key role in promoting tumourigenesis. Chronic inflammation is often associated with tumourigenic processes, such as prolonged physical irritation and bacterial or viral infection, as well as other inflammatory processes. Moreover, cancer cells that are quiescent or slowly proliferating are refractory to the cytotoxic effect of conventional chemotherapy. Cancer cells also frequently become resistant to chemotherapy because of various cellular changes, as well as physical and chemical characteristics of the tumour microenvironment, such as hypoxia and acidosis. Therefore, the development of a new class of anticancer drugs that lack the toxicity of conventional chemotherapeutic agents and are unaffected by common mechanisms of chemoresistance would be a major advance in cancer therapeutics.

Statistics reveal natural sources as the most promising pool for drug candidates or drug leads. The continuing search for bioactive molecules from natural sources leads to various published papers validating the use of extracts in a wide range of activities. There are several important chemotherapy agents already in use that are developed from plants, such as taxanes, certain topoisomerase inhibitor, and vinca alkaloids. Therefore, biologically active compounds obtained from natural products continue to offer opportunities as sources of new anticancer therapeutic leads.

We invite authors to contribute original research articles as well as review articles that will illustrate and stimulate the continuing effort in drug discovery and drug development using natural products as source of bioactive molecules in cancer research and treatment.

Potential topics include but are not limited to the following:

- ▶ Natural product cancer chemopreventive agents
- ▶ Combination strategies between natural products and conventional therapeutic approaches as anticancer agents
- ▶ Impact of use of natural compounds on metastasis biology
- ▶ Impact of natural products on the tumour microenvironment: inflammation and immunity
- ▶ Cancer drug discovery and anticancer drug development
- ▶ Review of preclinical and clinical studies of use of volatile oils as anticancer agents
- ▶ Encapsulation of natural products in nanoparticles for antitumoral activity
- ▶ Use of monoterpenes for cytotoxicity activity

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

Papers are published upon acceptance, regardless of the Special Issue publication date.

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