

Special Issue on
Natural Products in a Breast Cancer Treatment and Chemoprevention

CALL FOR PAPERS

The 2017 report of the American Cancer Society estimated that cases of breast cancer will achieve a value of 252,710, which is 30% of all new cancer diagnoses in USA (number 1 among new cases), while 40,610 (14%, number 2) cases will lead to death.

Breast cancer is a heterogeneous group of tumors with varying response to treatments. Radiation therapy is usually effective in the treatment of a breast cancer, but it carries two risks: a damage of normal cells and a radioresistance of tumor cells. Recently, there were numerous effective and personalized therapies against breast cancer implemented. It is noteworthy that an increased interest in natural chemopreventive agents was observed. Natural products, rich in bioactive compounds, are used both in cancer chemoprevention and in chemotherapy. At present, over 70% of the anticancer drugs are or derive from natural compounds. The progress of (nano)targeted therapy also increases the efficacy of natural products by combination with monoclonal antibodies or polymeric carriers.

There are studies showing the multistage process of carcinogenesis may be delayed or even prevented by the use of natural agents. The research of new anticancer drugs is heading in the direction of preventing the effects of genetic changes leading to breast cancer. Many *in vitro* and *in vivo* studies actively investigate the search for new compounds that act more selectively and aim at minimizing the undesired adverse effects. Chemopreventive agents inhibit the growth and proliferation of tumor cells by modulating the expression and/or activation of cell cycle regulatory proteins. There is a great need to search for natural bioactive substances that will be toxic to breast cancer cells without affecting normal cells.

We invite researchers to contribute original research manuscripts as well as state-of-the-art review articles that will illustrate and stimulate the continuing effort in breast cancer treatment using natural products. We highly welcome *in vitro*, *in vivo* articles in the natural products activity of a breast cancer area of interest. There are reports that natural products are effective against various cancers. Studies showing that they are specifically ineffective against breast cancer will also be considered.

Potential topics include but are not limited to the following:

- ▶ Natural products as chemopreventive agents in a breast cancer
- ▶ Complex therapy strategy between natural products and conventional therapeutic procedures as an anticancer approach
- ▶ Impact of use of natural products and their constituents on a metastasis biology
- ▶ Impact of utilization of natural products on the breast cancer microenvironment: invasion, migration, and metastasis
- ▶ Breast cancer drug discovery and anticancer drug development based on natural products
- ▶ Review of preclinical and clinical studies of a breast cancer treatment using natural products
- ▶ Encapsulation of natural agents in nanoparticles for the antitumoral activity
- ▶ Changes in a natural product structure—new analogues and derivatives in a breast cancer treatment
- ▶ New pathways discovery and bioactive mechanisms in a breast cancer treatment using natural compounds
- ▶ *In vitro*, *in vivo*, and clinical studies related to a breast cancer treatment by natural products

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

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

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Submission Deadline

Friday, 4 May 2018

Publication Date

September 2018